

WESTERN NORWAY UNIVERSITY OF APPLIED SCIENCES  
HØGSKULEN PÅ VESTLANDET

# Application for Accreditation

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PhD Programme in Responsible Innovation and  
Regional Development (RESINNREG)

[September 15, 2017]

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# Preface<sup>1</sup>

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## *Generelt om studietilbudet*

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This application exposes the reasons for Western Norway University of Applied Sciences (HVL) to establish an interdisciplinary PhD programme in *Responsible Innovation and Regional Development* (RESINNREG). The programme's starting point is an understanding of innovation where practice, organisational and technological conditions, as well as the social implications of innovation, are the subject of critical discussion and analysis. Innovations are *new combinations of existing resources that has been brought into practice*, and could be in the form of new products, new methods of production and new modes of organising (Fagerberg 2005).<sup>2</sup> The programme investigates innovation through *a responsibility approach*, meaning that it is concerned with interactive processes by which innovation-related actors become mutually responsive to the ethical acceptability, sustainability and social desirability of innovation activity (see Cooke 2011, Stilgoe et al 2013, Fløysand and Jakobsen 2016, Holden et al 2017).<sup>3</sup> Furthermore, RESINNREG link this approach to a special focus on regional development. Thus, a chief aim of the programme is to contribute to social and sustainable development processes. Relevant processes linked to this can be contributions towards reducing regional disparities, e.g. by encouraging employment and value creation in regional settings, and a deeper understand of how economic value creation can be promoted and realised in parallel with a green shift and the development of a welfare society.

This approach forms the backdrop and overarching theoretical position of the PhD programme, and is operationalised through three main research topics:

- *Industry Innovation*
- *Social Innovation*
- *Green Innovation*

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<sup>1</sup> This application has been written in British English. The template provided by NOKUT was exclusively written in Norwegian. HVL have therefore translated the Norwegian text, while attaching the original text to facilitate easy comparison.

<sup>2</sup> Fagerberg, J. (2005): Innovation: A guide to the literature. In: Fagerberg, J, Mowery, D.C and Nelson, R.R. (eds.) (2005): *"The Oxford handbook of innovation"*, Oxford University Press, 1-27.

<sup>3</sup> Cooke, P. 2011: Green innovation. In Cooke, P., Asheim, B. Boschma, R., Martin, R., Schwartz, D. and Tödtling, F. (eds): *Handbook of regional innovation and growth*. 434-448. Edward Elgar.

Stilgoe, J., Owen, R. og Macnaghten, P. (2013): Developing a framework for responsible innovation. *Research Policy*, 42, 1568-1580.

Fløysand, A. and Jakobsen, S-E. (2016): Industrial renewal: narratives in play in the development of green technologies in the Norwegian salmon farming industry. *The Geographical Journal*, vol.182.

Holden, E., Linnerud, K., Banister, D., Scgwanitz, V.J., Wierling, A. (eds) (2017) *The imperative of sustainable development*. Routledge.

For each of these research topics it has been set up a research group, and the research portfolios of these groups reflect in sum the aspirations of RESINNREG. The programme is furthermore reflected by seven different courses contributing to knowledge on the practice, organisation and technological foundations of innovation and the interlinkages between these three dimensions. It represents a core framework for advancing theoretical and practical knowledge of meeting today's and future challenges. Through encouraging multidisciplinary approaches to industry innovation, social innovation and green innovation, RESINNREG specifically aim towards bridging strong traditions of applicable research ('exploitation') and basic research ('exploration') found in the traditional university colleges. This implies that RESINNREG explicitly focuses on both the practical dimensions of innovation ('exploitation') and the theoretical dimension of innovation ('exploration') (March 1991). RESINNREG achieves this by utilising competence and resources both of applied and basic research orientation from the research environments of three now-merged university colleges (together forming HVL)<sup>4</sup>. Thus, the PhD programme bridges different knowledge fields, disciplines and innovation approaches, while at the same time contributing to interaction, cooperation and collaboration between the different campuses of HVL.

In RESINNREG, each PhD candidate will be linked to one of the three research groups, ensuring in-depth knowledge of a particular field. This will also help in assuring excellent academic learning environments for the candidates, as they will be part of active research groups with an international outlook. Academic staff involved in the research groups have extensive experiences in teaching and supervision at PHD-level. Moreover, they represent stable research groups with sufficient number of professor and associate professors with relevant research and education competences and skills. The PhD programme will be highly beneficial also for the established research groups (and the members involved), as PhD students and the PhD programme will contribute to collaboration and cooperation within and between these three groups, also implying that cross-disciplinarily is encouraged.

RESINNREG ensures that the candidate receives training in 'exploiting' and 'exploring' innovation, in written and oral dissemination of research results and in working in interdisciplinary research teams and across thematic areas (industry innovation, social innovation, green innovation). After completing the programme, the candidates have gained in-depth knowledge both on how innovation is performed ('exploitation') and understood ('exploration'), and how this is linked to a responsibility approach and regional settings. When graduated, student with a diploma from RESINNREG will be able to identify and assess barriers and drivers for Responsible Innovation and Regional Development, and initiate and contribute to innovation projects that involve Industry Innovation, Social Innovation and Green Innovation. RESINNREG aims to scrutinise and inform theories of innovation, but also to influence directly on how a region can take advantage of regional particularities to become more innovative; how R&D actors can take action to improve the innovation capacity of its firms, industries, clusters and the public sector. Therefore, a core activity of the programme is to explore and exploit innovation and promote regional development through combining insight from basic research and research findings from applied research. RESINNREG will do this in close collaboration with relevant regional players. Close collaboration with regional actors is one of the strengths of the university colleges. In the PhD programme, this collaboration will be linked to the commercialisation of research results, joint research projects between the university

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<sup>4</sup> HVL was established in January 2017 through a merge between three former university colleges: Bergen University College, Sogn og Fjordane University College and the University College Stord/Haugesund

and the industry, and the use of private and public organisations in the region for the practical training of PhD candidates. These activities are part of the 'third mission' of universities, i.e. how universities contribute towards social and economic development in the region (Pugh et al 2016, Foss and Gibson 2016).<sup>5</sup> Years of collaboration on different activities have led to strong linkages between HVL and surrounding actors in Western Norway (both public and private).

The application is organised along the structure of the template provided by NOKUT for applications of accreditation at 3<sup>rd</sup> cycle studies on 19.04.2017 in order to answer the requirements given in the Regulations concerning supervision of the educational quality in higher education and Regulations concerning quality assurance and quality development in higher education and tertiary vocational education. We believe that this application from HVL for a PhD programme in Responsible Innovation and Regional Development fulfils the quality criteria and the scope of high-level scientific work of NOKUT. The application attests that the academic environment behind RESINNREG has excellent research results within the field of innovation studies, publishes at a high international level and participate in extensive national and international research cooperation. The research environment, attested to in particular by the three research groups and the entity they represent as a whole, represents both depth and breadth within all segments of the PhD programme. Further, it is demonstrated that HVL runs relevant bachelor and master educations that back up the PhD programme. The involved academic community has significant supervisory competence at doctorate level within the research field. There are currently 13 PhD candidates at HVL studying innovation, but the application demonstrates that HVL has a capacity and recruitment potential for at least 18 fellows within the research field of Responsible Innovation and Regional Development within five years after start-up of the proposed programme. All this is attested below.

| Type of phd programme (check the correct box) / Type studium (kryss av) |  |
|---|--|
| <input checked="" type="checkbox"/>                                     | PhD programme/ph.d.-grad   |
| <input type="checkbox"/>  | Institutional scholarship for artistic development work / Institusjonsbasert stipendprogram for kunstnerisk utviklingsarbeid |

## Overall description of the phd programme

*Overordnet om studietilbudet.*

*Som en innledning til hoveddokumentet, skal dere gi en overordnet beskrivelse av studietilbudet og hvordan det hører hjemme i organisasjonen for øvrig»*

<sup>5</sup> Pugh, R., Hamilton, E., Jack, S. and Gibbons, A. (2016): A step into the unknown: universities and the governance of regional economic development. European Planning Studies, vol 24, 1357-1373.

Foss, L- and Gibson, D. (eds) (2016): The Entrepreneurial University: Context and institutional change. Routledge.

The PhD programme in Responsible Innovation and Regional Development (RESINNREG) is a doctoral education aimed at candidates who want to qualify for research and scientific work at a high international level within the field of innovation studies. RESINNREG enables the graduates to pursue a research career in academia as well as in industry linked to responsible innovation and regional development efforts.

The programme specifically puts emphasis on exploring and exploiting innovation. Independent of the specific area of specialisation, PhD candidates graduating from the programme will have state-of-the-art research knowledge, skills, and competences within exploring and exploiting innovation aiming for responsible innovation and regional development.

**The academic profile:** RESINNREG represents an effort to understand and promote innovation as a transparent, interactive process by which the involved actors become mutually responsive to the ethical acceptability, sustainability and societal desirability for development. With these aspirations in mind, RESINNREG approaches innovation as a socially constructed tangible-intangible complex consisting of a material, social and discursive dimension. The material dimension involves e.g. natural resources, technology and the introduction of new tools and new technical solutions. The social dimension is about organisation and the introduction of new ways of governance and networking to facilitate for new technology, tools and technical solutions, and for innovative service organisation and provision. The discourse dimension concerns the knowledge behind innovations in terms of new theories and ideas of what is-, should be and could become innovations (see Figure 1).



Figure 1: Innovation as a material, social- and discursive complex.



By concentrating the programme on *responsible innovation* and *regional development*, the programme is expressing its concern for *ethical and applied consideration* in innovation research and practice. In particular, the programme acknowledges the influence of ethical conditions by focusing on how researchers and entrepreneurs are engaged in various ways of knowing and performing innovation (e.g. expressed in the mandatory courses “Understanding and Exploring Innovation” and “Doing and Exploiting Innovation”). The potential outcomes of performing innovation vary widely. It is these differences that the programme tries to understand (‘exploration’) and apply/perform (‘exploit’) for the purpose of responsible innovation and regional development. Why, where and when do differences in innovation performance develop? How do R&D actors (e.g. researchers involved in RESINNREG) take part in processes of innovation? What difference can a responsible innovation approach make for development? What characterise the communication between discourse (i.e. theory development within R&D institutions), the development and implementation of service innovations and technologies (i.e. 'Digitisation' of organisations) and material conditions (i.e. Innovation outcomes in terms of economic surplus, welfare distribution and sustainability)? These questions are explained through acknowledging that innovation and regional development have both tangible and intangible outcomes, again reflecting the need to conjoin applied knowledge and basic research. Through linking professional knowledge with research-based knowledge, the intention of the programme is to enable the PhD candidates to both reflect upon challenges related to the topics presented here, but also to enable them to partake in development processes and real change. Thus, we believe it is necessary to develop knowledge not just on how to *explore* innovation, but also on how to *exploit* innovation. Crucially, though, candidates must be able to conceptualise and conceive how these two dimensions are interlinked and how they pan out in practice (hence doing research).

To back the research of these and related questions, RESINNREG draws on three main topics, each represented with a research groups:

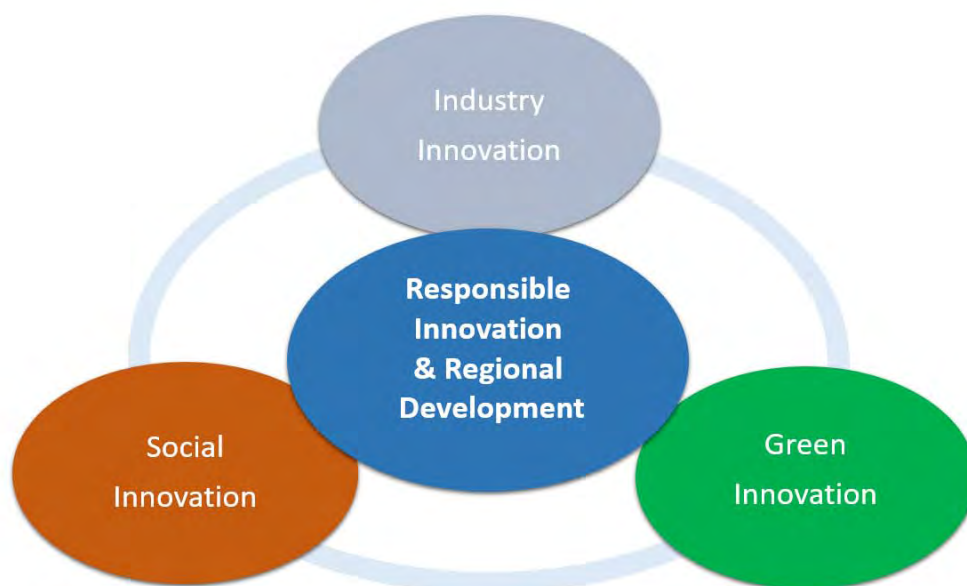
- Industry Innovation
- Social Innovation
- Green Innovation

*The industry innovation* group has been working within the topic of industry innovation that up until now has been the main focus for innovation studies. The emphasis of the research group has been on understanding the introduction of new technologies and new products into the market, i.e. business innovations (Meissner et al. 2016). There has also been a focus on the implications of industry innovation for the firm, the industry and the region. Eventually, the group has expanded its focus to also include process innovation, service innovations, innovations in marketing and sustainable transitions. Several of the key researchers within this research group is located at the Mohn Center for innovation and regional development. The Mohn Center (formerly known as Center for innovation) was established at Bergen University College in 2005 as part of a long-term effort to develop innovation and entrepreneurship as a strategic core area for the college. The industry innovation group also involves researchers from departments at the Faculty of Engineering and Science and the Faculty of Business Administration and Social Sciences. The researchers engaged in the industry innovation group represents diverse disciplines, such as engineering, economics, marketing, management and economic geography.

*The social innovation group* emphasis different aspects of social innovations, which is a new emerging research topic within innovation studies (Martin 2016, Meissner et al 2016). Research on social innovation focus on new configurations, new modes of organising and new form of governance

with the goal of solving problems and meeting needs in a better manner than those solutions that are currently being offered. Much of the research of the social innovation group at HVL has been targeting challenges within the public sector and the health sector. The Centre for Care Research West Norway at the Faculty of Health and Social Sciences represents the core milieu for this research group. The Center was established in 2008 with the intention to develop applied research directed toward the health and care sector regionally and nationally. The group also involves researcher from other departments and faculties at HVL, such as Faculty of Business Administration and Social Sciences. The researchers engaged in the social Innovation group embrace the disciplines of political science, organisation theory, social anthropology, sociology and researchers with professional qualifications within the health sector.

*The green innovation group* is investing the new and emerging topic of green innovations within innovation studies, i.e. how innovations can contribute to a more sustainable and environmentally sound society (Martin 2016). The focus of the green innovation group at HVL has been on the implementation of new green technologies, different transition pathways and the role of policy for promoting green innovations and a sustainable transition. Key researchers within the group are located at Department of Natural Science at the Faculty of Engineering and Science located at the Sogndal campus. But similar to the industry innovation group and social innovation group within the programme, the green innovation involves researchers from other departments and faculties at HVL, including the Faculty of Business Administration and Social Sciences. The green innovation group includes researchers coming from different disciplines and traditions, including engineering, political science, economics, physics, organisation theory and economic geography.



**Figure 2: The research groups of RESINNREG and their main affiliation.**

In sum, RESINNREG will be represented by different researchers, disciplines and, consequently, different epistemologies. The research environment behind the programme is a cross-disciplinary research team representing a mix of academic disciplines. Theoretically, this will necessarily lead to diversified approaches, but some of the central theoretical starting-points will be evolutionary economics and the literature on systems of innovation (as is also focal for the innovation literature and the research frontier within industry innovation), theories on governance, applied techno-engineering approaches (as is also focal for the innovation literature and the research frontier within social innovation), and transition studies and sustainable engineering approaches (as is also focal for the innovation literature and the research frontier within green innovation).

PHD candidates will be recruited from various master programme at HVL<sup>6</sup>, but necessarily, some master programs are more relevant than others. There are four master programmes representing the key recruitment channel for the PhD; Master programme in Innovation and Entrepreneurship, Master programme in Innovation Management, Master programme in Community Work and the Master programme in Climate Management currently. The first two have their main focus on industry innovation, the next emphasise social innovation while the final programme is specialising in green innovation. In September 2017 the total numbers of enrolled students in these four master programme was 136 (see 2.2.3).

There are also other master programmes at HVL that potentially can provide candidates to RESINNREG such as the Master in Software Engineering, the Master in Maritime Operations, the Master in Change Management and the Master in Collaboration in Health and Care. The master's degree programmes, and the associated staff members, constitute an important foundation for the proposed PhD programme. The programme will furthermore recruit students with equivalent or other relevant master degrees from external institutions both nationally and internationally.

Independent of background, PHD candidates graduating from the proposed programme will have state-of-the-art knowledge, skills, and competence in the research field of exploring innovation. In addition, allowing for research of high quality and with high relevance for the private and the public sector the PHD candidates will have state-of-the-art knowledge, skills, and competence in the research field of exploiting innovation. Finally, they will have state-of-the-art knowledge, skills, and competence in one or, or a combination of, the research perspective within the research groups of *Industry Innovation; Social Innovation; Green Innovation*.

RESINNREG implies a specific focus on effects and implication of innovations, and not only implications for the entrepreneur or the organisation, but also for the wider regional system. Accomplishing this, the PHD candidates will be trained as innovation facilitators/entrepreneurs in organisations in either the public or private sector. RESINNREG intends to understand innovation in its regional context. Such context can be anywhere, but traditionally innovation studies at HVL has had a specific focus on the regional innovation system of Western Norway. Researchers involved in the programme have taken part in several external funded research projects developing knowledge of relevant for the region but also of national and international importance. Through collaboration

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<sup>6</sup> Master programme in Innovation and Entrepreneurship (recruiting from natural science); Innovation and Management (recruiting from social science); Master in software engineering; Master in Maritime Operations; Master in Change Management; Master in social work; Master in Collaboration in Health and Care; Master in Climate Change Management.

with regional stakeholders such as the County Administrations, Innovation Norway, the Research Council, regional development agencies, Cluster facilitators, etc., the research conducted by the core group of the programme have led to concrete changes in the regional innovation system, for instance the introduction of more sustainability technology solutions and how to better ensure technology transfer from one industry sector to another. The knowledge developed in the student projects will follow the same pattern and as such contribute to knowledge diffusion between the R&D sector and its regional surroundings. The selection of public and private partners for the PhD projects will be fine-tuned in accordance with the professional background of the PHD candidates.

Through this application the HVL demonstrates its commitment to provide for education, research, professional and artistic development, innovation and dissemination, which will help meet today's and tomorrow's challenges regionally, nationally and globally. HVL takes a position to educate PhD candidates to take part in real-world process, through enabling them as change agents in regional contexts where the intention is that both professional, applied knowledge and basic research constitute the core of the programme. HVL does this by suggesting a PhD programme that in a novel and original way contributes to the *emerging scientific field*<sup>7</sup> of innovation studies. Early research within the field has been focusing on the development and introduction of new technology solutions in the market (product innovations), and emphasised the capability and skills of the single firm to develop 'new combinations', followed by systems approaches including non-technology innovations in their analysis (service innovation, process innovations, organisational innovations, markets innovations, etc.). More recently, innovation research has first expanded from this focus on industry innovation to studies of new topics, such as social innovation, referring to new forms of organising and interacting in response to social issues, thereafter also to studies of green innovations exposing political, social, and technological drivers and barriers for achieving sustainable development in different sectors at different scales and arguing for green technology solutions.

In some aspects, RESINNREG mirrors these general trends within the research field of innovation in terms of a mature research group focusing on *Industry Innovation* and strong emerging research groups focused on *Social Innovation* and *Green Innovation*. In other aspects, the programme corresponds with and adds to mainstream approaches within the research field.

Second, unlike other innovation programme in Norway, RESINNREG involves a focus on responsible innovation in an effort to scrutinise how innovation can meet welfare- and environmental challenges in addition to economic/productive tasks in regional contexts. The point of departure is that innovation is not only creating economic growth, it also shapes- and become shaped by the society and the natural environment we live in. New firms, established businesses and the public sector is constantly working to develop new and improved products, processes of services, organisational methods and market adjustments, but also cause unforeseen outcomes for example in terms of economic restructuring and job losses; concentration of capital accumulation; climate change and environmental degradation. The understanding of *responsible innovation* within RESINNREG is informed by research conducted by key members of this proposal. Fløysand and Jakobsen (2011) has argued for the importance of understanding innovation as a relational phenomenon consisting of uncertain processes of reflexive and dynamic interacting actors operating in a given time-spatial

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<sup>7</sup> i.e. a field of researcher with different disciplinary backgrounds identifying themselves as research community with a shared accumulated knowledge base; educational programmes; journals; networks; etc.

context. They have also stressed the importance of including both technical circumstances, organisational conditions and discursive elements in studies of how to develop more responsible innovations (Fløysand and Jakobsen 2016). Further, Holden et al (2017) has discussed the various imperative for sustainable economic development. In addition, RESINNREG is also informed by the broader discussion of RRI (responsible research and innovation) (Stilgoe et al 2013), triple bottom line (Elkington 2004)<sup>8</sup>, sustainable driven innovations (Kiron et al 2013)<sup>9</sup> and green innovations (Cooke 2011). In short, RESINNREG promotes an understanding of *responsible innovation* as how innovations can meet welfare- and environmental challenges in addition to economic/productive tasks, and link it to the concept of *regional development in terms of* how such innovations can contribute to an advantageous and sustainable development in the region. As far as we know, RESINNREG is the only PhD programme in Norway that is dedicated to investigate the complexity of *responsible innovation* in a regional perspective.

Third, RESINNREG include the practical dimension of innovation. This links up to HVL tradition for educating candidates with professional qualifications that are able to contribute to change within the private and public sector. The practical dimension, or how to conduct your profession, is a key element in these educations. In RESINNREG we intend to investigate how skilled candidates (professionals and others) perform innovation, and how these practices are influenced by material, organisational and discursive factors. This also links up to the concepts of exploration and exploitation (March 1991), where exploration is about understanding innovation while exploitation can be associated with the practical dimension and the doing of innovation. In our PhD programme we intend to bridge these two dimension. Thus, RESINNREG will be coalescing analytical knowledge (*exploring innovation*) with practical knowledge (*exploiting innovation*) by connecting different traditions, knowledge and professions at HVL and link them up to performing actors in the public and private sectors. The programme offers seven PhD courses as part of the programme's training component, of which several courses engage with this practical side of innovation processes, in particular the mandatory course *Doing and Exploiting Innovation*. This course ensures that the PhD candidates in the programme get experienced with how to perform innovation either in a public- or in a private business organisation. To cope with this, the involved research milieus within HVL already have established a pool of public and private organisations as collaboration partners. This includes important non-academic partners such as The Research Council of Norway, Innovation Norway, Hordaland County Administration, Bergen Technology Transfer, Nyskapingsparken Incubator, Connect Vest, cluster organisations (NCE Media, NCE Seafood Innovation, NCE Maritime Clean Tech, GCE Subsea, DesignArena) and individual firms and public organisations. Accordingly, the *Doing and Exploiting Innovation* will take place in close collaboration with these partners.

Fourth, innovations strongly influence on how a region - and the world - are facing the future. This is acknowledged in the 2014 government white paper on research<sup>10</sup> identifying innovation as one core topic that require increased focus. In particular, there is a need for stimulating knowledge transfer between the R&D sector and the public- and private sector. RESINNREG shares this ambition. The

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<sup>8</sup> Elkington, J. (2004): Enter the Triple Bottom Line, in: John Elkington, in Adrian Henriques and Julie Richardson (eds) The Triple Bottom Line: Does It All Add Up? Earthscan.

<sup>9</sup> Kiron, D., Kruschwitz, N., Reeves, M. and Goh, E. (2013): The benefits of sustainable-driven innovation. MIT Sloan Management Review, 54 (2),

<sup>10</sup> Ministry of Education and research (2014): St.meld. nr / (2014-2015): Langtidsplan for forskning og høyere utdanning 2015-2024.

knowledge developed in the programme may contribute to regional development both in Norway and abroad, but we believe that it will have a specific relevance for its home region Western Norway. Western Norway (the counties Rogaland, Hordaland and Sogn og Fjordane) is currently in need for radical innovations. As the most oil-dependent region in Norway, the region is facing a triple challenge. It needs to develop a more diverse and less oil-dependent regional economy; ensure that this restructuring also involves a shift towards greener, environmentally sustainable economic practices; and new jobs must furthermore have similar or higher productivity than those (high-income, high-productivity) jobs they replace in order to uphold the region's economic welfare. Aiming for regional development the programme will both develop ('exploring') and apply ('exploiting') knowledge on how innovations could be directed to cope with these and other acute challenges in the region. Through recruiting candidates graduating from the proposed programme, private and public organisation in the region will also strengthen their capabilities for dealing with the challenges of restructuring.

Fifth, *Industry Innovation-, Social Innovation-, and Green Innovation* studies emerges from strong, established research milieus at the HVL. The Mohn Centre for Innovation and Regional development (industry innovation), Centre for Care Research West Norway (social innovation) and the Department of natural science (green innovation) will take on particular leading roles in their respective fields. These academic environments will be key drivers within their respective research groups. This is corroborated to by involved researcher's academic track records. Involved researchers have shown strong publication records in peer-reviewed international journals, and have participated in and organised international conferences and workshops. This is attested by the publication lists included in Attachment 3.2. Furthermore, the research staff in the *Responsible Innovation and Regional Development Programme* has active research collaboration in these fields with a range of university-level academics and research institutions in several countries (see list in Attachment 3.3).

Finally, the programme represents an interdisciplinary effort on the co-production of knowledge on *Responsible Innovation and Regional Development* through exploring and exploiting innovation, and through facilitating for innovation and regional development in the region of Western Norway and beyond. The scope of disciplines engaged forms a strong basis for interdisciplinary collaboration and the lessons learnt from doing innovation would be nourishing the discourse of understanding innovation, as the case studies within the programme continuously will be fine-tuned in dialogue with existing theories of innovation and new knowledge from ongoing research collaboration including the case studies within the programme. This guaranty for graduation of candidates in position to inform the region about better practice for responsible innovation.

In order to better respond to and integrate global and regional challenges and to include PhD students in broader professional networks, it has been established a user reference group for RESINNREG as a key contact point to the world outside academia. It consists of individuals in key positions in the public sector and private industries, as well as representatives from the broader research environment and one alumni PhD student. The group will among other things contribute with ideas, networks, quality assurance, strategy development, as well as to new academic courses and activities. They will furthermore provide inputs for project plans and reports, different development decisions and assist in initiating PhD projects. The user reference group will arrange two mandatory meetings per year, but will also be invited for internal activities such as workshops or strategy meetings. The user reference group for the PhD programme consists of:

- Hans Martin Moxnes, Director/Regional Director, Vestenfjelske avdeling (EBAV) and EBA Sogn og Fjordane Lokallag.
- Bård Sandal, Director for Regional Development, Hordaland Country Council
- Vegard Frihammer, Green Executive Officer (GEO), Greenstat
- Maria Bos, special advisor, Innovasjon og utvikling, BKK
- Associate Professor José Luis Sánchez Hernandez, Universidad de Salamanca
- Associate Professor Elvira Uyarra, University of Manchester
- One alumni PhD-student (to be appointed)

**Institutional anchoring:** HVL was established in January 2017 through a merge between three former university colleges: Bergen University College, Sogn og Fjordane University College and the University College Stord/Haugesund. The RESINNREG covers all these three former university colleges, where all campuses contribute and are involved in development of the programme. This is attested to by a decision in the Board of HVL, which states that HVL supports and approves the PhD programme presented in this application. Thus, the application for this PhD programme is anchored in the Board of HVL.

The task of developing the proposed PhD programme in *Responsible Innovation and Regional Development* started in 2014 in the former Bergen University College. The mandate was to develop an interdisciplinary PhD programme. This mandate and work has continued throughout the merger process by involving relevant academic environments from the merging partners. The profile is still interdisciplinary and the programme therefore includes research groups from different institutes, research centres and faculties, but with *Responsible Innovation and Regional Development* as the common denominator. Given that RESINNREG is embedded in three strong interdisciplinary research environments at HVL (industry innovation, social innovation, green innovation), it embraces different disciplines and all campuses in the new HVL. This is highly beneficial for the PhD programme, as it utilises resources and academic strengths across thematic fields and well established research groups.

HVL is subject to Act of 1 April 2005 relating to Universities and University Colleges. This act defines the University College Board as the head of the institution and responsible for all managerial decisions. The board consists of thirteen members, comprised of five external members, and eight internal members elected by staff and students. The chairperson for the Board is an external member. HVL has a unitary management structure, where the Rector is the academic and administrative head of the institution. Rector's management team consist of three Pro-rectors; Pro-Rector for Education, Pro-Rector for Cooperation and Pro-Rector for Research as well as two administrative managers.

HVL has established a Learning Environment Committee, an Education Committee, and a Research and Development (R&D) committee and a central PhD committee. These committees are appointed by HVL as advisory bodies to the board and the university college management. It is organised in four faculties: the Faculty of Education; the Faculty of Health and Social Sciences; the Faculty of Engineering and Natural Sciences; the Faculty of Economy and Social Sciences. The faculties are headed by Deans having both academic and administrative responsibility. The Deans operate in close collaboration with the university college management and the administration. In total, Western

Norway University of Applied Sciences has approximately 1600 staff and 16600 students. In recent years, all faculties have developed master's degree programmes strongly rooted in professional studies. Currently, more than 43 different bachelor's degree programmes and 32 master's degree programmes with accreditation from NOKUT are offered by HVL. In addition, several lifelong learning courses are obtainable to active professionals. The interdisciplinary profile of RESINNREG means that PhD candidates will be recruited from different academic disciplines involving all faculties at HVL.

In addition to formal and administrative anchoring, the RESINNREG programme is also anchored in different faculties, departments and research groups. Academic staff from all campuses are involved, and academic resources are made available from the faculties. This means that both the leader group of HVL and the Deans (and their leader groups) have approved participation and encouragement to the PhD programme in Responsible innovation and regional development.

As the new institution of HVL does not have an operational strategy yet, the PhD programme is anchored in the merger agreement (between the three merging university colleges), which states that HVL aims to be excellent in interdisciplinary studies embedded in professional educations. Furthermore, this agreement states that new PhD programmes should be firmly anchored in subject areas central to HVL. This also links up to HVL's ambitions of becoming a university. Today, HVL has accreditation for two doctoral programmes and one joint PhD programme<sup>11</sup>. In 2017, HVL is applying for accreditation of a PhD programme within Health Science, Functioning and Participation, in addition to the current application for a PhD programme in *Responsible Innovation and Regional Development*.

The Board of Bergen University College decided at an early stage in the development of the PhD programme to appoint an external academic reference group. The academic reference group for development of the present programme has consisted of:

- Professor Bjørn M. Hofmann, University of Oslo/NTNU-Gjøvik
- Associate Professor José Luis Sánchez Hernandez, Universidad de Salamanca
- Associate Professor Elvira Uyarra, University of Manchester
- Professor Heidi Wiig Aslesen, BI Norwegian Business School, Oslo
- Managing Director Anders Haugland, BTO Bergen Technology Transfer Office
- Assistant Professor Torunn Herfindal, employee representative, HVL
- Associate Professor Kristin Hinna, deputy employee representative, HVL

We acknowledge the participation of this group, and we believe that their comments and input has strengthen the quality and the profile of this proposal.

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<sup>11</sup> PhD studies in Bildung and Pedagogical Practices (accredited in 2014); PhD program in Computer Science: Software Engineering, Sensor Networks and Engineering Computing (accredited in 2016); PhD program in Nautical Operations (a joint program with University College of Southeast Norway, Norwegian University of Science and Technology, and UiT Thea Arctic University of Norway, accredited in 2016)



# 1. Basic prerequisites for accreditation of the programme

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*Forutsetninger for akkrediteringen. Studietilsynsforskriften § 2-1*

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## 1.1 Rules and Governance

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*(1) Aktuelle krav i lov om universiteter og høyskoler med tilhørende forskrifter skal være oppfylt»*

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The University College Board adopted regulations for the Doctor of Philosophy Degree (PhD) at HVL on 22 December 2016 (Attachment 1.1). The regulations follow the template provided by The Norwegian Association of Higher Education Institutions in 2011. The regulation is very similar to regulations for the Doctor of Philosophy Degree (PhD) at former Bergen University College, but adapted to a new institution. The regulation is valid for all PhD programmes offered by HVL.

Based on the Regulations for the Doctor of Philosophy Degree (PhD) at HVL the Board has adopted a quality assurance system for PhD programmes at HVL (Attachment 1.2). This is based on the quality assurance system for PhD programmes adopted by Bergen University College and approved by NOKUT in 2014, but adapted to HVL.

Two sections in the quality assurance system are particularly relevant to the subject of governance and will therefore be described in the following: the mandate and constitution of 1) the central PhD committee and 2) the faculty based PhD committee (henceforth called programme committee).

The central PhD committee obtains its authority from the HVL Board. The programme committees are based at the faculties operating the individual PhD programmes. The University College Board appoints members of the central PhD committee, while the Dean appoints members of the programme committees.

The mandate of the central PhD committee is as follows:

- The committee develop and administrate guidelines and routines common for all PhD programmes at HVL in line with the Regulations for the Doctor of Philosophy Degree at HVL.
- The central PhD committee is a strategic, coordinating and advisory body to the university college management in matters relevant to PhD education
- The University College Board delegates authority to the central PhD committee in the following matters:
  - Determining the content of the application form

- Establish requirements related to the candidate's obligation to be in residence at the institution
- Revision of the Quality Assurance System for PhD education at HVL (section 2.3-10) in line with the PhD regulation
- Appoint administrative and academic coordinator for the PhD programmes (programme coordinator) after suggestion from the Dean
- Appointing committees for evaluation of doctoral theses and public defence following nomination from the programme committee
- Approving the doctoral examination
- Attending to policy and complaints

It follows from the mandate that the central PhD committee is an advisory body to the university college management in strategic questions. Within the given regulations, the central PhD committee makes decisions and provides advice regarding PhD programmes at HVL. The central PhD committee is also responsible for formulating rules and instructions according to the Regulations for the PhD degree at HVL.

The central PhD committee has 7-9 members and is composed as follows:

- Rector, or pro-rector in charge of research, chairs the committee
- The Dean from each faculty, or someone the Deane gives authority
- One professor from each PhD programme
- Two PhD candidates, from different PhD programmes
- One external professor from a PhD programme at another institution

The research management acts as the secretary of the central PhD committee. The number of committee members is dependent on the number of approved PhD programmes. One student representative from a master's degree programme is invited as an observer. The student representative is appointed for one year by the Student Parliament. Personal substitutes should be appointed for each member of the committee. The regular members of the central PhD committee are appointed for a four-year period with the exception of the representative for the PhD candidates who is appointed for a two-year period. The committee should be composed according to the rules set out by the Law of Equal Opportunity section 13 regarding gender representation.

For every accredited PhD programme, the board appoints a programme committee. The mandate of these committees is as follows:

- The programme committee will discuss and give the Dean recommendations in matters where the Dean seek the committees advice

- The programme committee has authority delegated by The University College Board in the following issues:
  - Determine changes within the syllabus and course plans for the PhD programmes in line with the accreditation
  - Decide upon which, master's degrees should qualify for admission to the PhD programme
  - Approve admission to the PhD programme
  - Approve supervisors, project description, and progress plan
  - Decide upon criteria for the ranking of qualified applicants if the number of applicants exceed the admission capacity
  - Monitor the progress of the PhD candidates enrolled in the programme
  - Appoint external representative in the committee for mid-term evaluation
  - Initiate action to ensure that quality assurance of the programme is maintained
  - Approve the course part of the PhD programme for each PhD candidate
  - Receiving and considering applications for evaluation of the doctoral thesis
  - Nominating members for the evaluation committee for each PhD candidate, which is sent to the central PhD committee for final decision
  - Deciding upon issues relating to individual PhD candidates

The programme committee has five members and is composed as follows:

- Dean or someone the Dean gives authority chairs of the committee (1)
- Three academic staff active in lecturing, supervision or research relevant to the PhD programme (3)
- One PhD candidate from the PhD programme (1)

The chairperson of the programme committee should have competence at the professor level. In total, at least three members of the committee should have competence at the professor level. A professor should be appointed as programme coordinator (person with academic responsibility) for the programme and act as secretary for the programme committee. At least one deputy will be appointed for the academic staff representatives and one deputy for the PhD candidate representative. The programme committee is appointed for a period of four years. The committee should be composed according to the rules set out by the Law of Equal Opportunity section 13 regarding gender representation.

The appointment as programme coordinator counts as 50 % of a professor position, and comes in addition to lecturing and supervision within the programme. The programme coordinator is responsible for the day-to-day operation of the PhD programme, and should coordinate items to be attended to by the programme committee. The programme coordinator reports to the Dean, who has the overall academic and administrative responsibility for the PhD programme. The programme coordinator is together with the programme committee responsible for quality assurance of the programme.

To ensure consistent administration of the PhD programmes at HVL, a full time position responsible for coordinating the administration of the PhD programmes has been established in the central administration of HVL. In addition, the faculty of the given PhD programme will provide administrative resources to operate the programme.

In addition to the adherence to Act of 1 April 2005 relating to Universities and University College, national regulations and the adoption of the Regulations for the Doctor of Philosophy Degree (PhD) at HVL, the University has established a number of guidelines and regulations relevant to the PhD programme: Quality assurance system for PhD programmes at HVL, (Attachment 1.2), guidelines for duty work for PhD research fellows, guidelines for extending the duration of employment for PhD research fellows, guidelines for assessment of applications for admission to doctoral education at HVL, admission requirements and supplementary regulations for the PhD programme in innovation , and guidelines for the admission period of PhD programmes at HVL (Attachment 1.3). In addition HVL has adopted rules for the research ethics committee at HVL as well as guidelines on how to proceed if one suspects violation of the rules for research ethics (Attachment 1.4) Further, the University has developed a form for application for admission to the PhD programmes at HVL (Attachment 1.5) and an agreement on admission to the PhD programmes at HVL (Attachment 1.6).

Should there be any discrepancies in the interpretation of the Regulations for the Doctor of Philosophy Degree (PhD) at HVL, the quality assurance system and the guidelines and procedure descriptions, priority shall be given according to this order. These documents are made accessible at the official web pages of HVL.

### **Diploma and Diploma Supplement**

When required coursework, thesis, trial lecture, and public defence are all approved according to the regulations for the Doctor of Philosophy Degree (PhD) at HVL, the University Board will award the candidate the Doctor of Philosophy degree. The doctoral diploma is issued to the candidate in accordance with section 3-1 in the Act relating to Universities. The doctoral diploma contains the title of the thesis, and details about the courses which the candidate has completed (Attachment 1.7). HVL issues a Diploma Supplement (Attachment 1.7) following the standard specified by the Common Student System (Felles Studentssystem, FS).

The Rector will sign the doctoral diploma

## 1.2 Information about the PhD programme must be correct, and show its content, structure and progression as well as opportunities for student exchange

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*2) Informasjon om studietilbudet skal være korrekt, vise studiets innhold, oppbygging og progresjon samt muligheter for studentutveksling.*

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The attached programme description (Attachment 2.1) for the PhD programme in Responsible Innovation and Regional Development describes the content of the phd programme, structure, progress as well as opportunities for student exchange. These issues are also discussed in the next chapter of this application (Section 2).

| <b>Table 1: Attachments for basic prerequisites for accreditation /<br/>Vedlegg til Grunnleggende forutsetninger for akkreditering</b>     | <b>Attachment No. / Vedlegg<br/>nr.</b> |
|--|---|
| Regulations for the Doctor of Philosophy Degree (PhD) at HVL   | 1.1                                     |
| Quality assurance system for PhD programmes at HVL   | 1.2                                     |
| Guidelines for PhD education at HVL  | 1.3                                     |
| Rules for the research ethics committee at HVL and guidelines on how to proceed if one suspects violation of the rules for research ethics | 1.4                                     |
| Application form   | 1.5                                     |
| Agreement on admission   | 1.6                                     |
| Doctoral Diploma and Diploma Supplement  | 1.7                                     |

## 2. Requirements for the PhD programme

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Krav til studietilbudet. Studietilsynsforskriften § 2-2

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### **2.1 The learning outcome of the PhD programme should be described in accordance with the National Qualifications Framework for Lifelong Learning, and the phd programme should have an adequate title**

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*(1) Læringsutbyttet for studietilbudet skal beskrives i samsvar med Nasjonalt kvalifikasjonsrammeverk for livslang læring, og studietilbudet skal ha et dekkende navn*

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#### 2.1.1 The learning outcome of the PhD programme

The PhD programme in Responsible Innovation and Regional Development (RESINNREG) is a doctoral education aimed at candidates who want to qualify for research and scientific work at a high international level within the field of innovation studies. RESINNREG enables the graduates to pursue a research career in academia as well as positions in the private and the public sector linked to responsible innovation and regional development efforts.

RESINNREG specifically puts emphasis on exploring and exploiting innovation. Independent of the specific area of specialisation, PhD candidates graduating from the programme will have state-of-the-art research knowledge, skills, and competences within exploring and exploiting innovation aiming for responsible innovation and regional development.

In addition, PhD candidates graduating from the programme will have state-of-the-art research knowledge, skills, and competences within one or more of the main topics of the research groups of *Industry Innovation*, *Social Innovation* and *Green Innovation*. Each research groups contribute to the programme with a course (Innovation and Industry Development, Innovation in the Public Sector, Innovation and Sustainable Transition).

The overall learning outcome of the PhD programme in Responsible Innovation and Regional Development is described below in terms of knowledge, skills and general competence. Upon completion of the programme, the candidate ...

#### **Knowledge**

- **K1:** is in the forefront of researching Responsible Innovation and Regional Development and in a specialisation area rooted in one of the fields of Innovation and Industry Development, Innovation in the Public Sector, and Innovation and Sustainable Transition.
- **K2:** has comprehensive knowledge on state-of-the-art concepts and methods within the research field of Responsible Innovation and Regional Development and within his/her area of specialisation.

- **K3:** is a contributor to new knowledge and potential new theories and concepts, methods and documentation within the field of exploring innovation
- **K4:** has comprehensive knowledge on methods and practices for exploiting research knowledge and transforming research findings into innovations

### **Skills**

- **S1:** can formulate research hypotheses, plan, and carry out independent theoretical- and applied research work within his/her area of specialisation.
- **S2:** is able to carry out research work of high international standards that advances the forefront of knowledge and application of Responsible Innovation and Regional Development within his/her area of specialisation.
- **S3:** can review research work within his/her area of specialisation, relate it to the forefront of knowledge, and assess its applicability for society.
- **S4:** is able to perform research that challenges established theory, concepts, approaches and methods within the research field of Responsible Innovation and Regional Development.
- **S5:** can identify and assess the need for responsibility in innovation and regional development.
- **S6:** initiate and contribute to innovation projects that involve Industry Innovation, Social Innovation and Green Innovation.

### **General competence**

- **G1:** can identify relevant ethical issues pertinent to Innovation and Regional Development research and its application in society.
- **G2:** can carry out research work with scholarly integrity and in accordance with the established scientific norms and traditions for research within the field of Responsible Innovation and Regional Development.
- **G3:** can participate in interdisciplinary assignments and projects involving research into, and application of, one or more of the fields of Industry Innovation, Social Innovation, and Green Innovation.
- **G4:** can disseminate and publish research results through recognised channels, including scientific workshops, conferences, and journals within the research field of innovation.
- **G5:** can participate in research discussions and research collaboration internationally on scientific topics within his/her area of specialisation.

### 2.1.2 Justification for the overall learning outcome

As described in the overall description of the programme, RESINNREG mirrors the specificities of HVL and its innovation research. It is embedded in professions and an explorative approach as well as an exploitative dimension. It furthermore takes on a regional development role and aims to produce knowledge that can be applied to contribute to solve regional challenges, such as green economic restructuring in the aftermath of the oil price crash. This particular approach is evident in the learning outcomes and emphasised in the knowledge outcomes which requires that candidates are in the forefront of researching Responsible Innovation and Regional Development and has comprehensive knowledge on state-of-the-art concepts and methods within the research field of Responsible Innovation and Regional Development and within his/her area of specialisation. They also require that candidates contribute to new knowledge in the field and has extensive knowledge on research practices.

The skills outcomes emphasise the exploitative and practically oriented dimensions of the programme. As RESINNREG has an explicit focus on *innovation as practice*, attested to by e.g. the course 'Doing innovation – innovation as exploitation', where we aim to give the candidates unique opportunities to not just understand but also to participate as change agents in regional firm, organisations and public institutions. For the candidates, this means that they will benefit from linkages to surrounding actors, and that they are involved in real-world processes taking place in the region. This practical experience will, as indicated in the skills learning outcomes, strengthen the candidates capacities to identify and assess the need for responsibility in innovation and regional development and to initiate and contribute to innovation projects that involve their respective areas of specialisation. The skills outcomes also emphasise general learning outcomes such as the ability to formulate research hypotheses and review research work within the respective specialisation of the candidate.

The general competence outcomes integrates the concept of *responsible innovation*; i.e. how innovations can meet welfare- and environmental challenges in addition to economic/productive tasks, with the concept of *regional development*, i.e. how these innovations can contribute to an advantageous and sustainable development in the region. The courses will thus emphasise teaching students to identify and critical evaluate innovation efforts and their implication for society, , and to carry out research work with scholarly integrity and in accordance with the established scientific norms and traditions for research. The general competence outcomes also emphasise the ability to work in interdisciplinary as well as participating in research discussions and dissemination of research knowledge, which are necessary skills in for researchers. Table 5 in section 2.4.2 specifies how the courses of RESINNREG relates to the overall learning outcomes of the programme.

### 2.1.3 The name of the PhD programme

The English name of the PhD programme of study is: *Responsible Innovation and Regional Development*.

The Norwegian name of the PhD programme of study is: *Ansvarlig innovasjon og regional utvikling*.

The title of the PhD programme mirrors its specific approach to innovation research.



The programme combine the concepts of *responsible innovation*; i.e. how innovations can meet welfare- and environmental challenges in addition to economic/productive tasks, with the concept of *regional development*, i.e. how these innovations can contribute to an advantageous and sustainable development in the region.

The programme is oriented toward an explorative as well as an exploitative dimension. The latter links up to the HVL tradition of educating candidates with professional qualifications that are practice oriented. Accordingly, the programme has an explicit focus on *innovation as practice*. This is attested to by e.g. the course 'Doing innovation – innovation as exploitation', that gives the candidates unique opportunities to not just understand but also to participate as change agents in regional firm, organisations and public institutions. For the candidates, this means that they will benefit from linkages to surrounding actors, and that they are involved in real-world processes taking place in the region. The concept of 'Doing innovation – innovation as exploitation' is further elaborated in the overall description of the PhD programme as well as section 3.1.4.

## **2.2 The PhD programme must be academically up-to-date and clearly relevant to further studies and /or work life**

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*(2) Studietilbudet skal være faglig oppdatert og ha tydelig relevans for videre studier og/eller arbeidsliv*

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### **2.2.1 Relevance**

The RESINNREG programme enables the graduates to pursue a research career in academia as well as in industry linked to innovation efforts. The programme is embedded in ongoing research at HVL linked to state of the art of research in the fields of responsible innovation and regional development. This is attested to by high publication activity in leading international journals by all the three research groups, as displayed in the publication list included in Attachment 3.2. In addition, attendance at international conferences are an important indication of how involved researchers keep up with the state of the art of research within their respective fields. Moreover, it is reflected by the courses offered by the programme, where involved personnel partly build on their own internationally published peer-reviewed research in their education of the PhD students.

In addition, the PhD programme has strong linkages to regional work life and society as such. As the programme has an explicit focus on exploring and exploiting innovation, , RESINNREG gives the candidates unique opportunities to not just understand but also to participate as change agents in regional firm, organisations and public institutions. It means that they will benefit from linkages to surrounding actors, and that they will be involved in real-world processes taking place in the region. This also represents the candidates with opportunities for developing professional networks, relations and linkages to regional actors that might be important for generating job opportunities for the candidates.

In order to better respond to and integrate such societal challenges, and to include PhD students in broader professional networks, a user reference group for the PhD programme has been established as a key contact point to the world outside academia. It consists of individuals in key positions in the public sector and private industries, as well as representatives from the broader international research environment and PhD students. The group will among other things contribute with ideas, networks, quality assurance, strategy development, as well as to new academic courses and activities. The applied research profile of the proposed PhD programme combined with the substantial industrial contact network of the research groups means that the programme is also well-suited for candidates financed by the Industrial PhD scheme and Public PhD scheme organised by the Research Council of Norway, that will undertake PhD projects that generate relevant knowledge for industry and public institutions.

An important contemporary example of a regional challenge where PhD students will help produce relevant knowledge and gain competencies, is the current need of economic restructuring in Western Norway. Falling oil prices and the challenge of greening the economy, presents the most oil-dependent region in Norway with a dual task: It needs to develop a more diverse and less oil-dependent regional economy, and ensure that restructuring involves a shift towards greener and environmentally sustainable economic practices.. Through recruiting candidates graduating from the proposed programme, private and public organization in the region will strengthen their capabilities for dealing with the challenges of restructuring.

### 2.2.2 Ensure that the PhD programme is academically up to date

Peer-reviewed publications are important for securing validity and reliability of the quality of the PhD programme, and we believe that the group represents a stronghold in research on responsible innovation and regional development. This is, more specifically, attested to by high publication activities by the involved researchers, and not least, by the international, academic networks in which the researchers participate. For instance, representatives are involved as editors of international, peer-reviewed journals (further elaborated in section 3.2.6), as academic facilitators of research conferences (e.g. *Regional Innovation Policies Annual Conference 2018*) and through reviewer activities. Lastly, as the researchers have a solid record of accomplishment in acquisition of external funding (e.g. The Research Council of Norway and Horizon 2020); we believe this is a good indication of our participation in the state of the art of research on responsible innovation and regional development.

### 2.2.3 Recruitment of PhD students

There are four master programmes at HVL representing the key recruitment channel for the PhD; Master programme in Innovation and Entrepreneurship, Master programme in Innovation Management, Master programme in Community Work and the Master programme in Climate Management. The first two has its main focus on industry innovation, the next emphasise social innovation while the final programme is specialising in green innovation. Table 2 displays the number of enrolled and graduated students in each programme.

**Table 2: Students enrolled in and graduated from master programmes**

| Programme   | No. of enrolled students | No. of graduated students         |
|---|--------------------------|-----------------------------------|
| Master programme in Innovation and Entrepreneurship | 35                       | 61                                |
| Master programme in Innovation Management           | 45                       | 20                                |
| Master programme in Community Work                  | 20                       | 70                                |
| Master programme in Climate Change Management       | 36                       | 0 (programme established in 2016) |

There are also other master programmes at HVL that potentially can provide candidates to the PhD programme such as the Master in Software Engineering, the Master in Maritime Operations, the Master in Change Management and the Master in Collaboration in Health and Care. The master's degree programmes, and the associated staff members, constitute an important foundation for the proposed PhD programme. The programme will furthermore recruit students with equivalent or other relevant master degrees from external institutions both nationally and internationally.

The applied research profile of the proposed PhD programme combined with the substantial industrial contact network of the research groups means that the programme is also well-suited for candidates financed by the Industrial PhD scheme and Public PhD scheme organised by the Research Council of Norway. The Mohn Centre is already hosting students funded by the public PhD scheme. Through giving the candidates thorough skills related to exploring and exploiting responsible innovation and regional development, the programme offers unique opportunities for continued efforts either in academic positions or in jobs outside academia. Given that the programme is focused on generating strong linkages to regional actors in the private and public sectors, and that HVL has a tradition of being an active participant in the regional work life and society, the candidates are represented with opportunities both within academia and outside. The user reference group for the PhD programme will be a key contact point to the world outside academia. It consists of individuals in key positions in the public sector and private industries, as well as representatives from the broader research environment and PhD students. The group provide inputs for project plans and reports, different development decisions and assist in initiating PhD projects.

This is beneficial for the candidates, as they are able to see the usefulness and importance of their knowledge and skills to a host of actors – both academic and non-academic. As the candidates are included in active research groups, this will benefit their possible careers in academia. Similarly, as the programme – and involved researchers – have very strong linkages to innovation practice and regional innovation activity, candidates are also introduced to possible career paths outside academia (i.e. work as innovation manager in private or public firms/organisations).

Due to persistent issues of gender imbalance in the academic sector, the programme will in particular emphasise gender balance as an important part of its recruitment. The gender balance among researchers included in the programme is 23 men and 22 women. As described in Table 9 in section 3.1.6, there is also approximate gender balance in terms of the currently associated PhD students, with 7 men and 6 women. In terms of researchers with course responsibilities listed in the attached study programme, there are 10 men and 10 women. As part of its recruitment strategy, the PhD programme will also aim at announcing all research fellow positions in English as well as in Norwegian to attract the best candidates nationally and internationally. The programme will furthermore ensure a balanced recruitment to the research groups that constitute the programme. We find 15-20 PhD candidates to be a realistic number of PhD candidates to supervise and obtain funding for as part of the proposed programme. This volume will allow for approx. 6 PhD candidates to be associated with each of the research fields included in the programme.

## 2.3 The total workload of the PhD programme should be 1500-1800 hours per year for full-time studies

*(3) Studietilbudets samlede arbeidsomfang skal være på 1500–1800 timer per år for heltidsstudier*

The RESINNREG is a PhD programme and thus includes a small course component, compared to hours designated for self-studies dedicated to the PhD dissertation. The programme is divided into a coursework (training) part of 30 ECTS, and a dissertation part of 150 ECTS that is completed with the PhD defence. All courses are of 5 ECTS with a calculated workload of 140 hours per course. This includes preparation, self-study, student and teacher-controlled learning activities, as well as work requirements and examinations. The PhD programme is a full-time programme with a nominal completion time of 3 years. A full-time student work 1688 hours per year, equivalent to one full-time equivalent for academic staff. For candidates employed in PhD research fellow positions of four years with 25 % teaching duties, the PhD studies will span a period of four years.

**Table 3: Workload divided by organised teaching activities, self-study and exam preparation**

| Course titles  | Learning activities (hours) | Self-study (hours) timer | Exam preparation (hours) |
|--|-----------------------------|--------------------------|--------------------------|
| PHDINN901<br>PhD Dissertation in Responsible Innovation and Regional Development |                             | 4140                     |                          |
| PHDINN902<br>Philosophy of Science, Research Ethics and                          | 45                          | 60                       | 35                       |

|  |    |    |    |
|--|----|----|----|
| Innovation in Scientific Work  |    |    |    |
| PHDINN903<br>Understanding and Exploring<br>Innovation                     | 20 | 30 | 90 |
| PHDINN904<br>Doing and Exploiting<br>Innovation                            | 20 | 30 | 90 |
| PHDINN905<br>Methodology: Decision<br>making for responsible<br>innovation | 20 | 30 | 90 |
| PHDINN906<br>Innovation and Industry<br>Development                        | 40 | 70 | 30 |
| PHDINN907<br>Innovation in the Public<br>Sector                            | 40 | 70 | 30 |
| PHDINN908<br>Innovation and Sustainable<br>Transition                      | 40 | 70 | 30 |

## 2.4 The content, structure and infrastructure of the PhD programme must be adapted to the learning outcomes of the programme

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*(4) Studietilbudets innhold, oppbygging og infrastruktur skal være tilpasset læringsutbyttet for studietilbudet*

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### 2.4.1 The content of the programme

The RESINNREG programme is organised as a full-time programme spanning three years and is divided into a training (coursework) component consisting of 30 ECTS, and a PhD dissertation component consisting of 150 ECTS. The programme offers seven PhD courses as part of the programme's training component, of which three are mandatory course and four are elective courses.

Table 4 gives an overview of the content and structure of the PhD. The table specifies the course code, title and credits (measured in ECTS) for each course or part of the programme, and indicates whether a given course is a mandatory or an elective course. The different parts of the programme are described and discussed in further detail below. A detailed specification of each course including learning outcomes is provided in the study programme included in Attachment 2.1.

**Table 4: Course codes, titles, credits of mandatory and elective courses of the PhD programme in Responsible Innovation and Regional Development**

| Course code | Title  | Credits (ECTS) | Mandatory/<br>Elective    |
|-------------|--|----------------|---------------------------|
| PHDINN 901  | PhD Dissertation in Responsible Innovation and Regional Development      | 150            | Mandatory                 |
| PHDINN 902  | Philosophy of Science, Research Ethics and Innovation in Scientific Work | 5              | Mandatory                 |
| PHDINN 903  | Understanding and Exploring Innovation                                   | 5              | Mandatory                 |
| PHDINN 904  | Doing and Exploiting Innovation  | 5              | Mandatory                 |
| PHDINN 905  | Methodology<br><br>Decision making for responsible innovation            | 5              | Mandatory<br><br>Elective |
| PHDINN 906  | Innovation and Industry Development                                      | 5              | Elective                  |
| PHDINN 907  | Innovation in the Public Sector  | 5              | Elective                  |
| PHDINN 908  | Innovation and Sustainable Transition                                    | 5              | Elective                  |

## Courses

The *Philosophy of Science, Research Ethics and Innovation in Scientific Work* is a mandatory course for the PhD candidates enrolled in the PhD programme (see Table 4). The aim of the course is to develop a thorough understanding of research methodologies and their grounding in the philosophy and history of science, and the application of these in the field of Responsible Innovation and Regional Development. The course aims to give a solid foundation for understanding and reflecting on the ethical and legal aspects related to conducting scientific research, to discuss scientific work practices within the research fields covered by the programme of study, and to introduce the candidates to the process of innovation as a link between the research process and the industry.

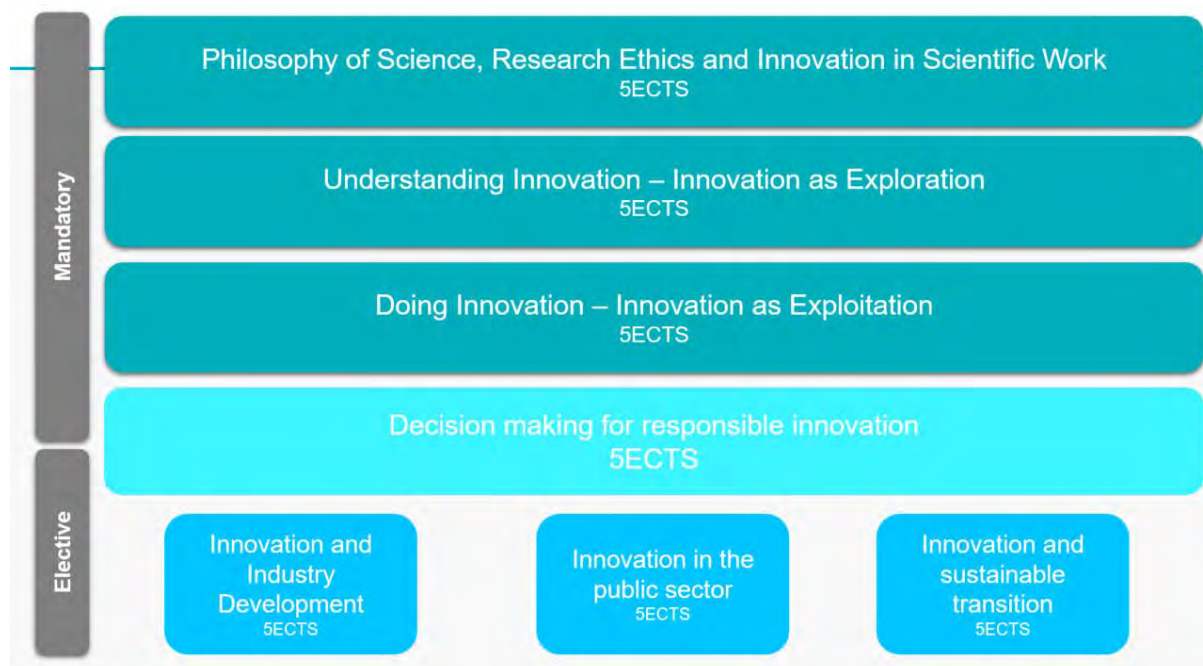
Likewise, the course *Understanding innovation – innovation as exploration* is mandatory course within RESINNREG. The course provide state-of-the-art knowledge, skills, and competence in the research field of innovation. The students take part in a three-day workshop coalescing lectures and seminars; in an essay writing process of approximately three weeks; and in a 45 minutes oral

presentation of the written essay. The workshop covers lectures on theoretical perspectives and core concepts central in innovation research providing an overview of the research field including approaches on responsible research and innovation (RRI), innovation systems, cluster development, actor-network theory, and different types of entrepreneurship. In addition, the workshop contains seminars on the relations between relevant theories and the individual PhD projects. The seminars function as a kick off for the writing process of an essay closely related to some of the theoretical, methodological and ethical questions in the students PhD project.

Experienced with *Understanding innovation – innovation as exploration*, the next mandatory step for the candidates in the PhD programme is the course *Doing innovation – innovation as exploitation*. This course provides the students with knowledge of how to exploit research findings and introduce and develop innovations in practical settings. The course gives a broad as well as in-depth introduction to the “doing and exploiting of innovation” in different organisations, industries and sectors. While the course deals with R&D and innovation in organisations in general, the emphasis is on the processes of managing technological innovations in real life. The course is organised around practical workshops including case studies of technology implementation within industry technologies, health technologies and «green» technologies. Based on the lessons from the workshops the students need to reflect on their own PhD project in a practical setting and/or on the implications of handling innovation in practice. This will be presented in poster form for an audience including one student fellow opponent and one opponent from the industry.

It is also compulsory for the candidates in the PhD programme to follow one methodology course equivalent to 5ECTS. This can be the methodology course offered within the programme, *Methodology – Decision making for responsible innovation*, but it may be replaced by a methodology course from alternative PhD-programmes within HVL or a methodology course at PhD level from another institution). It is important that the PhD students choose a methodology course relevant to their research project. In the course offered in this PhD programme *Methodology – Decision making for responsible innovation* the students are introduced to methods supporting decision making concerning innovation. The course is delivered through a combination of lectures, seminars, class presentations, practical and computational class work, while the student performances are assessed through coursework, essays, and experimental projects.

**Figure 3: Course structure of the PhD programme in Responsible Innovation and Regional Development**



The programme also offers three elective courses *Innovation and Industry Development* organised by the industry innovation research group; *Innovation in the Public Sector* organised by the social innovation research group and *Sustainable Transition* organised by the green innovation research group of which the students can choose none, one or, or a combination of two. The choice of elective courses will depend on the particular area of specialisation of the candidate. As a first choice, PhD candidates specialising in *Industrial Innovation* will typically follow the PHDINN906 – *Innovation and Industry Development*; PhD candidates specialising in *Social Innovation* will typically follow PHDINN907 – *Innovation in the Public Sector*, while PhD candidates specialising in *Green Innovation* will typically follow the PHDINN908 - *Innovation and Sustainable Transition*. The courses *Innovation and Industry Development*, *Innovation in the Public Sector* and *Sustainable Transition* are assessed through a turn paper not exceeding 2000 words.

Acknowledging the systemic nature of the innovation process, the *PHDINN 906: Innovation and Industry Development* course elaborates upon actors, organisations and institutions, and their interlinkages, to understand drivers and obstacles for Industry Innovation. The course introduce the students to current research on the dynamism of innovation systems and how such dynamics are related to internal- and external conditions; structural conditions; different types of agency, etc.

The course *PHDINN 907: Innovation in the Public Sector* provide state-of-the-art knowledge, skills, and competence in the research field of innovation in the public sector. Public sector innovations are often institutional innovations. They involve the creation and institutionalisation of new practices. In this way, institutional innovations are socially constructed. They transform the way we think about public organisations as well as the practices within these organisations. The course will give an understanding of how comprehensive governance innovations and concepts are developed and spread. Focus is also given to the current trend towards collaborative, cross sector organisation



forms as tools for public sector innovation. Lastly, the course focuses on innovations in public service production and delivery, with a special attention to health and welfare services. The role of professions and professionals will get particular attention as drivers of change, together with the impact of new technologies and organisational forms on innovative practices. The course will stress processes of innovation, exploring how various actors (individuals, groups, organisations, corporations) have a role in the origin, spread and implementation of innovations.

Finally, the course *PHDINN 908: Innovation and Sustainable Transition* cope with sustainability challenges such as climate change, the provision of clean and reliable energy and the continued access to critical resources like water or rare earth materials. The course is based on a socio-technological systems approach and is rooted in transition theories focusing on major systems of energy- and material-production & consumption. The analytical toolbox of the course comprises foresight analysis, agent based modelling, dynamic network analysis, and methods for decision making under uncertainty. Focal methods to analyse sustainability effects are integrated assessment, life-cycle-assessment and material flow analysis.

#### **Other credit awarding activities**

In addition to the PHD courses offered at HVL, the PhD candidates are recommended to take courses relevant to their PhD project at other institutions, participate in international PhD summer/winter schools, and present their projects at international conferences and other forms of research dissemination. Some of the courses offered by NORSI (Norwegian Research School of Innovation) are especially relevant for our candidates. NORSI is a national research school for PhD students within the field of innovation, and is hosted by NTNU.

#### **The PhD dissertation component of the programme**

The candidate is required to contribute with new knowledge and original research results within his/her area of specialisation by writing a thesis. The thesis may have the form of a monograph or a collection of papers published in, or submitted to, peer-reviewed international workshops, conferences or journals. In the case of a thesis organised as a collection of papers, at least one paper must have been published or accepted for publication in a high-quality journal or conference. A thesis organised as a collection of papers will consist of minimum 3 papers and it is additionally required to write an overview paper (kappe) as part of the thesis. This overview paper (kappe) must introduce the topic of the thesis and discuss the papers and research results obtained in the context of state-of-the-art within the particular area of specialisation of the thesis. Papers that are part of a thesis consisting of published and submitted papers are allowed to have co-authors. The thesis must then be accompanied by co-authors' statements specifying that the candidate contributed with a substantial amount of the work. This publication requirement is also specified in the admission requirements and supplementary regulations for the PhD programme (Attachment 1.1).

Successful completion of the RESINNREG programme leads to the degree of Philosophiae Doctor (PhD).

## 2.4.2 Justification for how the structure of the programme ensures that the student obtain the learning outcome

Section 2.1.1. specifies the learning outcomes for the different courses of REGINNREG. PHDINN 902: Philosophy of Science, Research Ethics and Responsible Innovation is a mandatory course. The aim of the course is for the candidates to develop a thorough understanding of research methodologies and their grounding in the philosophy and history of science, and the application of these to practical work in the field of innovation research. Further, the course performs a critical discussion of the research tradition of 'Responsible Research and Innovation'. The course also aims to give a solid foundation for understanding and reflecting on the ethical and legal aspects related to conducting scientific research. This course is thus gives an introduction to philosophy of science and a basis for participation in the other parts of the PhD programme. As such, it contributes to the fulfillment of all learning outcomes. This is reflected in Table 5 below.

The aim of the mandatory course PHDINN903: Understanding innovation – innovation as exploration” is to give an overview of the state of the art within the research field of innovation. The course focuses on ontological and epistemological issues pertaining to the concept of innovation and explores the multiple understandings of innovation; how the concept of innovation is defined; how innovation is analytically framed and empirically approached; and how innovation research inform policy makers and other stakeholders. PHDINN903 does contain all learning outcomes except from K4 and S6. These learning outcomes are addressed by the mandatory course PHDINN904: Doing and Exploiting innovation. It aims to provide participants an increased understanding of handling innovation in practice. The course includes approximately four weeks of practice for each individual doctoral student in a private or public organisation. After discussing seminal theories from e.g. diffusion of innovation, innovation transition and influence from entrepreneurship, concrete examples for handling innovation in organisations will be presented and discussed.

The learning outcomes pertaining to exploiting innovation are also fulfilled by the methodology course PHDINN905: Decision making for Responsible Innovation. It focuses on modelling of decision making for responsible innovation in organisations and firms. It thus does not give contextual understanding to the respective specialisation of PhD students, but teaches relevant knowledge for K2 and K4 such as methods for researching responsible innovation and transforming research findings into innovation. The course will furthermore allow students to conduct research on the cutting-edge of interesting questions in decision making related to innovation, enhancing their ability to perform innovation research described in S2 and S3, and to utilise concepts of responsibility applied in S5 and S6 as well as in the general competence learning outcomes.

The in depth knowledge of the respective research field in RESINNREG (industry innovation, social innovation and green innovation) is taught by the three elective course: PHDINN906: Innovation and Industry Development, PHDINN907: Innovation in the Public Sector and PHDINN 908: Innovation and Sustainable Transition. These electives fulfil learning outcomes pertaining to the ability to do research on responsible innovation and regional development, dissemination of research as well as carry out research work in with integrity and ethical issues pertinent to the use of research in society.

**Table 5: The overall learning outcomes of the programme and their relations to the courses of the PhD programme. An asterisk (\*) is used to indicate that the course component provides a main contribution to the candidate obtaining the intended learning outcome.**

|                               | PHDINN<br>901:<br><br>PhD<br>Dissertation | PHDINN<br>902:<br><br>Philosophy<br>of Science,<br>Research<br>Ethics and<br>Responsible<br>Innovation | PHDINN<br>903:<br><br>Understan<br>ding and<br>Exploring<br>Innovation | PHDINN<br>904:<br><br>Doing and<br>Exploiting<br>Innovation | PHDINN<br>905:<br><br>Decision<br>making for<br>Responsible<br>Innovation | PHDINN<br>906:<br><br>Innovation<br>and Industry<br>Development | PHDINN<br>907:<br><br>Innovation<br>in the<br>Public<br>Sector | PHDINN<br>908:<br><br>Innovation<br>and<br>Sustainable<br>Transition |
|-------------------------------|---|--|--|---|---|---|--|--|
| <b>Knowledge</b>              |   |  |  |   |   |   |  |  |
| <b>K1</b>                     | *   | *  | *  | *   |   | *   | *  | *  |
| <b>K2</b>                     | *   | *  | *  | *   |   | *   | *  | *  |
| <b>K3</b>                     | *   | *  | *  |   |   | *   | *  | *  |
| <b>K4</b>                     | *   | *  |  | *   | *   |   |  |  |
| <b>Skills</b>                 |   |  |  |   |   |   |  |  |
| <b>S1</b>                     | *   | *  | *  | *   | *   | *   | *  | *  |
| <b>S2</b>                     | *   | *  | *  | *   |   | *   | *  | *  |
| <b>S3</b>                     | *   | *  | *  | *   | *   | *   | *  | *  |
| <b>S4</b>                     | *   | *  | *  | *   |   | *   | *  | *  |
| <b>S5</b>                     | *   | *  | *  | *   | *   | *   | *  | *  |
| <b>S6</b>                     | *   | *  |  | *   | *   |   |  |  |
| <b>General<br/>competence</b> |   |  |  |   |   |   |  |  |
| <b>G1</b>                     | *   | *  | *  | *   | *   | *   | *  | *  |
| <b>G2</b>                     | *   | *  | *  | *   | *   | *   | *  | *  |
| <b>G3</b>                     | *   | *  | *  | *   | *   | *   | *  | *  |
| <b>G4</b>                     | *   | *  | *  |   | *   | *   | *  | *  |
| <b>G5</b>                     | *   | *  | *  | *   | *   | *   | *  | *  |

### 2.4.3 Infrastructure

#### **Academic support**

The University Board has the overall responsibility for the PhD programmes at Western Norway University of Applied Sciences. The university is committed to offering high quality education and sees it as important to offer research based professional study programmes from the Bachelor's level to the PhD level. Hence, the University has built a solid administrative and academic support system for PhD candidates. This includes coordinated administrative units, a programme coordinator for each PhD programme (person with academic responsibility for the given programme), and research group leaders and supervisors. In addition, the University has focused on research with the intent of developing research and doctoral education, the Centre for New Media (see description below) has focused on the use of new media in teaching and research dissemination, and the Mohn Centre for Innovation and regional development (see description below) has been focused on entrepreneurship, including innovation research, and on facilitating innovation projects involving HVL researchers and external partners such as the public sector and companies. An extensive description of the Mohn Centre and its research activities is included in section 3.2.3.

The dean at the Faculty of XX has the overall responsibility of ensuring that the PhD candidates are integrated in the faculty's research environment. One of the professors involved in the PhD programme will be appointed programme coordinator (person with academic responsibility). The vice dean for research, the research group leaders, and the supervisors are, jointly with the programme coordinator, responsible for the integration of PhD candidates in the research environment on a daily basis. HVL guarantees good workplace facilities for all its employees. The office of the PhD candidate will be in close proximity to the three research groups and their physical environments.

The programme committee has the responsibility of ensuring that each PhD candidate is part of an active research group. This will be done during the admission procedure, along with annual reports made by the PhD programme coordinator for the Responsible Innovation and Regional Development programme. The programme coordinator is responsible for the day-to-day operation of the programme, and is required to keep close contact with all PhD candidates and their supervisors. The PhD candidate and the supervisor are required to send individual annual progress reports to the programme committee. Based on the reports, the programme coordinator conducts review meetings with each PhD candidate and supervisor separately.

HVL will make available the resources required to operate the PhD programme. The administration will cover administrative costs, including the part time position as programme coordinator, costs for staff involved in administrative procedures, and the compensation of costs related to the central PhD committee and the programme committee. HVL will also cover costs related to assessment, trial lectures, and public defence of the thesis.

Faculty of XX will cover the resources required for the scientific staff associated with this programme.

#### **Administrative support services**

In accordance with the system for quality assurance of PhD education at HVL, several sections of the administration are involved in the operation of PhD education at HVL: The research administration,

Academic Affairs and Quality Office, Staff and Organisation Development Office, Division for Communications, Finance Office and Externally Funded Activities, Estate Management Services and Library

The research administration has the main responsibility for the administration of the PhD programme. A full time position responsible for coordinating the administration of the PhD programmes has been established in the central administration at HVL. In addition, the faculty of the given PhD programme will provide administrative resources to operate the programme. The division's research advisers may also help candidates with questions relating to the processing of personal data, intellectual property rights and with applications for additional grants from the Research Council of Norway, the EU and other funds, especially those directed towards student exchange of a longer duration to one of HiB's partner institutions abroad. Finally, the section organises courses for PhD supervisors with international speakers. An important aim of the course is to address challenges from a PhD candidate perspective.

The Academic Affairs and Quality Office has the overall responsibility for registering PhD candidates in The National Student Database (FS), to assist candidates in registering for PhD courses, to assist candidates with registration for examinations and answer student questions related to examination, as the section does for programmes in the first and second cycle. The Academic Affairs and Quality Office also has an international office for student exchange that will assist PhD candidates in organising and answering questions related to a stay abroad.

The Staff and Organisation Development Office is responsible for helping PhD research fellows in all aspects relating to their employment at HiB, such as questions related to salary, parental leave, sick leave and extension of the period of employment. The person in charge of human resources at the Faculty is the contact person of the research fellows in these questions and will refer the research fellow to Staff and Organisation Development Office. The unit has appointed a person in charge of research fellows.

The Division for Communications will advise the PhD candidates in dissemination of their research to the general public. The unit will also cooperate with the Centre for New Media on media training.

The Finance Office and Externally Funded Activities will, in dialogue with the coordinator of the PhD programme, administrate an account for covering work expenses for each research fellow. All research fellows employed by HVL are granted NOK 50 000 a year for work expenses, in order to finance expenses related to the PhD education in general, and to their research project in particular. The PhD research fellows manage this funding in dialogue with his or her supervisor, and they are transferable from one year to the next for instance if the research fellow wishes to save up for a research stay abroad.

Computing Services, organised under the Finance Office and Externally Funded Activities, is responsible for necessary computer equipment, authorisations and telephone. All PhD research fellows will get their own laptop and access to safe storage of research data on a proper research server.

The Estate Management Services is, together with the faculty, responsible for organising office space for the PhD research fellows.

Upon admission to the PhD programme, HVL offers all PhD candidates an introduction seminar about their rights and obligations in relation to the PhD education, and information about what kind of assistance HVL offers.

### **Library services:**

The library renders common services to all the faculties and research centres in the college, and it has 42 employees. Each of the campuses has a physical library that offers standardised services and has qualified staff who are profiled in all the functions that the library is engaged with. After the merger of the three colleges, library resources have increased considerably in size and coverage. Internally, the library is organised along function-units that focus on study and research support services, information and digital resource services and user services.

The library aims to support the college to reach its objectives geared towards education, innovation, research and development by:

- Collecting, administering and disseminating general and subject specific knowledge sources;
- Giving study and research support services that lead towards the development of necessary knowledge and competencies that students and employees need to search, find, evaluate and integrate knowledge sources in their education, research and professional practices;
- Supporting researchers and PhD candidates in disseminating and documenting their research outcomes.

Compliant with HVL's strategic plan to increase its research activities, the library has been continuously developing its research services and resources in order to be able to offer tailored research support to individual researchers, research groups and PhD education programs. To this end, it has been building up the research competence of its staff members and has employed research librarians and senior research librarians. A research support team is specifically mandated to respond to the research support needs of the newly established PhD programs. Future PhD candidates who will be admitted to the Responsible Innovation and Regional Development program will have full access to the library services and resources found in all HVL campuses.

**Access to information resources:** As per 2017, the library has in its general collections about 90,000 printed books and about 211 000 electronic books and journals. The library acquires these resources through packages supplied by publishing companies and consortia agreements. The leading suppliers of our journal articles and digital books are EBSCOhost, SpringerLink and Standard Collection, Taylor & Francis, Science Direct and Proquest. The library also use publisher companies such as Sage and Wiley. Since the PhD program in RESINNREG is multidisciplinary, literature sources relevant to the study are collected under different disciplines such as economy, engineering, health and social science. The library has subscriptions to top databases relevant for these different areas. For economy and engineering subjects, it has Business Source Elite, Marketline, Business News, ACM (digital library of the Association for Computing Machinery), IEEE Xplore (Publication database of the Institute of Electrical and Electronics Engineering) and Compendex (provided through Engineering Village database). For health subject the program will have access to important resources such as Cochrane Library, Medline/PubMed, Embase and Cinahl. In addition, the program will have access to ERIC (Database for education) and other multidisciplinary databases such as Scopus, Web of Science

and JStore. Through these different databases, over 50 journal titles can be accessed which specifically deal with innovation and regional development.

The library provides literature from other libraries through interlibrary loans in order to ensure that PhD candidates and researchers have access to necessary regional and national resources which are not found in its own collections. The library constantly updates its subject specific collections and digital resources in order to accommodate the research needs of PhD candidates. In the same manner, the library will increase its resources whenever necessary in order to accommodate the needs of researchers and PhD candidates engaged in the research areas covered by the Responsible Innovation and Regional Development.

**Course and consultation offers:** The library offers tailored courses on research literacy and consultation sessions that meet PhD candidates' specific information competence needs during the research process. PhD candidates, individually, or in small groups, can book a consultation. Each PhD candidate is assigned individually a contact librarian that they will associate to throughout their PhD term.

The course syllabus offered to PhD candidates includes advanced literature search, reference management, ethical use of sources, review of literature, authorship and copyright, publishing strategy and visibility. The RESINNREG program plans to offer such research literacy courses integrated in RESINNREG402 (Philosophy of Science, Research Ethics and Innovation in Scientific Work).

Since PhD candidates do not always work from their offices on campus, the library is continuously developing its own online solutions to ensure access to knowledge sources from any workplace and platform, such as pc or mobile phone. Through a Nordic project collaboration known as Information Management for Knowledge Creation which HVL is a partner, an online module, PhD on Track (<http://www.phdontrack.net/>) is developed. The module guides beginner PhD candidates through the research lifecycle by providing practical information that they need at a specific stages of their PhD terms.

**The library as disseminator of research :** One of the college's core values is knowledge sharing, and the library is an important partner that practices this principle. It has the necessary infrastructure and manages an institutional repository for research materials produced by the institution. Materials deposited in this archive are openly accessible to the public. The library is instrumental in the drafting and enacting of the open access policy, which has been effective since fall 2014. As an incentive to dissemination, an open access-publishing fund has been established which is also available for PhD candidates.

**Internal and external collaboration:** The library collaborates internally and externally in order to develop effective and relevant services. The library collaboration within the UH-nett Vest (network of universities and university colleges in Western Norway) works on joint license agreements, which widen and improve access to scientific resources and meet the needs of research and professional communities in Western Norway (<http://uhnettvest.no/index.php?action=static&id=189>). The library committee of the Norwegian Association of Higher Education Institutions (UHR), one of the current tasks is to define the libraries' function as a research support provider throughout the research process so that it meets the actual needs of researchers at different stages of the research process.

This task aims at building up library capacity in order to develop new and standardised research support services at the national level.

Internally, the library works closely with faculties and departments to build its collections and develop information competence courses that reflect subject specific areas and the needs of students and researchers. There is also close collaboration with the college Section for Research and External Collaboration in order to offer resources and services that meet the needs of the college's fast growing research activities.

### **Centre for New Media.**

The Centre for New Media is organised under the Section for Research Management and External Funding, and provides HVL with expertise with respect to research, development and dissemination of new media. The centre was established in 1994 and has evolved into a national player with respect to e-learning, digital learning resources and mobile technologies. The Centre cooperates with external partners and all faculties at HVL.

**Media Production.** The Centre for New Media has equipment and expertise to carry out various forms of media productions. The Centre has contributed to various research projects, e.g., through the use of photography and video, documentation and visualisation of processes, single- and multi-camera productions of lectures/conferences (recording and streaming). The Centre has its own studio with multiple video cameras, streaming, recording and photography.

Academic staff at HVL can apply for resources that allow the use of the Centre's expertise in the development of various learning resources including research dissemination. The Centre for New Media gives professional assistance in a broad range of areas including contributions to production, development, and research.

**Research and dissemination.** The Research Council of Norway emphasises the importance of media and other public arenas, to reflect the significance of research for individuals, communities, and businesses. However, most researchers do not disseminate results from their own research via media, except from scientific journals and conference papers. Researchers may therefore have a lot to gain from communicating their research in alternative ways.

The Centre for New Media is involved in several projects in research and development. Currently R&D activities are mainly related to enhanced/media-rich e-books, locative media, game-based learning, and online teaching. R&D projects at the Centre are often a result of a close interplay between production, use and development of theory, within a tradition that can be characterised as design science.

**Support for PhD programme and candidates.** The Centre for New Media can assist PhD candidates in terms of various forms of research dissemination. The Centre has a variety of experiences with dissemination on the Internet, and may, in addition, assist with technical support, and through the production of various media. This design expertise in various media and technical platforms can be important in contexts where technical ICT solutions are to be tested in practice. The staff at the Centre for New Media has both formal and practical expertise, which can be utilised through counselling and guidance.



## Incubation

Candidates in this PhD will develop comprehensive knowledge on methods and practices for exploiting research knowledge and transforming research findings into innovations. Through the Mohn center this PhD program also provide an infrastructure that intend to stimulate innovations and facilitate entrepreneurship among PhD candidates. The center been in charge of the operations of the *Nyskapingsparken Inkubator* (a SIVA incubator), which houses and develops recently established businesses with a large growth potential and a large degree of innovation and which is the result of the county's education and research environment. This incubator is now part of Bergen Technology Office (BTO), but HVL is one of the co-owners of BTO. PhD students with a specific interest in entrepreneurship and new firms formation can use the facilities provided by BTO or they can participate in different events focusing on responsible business development, such as ACCEL, Idea-cup or Startup Weekend. These initiatives are organised in collaborations between the Mohn center and BTO.

## **2.5 Teaching, learning and assessment forms must be adapted to the learning outcomes of the PhD programme. An active role for students in the learning process will be facilitated**

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*(5) Undervisnings-, lærings- og vurderingsformer skal være tilpasset læringsutbyttet for studietilbudet. Det skal legges til rette for at studenten kan ta en aktiv rolle i læringsprosessen*

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### 2.5.1 Teaching, learning and assessment forms

The candidates will be exposed to a wide range of forms of teaching, including lectures, group work, seminars, and self-study (see Table 6). In the coursework component, the teaching is largely based on a combination of lectures, seminars by visiting researchers and the candidates themselves, and discussions and practical work in smaller groups. The candidates will give oral presentations and write reports, essays and papers in all courses that are offered in the programme. Furthermore, the candidates will conduct reviews of papers, and provide assessment of oral presentations by fellow PhD candidates. Some PhD research projects and coursework involves practical work linked to the development, evaluation, and application of innovations.

**Table 6: Teaching and learning-, assessment- and grading forms in the phd programme.**

| Course code | Course title   | Credits | Teaching and learning  | Assessment  | Grading   |
|-------------|--|---------|--|---|-----------|
| PHDINN 901  | PhD Dissertation in Responsible Innovation and Regional Development      | 150     | PhD project  | Assessment of PhD Thesis<br>Trial lecture<br>Public defence               | Pass/Fail |
| PHDINN 902  | Philosophy of Science, Research Ethics and Innovation in Scientific Work | 5       | M1-History of Science and Research Methodologies<br>M2-Ethics and Scientific Integrity<br>M3-Responsible Research and Innovation   | Assessment of oral presentations<br>Assessment of written report          | Pass/Fail |
| PHDINN 903  | Understanding and Exploring Innovation                                   | 5       | M1-Theories of Innovation<br>M2-Writing essay about exploring Innovation<br>M3-Essay seminar   | Assessment of essay<br>Assessment of oral presentations of essay          | Pass/Fail |
| PHDINN 904  | Doing and Exploiting Innovation  | 5       | M1-Lectures and colloquiums on exploiting innovation<br>M2-Practice of innovation<br>M3-Doing seminar  | Assessment of PPP reporting on experience of practice in a doing-seminar. | Pass/Fail |
| PHDINN 905  | Decision Making for Responsible Innovation                               | 5       | M1-Introduction to theory of decision making<br>M2-Practical and computational class work<br>M3-Research paper on experimental project   | Assessment of research paper on experimental project.                     | Pass/Fail |
| PHDINN 906  | Innovation and Industry Development                                      | 5       | M1-Path dependency and regional development<br><br>M2-Clusters and regional innovation systems<br><br>M3-Entrepreneurs and starts ups<br><br>M4-Policy institutions and transformation | Assessment of turn paper (extended abstract)                              | Pass/Fail |
| PHDINN 907  | Innovation in the Public Sector  | 5       | M1-Innovative governance and public service provision<br>M2-Innovation in public service production<br><br>M3-Feature article/poster   | Assessment of feature article/poster                                      | Pass/Fail |
| PHDINN 908  | Innovation and Sustainable Transition                                    | 5       | M1-Future technologies and greening<br>M2-The analytical toolbox<br>M3-Sustainability effects  | Assessment of turn paper (extended abstract)                              | Pass/Fail |

## 2.5.2 The involvement of PhD candidates

The PhD candidates will be part of one research group and are expected to actively participate in scientific discussions at meetings and seminars organised by the research group. The PhD candidates will take part in monthly meetings of the research groups in which the daily work of the research group is discussed and planned. In these meetings, the PhD candidates typically contribute with short

presentations of work-in-progress, and receives feedback on workshop and conference presentations. The PhD candidates can also participate in various research seminars for all faculty members, PhD candidates, and master's thesis students. In these seminars, the PhD candidates can present their research work to a broader audience. The seminars also include presentations by faculty members, visiting researchers, and other external guests. The PhD candidates organise an informal monthly PhD forum in which the PhD candidates discuss matters related to their research and their work environment. A main purpose of this forum is to support the integration of new PhD candidates into the research environment.

The RESINNREG programme organises an annual retreat for all involved HVL researchers, post-doctoral fellows, and PhD candidates. At this annual retreat, the PhD candidates give presentations in relation to their PhD project. The retreat also contains lectures – some from external guests - on topics related to researcher education such as dissemination of research, research ethics, paper reviewing, writing of project proposals and funding applications, writing research papers, giving scientific presentation, and building a network and research career. As part of the retreat, the PhD candidates also contribute to group work on proposals for cross-disciplinary projects and collaboration, and project proposals for external funding.

This implies that a candidate will regularly be giving oral presentations on the current work undertaken in the research group of his/her research project, and will engage in discussions with other researchers and PhD candidates on related topics. Candidates will also regularly attend national and international scientific workshops and conferences that will lead to collaboration and interaction with researchers at other institutions. Candidates typically attend one or more PhD summer/winter schools related to the topic of their research project.

### 2.5.3 Rationale for choice of methods for teaching, learning and assessment, and why these methods facilitate the fulfillment of learning outcomes

The teaching in courses mirrors the specificities of a PhD programme with less teaching and more self-studies than one may expect from lower degrees. The candidates will however be exposed to a wide range of forms of teaching methods, including lectures, group work, seminars, and self-study. In the coursework components, the teaching is largely based on a combination of lectures, seminars by researchers and the candidates themselves, and discussions and practical work in smaller groups. In PHDINN902: Philosophy of Science, Research Ethics and Innovation in Scientific Work, participants for instance must take actively part in the colloquiums by giving oral presentations on subjects and literature in each of the three modules. The participants must participate in discussions, including critical discussions based on the writing of scientific reviews. Such presentations and discussions will for instance in particular ensure the fulfillment of learning outcomes pertaining to dissemination of research results (G3 and G4). In PHDINN907: Innovation in the public sector, a feature article or poster presentation will furthermore be graded as part of the assessment.

There is however a particular emphasis on various forms of academic writing in the assessment and evaluation methods chosen for each course. The candidates will write reports, essays and papers in all courses that are offered in the programme. In PHDINN903: Understanding and Exploring Innovation, an essay closely related to some of the theoretical, methodological and ethical questions in the students PhD project is graded. In the course PHDINN904: Doing and Exploiting Innovation,

students need to read and reflect upon the listed literature and present their own experience of practice as well as review and be opponent for a fellow student's presentation. The PhD programme thus puts emphasis on dimensions of exploration and exploitation of innovation (which are reflected in learning outcomes such as K1, K2, K4 and S6) in its choice of evaluation methods. The method of evaluation in PHDINN 908: Innovation and Sustainable Transition and PHDINN 906: Innovation and Industry Development is furthermore assessment of a turn paper. This emphasis on academic writing in contributes to the achievement of learning outcomes relating to research work (S1, S2, S3, S4, G2, G3, G4 and G5). The teaching, learning and assessment methods of the different courses are further outlined in the programme description.

## **2.6 The PhD programme must be relevant to research and / or artistic development work and academic development work**

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*(6) Studietilbudet skal ha relevant kobling til forskning og/eller kunstnerisk utviklingsarbeid og faglig utviklingsarbeid*

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The PhD candidates will be included in one of the research groups of the programme (Industry Innovation, Social Innovation and Green Innovation) and are expected to actively participate in scientific discussions at meetings and seminars organised by their research groups. Researchers in these groups actively engage in different research projects. Table 11 in section 3.2.5 and Table 12 in section 3.2.6 display lists over the significant research projects with participation of researchers from the academic environment of the PhD programme. Several of the PhD candidates are part of external funded projects, and this ensure their inclusion in the research groups. Other candidates will be linked to a research group through the topic of their project and through their supervisor. All supervisors from HVL are members of one of these research groups. Candidates are entitled to receive up to 200 hours of supervision in relation to the PhD project. The hours of supervision includes preparation, discussion with the candidate, and any follow up tasks.

The main element in the individual supervision is to ensure the academic development of the candidate in terms of skills and independence in research and writing, and the timely scientific progress on the PhD project in accordance with the rules and regulations of the programme. For the course work component, the supervisor will provide advice on courses and PhD summer/winter schools to ensure that the candidate obtains the required background to carry out his/her PhD project. The supervision also includes: guidance on the focus of the research project; guidance on formulating hypotheses and delimiting the scope of the project; and guidance on ensuring that the project is carried out with scientific integrity and in accordance with established ethical norms within the scientific community.

The PhD candidate typically writes several research papers in the course of their project. For both the writing of the research papers and the thesis, the work form is typically iterative. The supervisor(s) will provide advice on the structure and content, and give feedback on draft versions of research papers. Co-authoring papers with supervisors will furthermore be encouraged and facilitated. In

relation to this, the supervision also includes advice on workshops, conferences and journals for submission of papers, and discussions on how to address feedback from review reports in a professional and constructive manner. For workshops, conferences and journals, important factors are relevance in relation to the project and scientific quality. In many cases, the PhD candidate and the supervisor(s) (or other PhD candidates) also write joint research papers which further aids the candidate in obtaining the required skills in scientific writing. Other important issues in the supervision are advice on relevant literature and related work, feedback and advice on oral presentations, and advice on career planning. The supervision may also include risk management, revision and change of original plans. The supervisor(s) also introduces the PhD candidates to their international contact network and, in relation to this, supports the PhD candidates in planning the compulsory international research visit and in building their own network.

The PhD candidates will have at least one academic supervisors from HVL. In general, the HVL supervisor, will be the main supervisor, and will have full-time permanent positions at HVL. The main supervisor will be the the primary academic responsibility for the candidate, including the formal responsibility on matters related to the education and scientific work of the candidate. The candidate may apply to have one or more co-supervisors from HVL or other institutions when special competence in the PhD project is required. In the case of an external main supervisor, at least one co-supervisor from HVL must be assigned. An important duty of the HVL-based supervisor(s) is to ensure that the candidate shows good progress in the course of studies and that the candidate becomes part of the research environment at HVL. A minimum of 20 researchers will furthermore be teaching in the courses. This is further outlined in the study programme.

As shown in Table 9 in section 3.1.6, the PhD candidates will be part of one research group and are expected to actively participate in scientific discussions at meetings and seminars organised by the research group. The PhD candidates will come to know state of the art research through their involvement in the research group as well as through the suggested literature for the PhD courses. The courses PHDINN903, PHDINN904, PHDINN905, PHDINN906, PHDINN907 and PHDINN908 furthermore have literature authored by researchers included in the research groups of the PhD programme. In section 2.2.1 there is an extensive further elaboration of how the PhD programme is relevant to research and academic development of the PhD students.

## **2.7 The PhD programme must have internationalisation arrangements that are adapted to the level, comprehensiveness and specificity of the PhD programme**

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*(7) Studietilbudet skal ha ordninger for internasjonalisering som er tilpasset studietilbudets nivå, omfang og egenart*

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All PhD candidates will give research presentations at international scientific meetings, workshops and conferences, and it is expected that PhD candidates give at least one talk at an international venue in the course of the studies. As shown in the supplementary regulations for the PhD

programme in Responsible Innovation and Regional Development (Attachment 1.3), the programme committee will determine the number of credits awarded for such activities (up to 5 ECTS). Furthermore researchers from international partner institutions may be involved in the programme as secondary PhD supervisors and guest lecturers. In April 2017, the Mohn Centre hosted a workshop for PhD students on responsible innovation including top international guest lecturers from the University of Manchester and Salamanca and visiting PhD students from abroad. In 2018 the Mohn Centre will host the 13<sup>th</sup> Regional Innovation Policy Conference (RIP) which will include a workshop for PhD students. Internationalisation arrangements are further elaborated in section 2.8.

## **2.8 Phd programmes that produce a degree should have arrangements for international student exchange. The content of the exchange must be of academic relevance**

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*(8) Studietilbud som fører fram til en grad, skal ha ordninger for internasjonal studentutveksling. Innholdet i utvekslingen skal være faglig relevant.*

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The research environment responsible for RESINNREG has extensive international collaborations including both research collaborations and supervision of PhD candidates. In the context of the proposed programme, formal international agreements (see Attachment 2.2) for collaboration, including staff and PhD candidate exchange has been established with the following institutions:

International agreements for PhD candidates:

- Aarhus University, Denmark (Social Innovation)
- Charles University in Prague, The Czech Republic (Social Innovation)
- University of Southern Denmark (Social Innovation)
- Australian Catholic University (Social Innovation)
- University West, Sweden (Industry Innovation)
- University of Manchester (Green Innovation)
- University of Salamanca (Industry Innovation)
- University of Strathclyde (Industry Innovation)
- West University of Timisoara (Industry Innovation)
- University of California, San Fransisco (Social Innovation)

The majority of the institutions with which formal agreements have been established are institutions that researchers in the programme have had collaboration with in the past.

The PhD students are strongly encouraged to visit an international research group for a period of 1-6 months. Typically this will take place within the two first years of the PhD programme. A visit at an international research institution can be accredited up to five ECTS subject to approval by the programme committee. The PhD candidates are strongly recommended to engage in international collaborations (for example with fellow students and researchers at the hosting institution), and/or follow PhD courses at other institutions as part of their coursework.

| <b>Table 7: Attachments for requirements for the phd programme / Vedlegg til krav til studietilbudet:</b><br>Highlight as «not relevant» if the attachment is not relevant for the phd programme / Marker med «Ikke relevant» dersom et vedlegg ikke er aktuelt for studiet | <b>Attachment No. / Vedlegg nr.</b> |
|---|-------------------------------------|
| Programme description   | 2.1                                 |
| Strategy and plan of action / Strategi og handlingsplan   | Not relevant                        |
| Agreements on internationalisation / Avtaler om internasjonalisering  | Not relevant                        |
| Agreements on (judicially binding) student exchange / Avtaler om studentutveksling (juridisk bindende)  | 2.2                                 |
| Rental agreements and other agreements if the institution is using external infrastructure / Leieavtaler og andre avtaler dersom institusjonen tar i bruk infrastruktur eksternt  | Not relevant                        |

## 3. Requirements for the academic environment

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Krav til fagmiljø.

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### 3.1 Prerequisites from the Ministry of Knowledge on quality assurance and quality development in higher education

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*Krav i forskrift fra kunnskapsdepartementet om kvalitetssikring og kvalitetsutvikling i høyere utdanning og fagskoleutdanning. § 3-3. Akkreditering av doktorgradsstudier*

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#### **3.1.1 The institution shall offer education and research on a scale and in a quality that ensures that the PhD programme can be completed at a high academic level. The institution shall host a breadth of study programmes at lower and higher levels within the academic discipline of the PhD programme**

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*(1) Institusjonen skal tilby utdanning og forskning på området for doktorgradsstudiet som har en kvalitet og et omfang som sikrer at doktorgradsstudiet kan gjennomføres på høyt vitenskapelig nivå. Institusjonen skal ha bredde i studietilbudene på lavere og høyere grads nivå innenfor området for doktorgradsstudiet*

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HVL currently has three accredited PhD-programmes: Bildung and Pedagogical Practices, Computer Science and Nautical Operations. With the accreditation of the PhD programme in Responsible Innovation and Regional Development, HVL will be able to offer education within the subject area innovation and regional development at the bachelor, master and PhD level.

HVL offers breadth in its study programmes in the area of the PhD. After the establishing a new PhD-programme in Responsible Innovation and Regional Development, students at HVL may pursue both the master and the PhD programmes in innovation studies. There are four master programmes representing the key recruitment channel for the PhD; Master programme in Innovation and Entrepreneurship, Master programme in Innovation Management, Master programme in Community Work and the Master programme in Climate Management. The first two has its main focus on industry innovation, the next emphasise social innovation while the final programme is specialising in green innovation. There are also other master programmes at HVL that potentially can provide candidates to the PhD programme such as the Master in Software Engineering, the Master in Maritime Operations, the Master in Change Management and the Master in Collaboration in Health



and Care. The master's degree programmes, and the associated staff members, constitute an important foundation for the proposed PhD programme.

Some master programs are more relevant than others for the research groups *industry, social* and *green innovation*. PhD students specialising in *Industry Innovation* will generally be recruited from the Master programmes in Innovation and Entrepreneurship, Innovation Management, Software Engineering and Maritime Operations. The PhD students specialising in *Social Innovation* will generally be recruited from the Master programmes in Change Management, Community Work, and Master in Cooperation within the Health and Social Services, while PhD students specialising in *Green Innovation* will generally be recruited from the Master in Climate Change. The master's degree programmes, and the associated staff members, constitute an important foundation for the proposed PhD programme. The PhD programme will however also emphasise recruitment from other equivalent and relevant educations outside HVL, both nationally and internationally.

It is documented in section 3.1.4 that there is research at HVL within the area of the studies with a quality and magnitude that will enable PhD students to complete the study at a high academic level.

### **3.1.2 The PhD programme shall be academically coherent, and the different components of PhD programme shall be linked**

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*(2) Området for doktorgradsstudiet skal utgjøre en vitenskapelig helhet, og det skal være sammenheng mellom de enkelte delene studiet er satt sammen av*

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The academic coherence of the programme is addressed and outlined in the Programme Description (Attachment 2.1), as well as the introduction of this application and in section 2.4 and 3.1.4. This PhD programme is anchored in innovation studies, with a particular emphasis on economical, societal and environmental aspects and impacts of innovation. The programme's starting point is an understanding of innovation where practice, organisational and technological conditions, as well as social implications of innovation, are the subject of critical discussion and analysis. The programme investigates innovation through a responsibility approach, meaning that RESINNREG is concerned with transparent, interactive processes by which innovation-related actors become mutually responsive to the ethical acceptability, sustainability and social desirability of innovation activity. Furthermore, RESINNREG links this approach to a special focus on regional development. Thus, a chief aim of the programme is to contribute to sustainable development processes. Relevant processes linked to this can be contributions towards reducing regional disparities, e.g. by encouraging employment and value creation in regional settings, and a deeper understand of how economic value creation can be promoted and realised in parallel with a green shift and the development of a welfare society.

This approach forms the backdrop and overarching theoretical position of the PhD programme, and is operationalised through three main research topics, **industry, social and green innovation**, each represented with a research group (see section 3.1.4). A detailed list of externally funded and relevant research projects is furthermore included in Table 11 in section 3.2.5. This approach is furthermore reflected by seven different PhD courses contributing to knowledge on the practice,

organisation and technological foundations of innovation and the interlinkages between these three dimensions. This represents a core framework for advancing theoretical and practical knowledge of meeting today's and future challenges.

Through encouraging multidisciplinary approaches to industry innovation, social innovation and green innovation, RESINNREG specifically aims towards bridging strong traditions of applicable research ('exploitation') and basic research ('exploration') found in the traditional university colleges. This implies that the PhD programme explicitly focuses on the practical dimensions of innovation ('exploitation') and the generation of new knowledge ('exploration'). We achieve this link by utilising competencies and resources of both applied and basic research orientation from the three now-merged university colleges (together forming HVL). Thus, the PhD programme bridges different knowledge fields, disciplines and innovation approaches.

The PhD programme thus ensures that the candidate receives training in both 'exploiting' and 'exploring' innovation, in written and oral dissemination of research results and in working in interdisciplinary teams and across thematic areas (industry innovation, social innovation, green innovation). After completing the programme, the candidates have gained in-depth knowledge both on how innovation is performed ('exploitation') and understood ('exploration'), and also how this is linked to a responsibility approach and regional settings. When graduated, students will be able to identify and assess barriers and drivers for Responsible Innovation and Regional Development, and initiate and contribute to innovation projects that can contribute to industry development, social development and sustainable transitions..

The courses of the PhD programme correspond to this academic focus and are fully described in the attached programme description (Attachment 2.1). The coursework part consists of three mandatory courses. PHDINN902 is named on Philosophy of Science, Research Ethics and Innovation in Scientific Work. This course is designed so the candidates may develop a thorough understanding of research methodologies and their foundation in the philosophy and history of science, and the application of these to practical work within the field of innovation research. The course will also introduce the candidates to the process of innovation as a link between ethics, the research process and industrial operations. This will serve as the base foundation of the scientific work to be conducted as part of the dissertation work. The courses PHDINN 903 Understanding and Exploring Innovation and PHDINN 904 Doing and Exploiting Innovation are also mandatory. The course Understanding and Exploring Innovation will provide the candidates with state-of-the-art knowledge, skills, and competence in the research field of innovation. It will provide theoretical perspectives and conceptual foundation in the research field of innovation. The course Doing and Exploiting Innovation will provide students with advanced knowledge of handling Innovation and R&D in different organisations, industries and sectors. Based on its experiences of practicing innovation, theories, and practical models and its consequences, the course gives a broad as well as in-depth introduction to ideas needed to understand innovation and R&D projects and process management needed to do and exploit innovation in different organisations. The mandatory coursework also include a methodology course. This programme offers a methodology course in Mathematical Modelling of Decision Making (PHDINN 905), but PhD students may replace this with another methodology course from HVL or another institution. PHDINN 905 focuses on modelling of decision making for responsible innovation in organisations and firms. The training will allow students to conduct research on the cutting-edge of interesting questions in decision making related to

innovation. Depending on the particular needs of methodology specialisation of the candidate, either candidates are required to follow this course or an alternative relevant PHD approved methodology course at HVL or an external research and education institution.

The elective course PHDINN 906: Innovation and Industry Development is based in the interdisciplinary team working with *industry innovation*. Acknowledging the systemic nature of the innovation process, this course will elaborate upon actors, organisations and institutions, and their interlinkages, to understanding drivers and obstacles for innovation and industry development. Innovation systems can have different scale and scope, and have been investigated and operationalised through analytical concepts such as industry clusters, regional innovation systems and regional industry structures, national innovation systems, sectoral innovation systems and sociotechnical regimes. The course investigate how to understand cluster development, key issues within regional and national innovation system research and how to investigate the renewal and transformation of regions and innovation regimes. The dynamism of these systems are linked both to systemic dimension, such as the co-evolution and interdependency of different sub-system, and the agency of actors. The course will especially look into the challenge of developing more responsible and sustainable innovation systems.

The elective course PHDINN 907: Innovation in the Public Sector is based in the interdisciplinary team working with *social innovation*. Public sector innovations are often institutional innovations. They involve the creation and institutionalisation of new practices. In this way, institutional innovations are socially constructed. They transform the way we think about public organisations as well as the practices within these organisations. The course focuses on three distinct, but related aspects of public sector innovations. Firstly, the course aims at giving an understanding of how comprehensive governance innovations and concepts are developed and spread. Even though innovations in public service provision sometimes involve private actors, there seems to be some particular features of innovations in the public sector. Focus is also given to the current trend towards collaborative, cross sector organisation forms as tools for public sector innovation. Lastly, the course studies innovations in public service production and delivery, with a special focus on health and welfare services. It gives a particular attention to the role of professions and professionals as drivers of change, together with the impact of new technologies and organisational forms on innovative practices.

The elective course PHDINN 908: Innovation and Sustainable Transition is based in the interdisciplinary team working with *green innovation*. A fundamental transition of our global society is required in order to cope with sustainability challenges that are increasingly of global dimension, such as climate change, the provision of clean and reliable energy or the continued access to critical resources like water or rare earth materials. Their solution requires new inter-disciplinary and cross-sectoral approaches. Course participants acquire profound knowledge on how to assess yet immature and potentially disruptive technologies from an integrated perspective. Such technologies are the “next big things” and examples are artificial intelligence, energy storage, and advanced materials) from an integrated perspective. Upon completing the course, will have advanced knowledge on socio-technical challenges and transition strategies to foster a sustainability transition in different sectors

### **3.1.3 The PhD programme shall be supported by an academic environment with a high level of competence in education and research. The academic environment shall be able to document research output, including publication, at a high international level, as well as results from cooperation with other academic environments nationally and internationally**

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*(3) Doktorgradsstudiet skal ha et fagmiljø med høy kompetanse innenfor utdanning og forskning. Fagmiljøet skal kunne vise til dokumenterte forskningsresultater, inkludert publisering, på høyt, internasjonalt nivå, og resultater fra samarbeid med andre fagmiljøer nasjonalt og internasjonalt*

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The mandate of HVL includes education, research, facilitating academic- and artistic development, innovation and dissemination, that will contribute to solve regional, national and global challenges. HVL (HVL) includes three former university colleges: Bergen University College, Sogn og Fjordane University College and the University College Stord/Haugesund. The PhD programme presented here covers all these three former university colleges, where all campuses contribute and are involved in development of the programme. In Table 8 in section 3.1.4 all researchers contributing to the PhD programme are listed. As seen in Attachment 3.2, the researchers included in the academic environment of the PhD programme have over 640 publications in the space of time from 2012-2017, where 130 are at level 2.

The profile of the research environment and its corresponding research fields is described in detail in section 3.2.1 Based on the this information and other information in the application (see Table 16 in the Appendix), we believe it is documented that the PhD programme has a size and proposed activity level that is proportional to the number of students and the profile of the PhD programme. The research environment has furthermore showed a stability over time, and have a composition that covers the disciplines and subjects included in the PhD programme.

In section 3.6 international cooperation in relation to research projects from research groups is documented. As apparent from the CVs in the Attachment 3.1, the academic environment has a high level of competence both with regards to education and research. The CVs do also display international cooperating partners. The Publication Lists for all researchers included in the academic environment is listed in Attachment 3.2.

### **3.1.4 The academic environment shall display depth and breadth within all the vital components of the PhD programme, so that PhD candidates will be able to participate actively in different academic relations and get an introduction to different perspectives**

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*(4) Fagmiljøet skal ha dybde og bredde innenfor alle vesentlige deler av doktorgradsstudiet slik at doktorgradskandidatene kan delta aktivt i ulike faglige relasjoner og få innføring i ulike perspektiver.*

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The research environment associated with the PhD programme build on strong professional knowledge and applicability represented by the university colleges in Western Norway. We intend to link this strength to ongoing research activities and strong research groups at HVL. These research group have a national and international position, representing leading academic environments within their fields. Given the merger of the former university colleges, initiatives were taken to identify and mobilise relevant scholars fitting the thematic profile of the PhD programme. Representatives from former university colleges in Stord/Haugesund and Sogndal were invited to join forces under the new PhD programme. The research groups and individual academic staff fitting the profile of the PhD programme were invited to participate in the new PhD programme through three research groups; Industry innovation, Social innovation and Green Innovation. The programmes profile also mirror a general trend within the *emerging scientific field* of innovation studies. Traditionally the focus has been on new technology and new products introduced in the market (industry innovation), while this research field more recently has expanded its focus to new topics such as social innovation and sustainability and green innovations (Martin 2016). Consequently, this PhD programme have a mature research group focusing on *Industry Innovation* and strong and emergent research groups focusing on the more novel topics of *Social innovation* and *Green Innovation*.

The research environment associated with the PhD programme in Responsible Innovation and Regional Development consists of 24 professors contributing and 21 associate professors (see Table 8). The academic staff is organised in three research groups corresponding to the three research fields that constitute the pillars of the proposed programme: Industry Innovation, Social Innovation, Green Innovation. This section will show that the academic environment of the PhD programme has depth and breadth within all the research fields of the study through a presentation of research groups and environment. The PhD students can specialise in one of the subfields of this programme: industry innovation, social innovation or green innovation and will be connected to a research group accordingly. Through their involvement in a research group the programme will ensure that the PhD students get access to national and international academic relations and networks. Through their supervisors and research groups, the PhD students will be introduced to different academic environments and perspectives, and be invited for active participation.

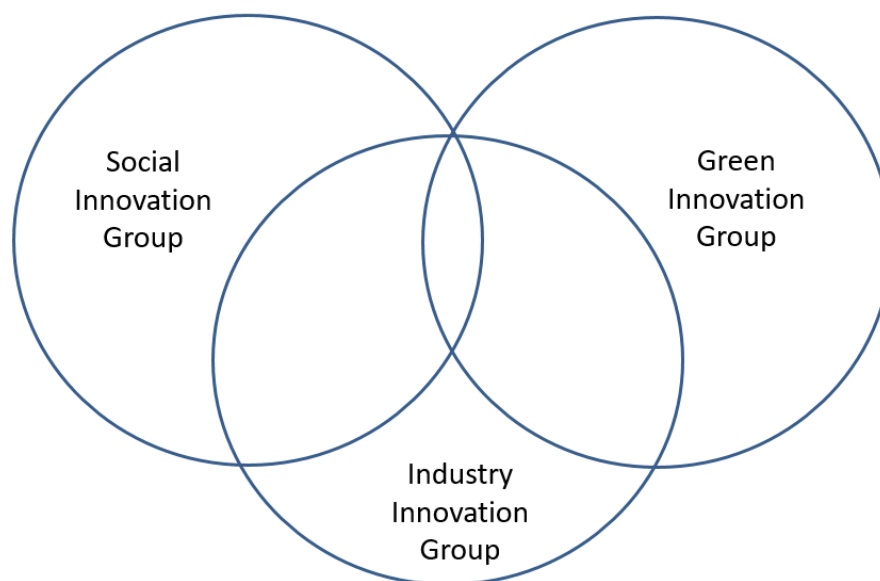
**Table 8: Research groups and related academic staff.**

| Industry Innovation  | Social Innovation   | Green Innovation  |
|--|---|---|
| <p><b>Professors</b><br/> Jarle Aarstad<br/> Philip Cooke<br/> Sylvia Encheva<br/> Ilona Heldal<br/> Stig-Erik Jakobsen<br/> Marina Solesvik<br/> Talal Rahman<br/> Chunyan Xie<br/> Prof. in technology management **</p> <p><b>Associate Professors</b><br/> Ole Jakob Bergfjord<br/> Olav Kvitastein<br/> Carsten Helgesen<br/> Ingunn Alne Hoell<br/> Natalie Mæhle<br/> Inger Beate Pettersen</p> | <p><b>Professors</b><br/> Jan Kåre Breivik<br/> Oddbjørn Bukve<br/> Frode Fadnes Jacobsen,<br/> Eva Langeland<br/> Anne-Mette Magnussen<br/> Even Nilsen<br/> Siri Ytrehus<br/> Christine Øye</p> <p><b>Associate Professors</b><br/> Elisabeth Ersvær<br/> Jens Kristian Fosse<br/> Oddvard Førland<br/> Kristin Hope<br/> Einar Hovlid<br/> Jill Merethe Loga<br/> Tone Elin Mekki<br/> Grete Nettelund<br/> Tobba Therkildse Sudmann</p> | <p><b>Professors</b><br/> Arnt Fløysand*<br/> Erling Holden<br/> Liv Osland<br/> Inge Thorsen<br/> Kristin Linnerud<br/> Dhayalan Velauthapillai<br/> Akkelies van Nes</p> <p><b>Associate Professors</b><br/> Tom Skauge<br/> August Wierling<br/> Ole Andreas Brekke<br/> Geoffrey Gilpin<br/> Bente Johnsen Rygg<br/> Valeria Jana Schwanitz</p> |

\*Programme coordinator

\*\* From January 2018

The academic breadth and depth of the programme is ensured by these three research areas. Each candidate will be linked to one of the three research groups, ensuring in-depth knowledge of a particular field. This will also help in assuring excellent academic learning environments for the candidates, as they will be part of active research groups with an international outlook. The PhD programme will also be highly beneficial for the established research groups (and the members involved), as PhD students and the PhD programme will contribute to collaboration and cooperation between these three groups and their academic staff, implying that cross-disciplinary activities are encouraged. Table 9 in Section 3.1.6 outlines the breadth of the research of PhD students currently associated with the academic environment. Section 3.2.6 exemplifies the breadth of the programme by listing externally funded research projects in the research environment. Attachment 3.2 furthermore presents the publication lists of all participating researchers.



**Figure 4:** The extent of interaction between the three research groups

The industry innovation group has investigated different aspects of innovation and industry development, but there are three main topics in their research activity representing different level of analysis; i) technology development, ii) Organising, marketing and managing innovation, and iii) Innovation systems. Social innovation takes place in the voluntary sector, in organisations providing public services and in government, as well as in interaction between these sectors. The two main topics in the research of the Social innovation group are 1. Innovative governance and public service provision and 2. Innovation in the health and social care services. Innovations in public service production e.g. relates to knowledge, competence, technology and professional roles. The conceptual starting point for the green innovation group is the field of innovation and sustainability transition studies (commonly referred to as T2S studies). There are three main topics in their research activity; i) conceptual sustainability studies, ii) green innovation and sustainable transition pathways, and iii) sustainability impact assessments.

As will be elaborated in this section below, knowledge building on these topics presuppose close collaboration within the two other research groups in this PhD-program (Green innovation and Industry innovation). A more extensive description of each research and its members are included below in this section. All research groups have a very good track record in attracting external funding, especially from the Research Council of Norway and is experienced in publishing in leading international journals. This is attested by the attached publication list in Attachment 3.2 as well as the list of externally funded research projects in Table 11 in section 3.2.5.

As a new organisation consisting of three former university colleges (Bergen, Sogn og Fjordane, Stord/Haugesund) HVL is in the process of building a coherent academic institution. The three former university colleges are represented in all of the three research groups, and the PhD programme will be important in the building of the new institution. There are also important research linkages

between the research groups. The Industry innovation group and the Social innovation group have collaborated on several research initiatives and projects exploring innovation in the health sector. Some of the examples are innovation project about municipal effort for residents with visual impairments, several innovation dialogue seminars with private firms and public institutions about municipal service, service design/-innovation and health technology, and innovation camps together with Haukeland University Hospital. Recently the Industry innovation group was successful in achieving funding from the Research Council for project “Drivers of regional economic restructuring: Actors, institutions and policy”. The project is coordinated by the Industry innovation group, but also includes members from the Social innovation group. The two groups have also submitted two joint proposal for the Research Councils new programme FORKommune (titles: “Innovative ways of housing within health care” and “Better together – simulation and collective learning in nursing home”). Further, research linkages between the Green Innovation group and the Industry Innovation group are also in the making. One joint proposal with the title “Innovation under uncertainty: Producing and using renewable-based hydrogen” has been submitted to the ENERGIX program (The research Council) and another with the title “The greening of new aquaculture technologies” has been submitted to FRIHUMSAM (The research Council). In addition there has also been co-production of articles between members from the two groups, such as “Industrial renewal: narratives in play in the development of green technologies in the Norwegian salmon industry” published in *The Geographical Journal* (2016), “Discourers, risk perceptions and the green profile of New Zealand fish farming industry” published in *Marine Policy* (2016), and “Encounters between cluster theory, policy and practice in Norway”, published in *European Urban and Regional Studies* (2016). The members of three involved research groups intend to intensify these collaborations efforts, and we experience that we have complementary competences that are of importance in order to develop a more integrated and cross-disciplinary understanding of the complex phenomena of innovation.

The research groups have strong research networks including both international and national expertise within the field of innovation research. In Table 12 and 13 in section 3.2.6 lists external partners in current and recent research projects of the academic environment. In addition, the research group has a pool of public and private organizations as collaboration partners. Accordingly, the *Doing and Exploiting Innovation* will take place in close collaboration with both academic- and non-academic partners.

Below, we present the three research groups and their members:

## **Industry innovation group**

### **Composition, volume and collective competence**

**The Industry Innovation research group** consists of 9 professors (Jarle Aarstad, Philip Cooke, Sylvia Encheva, Professor, Ilona Heldal, Stig-Erik Jakobsen, Marina Solesvik, Talal Rahman Chunyan Xie, Prof. in technology management (from January 2018)) and 6 associate professor (Ole Jakob Bergfjord, Carsten Helgesen, Olav Kvitastein, Ingunn Alne Hoell, Natalie Mæhle, Inger Beate Pettersen). It is a cross-disciplinary group representing a mix of academic disciplines including engineering, economics, marketing, management and economic geography.



**Key topics** - The group has investigated different aspects of innovation and industry development, but there are three main topics in their research activity representing different level of analysis; i) technology development, ii) Organising, marketing and managing innovation, and iii) Innovation systems. Studies of *technology development* has investigated the process of developing new breakthrough innovations, the implementation of new technology, the use of different models for technology development, and user involvement in the process. There has also been studies of the implementation of green technology innovations within the fish farming industry.

Within the *Organising, marketing and managing innovation* there has been studies of innovation management and innovation strategy. There has been a specific focus on the maritime sector, for instance studies of the complexity of maritime organisations and new innovative ways to handle risk in offshore operation. Further, the topic includes studies of academic spin off, incubation, and the mindset and style of entrepreneurs, i.e. those introducing innovations.

Studies of *Innovation system development* has investigated innovation process from a systemic and evolutionary perspective. Researchers has for instance looked into the development of regional innovation systems, how to ensure the renewal of the regional economy, drivers for regional economic restructuring and the development of new industry paths. There has also been studies of industry clusters and how to develop a coherent innovation policy. Empirically, many of the studies have focused on the industrial landscape of Western Norway.

**External research funding** - The research group has a very good track record in attracting external funding, especially from the Research Council of Norway. Some recent examples are 'Managing Risk in Offshore Operations' (MAROFF-program 2013-2017), 'Path development in different regional settings. Regional policy approaches in the global economy' (VRI-program 2014-2016) and 'Drivers of regional economic restructuring: Actors, institutions and policy' (RFFV 2017-2020). External funded projects involve both nationally and internationally collaborates. Members of the research group have coordinated several of the projects. Some of the external funded projects has also include PhD-grants and have contributed towards building a competence in the group both on PhD supervision and on how to integrate PhD-students in research communities.

**National and international networks** - There has been established close relationship with several excellent research milieus. One example is the external funded research activity on innovation systems that has been conducted in close collaboration with University of Agder (The RIS research group) and University of Stavanger (Centre for Innovation Research). Some of the international partners in these projects has been CIRCLE (Sweden), London School of Economics (UK) and University of Manchester (UK). Other examples are the research on maritime operations that includes University of Michigan, University of Cardiff and University of Aberdeen as international partners.

**Publications** - The research group is experienced in publishing in leading international journals. During the period 2012-2017 the research group contributed with nearly 240 articles in peer-reviewed international (22 in level 2 journals). In addition, they have published about 40 books chapters. An exact breakdown and individual publication lists may be found in Attachment 3.2. The group also host the acknowledged international journal European Planning Studies (Professor Stig-Erik Jakobsen is Associate Editor of the journal).

**Stakeholders** - Within the group there is a strong focus on user involvement to ensure the dissemination of findings and new knowledge. Non-academic partners such as Hordaland County Administration, Bergen Technology Transfer, various cluster organisations and industry firms have all been involved as partners in research projects. Such collaboration ensure user participation and provide an arena for learning and dialogue between researchers, the industry and the government.

**Academic ambitions** - In general, the research group has interpreted the innovation process as contextual, non-linear and difficult to manage. Still, our academic ambitions is to increase our understanding of both the drivers and obstacles for innovation but also of the potential 'dark side' of innovations. The latter is link to environmental challenges, increased inequality in society and 'organisational tension' associated with innovation work. The understanding of how to ensure a comprehensive change and restructuring of the industrial landscape towards long-term sustainability is still immature and incomplete. The logic of market driven innovation is also invading new areas of societal life (health and welfare), and the research group aims expand our knowledge about the consequences of this. Knowledge building on these topic presuppose close collaboration within the two other research group in this PhD-programme (Green innovation and Social innovation), and a key ambition with this initiatives is to facilitate and stimulate more cross-disciplinary research collaboration between strong research milieus at HVL.



**Figure 5: Examples of networks, external funding and publications of the Industry innovation group**

#### **Members of the industry innovation group**

**Jarle Aarstad** (dr. oecon.) is professor in entrepreneurship and innovation at the Mohn Centre for Innovation and Regional Development, HVL. Aarstad received his doctoral degree at NHH Norwegian School of Economics in 2004, and in 2003, he was a visiting scholar at Stanford University. In his research, Aarstad primarily applies econometric analyses and he has published extensively in numerous international outlets, including leading journals in entrepreneurship, innovation studies

and tourism management. Aarstad has participated in a number of externally funded research projects, primarily financed by the Research Council of Norway.

**Philip Cooke** is a professor at the Mohn Center for innovation and regional development. He has previously been based at the Centre for Advanced Studies, University of Wales, Cardiff. He is a top international expert in studies of innovation, cluster development and especially Regional Innovation System (RIS). He has edited several books and published numerous articles on these topics. Cooke is also Principal of Regional Industrial Research (RIR), a private consultancy specialising in regional innovation and industrial research. It has conducted contracts for EU and various national and regional policy organisations in Europe, North America and Asia. In 2010 he was International Cluster Evaluator to Sweden's Vinnova and Tillvaextverket national innovation and development agencies. In 2011 he advises VINNOVA on "Platform Innovation" and OECD on "Eco-innovation".

**Sylvia Encheva** is a professor in mathematics and informatics at Faculty of Technology, Business, and Maritime Education (FTBME), HVL. She received her doctoral degree at Institute of Informatics, University of Bergen in 1992, followed by a professorship in mathematics in 2000 and a professorship in informatics in 2001. She is a leader of a R&D programme 'Applied information technology in environment and society' at FTBME since 2007. Her current research interests include mathematical, modeling, intelligent tutoring systems, and decision support systems. Her previous work was focused on error correcting codes. The results of her scientific work are published in various international journals. She has been a partner in several projects founded by the Research Council of Norway and France Telecom. She has also served as a programme committee member of a number of international conferences. She has been a visiting professor at Technical University of Denmark (1993, 1994), ENST Paris France (1995 – 2002), and USM Penang, Malaysia (2005, 2008).

**Ilona Heldal** is a professor of Informatics at HVL, Bergen, and guest professor at University West, Sweden. Heldal has considerable experience in postgraduate education and in defining university-industry collaboration projects. She has been the leader for the industrial PhD research school in applied information technologies at the University of Skövde and this experience will be important for the proposed PhD program. She has been involved in starting 15 industrial doctoral projects. Her research area includes information technology development and use from human computer interaction to technology management in organisations. She has been looking at innovative ways of visualising architecture and urban planning, introducing digital communication technologies for emergency services, using simulations and serious games for training and education. Her projects aim to evaluate user experiences depending on technologies, technology effectiveness depending on usage contexts, or technology integration, acceptance and management at organisations. Heldal has been on the program committee of several international conferences and workshops, is editor for the Springer Journal of Virtual Reality and the international Journal of Multidisciplinary Social Research, in the board of director of International Association for Information Systems for Crisis Management. She has supervised a number of PhD candidates and has ongoing international research collaboration with the University of Borås, University of Skövde, Chalmers University (Sweden), Oxford Internet Institute (UK), Salford University (UK), and the University College of London (UK) and industries e.g. Ericsson AB, Volvo AB and the Swedish Transport Agency.

**Stig-Erik Jakobsen** is a professor in innovation studies and leader for the Mohn Centre for innovation and regional development at HVL. He is also a professor II at the University of Bergen. Jakobsen holds

a doctoral degree in economic geography from the University of Bergen (1996), and is a former professor in economic geography at the Department of Sociology and Human Geography, University of Oslo. He is experienced with studies of innovation, innovation policy and industry development, and has an extensive publication record. Jakobsen has run several project founded by the Research Council of Norway, and has also conducted evaluations of innovation instruments and assessments of the knowledge foundation for the public research and innovation policy. At present he is associate editor for *European Planning Studies* (Routledge) and a member of the editorial board of the *Norwegian Journal of Geography* (Taylor & Francis). He is also a member of the board for the Division for Innovation in The Research Council of Norway.

**Talal Rahman** is a Professor of Mathematics in the Faculty of Engineering at HVL. The primary research interests of Rahman lie in the areas of computational and applied mathematics, focusing particularly on numerical modelling and simulation of both scientific and engineering problems, methods of preconditioning based on domain decomposition for multi-scale problems, and variational methods for image processing. Rahman has published his research work in several high-quality journals and conference proceedings in the field of applied mathematics and computing, including the SIAM, the BIT Numerical Mathematics, the Numerische Mathematik, and the IMA Numerical Analysis journals. Rahman has also been a visiting professor at the University of Cambridge in 2012. Rahman has been principal investigator in two research projects supported by the Research Council of Norway, one of which was under the FRINAT program. He has been programme- and organising committee member of several international conferences and workshops, and reviewers for a large number of international journals in his area of research. Rahman has supervised two PhD research fellows under the project financed by the FRINAT, and is currently supervising one PhD research fellow financed internally by the HVL. He has also supervised one PhD research fellow from the Chinese Academy of Sciences.

**Marina Z. Solesvik** is a Professor of innovation and management at HVL. She does research in teaching in innovation (regional innovation, maritime innovation, open innovation), entrepreneurship (female entrepreneurship, entrepreneurial intentions). She is furthermore a reviewer for numerous journals and publishing houses, as well as for the RCN.

**Chunyan Xie** is professor in marketing in HVL. Xie received her doctoral degree at Norwegian School of Economics (NHH) in 2005; and in 2004 and 2005, she was a visiting scholar at University of Illinois at Champaign and Urbana and at Rice University. Xie's research centers on consumer co-creation and marketing strategy issues such as integration of innovation processes and corporate social responsibility (e.g., "green" innovation) in firms in the Norwegian maritime sector. In her research, Xie applies both quantitative and qualitative methods. She has published extensively in international outlets, including several publications in highly-ranked marketing journals. Xie has extensive experiences with a number of research projects funded by the Research Council of Norway.

**Professor in technology management** (from January 2018).

**Ole Jakob Bergfjord** is associate professor at the Department of Business and Economics at HVL. Bergfjord has a PhD in business economics from the University of Southern Denmark (2008) and was a visiting scholar at Texas A&M University (2005) as part of his PhD project. Bergfjord has published several scientific articles on the aquaculture industry, and is currently involved in running an

Executive MBA on innovation and sustainability in the seafood industry. Bergfjord's other main research interest is innovation in financial markets, including what criteria are necessary for new markets and contracts to survive; how new markets and contracts should be designed; and how prices from different markets should be interpreted.

**Carsten Helgesen** is associate professor at Department of computing, mathematics and physics at Western Norway University of Applied Sciences (HVL). He holds a Cand Real degree in Mathematics from University of Bergen (1983), a Master degree in Knowledge Based Systems from Heriot Watt University (UK 1988) and a PhD in Informatics (specialising in Bioinformatics) from University of Bergen (1994). Helgesen has a long and varied work experience from research and development in various settings, and is particularly interested in cross-disciplinary research and development. Before joining HVL he has worked as researcher at Chr Michelsens Institute (now CMR) with digital planning tools for petroleum economics (1983-1989), as researcher at European Bioinformatics Institute (UK) with biological databases (1996-98), and as senior consultant at CapGemini with commercial software development (1998-2002). He has also held management positions at HVL from 2005 to 2016. He is now particularly focusing on cross-disciplinary innovation projects with external cooperation, and supervises students on such projects. Two particular areas of interest are practical application of innovation methods like Design Thinking, and digital solutions in the health sector.

**Ingunn Alne Hoell** is an associate professor within engineering and technology at HVL, campus Haugesund. She holds a PhD within biochemistry from the Norwegian University of Life Sciences (2009). She is currently part of a professor qualification programme, and has previously supervised 4 bachelor students, 2 master student, and 1 PhD-students. She is currently supervising 1 PhD-student. She has been the project leader of an innovation project founded by the Research Council of Norway and Knutsen OAS Shipping AS, and has also been involved in several other research projects funded by the Research Council of Norway, Innovation Norway and VRI Rogaland. Her research interests have focused on ballast water purification and analysis, exploitation of marine resources, as well as aquaculture.

**Olav A. Kvitastein** is associate professor at the Department of Business Administration, HVL. Kvitastein holds a PhD from the Norwegian School of Economics and has prior work and research experience from Department of Public Administration, Department of Comparative Politics, Department of Information Science, University of Bergen, Texas Tech University, Lubbock and SNF (Centre for Applied Research at The Norwegian School of Economics, NHH). Kvitastein's research concerns organisational behavior, industrial organisation and related topics, and is predominantly focused on econometric and related empirical methodologies.

**Natalia Mæhle** is Associate Professor at the HVL, Mohn Centre for Innovation and Regional Development. She holds a Phd in Marketing from NHH Norwegian School of Economics. Mæhle has a lot of research experience and earlier worked as a researcher at the Centre for Applied Research at NHH (SNF AS) and Nofima Market Tromsø. She has widely published in the highly ranked international research journals and is a regular speaker at the international and national conferences. Dr. Mæhle's research interests include innovation, branding, consumer behavior and digital economy.

**Inger Beate Pettersen** is Associate Professor at the Mohn Centre for innovation and regional development at HVL. Pettersen has a PhD in B2B marketing from NHH (2005). She has prior research experience at SNF (applied research, NHH) and associate professor at BI, Norwegian Business School. Pettersen has experience with several research projects founded by the Research Council of Norway. Pettersen's research centers around innovation processes in firms (commercialisation, design, open innovation), entrepreneurship (entrepreneurial learning, market learning in internationalisation processes), and entrepreneurship education research (practice based entrepreneurial learning).

## **The Social Innovation Group**

### **Composition, volume and collective competence**

**The Social innovation research group** consists of 8 professors (Jan Kåre Breivik, Oddbjørn Bukve, Frode Fadnes Jacobsen, Eva Langeland, Anne-Mette Magnussen, Even Nilsen, Siri Ytrehus, Christine Øye) and 9 associate professor (Elisabeth Ersvær, Jens Kristian Fosse, Oddvard Førland, Kristin Hope, Einar Hovlid, Jill Merethe Loga, Tone Elin Mekki, Grete Netteland, Tobba Therkildsen Sudmann). It is a cross-disciplinary group representing different academic fields such as health science, molecular biology, geography, political science, sociology and social anthropology. The group is established recently resulting from the merger of three university colleges into HVL.

**Key topics** – Social innovation concerns new ideas that meet unmet needs, and how they are put into practice. Social innovation takes place in the voluntary sector, in organisations providing public services and in government. Social innovations also emerge from interaction and partnership between these types of actors. The two main topics in the research of the Social innovation group are 1. Innovative governance and public service provision and 2. Innovation in the health and social care services. Innovations in public service production e.g. relates to knowledge, competence, technology and professional roles. In our research on public service production and service innovations, we ask questions like: How do service innovations involve knowledge development and changes in professional roles? Which hindering and promoting factors may be identified with regard to implementation and sustainability of innovation? Which benefits and drawbacks may result for different stakeholders in specific service innovation processes, in a short-term and long-term perspective? Which drivers or barriers leads to implementation of specific technology? Examples of service innovation themes that the group has researched are 1. Reablement of frail elderly at home and 2. Telecare in municipal health care services. The research on governance innovations relates to new forms of organisation and leadership in the public sector, cross-sectoral collaboration, exchange of rules and norms between sectors etc. The research group pays attention to several important analytical questions, like: What distinguishes innovations in public sector from innovations in the market? What are the potential roles of voluntary actors and civil society in co-creation with public sector and the market? How do such innovations come into existence and under which conditions? How do they spread passively (by diffusion) or actively (by dissemination), and how are innovations spread made local in localities adopting them, partly or fully? Examples of themes are 1. New forms of public-private partnerships. 2. The relationship between governance forms and service production in the health sector

**External research funding** - The research group has a very good track record in attracting external funding, and in particular from Research council of Norway (NFR). Recent examples are “The multicultural staff in nursing homes: Contemporary challenges, opportunities and potentials for the future in the Norwegian municipal care sector (MULTICARE; HELSEVEL, NFR), “Prioritising care: service development, allocation and trust (PRICARE; HELSEVEL, NFR), “Modeling and evaluating evidence based continuing education in nursing home dementia care” (MEDCED; NRF), Care support for the elderly and disabled persons by radar (RADCARE; EEA) and “Telecare in the municipalities” (RFF). Governance, hybrid organisations and co-production between public, private and voluntary sector has been a central topic for research at the research program “The Centre for Research on Civil Society and Voluntary Sector”, financed by several Norwegian Ministries from 2008-2017. “Effects of planned audits” (The Norwegian Board of Health Supervision) studies the relationship between new governance forms and service improvements. Externally funded projects involve both national and international funding agencies, like the Social Sciences and Humanities Research Council of Canada (SSHRC) and NordForsk, and involves national and international collaborating academic institutions. Members of the research group have coordinated several of the projects. The bulk of the external funded projects has included PhD-grants. The PhD students have hence been included in larger research projects together with senior researchers, contributing to competence building in the candidates and the senior supervising staff.

**National and international networks** - The researchers in the Social Innovation group actively collaborate with several prominent researchers and academic institutions. As an example, the Centre for Care Research – Western Norway, to which several of the researchers listed above belong, engages in several joint research projects with the four other Centres for Care Research, located at NTNU, University of Agder, UiT Arctic University, University College of Southeast Norway and Nord University. In a larger research project led by York University, Toronto, Canada, the project “Re-imagining Long-term Residential Care: An International Study of Promising Practices” (2010-2018), the Centre for Care Research – Western Norway represents Norway in a six country comparative project, with participating academic institutions, besides Norway, from Canada, U.S.A., Great Britain, Germany and Sweden. Researchers in the Social innovation participate in The Centre for Research on Civil Society and Voluntary Sector, which is the most established research network on third sector research in Norway. This network also consist of strong collaboration in Scandinavia, membership in the European third sector network (ISTR) and in the network for research on social entrepreneurship in Europe (EMES) The researcher from the Centre for Care Research and the other researcher in the Social Innovation group have extensive collaboration with several international universities, like University of California, San Francisco (UCSF), University of California, San Diego (UCSD), York University, Toronto, Canada, Bristol University, University of Newcastle and University of Stirling, all three in Great Britain, University of Stockholm and University of Eastern Finland.

**Publications** - The research group are publishing extensively in leading international and national journals. During the period 2012-2017 the research group contributed to more than 240 articles in peer-reviewed international (48 in level 2 journals). In addition, they have published 90 book chapters. An exact breakdown and individual publication lists may be found in Attachment 3.2. The Center of Care Research – Western Norway runs the journal Tidsskrift for omsorgsforskning (Journal of Care Research), together with the four other regional Centres for Care Resesarch. Researchers in the Social innovation group participate as editors and referees in other journals such as Community

Development Journal, International Practice Development Journal, Ageing International, Tidsskrift for Velferdsforskning, Tidsskrift for samfunnsforskning, Nordiske Organisasjonsstudier, Voluntas, Rett og velferd, Tidsskrift for psykisk helsearbeid.

**Stakeholders** - The group has a strong focus on user involvement in the research process of all research project, to ensure relevance and usefulness of the research for the society. The user involvement is also important in order to enhance the dissemination of findings and new knowledge. Non-academic partners such the Centres for Development of Institutional and Home Care Services (USHT), interest organisations like Norwegian Pensioner's Organisation (Pensjonistforbundet), and various other relevant non-profit and for-profit organisations like Bergen Technology Transfer and Vakt & Alarm. Such collaboration ensure user participation and provide an arena for learning and dialogue. An example of an arena for joint learning and dialog frequently employed when meeting with stakeholders, is the Telecare Lab (Omsorgsteknologilaboratoriet), administrated by the Centre for Care Research – Western Norway.

**Academic ambitions** - The research groups acknowledges that innovation in governance and service innovation are interrelated themes, and that both processes are embedded in complex cultural, social and material contexts. Hence, we aim at a coherent approach for understanding the contextual and complex innovation phenomena in health and social care, requiring competent cross-disciplinary teams of researchers in all research projects. We moreover acknowledge the need for following innovation processes over a longer time-span and by employing a broad range of research methods. A long-term perspective is not the least important in following up on implementation of innovations, where a proper evaluation of successes and failures requires a long-term perspective. Additionally, we aim at continuously asking the questions: successful or detrimental for whom? In what sense, and under which conditions? Knowledge building on these topics presuppose close collaboration within the two other research groups in this PhD-program (Green innovation and Industry innovation). Furthermore, the group members have close collaboration with researchers connected to the PhD programs in Computer Science and the Health Sciences, which also facilitates and stimulates cross-disciplinary research collaboration between strong research milieus at HVL.





## **Figure 6: Examples of networks, external funding and publications of the social innovation group**

### **Members of the social innovation group**

**Jan-Kåre Breivik** is professor in community work at the HVL (HVL). Breivik has a PhD in social anthropology from the University of Oslo (2001) with the thesis "Deaf Identities in the Making – translocal and transnational connections in the Deaf World". Breivik also published a book at Gallaudet University Press based on this thesis (2005). His research interests are diverse; minority-majority relations, marginalisation and collective empowerment, disability research, homelessness and social housing, health migration (from Norway to the Canary Islands), intersectionality, art based action research, community development and disaster research. Breivik has published extensively and figured as guest editor of academic journals. Breivik uses different ways of disseminating research insights (academic journal articles, documentary films and theatre productions). He has also led several externally funded research projects.

**Oddvar Bukve** is a professor in organisation and management at HVL and deputy head of the strategic research programme Innovation and quality in public services and governance. Currently, he teaches in the master programme "Organisation and management for the public sector". Bukve is educated in public administration and organisation theory. His most long-standing research interests have been local economic development and governance innovations in local and regional government. More recently, he has also done research on multi-level governance, policy networks and quality improvement in health and welfare. Theoretically, his research draws on organisation theory, institutional theory and theories of public policy.

**Frode F. Jacobsen** is research director at the Centre for Care Research – Western Norway, at the HVL (HVL), professor at HVL and professor II at VID Specialised University. Jacobsen has a PhD in social anthropology from the University of Bergen (1997) and is also a registered nurse. His research interests are organisation of municipal health and care services, health services research, innovation in care services, staff organisation and staff culture, health and health practices in context of culture and society. Jacobsen employs international comparative perspectives in much of his research. He has published extensively and has led several externally funded research projects.

**Eva Langeland** is Professor in Health Science at the HVL (HVL), Faculty of health and Social Sciences. Her research interest are salutogenesis, health promotion, rehabilitation, reablement, mental health, long-term health challenges, talk therapy groups and complex interventions. She is leader of the Research group Rehabilitation and Health Promotion at the HVL. She has been leader of a national project about reablement and has developed a talk-therapy group intervention based on salutogenesis.

**Anne-Mette Magnussen** is a professor at the Faculty of Health and Social Sciences at HVL (HVL). Magnussen has a PhD in political science from the University of Bergen (2006). Her main research interest is the relationship between law, politics and professional discretion. Juridification processes have been studied in sectors and institutions such as the Norwegian Supreme Court, the health sector and child welfare. Magnussen has extensive experience in interdisciplinary research. She has published extensively, and participated in and led several externally funded research projects.

**Even Nilssen** is professor in social policy at HVL. Nilssen has a PhD (Dr.Polit.) in political science from the University of Bergen (1996). His research interests cover comparative and national studies in the field of welfare and work, the role of international organisations in social policy, the impact of juridification processes on the construction of social citizenship and the relationship between legal regulation and professional discretion in the welfare state. Nilssen was manager of the module “Changing Professional Roles in the Norwegian Welfare Administration” of the national evaluation of the Nav-reform. Nilssen is currently working on a project on prioritisation in the Norwegian health service. He has published extensively and led, and participated in, several external funded national and international oriented research projects.

**Siri Ytrehus** is a professor at the Department of Health Sciences, HVL. Ytrehus holds a PhD in sociology from the University of Bergen and is a registered nurse. She has specialised in research on welfare state issues and municipal health and care services. Recurring themes are elderly care, housing policy, organisation and development of housing and services for vulnerable groups, family care and dementia. She is currently involved in various research projects: home based care to elderly with advanced cancer, an innovative ICT learning platform (DILP) for family caregivers, a new ICT based device for communication within a private family caregiver network (KontaktNett) and family care to elderly with mental health problems. She is the leader of the programme “Master in Cooperation within the Health and Social Services” at HVL. She has been co-editor for the journal *Sykepleien Forskning* and has now an additional position at Helse Møre og Romsdal.

**Christine Øye** is a professor at the Department of Health Sciences, HVL. Øye is a social anthropologist, and has a phd. from University of Bergen from Faculty of Psychology. She has been doing research in different health and care institutions such as youth centers of reproductive health (HIV/AIDS eastern Africa), psychiatry, social psychiatry and nursing homes. For the most part she has been using participant observation, but has also used other qualitative and quantitative research methods. The last few years she has been involved in practice development projects, using participatory action research as well as doing implementation research analysing contextual factors influencing the process of implementation. For instance, she has been evaluating an education intervention programme targeting nursing home staff to reduce the use of restraint.

**Elisabeth Ersvær** is an associate professor at HVL. Her research work has been devoted to human health and biomedical sciences. Presently, she is devoted to initiate a project of importance for the Biomedical Laboratory Scientist Education Program: Biological specimen tracking system that tracks specimen samples in real-time as they are collected and progress through the delivery cycle to their destination laboratories; including monitoring of possible pre-analytical errors. She has furthermore developed and released digital learning resources on an open access webpage ([www.epraksis.no](http://www.epraksis.no)) and introduced a blended learning/flipped classroom approach in the Biomedical Laboratory Scientist Education Program in Bergen (article in preparation). This in order to facilitate deep learning and students that are more active.

**Jens Kristian Fosse** is an associated professor at The Mohn Centre for Innovation and Regional Development, HVL (HVL). Fosse has a PhD in geography from NTNU in (2010). His research interests are within the fields of innovation policy, clusters and regional development. Fosse has been working for many years with applied research about regional development, regional economic restructuring, regional innovation policy and evaluation at Agderforskning, a social science research institute.

**Oddvar Førland** is a researcher at Centre for Care Research – Western Norway, at the HVL and associate professor II at VID Specialised University. He works as a researcher at the Centre for Care Research – Western Norway and as a research advisor for the Centers for Development of Institutional and Home Care Services in Western Norway since 2010. He has earlier worked as a researcher and sociologist at Uni Research Health, National Centre for Emergency Primary Health Care. He is now an editor at the National documentation Centre for Municipal health and care services (Omsorgsbiblioteket) and from June 2017 he takes over as the main editor at the Journal of Care Research (Tidsskrift for omsorgsforskning). He has participated in different research projects directed by the Research Council of Norway and the Ministry of Health and Care Services. From 2010-2015 he was board member of The Norwegian Agency for Quality Assurance in Education (NOKUT). His research interests and publications are within the fields of public organisation and service development, dissemination and implementation of reforms and new knowledge, health services research, municipal care services, user involvement, family carers, voluntary sector and trust studies.

**Kristin Lofthus Hope** is an associated professor at the Department of Business Administration, HVL. She has a PhD in science and technology studies from Norwegian University of Science and Technology (2006), and has a master degree in sociology. Her research experience and interests covers the study of organisation and technology, in particular knowledge production, cultural studies, reforms and implementation in education. This covers organisational and institutional theory, governance, management and organisation of policy, cultures of knowledge-producing organisations or knowledge-intensive workplaces, and comparative European studies of professional roles. Hope has worked with different research and developments projects, both national and international, at the applied social science research institute Uni Research Rokkan Centre. Hopes doctoral thesis analysed and explored into the cultures of knowledge-producing organisations where this exploration identified the interstitial world between the academy and “the public”, where it examined the “who” and “how” of co-production. The for-profit companies play a direct role in mediating between technology/knowledge and the end user, where the thesis focuses on the process of the mediation.

**Einar Hovlid** is associate professor at the HVL (HVL), and head of the strategic research programme Innovation and quality in public services and governance. He teaches in the master programme “Organisation and management for the public sector”. Hovlid is also associate professor at the University of Bergen, Faculty of Medicine where he teaches at the master program “Quality improvement in health care”. His research interests are organisational changes and quality improvement in the health care. Currently, he is part time employed by the Norwegian Board of Health Supervision where he manages a large research project about the effects of external inspection in health care.

**Jill Merethe Loga** is an associate professor at the Department of Business Administration, HVL. Loga has a PhD in Political Science from the University of Bergen (2005) and has been employed as a senior researcher at Uni Research Rokkan Centre since 2006. She has been a research coordinator for the programme “Centre for research on Civil Society and Voluntary Sector” since 2013 and was an affiliated researcher at this Centre from 2008. This research programme/Centre has been funded in two periods (2008-2013, 2014-2018) by seven different Ministries. Loga’s research interests at the Centre the last years has been concentrated on social entrepreneurship and social innovation, governance, co-creation and co-production between sectors. In the first research period the focus

was on social participation, inclusion, integration and social capital. Her dissertation from 2005 was an analysis of the concept of social values and a case study of a Government appointed commission called The Social Values Commission (1997-2003). Loga has published extensively, and participated and led several externally funded research projects. She has also participated in Government committees and inquiries for Ministries, e.g. Advisor on Social entrepreneurship for the Minister of Local Government and Modernisation (2016), member of the Inclusion Committee (Kaldheimutvalget, 2010-11) and engagement for the Committee for Religious and Life Stance Communities (Stålsettutvalget, 2012-13).

**Tone Elin Mekki** is associate professor at the Centre for Care Research – Western Norway, at the HVL (HVL). Mekki has a PhD degree at Queen Margaret University in Edinburgh related to implementation of an intervention to reduce restraint in nursing home residents living with dementia (financed by the Norwegian Research Council). She is registered nurse and has a master degree in Pedagogy and in Nursing Science. Her field of research is municipal health and care services, responsible research innovations, and in particular collective actions for implementation and knowledge co-creation in collaboration with stakeholders at micro, meso and macro levels. She is member of international implementation science networks, has participated in several research and development projects, both nationally and internationally.

**Grete Netteland** is associate professor at the Department of Social Sciences at HVL (Campus Sogndal). She is leader of the Institute of Social Sciences and teaches in the institute's Master Programme "Organisation and management for the public sector". She is affiliated to the strategic research programme Innovation and quality in public services and governance. Netteland holds a PhD in Information Science from UiB in 2008. Research interests are related to the implementation and use of ICT-based Information Systems in large organisations, as well as the use of ICT- enhanced learning for change, learning and development. She has lead several externally funded projects, regionally as well as nationally, within digitalisation of public sector, technology enhanced learning and eHealth. ICT-based collaboration within and across organisations and between different governmental levels is of specific interest, e.g. between hospitals and municipality health. She has also been member of the National Expert Group for Quality in ICT- supported Education" with a main focus on Higher Education.

**Tobba Therkildsen Sudmann** is associate professor at Department of Social Education and Community Work, affiliated with the Master's programme in Community Work. Sudmann was head of the pre-program project 2001-2006, and head of the running programme 2007-2015. Sudmann holds a PhD in medical sociology/public health from UiB (2009). Research interest are related to how people use their bodily resources to enhance their well-being and social participation, whether the means are physical activity, technology or animals. She has been in several externally funded projects concerning innovative services on farms; for home-dwelling persons with dementia, for persons with substance use disorders and youths with mental health problems. She has been involved i externally funded projects for development of new welfare technology, RADCARE, EEA project. Running projects relates to studies of ageing and e-Health Literacy, and priority setting in health care. Publications and research are directed towards the person(s)'s agency, barriers for interaction (persons/structure), and towards anti-oppressive professional practice, irrespective of empirical field.

## The Green Innovation group

### Composition, volume and collective competence

**The Green Innovation research group** consists of 7 professors (Arnt Fløysand, Erling Holden, Liv Osland, Inge Thorsen, Kristin Linnerud, Akkelies van Nes, Dhayalan Velauthapillai) and 6 associate professor (Tom Skauge, August Wierling, Ole Andreas Brekke, Geoffrey Gilpin, Bente Johnsen Rygg, Valeria Jana Schwanitz). It is a cross-disciplinary group representing a mix of academic disciplines including engineering, economics, sociology, political science, mathematics, and physics.

**Key topics** - The conceptual starting point for the group is the field of innovation and sustainability transition studies (commonly referred to as TIS studies). The main aim of the group is to develop new empirical and theoretical knowledge in this field as well as drawing policy implications of this knowledge. The group has since 2007 investigated different aspects of green innovation and sustainable transition, but there are three main topics in their research activity; i) conceptual sustainability studies, ii) green innovation and sustainable transition pathways, and iii) sustainability impact assessments.

*Conceptual sustainability studies* assess different ways to interpret the concept of sustainable development as it has developed from the 1987 UN report Our Common Future to the 2015 UN report Transforming our world: the 2030 Agenda for Sustainable Development. The latter report announced the 17 universal sustainable development goals. The topic assesses a large number of sustainable development models, including the three pillar model of sustainability, the triple-bottom line, the overlapping spheres model, the nested spheres model, the responsible sustainability model, and the normative sustainable development model. We draw policy implications of the models for different actors (e.g., government, firms, organisations) at different levels (global to local).

*Studies of green innovation and sustainable transition pathways* assess different ways to achieve sustainable development. The topic consists of two sub-topics. The first sub-topic empirically exposes political, social, and technological drivers and barriers for achieving sustainable development in different sectors at different scales. The second sub-topic develops pathways to sustainable development and matching positive narratives to see how different actors at all scales can find inspiration and useful illustrations to achieve sustainable development. The studies in this topic are conceptually based on strategic niche management, the multi-level perspective, transition management, and technological innovation systems.

*Studies of sustainability impact assessments* assess tools, methods, and theories that document the sustainability of different sustainable development pathways. Our main focus is on assessing the environmental (and to some extent the social) impacts of deploying various types of renewable energy sources in developing new technologies and fuels in the energy and transport sector. Energy sources include for example hydropower, bioenergy, wind energy, and solar energy. New technologies and fuels include for example electric vehicles, biofuels, hydrogen, fuel cells, and batteries. The studies in this topic are conceptually based on life cycle assessment theory.

In addition to the above mentioned key topics, participants in the research group have competence in regional economics and regional economic development. Parts of their research is relevant for the field environmental economics. The following issues have been studied in this respect: Empirical

evaluation of some alternative methods for calculating the economic value of goods or bads which are not directly subject to market transaction. They have been working with the spatial transferability of such measures, and on the estimation of externality costs of atmospheric emissions to the population living close to an emitter. Finally, they have studied local impact of road pricing and investments in road infrastructure on population growth, congestion, and emissions.

**External research funding** - The research group has an excessive track record in attracting external funding. Between 2007 and 2017 the group has received more than NOK 55 million from the EU, the Research council of Norway (RCN), private firms, and regional governments. The external funding includes nine PhD grants of which five has received their doctoral degree. Some recent project examples are: Social Enterprises in Communities Renewable Energy (EU Northern Periphery Programme 2011-2013), Renewable Energy Projects: Local Impacts and Sustainability (RCN 2014-2018), Centre for Sustainable Energy Studies (RCN Centres for Environment-friendly Energy Research 2011-2018), Renewable Energy Transition (RCN 2011-2014), Fornytbar energi, innovasjon og regional utvikling (Sogn and Fjordane County 2011-2014), Renewable Energy Programme (regional firms 2008-2013). All externally funded projects involve both nationally and internationally collaborates. Members of the research group have managed several of the projects.

**National and international networks** - The research group has developed close relationship with several excellent research groups nationally and internationally in the field of sustainable transition. *National:* NTNU Industrial Economics and Technology Management; NTNU Department of Interdisciplinary Studies of Culture; SINTEF Technology and Society; UiO TIK Centre for Technology, Innovation, and Culture (where Holden holds a professor II position); Institute for Energy Technology; and the Norwegian School of Economics. *International:* Oxford University, Centre for the Environment; Imperial College Business School, London; the Bartlett School of Planning, University College London; University of St. Gallen; Aalborg University; London Business School; Okinawa Institute of Science & Technology; Ryukyu University; and Osaka University.

Researchers from the group have been visiting researchers and/or given lectures on sustainable transition at all the international research groups mentioned above.

**Publications** - The research group publishes regularly in leading international journals. During the period 2012-2017 the research group significantly contributed to more than 150 articles in peer-reviewed international (60 at level 2 journals). In addition, they have published over 20 book chapters.

**Stakeholders** - The group has a strong focus on user involvement in all research projects to ensure the dissemination of findings and new knowledge. The group has conducted more than 300 visits to firms, sites, and public institutions between 2007 and 2017. Many of the visits have been part of student excursions. Non-academic user partners include: Sogn og Fjordane Energi, Sognekraft, Statkraft, Sparebanken Sogn og Fjordane, Sogn og Fjordane County Administration, several municipalities in Western Norway, Sogn and Fjordane Science Park, the Norwegian Water Resources and Energy Directorate, Enova SF, Energy Norway, and Innovation Norway. Such collaboration ensure user participation and provide an arena for learning and dialogue between researchers, the industry and the government.

**Academic ambitions** - The Innovation Group will continue to increase the understanding of drivers and barriers relevant for green innovation and sustainable transition. In doing so, the research group will conduct empirical investigations (both qualitative and quantitative) among all relevant actors. Though the research group will focus on actors at all scales, our main focus will be on actors at regional and local scale.

The research group will contribute to the theory development in the Transformation to Sustainability (T2S) literature. Particularly, the group will elaborate on the multi-level perspective and technological innovation system. In our view, the dominant T2S models currently needs further theoretical input from three areas: the sustainable development literature, actor-oriented approaches to sustainable transition, and policy implications of the models.

The research group will contribute to the understanding of how different sustainable development models, including the SDGs, can facilitate green innovation and sustainable transition for different actors (e.g., government, firms, organisations) at different levels (global to local).

The research group will continue to publish at the highest academic level, that is, in level 2 journals and publishers. The percentage of level 2 publications has increased from 33 percent (average 2007-2017) to 73 percent (2015-2017).

The research group will make empirical and theoretical findings relevant for private and public actors. Innovation and transitions are indeed concepts that not necessarily fit easily into the vocabulary of county officials, municipality employees, and firms. Nevertheless, it is important to 'translate' research findings to those groups because they possess many of the means and instruments necessary to encourage innovation and facilitate transitions.

The research group collaborate closely with the two other research groups in this PhD-programme (Industry innovation and Social innovation). A key ambition is to facilitate and stimulate more cross-disciplinary research collaboration between strong research milieus at HVL.



**Figure 7: Examples of networks, external funding and publications of the green innovation group**

### Members of the green innovation group

**Arnt Fløysand** is a professor in Human Geography. At present (to September 2017) he is a project leader at the Mohn Centre for innovation and regional development at HVL. Fløysand holds a doctoral degree in Human Geography from University of Bergen (1996). He is experienced in studies of development and economic restructuring at community and regional level and in studies of innovation and competitiveness at clusters and place level. He has a broad publication record. Fløysand has run several project founded by the Research Council of Norway, and been partner in several international founded projects (e.g. Horizon 2020 within EU, Fondo Nacional de Desarrollo Científico y Tecnológico (FONDECYT) *Chile*). He has been involved in several evaluation related to a variety of R&D activities within his field of research. At present, Fløysand is co-editor for *Norwegian Journal of Geography* (Taylor & Francis) and a member of the editorial board of the *European Planning Studies* (Routledge). He is also a member of the Business Administration, Economics, Economic History, Human and Economic Geography, Statistics, Demography panel in the Swedish Research Council. He has been visiting professor at Universidad de Alicante, Spain (2002), Pontificia Universidad Católica in Santiago de Chile, Chile (2008), Victoria University of Wellington, New Zealand (2016).

**Erling Holden** is Professor in renewable energy at HVL, Faculty of Engineering and Sciences; and Professor II at TIK Centre for Technology, Innovation and Culture, University of Oslo. Holden has a master degree (1988) in mechanical engineering from the Department of Energy and Process Engineering, Norwegian University of Science and Technology (NTNU). In 2002, he received a doctoral degree in urban planning at Department of Urban Design and Planning, NTNU. Holden studied sociology and social psychology at the Program for Research and Documentation for a sustainable Society (ProSus), University of Oslo from 2001 to 2004. He has been visiting professor at



Oxford University (2015, 2016), London University College (2014, 2015), Imperial College London (2014), and Oxford Brookes University (2005-06).

**Kristin Linnerud**<sup>12</sup> is research professor (Researcher I) in climate policy and renewable energy at CICERO Center for International Climate Research. Linnerud has a master degree in finance (1989) from London School of Economics (LSE). In 2008, she received a doctoral degree in economics at NHH Norwegian School of Economics. She has been visiting professor at Oxford University (2015, 2016), London University College (2014, 2015, 2016), London Business School (2014), and Oxford Brookes University (2005-06). Linnerud has worked in the natural gas, finance and educational sector and has held directorships in boards of industrial companies.

**Liv Osland** is a professor in economics at HVL, Campus Haugesund. Osland received her doctoral degree in 2008 at the University of Bergen. Since 2010 she has been a coordinator in Network of European Communications and Activities Research (NECTAR) which is an active international research network. She has published papers together with national and international researchers in various international outlets. The topics of her scientific papers and book-chapters are related to housing markets, regional economics and development, applied spatial econometrics, environmental economics and cost benefit analyses. She has experience with Project Management and has taken part in projects financed by the Research Council of Norway.

**Inge Thorsen** is Professor in economics at HVL, Campus Haugesund. Thorsen holds a doctoral degree in economics from the University of Bergen, 1999, and has a long experience in conducting projects on transportation problems and regional development, for local and central authorities. In the period 2008-2010 he was for instance in charge of a research programme on modelling regional development, that was financially supported by the Research Council of Norway. In the period 2011-2014, he was working at the research programme "Crisis, Restructuring and Growth", at the Norwegian School of Economics. This programme was also financially supported by the Research Council of Norway. Thorsen has published his work in scientific journals and book chapters. The area of research is urban and regional economics, and transportation economics. This involves topics like regional growth and development, general spatial equilibrium modelling, spatial interaction analysis, the local impact of investments in transportation infrastructure, road pricing, cost benefit analysis, location theory, regional labour market issues, the housing market, and more methodological issues related to studying data involving a spatial dimension.

**Dhayalan Velauthapillai** is Professor in Physics and Technology at Western Norway of Applied Sciences, Campus Bergen. He received his PhD degree from University of Bergen in the field of electromagnetic modeling in 1996 and has had a Post Doc at University of Neuchatel, Switzerland and at University of Bergen. He won external funding for his research projects including personal PhD and Post Doc research funding from the Research Council of Norway (RCN). He is also the primary investigator of a number of international collaborative research projects on clean energy technologies funded through INCP, UTFORSK and NORPART programs run by SIU. Velauthapillai in association with international partners has organised a number of international conferences on clean energy technologies with the funding from RCN and other international funding agencies. The research of Velauthapillai concentrates on computational and experimental studies on advanced

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<sup>12</sup> Linnerud will join the Sustainable transition group as a full professor from October 2017.

nanomaterials for clean energy and health applications. The research group of Velauthapillai focuses on mathematical modeling, computer simulation, synthesis, characterisation of advanced nano materials with particular emphasis on third and fourth generation solar cells and fuel cells. The research group has the vision to develop low weight, flexible and low cost solar cell technologies based on metal oxides, dyes, polymers and perovskite materials. Velauthapillai leads also a project on energy policy and management with external funding. He has been supervisor for several master and PhD candidates in the field of computational modelling and clean energy technologies. He is currently supervising 8 PhD candidates from HVL and collaborating international institutions from India, Sri Lanka, South Korea and UK. He has also served on the evaluation committee for several PhD theses. He has over 100 research and conference articles with peer-review to his credit, and serves as a reviewer for several international journals on nano materials, optics and clean energy technologies. He has also guest edited a special issue on third generation solar cells for the Solar Energy journal.

**Akkelies van Nes** is Full Professor at the Department of Civil Engineering at Western Norway University of Applied Sciences and Assistant Professor at the Department of Urbanism at the Faculty of Architecture at the Delft University of Technology. Van Nes has been leading and involved in several research projects related to mobility and network characteristics, such as revealing the relationship between space and crime in neighbourhoods, applying spatial tools in strategic planning in cities and in the vicinity of railway stations. The core of her research activities is developing and applying various spatial analyses tools on urban centralities on various scale levels, space and crime in neighbourhoods, archaeology, strategic planning in cities, and railway stations. She has been involved in the EU financed projects earlier, such as RUFUS (Rural Future Networks), and NODES (New tools for design and operation of urban transport interchanges) when she was working as an assistant professor at the faculty of Architecture, Delft University of Technology. Currently she is leading the HVL team in the EU funded SPACERGY project (Space-Energy patterns for smart energy infrastructures, community reciprocities & related governance).

**Ole Andreas Brekke** is associate professor at the Western University of Applied Sciences and professor II at the Stein Rokkan Centre for Social studies, Uni Research. Brekke has a masters' degree (1995) in political science from the Department of Administration and Organisation theory at the University of Bergen. In 2005, he received a doctoral degree in political science from the same institution. The subject of his doctoral thesis was democratic governance of technology. He was a senior researcher at the Rokkan Centre from 2004 to 2016, from 2015 as a research Professor (Researcher I). He has a long experience in managing research projects, and was Research Manager for the research group *Culture, Power and Meaning* at the Rokkan Centre from 2011 -2016. Brekke's main research interests cover fields such as Science and Technology Studies, energy politics and social and political theory.

**Geoffrey Gilpin** is Associate Professor- and Programme Coordinator for the Renewable Energy Programme at the HVL. Gilpin holds a master degree (2006) in mechanical engineering from the Aachen University of Applied Sciences, Germany. In 2016, he received his doctoral degree in Environmental Physics and Renewable Energy from the Department of Mathematical Sciences and Technology, at the Norwegian University of Life Sciences (NMBU). Gilpin worked as a researcher at NMBU (2006-2008) and at the Western Norway Research Institute (WNRI) (2008-2015) in the fields of renewable energy and sustainability assessment. Additionally, he has been head of the Social Sciences Environmental Research Group at WNRI in the period 2013 to 2015.

**Bente Johnsen Rygg** is an associate professor in renewable energy at HVL, Faculty of Engineering and Sciences. She has a master's degree (2005) in political science from Norwegian University of Science and Technology (NTNU). In 2015, she received a doctoral degree at the department of Interdisciplinary Studies of Culture. The title of her thesis was Renewable Energy as a Community Concern. How Local Communities Face the Challenge of Increasing Use and Production of Renewable Energy. Rygg was a visiting scholar at Aalborg University, Department of Planning in 2012. Her research interests are local development of renewable energy, energy transitions, innovation and public policy.

**Valeria Jana Schwanitz**<sup>13</sup> is associate professor at HVL, Faculty of Engineering and Sciences. She holds a PhD in political sciences with a thesis in the field of environmental economics from the University of Rostock (2011). She studied physics and economics, finishing both with a masters degree (1998 and 2004, respectively). She has previously worked at the Potsdam-Institute for Climate Impact Research, Research Domain "Sustainable Solutions", as a modeler in the research groups "Global energy systems" and "Growth and Development" (2011-2013), as a guest researcher at Kyoto University, Department of Economics (2006), and at Osaka University, Department of Engineering (2007, 2010). Furthermore, she was a research associate at the Technical University of Dresden, International Graduate School IHI Zittau, Environmental Technologies Research Group (2004-2006). Valeria Jana uses historical data, scenario projections, mathematical as well as computer models to explore pathways for a sustainable development.

**Tom Skauge** is associate professor at HVL, Faculty of Engineering and Business Administration. His research and development work on green innovation has an educational and a research path. As academic coordinator for two master's – MSc in Innovation and entrepreneurship and Master in Innovation and Master in Innovation and Management – Social Science Track, he has facilitated courses and master thesis on green innovation, green technology and organisation and competence building for climate change. His relevant research has two axis: One is responsible business, ethics and CSR. He is a co-editor of a popular textbook for Business Administration in Norway: Ethics for decision makers in which the triple bottom line is important covering environmental issues. He leads a National Network on Professional Ethics and is also leader of the standing committee of Business Ethics and CSR in National Council for Economic Administrative Education. The other research axis is green energy focusing governance, management, organising, business models, competence and professionalisation. He is a member of the research group on Transition to sustainable energy systems in emerging economies: A South African focused comparative project with South African and Norwegian Research Council – SANCOOP (2013-2016).

**August Wierling**<sup>2</sup> is associate professor at HVL, Faculty of Engineering and Sciences. He has a master degree in physics (1992) from the University of Münster, Germany. In 1997, he received a doctoral degree in natural sciences from the University of Rostock, Faculty of Mathematics and Natural Sciences. August has been working at University of Rostock, University of Georgia, University of Jena, Kyoto University, and Osaka University publishing on topics such as nuclear astrophysics, laser-matter interaction, quantum statistics, and plasma diagnostics. His current interests range from dynamics of correlations in complex systems to the geometry of continued fractions. In the

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<sup>13</sup> Schwanitz and Wierling will apply for full professor qualification in 2018/19.

renewable energy group, he works on statistical analysis of data in connection with a sustainable energy transition.

**In short,** The industry group consists of 15 researchers, the social innovation group of 17 researchers and the green innovation group of 13 researchers. Accordingly, all groups has a capacity for supervision of six PhD-students or more. An exact breakdown of the number of man years can be found in Table 16 in the Appendix). The expected number of PhD-students on the programme will be 18 or approx. six students linked to each research group. Currently there are 13 active PhD candidates in the research groups of the PhD programme (see Table 9 in section 3.1.6) and additionally 3 PhD research fellow positions are in the process of being filled.

**3.1.5 The PhD programme shall host an academic environment that is stable and consists of a sufficient number of employees with professor and associate professor competencies within the full academic breadth of the programme. An evaluation of the academic environment's capacity to cover courses, topics and supervision given its number of employees shall be undertaken. The academic environment shall consist of employees with relevant competencies. The considerations of the institution shall be documented so that NOKUT can use it in its work.**

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*(5) Doktorgradsstudiet skal ha et fagmiljø som er stabilt og består av tilstrekkelig antall ansatte med professor- og førsteamanuensiskompetanse innenfor hele bredden av studietilbudet. Det skal gjennomføres en helhetlig vurdering av om fagmiljøet har tilstrekkelig antall ansatte for å dekke fag og emner og den veiledningen studiet består av. Fagmiljøet skal bestå av ansatte med relevant kompetanse. Institusjonens vurderinger skal dokumenteres slik at NOKUT kan bruke dem i arbeidet sitt*

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As outlined in Table 8 section 3.1.4, the academic environment that contributes to the PhD programme with teaching or supervision consists of 45 researchers; 24 professors and 21 associate professors.

The research environment amounts to 22,0 man-year dedicated to teaching/supervision and research activity of relevance to RESINNREG. An exact breakdown is included in Table 14 in the Appendix. This is sufficient for the 15-20 PhD candidates proposed in section 3.1.6. The academic staff has substantial PhD supervision experience making it feasible to sustain 15-20 PhD research fellows being enrolled in the programme at any given time. It is reasonable to assume that each of the 45 academic staff having their main position at HVL will be able to supervise (on average) 1 PhD candidates at any given time. 13 PhD students are currently associated with the research environment, as displayed in Table 7 in section 3.1.6.

Connected to strategic efforts at the former colleges that now constitute HVL, stable research environments with a proven track record has been developed. The Mohn Center (formerly known as Center for innovation) was established in 2005, and was part of the Bergen University College long-term effort to develop innovation and entrepreneurship as a strategic core area for the college. The first master programme in Innovation and Entrepreneurship was introduced as early as 2009, and the Mohn Center has been a key partner in this and related programmes at Bergen University College ensuring the link between education and research. The Centre for Care Research was established at Bergen University College in 2008, and the main objective was to strengthen the colleges' position as a strategic provider of applied research for the health and care sector regionally and nationally. In 2007 the Department of Natural Science, at the former Sogn og Fjordane University College, set up a research group on sustainable development. The group has prospered since its formation and today it has a strong reputation both nationally and internationally. In 2016 the group was instrumental in the introduction of a master programme in Climate Change Management. The Mohn Center, the Centre for Care Research and the sustainability group at the Department of Natural Science form the foundation for the three research groups included in RESINNREG (Industry Innovation, Social Innovation, Green Innovation).

The research groups will be responsible for facilitating the specialisation of each student in their respective. The research groups are approximately equally staffed with a current number of 13 researchers included in Green Innovation, 17 in Social Innovation and 15 in Industry Innovation, as displayed in Table 8 in section 3.1.4. As stated in section 3.1.6, (below) students will be divided between each group to ensure a balance between the groups. The academic experience and breadth of the research environment is extensively covered in section 3.1.4, 3.2.5, 3.2.6 as well as the CVs and publication lists attached in Attachment 3.1 and 3.2.

The distribution of researchers taking on responsibility for each course is clarified in the study programme. 20 researchers in total have designated course responsibilities. Arnt Fløysand is furthermore the programme coordinator. The PhD programme also has designated coordinators for each research group; Prof. Stig Erik Jakobsen (industry innovation), Prof. Frode Fadnes Jacobsen (social innovation) and Prof. Erling Holden (green innovation).

The academic environment has sufficient competencies in terms of teaching and supervision, as per the attached CVs. In section 3.2.2, the pedagogic competencies in the academic environment is detailed further and summarised. These competencies are spread over each of the former university colleges comprising HVL (check Figure 8 and section 3.1.4). The distribution of researchers taking on responsibility for each course is clarified in the study programme and in Table 10 in section 3.2.1.

**3.1.6 The institution shall document its capacity and recruitment potential to admit at least 15 PhD candidates within five years of the start of the programme. In addition, the institution shall demonstrate that it can maintain a PhD programme that can host at least 15 candidates over time. Employees hired under a private sector-PhD programme or public sector PhD programme shall be included in the calculation of number of PhD candidates as according to this paragraph and the fifth section of § 3-8. At least eight of the candidates are required to have the institution as their primary workplace. The institution may also admit externally financed PhD candidat**

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(6) Institusjonen skal dokumentere at den har kapasitet og rekrutteringspotensial til å ta opp minst 15 stipendiater til doktorgradsstudiet i løpet av fem år etter oppstart. Institusjonen skal i tillegg sannsynliggjøre at den over tid kan opprettholde et doktorgradsmiljø med minst 15 stipendiater. Personer ansatt under ordningen nærings-ph.d. og offentlig sektor-ph.d., kan inngå i beregningen av antall stipendiater etter denne paragrafen og § 3-8 femte ledd. Minst åtte av stipendiatene skal ha hovedarbeidsplass ved institusjonen. Institusjonen kan i tillegg ta opp doktorgradskandidater med annen finansiering

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As displayed in Table 7, there are currently 13 active PhD candidates within the areas covered by the PhD programme, and 3 new PhD research fellow positions relevant to the programme are in the process of being filled or advertised. The majority of the candidates have been financed by PhD positions at HVL, but there have also been several PhD candidates financed by external grants.

Currently, HVL has in total received funding for 94 recruitment positions from the central government through the Ministry of Education and Research. The academic environments supporting the application are increasingly applying for and attracting external funding, including funding for PhD positions such as public and industry PhD funding, which are particularly relevant to this programme due to its applied and practical focus. There is currently a PhD student funded by the public PhD programme affiliated with the Mohn Centre.

Based on this, we find 15-20 PhD candidates to be a realistic number of PhD candidates to supervise and obtain funding for as part of the proposed programme. This volume will allow for approx. 6 PhD candidates to be associated with each of the research fields included in the programme. This will constitute a research and learning environment with a critical mass for all enrolled PhD candidates and ensure that each research group includes PhD candidates who are in the beginning of the PhD studies and more experienced PhD candidates who are in the second half of their studies. A volume of approx. 18 candidates will require admission of approx. 6 new PhD candidates each year. We consider this to be realistic given the past history of applicants to open PhD positions. Recruitment strategies are elaborated in section 2.2.3.

Table 9 – Current PhD research in the research environment

| Candidate                      | Research Area  | Supervisor(s)  | Admission Period                                     | Degree awarding institution                      |
|--------------------------------|--|--|--|--|
| <b>Industry Innovation</b>     |  |  |  |  |
| Øystein Stavø Høvig            | Entrepreneurship and the development of dynamic industrial environments in urban and rural areas / Entreprenørskap og utvikling av dynamiske næringsmiljø i urbane og rurale områder | Professor Arnt Fløysand, Professor Stig-Erik Jakobsen  | 2012-2017<br><br>External funding                    | Faculty of Social Sciences, University of Bergen |
| Rune Njøs                      | Regional industry development and innovation: Conditions for renewal of natural resource-based industries  | Professor Arnt Fløysand, Professor Stig-Erik Jakobsen  | August 2015-July 2018<br><br>External funding        | Faculty of Social Sciences, University of Bergen |
| Kaya Færøvik                   | Drivers and challenges for cross-industry innovation and branching in Western Norway.  | Professor Arnt Fløysand, Professor Stig-Erik Jakobsen  | Mai 2017 – April 2021                                | Faculty of Social Sciences, University of Bergen |
| Øivind André Strand Aase       | Financial Accounting and Taxation  | Professor Liv Osland   | Mars 2016 – Mars 2020                                | NHH  |
| Gunnar Husabø                  | How, and to what degree, external inspections can be used as a tool for improving diagnosis and care for patients with sepsis in emergency departments.                              | Associate professor Einar Hovlid, Professor Gunnar Bondevik (UiO), Professor Jan Frich (UiB) | October 2016-september 2020                          | Faculty of medicine, University of Bergen        |
| PhD student (posted June 2017) |  |  | January 2018 – December 2022<br><br>External funding |  |
| PhD student (posted June 2017) |  |  | January 2018 – December 2022                         |  |
| Candidate                      | Research Area  | Supervisor(s)  | Admission Period                                     | Degree awarding institution                      |
| <b>Social Innovation</b>       |  |  |  |  |
| Mari Synnøve Berge             | Health and care technology / Omsorgsteknologi  | Knut Øvsthus, HVL, Bergen<br>Alison Bowes, University of                                     | 2016   | University of Sterling                           |

|                         |  |   |                              |  |
|-------------------------|--|---|------------------------------|--|
|                         |  | Stirling, UK<br><br>Louise McCabe,<br>University of<br>Sterling, UK<br><br>Professor Frode<br>Fadnes Jacobsen |                              |  |
| Thomas Owren            | Job creation for persons with intellectual disability in ordinary businesses - institutional entrepreneurship in the workplace   | Professor Hans Christian Garmann Johnsen,<br><br>Associate Professor Jens Kristian Fosse                      | August 2016 – September 2020 | University of Agder                              |
| Ida Lervik Midtbø       | Innovation practices in multicultural kindergardens  | Professor Hans Christian Garmann Johnsen,<br><br>Associate Professor Inger Beate Pettersen                    | August 2016 – September 2020 | University of Agder                              |
| Yngvild Eline Brandser  | Health and care technology / Omsorgsteknologi  | Professor Frode F Jacobsen, HVL<br><br>Professor Knut Øvsthus, HVL<br><br>Professor Karin Anna Petersen, UiB  | 2019                         | University of Bergen                             |
| Tine                    | An ethnographic study on the implementation of standardised diagnostic practice in a Psychiatric Care Center   | Researcher Simen Neby<br><br>Associate professor Tom Skaug  | Mars 2017 – February 2021    | University of Bergen                             |
| <b>Candidate</b>        | <b>Research Area</b>   | <b>Supervisor(s)</b>  | <b>Admission Period</b>      | <b>Degree awarding institution</b>               |
| <b>Green Innovation</b> |  |   |                              |  |
| Svein-Gunnar Sjøtun     | The role of the engineer profession in the green shift in the maritime industry of South-West Norway / Ingeniørprofesjonens rolle i det grønne skiftet i maritime industri på Sør-Vestlandet | Professor Arnt Fløysand,<br>Professor Stig-Erik Jakobsen  | July 2015-July 2019          | Faculty of Social Sciences, University of Bergen |



|                                   |   |   |                              |  |
|-----------------------------------|---|---|------------------------------|--|
| Jorunn-Elisabeth Stavø            | Support schemes' influence on risks and profits in the renewable electricity sector   | Professor Torjus Bolkesjø (NMBU), Forsker I Kristin Linnerud (Cicero) | September 2015 – March 2020  | Faculty of Environmental Sciences and Natural Resource Management, Norwegian University of Life Sciences |
| Ole Inge Gjerald                  | Renewable strategies? Innovation, implementation and commercialisation in renewable energy / Fornybare strategier? Innovasjon, implementering og kommersialisering for ny fornybar energi | Professor Knut Holtan Sørensen (NTNU), Professor Erling Holden (HVL)  | January 2011 - December 2017 | Department of Interdisciplinary Studies of Culture, Norwegian University of Science and Technology       |
| PhD student<br>Posted (june 2017) |   |   | January 2018 – December 2022 |  |

## 3.2 Regulation concerning supervision of the educational quality in higher education § 2-3

### Studietilsynsforskriften § 2-3

**3.2.1 The academic environment associated with the PhD programme should have a size that is proportional to the number of students and profile of the PhD programme, be stable over time, and have a composition that covers the disciplines and subjects included in the PhD programme**

*(1) Fagmiljøet tilknyttet studietilbudet skal ha en størrelse som står i forhold til antall studenter og studiets egenart, være kompetansemessig stabilt over tid og ha en sammensetning som dekker de fag og emner som inngår i studietilbudet*

The academic environment has sufficient competencies in terms of teaching and supervision, as per the attached CVs. In section 3.2.2 the pedagogic competencies in the academic environment is detailed further and summarised. These competencies are spread over each of the former university

colleges comprising HVL (check Figure 8 in section 3.2.3 on academic management and section 3.1.4).

As outlined in Table 8 in section 3.1.4, the academic environment that contributes to the PhD programme with teaching or supervision consists of 45 researchers. Out of the 45 researchers 24 have professoral competence and 21 are associate professors.

The research environment amounts to 22,0 man-year, with 5,7 man years allocated to teaching and supervision and 15,8 man years allocated to research and development (and 0.5 to 'other'). An exact breakdown is included in Table 16 in the Appendix. This is sufficient for the 15-20 PhD candidates proposed in section 3.1.6. The academic staff has substantial PhD supervision experience making it feasible to sustain 15-20 PhD research fellows being enrolled in the programme at any given time. It is reasonable to assume that each of the 44 academic staff having their main position at HVL will be able to supervise (on average) 1 PhD candidates at any given time.

The research groups corresponding to the three research fields that constitute the pillars of the proposed programme: Industry Innovation, Social Innovation, Green Innovation are approximately equally staffed with a current number of 13 researchers included in Green Innovation, 17 in social innovation and 15 in Industry Innovation, as displayed in Table 8 in section 3.1.4. As stated in section 3.1.6, students will be equally divided between each group. The PhD programme also has designated coordinators for each research group; Prof. Stig Erik Jakobsen (industry innovation), Prof. Frode Fadnes Jacobsen (social innovation) and Prof. Erling Holden (green innovation). Arnt Fløysand is furthermore the programme coordinator.

PhD candidates will be part of one of these research groups and undertake a research project linked to the research competence of the supervisor(s). The research competence of the academic staff is sufficient to cover the breadth of the PhD programme. This is described at length in section 3.1.4, as well as document in publication lists and CV included in Attachment 3.1 and 3.2. In study programme of Attachment 2.1 researchers are designated to course responsibilities. As displayed in the Table 10, there are in total 20 researchers with allocated course responsibilities.

**Table 10: Course responsibility**

| Course  | Course responsible  |
|---|---|
| PHDINN902: Philosophy of Science, Research Ethics and Innovation in Scientific Work | Prof. Ole Andreas Brekke ( <i>primarily responsible</i> ), Prof. Ilona Heldal, Assoc. Prof. Tobba Therkildsen Sudmann.                              |
| PHDINN903: Understanding and Exploring Innovation                                   | Prof. Arnt Fløysand ( <i>primarily responsible</i> ), Prof. Jarle Aarstad, Ass. Prof. Jill Merethe Loga.  |
| PHDINN904: Doing and Exploiting Innovation  | Ass.Prof. Jens Kristian Fosse ( <i>primarily responsible</i> ), Ass.Prof. Inger Beate Pettersen, Prof. in technology management (from January 2018) |
| PHDINN905: Decision making for responsible innovation                               | Prof. Sylvia Encheva ( <i>primarily responsible</i> ), Prof. Talal Rahman.  |
| PHDINN906: Innovation and Industry Development                                      | Prof. Stig-Erik Jakobsen ( <i>primarily responsible</i> ), Prof. Chunyan Xie, Ass.Prof. Natalia Mæhle.  |
| PHDINN907: Innovation in the Public Sector  | Prof. Frode F. Jacobsen ( <i>primarily responsible</i> ), Prof. Oddbjørn Bukve, Prof. Even Nilssen.   |
| PHDINN908: Innovation and Sustainable Transition                                    | Prof. Erling Holden ( <i>primarily responsible</i> ), Prof. Kristin Linnerud and Prof. Liv Osland.  |

### 3.2.2 The academic environment associated with the PhD programme must contain relevant pedagogic competence

(2) *Fagmiljøet tilknyttet studietilbudet skal ha relevant utdanningsfaglig kompetanse*

We have also documented the pedagogic competence of the research group. It shows that ....

Out of 45 researchers, 25 have formal pedagogic education. This competence is distributed over the different research groups. The researchers also have broad teaching and supervision experience at bachelor's, master's and the PhD level, as well as in writing textbooks for teaching. The academic environment has furthermore supervised 94 PhD students. This is corroborated by the CVs attached in Attachment 3.1. As specified in Table 9 in section 3.1.6, there are currently 13 PhD students associated with the research environment.

### **3.2.3 The PhD programme must have clear academic management with a defined responsibility for quality assurance and development of the PhD programme**

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*(3) Studietilbudet skal ha en tydelig faglig ledelse med et definert ansvar for kvalitetssikring og -utvikling av studiet.*

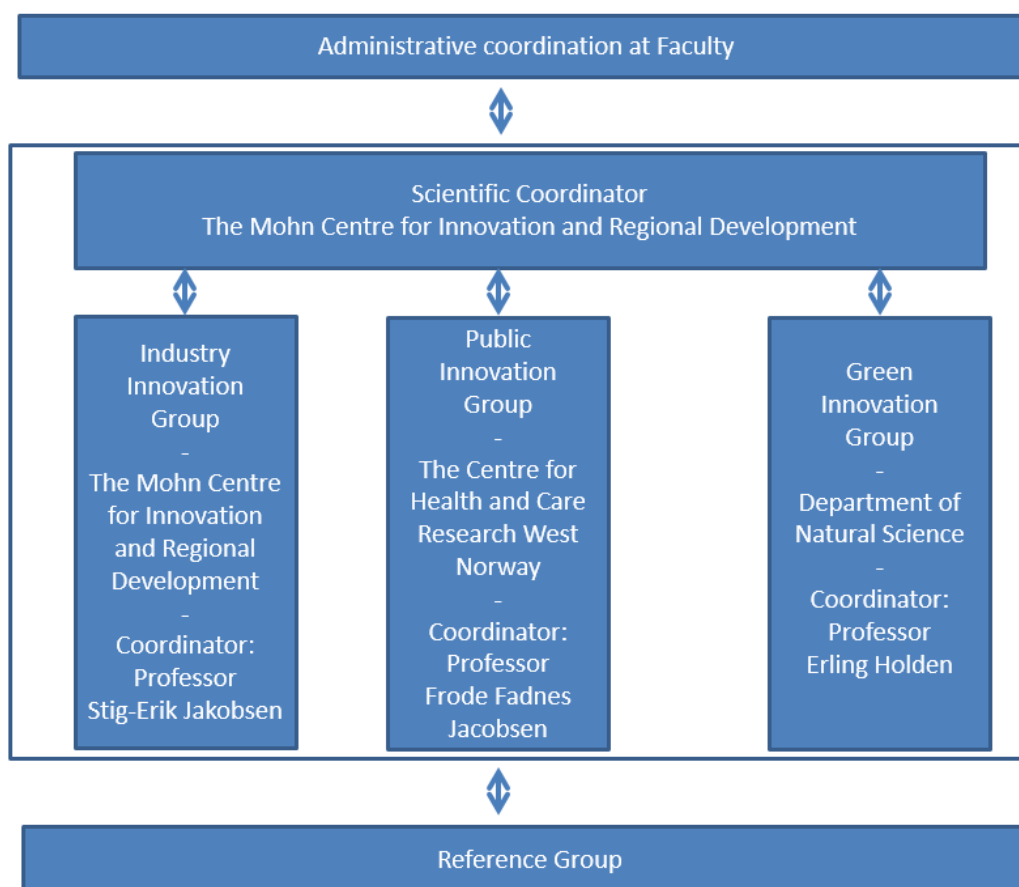
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The quality assurance system for PhD education at HVL (Attachment 1.2) defines the programme coordinator as head of the PhD programme both scientifically and administratively. The programme coordinator has to be a professor from the academic staff of the programme. The programme coordinator is together with the programme committee for RESINNREG responsible for the quality assurance and development of the PhD programme, as the day-to-day operation is the responsibility of the programme coordinator but decisions on admission to the PhD programme, on changes in syllabus and course plans etc is the responsibility for the programme committee for RESINNREG (see section 1.1)) for the mandate of the programme committee).

As specified in section 3.2.1, Prof. Arnt Fløysand is the programme coordinator. The PhD programme also has designated group-coordinators for each research group; Prof. Stig Erik Jakobsen (industry innovation), Prof. Frode Fadnes Jacobsen (social innovation) and Prof. Erling Holden (green innovation). These four, together with a PhD student from the program, constitute the programme committee of RESINNREG.

The day to day administration of RESINNREG will be conducted by the faculty administration at faculty XX in close collaboration with the central research administration at HVL. The scientific coordination of RESINNREG will be located at the Mohn Center for Innovation and Regional Development. As this is the most excellent innovation research milieu at HVL, the programme coordinator will be based in this milieu. The Industry Innovation Group are also strongly associated with the Mohn center. Further, the Centre for Care Research are pivotal in the Social innovation group while the Department of natural science in Sogndal has a similar role in the Green innovation group. Our management model (see figure 8) ensure solid cross-faculty and cross-disciplinary involvement in the programme. Due to its coordinating role, we describe the Mohn Centre in detail below.

**Figure 8: Academic management**



**About the Mohn Centre.** The the Centre consists of 9 full-time researchers (three professors, three associate professors, 2 assistant professors and 1 researcher). In addition it includes two adjunct professor and five PhD students. The Centre aims for research of high international quality, but also for development of Western Norway.

The Mohn Center (formerly known as Center for innovation) was established in 2005, and was part of the Bergen University college long-term effort to develop innovation and entrepreneurship as a strategic core area for the college. The Mohn Centre is located at Campus Kronstad, where the involved researchers are physically co-located. Professor Stig-Erik Jakobsen leads the Centre. The Centre aspires to represent a proactive and practice-oriented research group which disseminates research-based knowledge both regionally (to non-academic partners and users) and nationally/internationally through academic publishing, research collaboration and as coordinators and participants of externally funded research projects. Within the group, different academic disciplines are represented encompassing economics, engineering, economic geography, strategic management, political science, organisational theory. The research group is interested in several topics within the field of innovation and regional development.

The Mohn Centre has a strategy for scientific conduct that spans both exploring and exploiting innovation, where both academic and non-academic partners and actors are focal for advancing the activities. Accordingly, the Centre is very active in “global pipelines” (e.g. academic journals, conferences, workshops etc.), but also in the “local buzz” disseminating research of high scientific

quality to the society in Western Norway and beyond. Regional networks include important non-academic partners such as The Research Council of Norway, Innovation Norway, Hordaland County Administration, Bergen Technology Transfer, Nyskapingsparken Incubator, Connect Vest, cluster organisations NCE Media, NCE Seafood Innovation, NCE Maritime Clean Tech, GCE Subsea, DesignArena, formal and informal networks, and individual firms and public organisations. Nationally, the Mohn Centre in particular cooperate with innovation researchers at the University of Stavanger and the University of Agder. Important international partners are the University of Manchester, London School of Economics and the University of Salamanca.

Moreover, in 2018, the Mohn Centre will host the international conference Regional Innovation Policies. This conference is an important meeting place for leading scholars within the field of innovation and regional development, and will attract approx. 300 participants from all over the world. The Centre is particularly concerned with acquisition of externally funded research projects, where the researchers form consortiums with other relevant research milieus and institutions within both nationally and internationally within the field of innovation and regional development in joint applications. Accordingly, external funding is crucial for the research activities. Through coordinating and participating in large, externally funded projects the Centre has had an annual external funding of approx. 7.5 MNOK since the Centre was established in 2011.

Through publication in leading journals, and as hosts of the acknowledged international journal European Planning Studies (Professor Stig-Erik Jakobsen is Associate Editor of the journal), the Mohn Centre in particular has contributed to understandings of the context-specificities of innovation and economic development processes, the role of policy in regional development processes and understandings of industry cluster development. During the period 2013-2016, the Mohn Centre contributed to 48 articles in peer-reviewed, international journals. The Mohn Centre encourages interaction and publishing in open access publication canals, co-authoring and cooperation in order to utilise and further develop its knowledge resource base.

**3.2.4 At least 50 percent of the work associated with the phd programme shall consist of employees in principal position at the institution. Out of these, there must be employees with first-rate qualifications in the central parts of the phd programme.**

**In addition, the following requirements apply to the level of competence of the academic environment: c) For phd programmes at a doctoral level, the academic environment associated with the programme must consist of first-rate qualifications, of which 50 % requires professor or adjunct professor competence**

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*(4) Minst 50 prosent av årsverkene tilknyttet studietilbudet skal utgjøres av ansatte i hovedstilling ved institusjonen. Av disse skal det være ansatte med førstestillingskompetanse i de sentrale delene av studietilbudet.*

*I tillegg gjelder følgende krav til fagmiljøets kompetansenivå: c) For studietilbud på doktorgradsnivå skal fagmiljøet tilknyttet studiet bestå av ansatte med førstestillingskompetanse, hvorav 50 prosent med professor- eller dosentkompetanse*

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The academic staff behind the PhD programme in Responsible Innovation and Regional Development consists of 24 professors contributing and 21 associate professors. All have their principal position at HVL (see Table 16 in the Appendix). No researchers have less than 0.1 man years per year.

### **3.2.5 The PhD programme must be relevant to research and / or artistic development work and academic development work and be able to demonstrate documented results with a quality and an extent that is proportionate to the content and level of the phd programme**

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(5) Fagmiljøet tilknyttet studietilbudet skal drive forskning og/eller kunstnerisk utviklingsarbeid og faglig utviklingsarbeid og skal kunne vise til dokumenterte resultater med en kvalitet og et omfang som er tilfredsstillende for studietilbudets innhold og nivå

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The education of this PhD programme is research-based. Thus, researchers in the programme actively engage in academic research. This research is organized in three research groups and are conducted at various campus at HVL . Table 11 displays a list over the significant external funded research projects with participation of RESINNREG researchers. The list shows that the research group behind this proposal has a strong record in with forwarding proposals to external sources, such as the Norwegian Research Council. Additionally, the academics staff's research production is documented in the publication lists in Attachment 3.2. The link between education and research in RESINNREG are further attested by the fact that a third of current PhD students are financed by externally funded research projects (see Table 9 in section 3.1.6).

**Table 11: Selected external funded research projects (2012-2017) with participation from RESINNREG researchers**

| Title   | Funding                          | Project periode | Participants from RESINNREG  |
|---|----------------------------------|-----------------|--|
| Drivers of regional economic restructuring: Actors, institutions and policy                       | Research Council of Norway (RCN) | 2017-2020       | Jakobsen, Aarstad, Pettersen Fosse, Fløysand, Mæhle, Bukve, Kvitastein |
| Managing Risk in Offshore Operations  | RCN                              | 2013-2017       | Xie, Solesvik  |
| Innovation policies for economic restructuring: Combining actor based and system based strategies | RCN                              | 2017-2018       | Jakobsen   |
| Path development in different regional settings. Regional policy approaches in the global economy | RCN                              | 2014-2016       | Jakobsen, Aarstad, Pettersen Fosse, Fløysand, Mæhle                    |
| Exploring the role of VRI in regional   | RCN                              | 2014-2016       | Jakobsen, Aarstad, Fosse   |

|  |  |            |   |
|--|--|------------|---|
| innovation system formation and new path development   |  |            |   |
| Local crowdfunding for a low-emission society: Investigating the concept of local climate crowdfunding for Norway  | RCN  | 2017-2019  | Mæhle   |
| Petroleum activities and implications for innovation and entrepreneurship in a regional perspective  | RCN  | 2015       | Aarstad, Pettersen                            |
| Evaluation of SIVA's incubator and industry facilitation programme   | SIVA   | 206-2017   | Jakobsen, Mæhle, Aarstad                      |
| Kunnskapsfundament, arbeidsmodeller og verktøy for NCE- og Arenaprogrammene  | Innovasjon Norge                                     | 2015       | Fosse, Jakobsen                               |
| Analyse av Forskningsrådet nye regional satsing for mobilisering og forsknignbasert innovasjon   | RCN  | 2015       | Jakobsen, Fosse                               |
| EMBRIC – Clusters to promote the Blue Bioeconomy   | EU, Horizon 2020                                     | 2016-2019  | Jakobsen, Fløysand                            |
| How can policy makers create clusters?   | RCN  | 2012-2014  | Jakobsen, Aarstad, Pettersen, Fløysand, Fosse |
| Innovation processes in firms, networks and industry clusters in Hordaland   | RCN  | 2010-2012  | Jakobsen, Fosse,                              |
| Transition to sustainable energy systems in emerging economies – A South African focused comparative project (comparing China, India, South Africa and Brazil, the southern BRICS) | RCN  | 2015-2017  | Skauge, Brekke                                |
| Experience-based knowledge and innovation in the maritime sector   | Martimt Forum, Neptum Stiftelsen                     | 2017-2019  | Jakobsen, Aarstad                             |
| Renewable Energy Projects: Local Impacts and Sustainability  | RCN  | 2014-2018  | Holden, Rygg, Schwanitz, Wierling, Linnerud   |
| Centre for Sustainable Energy Studies  | RCN Centres for Environment-friendly Energy Research | 2011-2018  | Holden, Rygg, Gilpin                          |
| Renewable Energy Transition  | RCN  | 2011-2014  | Holden. Rygg                                  |
| Renewable energy, innovation and regional development  | Sogn and Fjordane County                             | 2011-2014  | Holden  |
| Social Enterprises in Communities Renewable Energy   | <i>EU Northern Periphery Programme</i>               | 2011-2013  | Holden  |
| Renewable Energy Program   | Regional power companies and banks                   | 2008-2013  | Holden, Rygg, Gilpin, Linnerud                |
| Development of hybrid power generating system for Electrical Power Supply Ship.  | RCN (MAROFF)   | 2011-2012. | Osland, McArthur                              |
| Neighbourhoods at risk: Residential mobility and neighbourhood tipping.  | RCN(VAM)   | 2012-2015  | Osland, Thorsen, Gjestland                    |
| Clean energy policy and  | Ministry of  | 2017-2020  | Velauthapillai D                              |



|   |   |                |                          |
|---|---|----------------|--------------------------|
| management – Comparison study, Capacity building and establishment of clean energy consortium   | Foreign Affairs, Norway/Royal Norwegian Embassy in Sri Lanka      |                |                          |
| Higher education and Research on Nano materials for Clean Energy Technologies (HRNCET)  | NORPART, SIU  | 2017-2021      | Velauthapillai D         |
| Advanced Nano materials for clean energy and health applications  | UTFORSK (Long term), SIU/RCN                                      | 2017-2020      | Velauthapillai D         |
| Advanced Nano materials for Clean Energy Applications - A Joint collaborative project between HiB and Coimbatore Institute of Technology (CIT), India | Indo-Norwegian Collaborative Program                              | 2014-2017      | Velauthapillai D         |
| International Conferences on Nano materials for Frontier Applications and Sustainable Technologies  | RCN, NANO2021   | 2013,2014,2015 | Velauthapillai D         |
| The multicultural staff in nursing homes: Contemporary challenges, opportunities and potentials for the future in the Norwegian municipal care sector | RCN   | 2017-2020      | Jacobsen, Førland, Mekki |
| Prioritising care: service development, allocation and trust  | RCN   | 2017-2020      | Førland, Jacobsen        |
| Modeling and evaluating evidence based continuing education in nursing home dementia care   | RCN   | 2011-2015      | Jacobsen, Mekki, Førland |
| Contested spaces: Exploring how policy and practice shape Norwegian nursing homes   | RCN   | 2011-2015      | Jacobsen                 |
| Voluntary work in Norwegian long term care – prevalence, forms, interaction with professionals and potentials for the future                          | RCN   | 2013-2016      | Førland, Jacobsen        |
| Care support for the elderly and disabled persons by radar (RADCARE)  | EEA   | 2013-2016      | Jacobsen, Sudmann        |
| Re-imagining long-term residential care: an international study of promising practices  | Social Sciences and Humanities Research Council of Canada (SSHRC) | 2010-2018      | Jacobsen, Mekki, Førland |
| Marketisation in elderly care   | FAS and NordForsk   | 2012-2017      | Jacobsen                 |
| Telecare in the municipalities (Telecare in municipal home nursing)   | RCN/RFF   | 2012-2017      | Jacobsen                 |
| Alarmmottak som sentral utfordring og mulighet i et kommunalt omsorgsteknologitilbud (The call centre as a municipal telecare solution)               | RCN/RFF   | 2016-2019      | Jacobsen, Sudmann        |
| Vossamodellen - tidlig rehabiliteringsinnsats for hjemmeboende eldre i Voss kommune   | RCN/RFF   | 2013-2016      | Jacobsen                 |

|  |                              |           |                    |
|--|------------------------------|-----------|--------------------|
| Prioritising healthcare: Tensions and Interplays between Legal, Political, Economic and Professional Perspectives                    | RCN                          | 2013-2018 | Magnussen, Nilssen |
| RADCARE  | NFR/EØS                      | 2014-2016 | Sudmann            |
| Inn på tunet RFF-VEST  | Møreforskning                | 2015-2016 | Sudmann            |
| Reshaping the Map of Local and Regional Self-Government. A study of the Norwegian Local Government Reform (NLGR) processes 2014–2019 | Norwegian Research Council   | 2016-2020 | Bukve              |
| Local development policy issues in Norway and Slovakia   | EEA Grants                   | 2015-2016 | Bukve              |
| City and county parliamentarism compared   | Ministry of Local Government | 2014-2016 | Bukve              |

### 3.2.6 The academic environment of the phd programme that produces a degree, shall actively take part in national and international cooperation and networks of relevance to the phd programme

(6) Fagmiljøet tilknyttet studietilbud som fører fram til en grad, skal delta aktivt i nasjonale og internasjonale samarbeid og nettverk som er relevante for studietilbudet

International cooperation strengthen competencies and facilitate transfer of knowledge. The academic environment of the PhD programme is therefore actively prioritising research projects that include cooperation with world-leading external institutions. It is thus participating in a series of national and international academic networks. It is not expedient to include a list over the networks that every researcher takes part in. Table 12 lists external cooperating partners that are integrated in relevant research projects at the HVL. Table 13 displays a lists of a selection of relevant publications co-authored with researchers external to HVL.

Researchers from the academic environment furthermore participate in the editorial boards of international academic journals. Prof. Stig Erik Jakobsen has since 2014 been one of three editors in *European Planning Studies*, while Prof Arnt Fløysand has been one of the co-editors of *Norwegian Journal of Geography* since 2015. Prof. Dhalayan Velauthapillai meanwhile has been a guest editor for the journal's Solar Energy and International Journal of Energy Technology and Policy in 2014 and 2017. Even Nilssen has furthermore been a member of the editorial board in *The Open Political Science Journal* from 2007 to 2015. Prof. Liv Osland has been a guest editor in *Urban Studies*, while several other members of the academic environment has been guest editors for selected numbers in different journals.

International cooperation is also done through participation in research conferences. All PhD candidates will give research presentations at international scientific meetings, workshops and conferences, and it is expected that PhD candidates give at least one talk at an international venue in the course of the studies. In April 2017, the Mohn Centre hosted a workshop for PhD students on responsible innovation including top international guest lecturers from the University of Manchester

and Salamanca and visiting PhD students from abroad. In 2018 the Mohn Centre will host the 13<sup>th</sup> Regional Innovation Policy Conference (RIP) which will include a workshop for PhD students. Internationalisation arrangements are further elaborated in section 2.8. Furthermore researchers from international partner institutions may be involved in the programme as secondary PhD supervisors and guest lecturers.

**Table 12: Academic partners in selected external funded projects involving RESINNREG researchers**

| <b>Research projects</b>  | <b>External partners (national and international)</b>  |
|---|--|
| <i>Drivers of regional economic restructuring: Actors, institutions and policy</i>  | University of Stavanger, University of Bergen, University of Manchester, Queensland University of Technology, London School of Economics, Universiteit Utrecht   |
| <i>Managing Risk in Offshore Operations</i>   | SINTEF, Uni Research, University of Michigan, Innsbruck University, SIRC/University of Cardiff, University of Aberdeen, and University of Stavanger  |
| <i>Innovation policies for economic restructuring: Combining actor based and system based strategies</i>  | University of Agder, BI Oslo, University of Tampere, University of Vienna  |
| <i>Path development in different regional settings. Regional policy approaches in the global economy.</i>   | University of Agder, University of Stavanger, University of Bergen, London School of Economics, Circle (Lund), Norut   |
| <i>Exploring the role of VRI in regional innovation system formation and new path development</i>   | University of Agder, University of Stavanger, London School of Economics, Circle (Lund, Norut  |
| <i>Kunnskapsfundament, arbeidsmodeller og verktøy for NCE- og Arenaprogrammene</i>  | Agder Research   |
| <i>How can policy makers create clusters?</i>   | University of Bergen, University of Wales, BI Oslo   |
| <i>Innovation processes in firms, networks and industry clusters in Hordaland</i>   | University of Agder, NORUT   |
| <i>EMBRIC – Clusters to promote the Blue Bioeconomy (EU, Horizon 2020)</i>  | University of Bergen, 24 partners at R&D institutions in Europe  |
| <i>Evaluation of SIVA's incubator and industry facilitation programme / Følgeevaluering av SIVA's inkubator- og næringshageprogram</i>  | SNF, Ideas2Evidence  |
| <i>Transition to sustainable energy systems in emerging economies – A South African focused comparative project (comparing China, India, South Africa and Brazil, the southern BRICs)</i> | University of Cape Town, UiB , Universidade Cândido Mendes, Norwegian Institute of Urban and Regional Research   |
| <i>Experience-based knowledge and innovation in the maritime sector</i>   | Maritimt Forum / Maritime Forum, Neptun Bergen Association/ Stiftelsen Neptun Bergen   |
| <i>Local crowdfunding for a low-emission society: Investigating the concept of local climate crowdfunding for Norway (COOLCROWD)</i>  | Norwegian Business School (NHH), Eindhoven University of Technology, University of Western Australia School of Agricultural and Resource Economics, University of Otago  |
| <i>Renewable Energy Projects: Local Impacts and Sustainability</i>  | NTNU Industrial Economics and Technology Management; NTNU Department of Interdisciplinary Studies of Culture; Oxford University, Centre for the Environment; Aalborg University  |
| <i>Centre for Sustainable Energy Studies</i>  | NTNU Industrial Economics and Technology Management; NTNU Department of Interdisciplinary Studies of Culture; SINTEF Technology and Society; UiO TIK Centre for Technology, Innovation, and Culture (where Holden holds a professor II position); Institute for Energy Technology; and the Norwegian |

|  |  |
|--|--|
|  | School of Economics; Imperial College Business School, London; the Bartlett School of Planning, University College London  |
| <i>Renewable Energy Transition</i>   | UiO TIK Centre for Technology, Innovation, and Culture; Utrecht University   |
| <i>Renewable energy, innovation and regional development</i>   | NTNU Industrial Economics and Technology Management; Aalborg University  |
| <i>Social Enterprises in Communities Renewable Energy</i>  | Finnish Forest Research Institute; Joensuu Research Unit; Savonia University of Applied Sciences; Action Renewables, Northern_Ireland; University of Ulster, Coleraine; Northern Ireland West Regional Authority; Community Energy Scotland; Lews Castle College /UHI, Engineering Department, Scotland; Biofuel Region, Sweden; Sogn og Fjordane Science Park; Innovation Center Iceland; Arctic Technology Centre, Greenland |
| <i>Renewable Energy Program</i>  | NTNU Department of Interdisciplinary Studies of Culture; The Norwegian University of Life Sciences   |
| <i>Nano materials for Clean Energy and Health applications</i>   | Coimbatore Institute of Technology (CIT), India; Center for Clinical Dental Research, University of Bergen (UiB) , PSG College of Technology, India, CMR, 1. Kasbah Systems Software, India  |
| <i>Clean energy policy and management – Comparison study, Capacity building and establishment of clean energy consortium</i>                                 | University of Jaffna (UoJ), Sri Lanka, University of Agder, University of Bergen, University of Peradeniya (UoP), Sri Lanka, A number of industries involved in renewable energy solutions from Norway and Sri Lanka   |
| <i>Modeling and simulation of nano materials for solar cell applications</i>   | University of Oslo, University of Bergen, CIT, India, UoJ, Sri Lanka, Institute for Energy Technology (IFE)  |
| <i>Experimental studies on emerging solar cell technologies</i>  | National University of Seoul, South Korea, CIT, India, UoJ, Sri Lanka, UoP, Sri Lanka, University of Exeter, UK, Nanyang Technological University, Singapore, PSG, India   |
| <i>The multicultural staff in nursing homes: Contemporary challenges, opportunities and potentials for the future in the Norwegian municipal care sector</i> | The Netherlands institute for health services research (NIVEL); York University, Toronto; Uni Rokkan Centre for Research, Bergen; University of Stavanger; Centre for Care Research Eastern Norway, NTNU   |
| <i>Prioritising care: service development, allocation and trust</i>  | York University, Toronto; Centre for Care Research Eastern Norway, NTNU,   |
| <i>Modeling and evaluating evidence based continuing education in nursing home dementia care</i>   | York University, Toronto; University of California, San Francisco (UCSF); University of Stavanger; Stavanger University Hospital   |
| <i>Contested spaces: Exploring how policy and practice shape Norwegian nursing homes</i>   | Stockholm University (lead institution), University of Tampere, Finland; University of Aalborg; University, Bergen; York University, Toronto; NOVA, HiOA,  |
| <i>Voluntary work in Norwegian long term care – prevalence, forms, interaction with professionals and potentials for the future</i>                          | York University, Toronto; Centre for Care Research Eastern Norway, NTNU  |
| <i>Care support for the elderly and disabled persons by radar (RADCARE)</i>  | Warsaw University of Technology (WUT)  |
| <i>Re-imagining long-term residential care: an international study of promising practices</i>  | York University, Toronto (lead institution); Bristol University, UK; University of London; University of Dortmund, Germany; Vechta University, Germany;  |

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|  | University of California, San Francisco; University of Texas; Stockholm University   |
| <i>Marketisation in elderly care</i>   | Stockholm University (lead institution); University of Tampere, Finland; University of Sydney, Australia; Aalborg University; University of Bergen |
| <i>Telecare in the municipalities (Telecare in municipal home nursing)</i>   | University of Stirling, UK   |
| <i>Alarmmottak som sentral utfordring og mulighet i et kommunalt omsorgsteknologitilbud (The call centre in municipal telecare solution)</i> | University of California, San Francisco  |
| <i>Vossamodellen - tidlig rehabiliteringsinnsats for hjemmeboende eldre i Voss kommune</i>   | Uni Rokkan Centre for Research, Bergen; VID Specialised University; University of Bergen; Diakonhjemmet Hospital                                   |
| <i>Reshaping the Map of Local and Regional Self-Government. A study of the Norwegian Local Government Reform (NLGR) processes 2014–2019</i>  | KORA, Aarhus universitet, Åbo Akademi, Universitetet i Oslo, Universitetet i Bergen, UNI Rokkan  |
| <i>Local development policy issues in Norway and Slovakia</i>  | University Matej Bel, Slovakia   |
| <i>City and county parliamentarism compared</i>  | Nord Universitet   |

**Table 13: Selected publications with co-authorship between RESINNREG researchers and researchers outside HVL**

| Authors   | Title   | Publication  |
|---|---|--|
| Netteland, G., Wasson, B., Mørch, A.I.  | E-learning in a Large Organisation: A Study of the Critical Role of Information Sharing. (2007)   | <i>Journal of Workplace Learning</i>                 |
| Netteland, G., Wasson, B. Hansen, C.  | Data literacy and use for learning when using learning analytics for learners. (2016)   | <i>CEUR Workshop Proceedings</i>                     |
| Netteland, G., Hansen, C., Wasson, B.   | Learning analytics and open learning modelling for professional competence development of firefighters and future healthcare leaders. (2016)  | <i>CEUR Workshop Proceedings 2016</i>                |
| Mekki, T. E., Øye, C., Kristensen, B. M., Dahl, H., Haaland, A., Nordin, K. A., McCormack, B.   | The inter-play between facilitation and context in the Promoting Action on Research Implementation in Health Services frameworkhomes. (2017)  | <i>Journal of Advanced Nursing</i>                   |
| Mekki, T. E., Testad, I., Fjørland, O., Øye, C., Tveit, E. M., Jacobsen, F. F., & Kirkevold, Ø. | Modeling and evaluating evidence-based continuing education program in nursing home dementia care (MEDCED)—training of care home staff to reduce use of restraint in care home residents with dementia (2016) | <i>International Journal of Geriatric Psychiatry</i> |

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|---|---|---|
| Mekki, T. E., Fairbrother, G., Cashin, A., Graham, I., & McCormack, B.                      | Is it possible to bring the emancipatory practice development and evidence-based practice agendas together in nursing and midwifery? (2015)   | <i>International Practice Development Journal</i>         |
| Langeland E., Gjengedal, E., Vinje, HF  | Building salutogenic capacity: A year of experience from a salutogenic talk-therapy group. (2016)   | <i>International Journal of Mental Health Promotion</i>   |
| Langeland, E., Robinson, HS., Coward, C., Bjorbækmo, WS                                     | Sense of Coherence, resistance resources and deficits among people on long term sick leave. (2017)  | <i>Cogent medicine,</i>                                   |
| Langeland, E., Wahl, AK, Larsen MH, Robinson, H, Osborne R, Krogstad, AL                    | Positive changes in self-management and disease severity following climate therapy in people with psoriasis. (2015)   | <i>Acta Dermato –Venereologica</i>                        |
| Loga, J., Fredriksen, M., & J. von Essen  | The Societal role of volunteering – remarks on the moral logic of the Scandinavian volunteer sector. (2017)   | <i>Civic Engagement in Scandinavia</i>                    |
| Loga, J., Ingstad, E. L.  | Sosialt entreprenørskap i Norge: en introduksjon til feltet (2016)  | <i>Tidsskrift for Praktisk økonomi &amp; Finans</i>       |
| Bergfjord, O.J., Arnesen, S.  | Prediction markets vs polls – an examination of accuracy for the 2008 and 2012 elections (2014)   | <i>Journal of Prediction Markets</i>                      |
| Bergfjord, O.J., Lien, G. and Hoveid, Ø.  | Factors influencing farmer migration in Norway: a study based on survey results linked to financial data (2011)   | <i>Food Economics</i>                                     |
| Bergfjord, O.J., Brandt, U.S.   | Regulations, risk, and rent seeking behavior (2009)   | <i>Journal of Risk and Governance</i>                     |
| Førland, O., Testad, I., Mekki, T. E., Oye, C., Tveit, E. M., Jacobsen, F., & Kirkevold, O. | Modeling and evaluating evidence-based continuing education program in nursing home dementia care (MEDCED)-training of care home staff to reduce use of restraint in care home residents with dementia. A cluster randomised controlled trial. (2015) | <i>Int J Geriatr Psychiatry</i>                           |
| Gilpin, G., Andrae, A.  | Comparative attributional life cycle assessment of European cellulase enzyme production for use in second-generation lignocellulosic bioethanol production. (2016)  | <i>The International Journal of Life Cycle Assessment</i> |
| Gilpin, G., Andersen, O. Andrae, A.   | Cradle-to-gate life cycle assessment of the dry etching step in the manufacturing of photovoltaic cells. (2014)   | <i>AIMS Energy</i>  |

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| Gilpin, G., Hanssen, O.J., Czerwinski, J.  | Biodiesel's and advanced exhaust aftertreatment's combined effect on global warming and air pollution in EU road-freight transport. (2014)                   | <i>Journal of Cleaner Production</i>   |
| Nilssen, E., Aasen, H S, Gloppen, S., A-M Magnussen  | Juridification and Social Citizenship. (2014)  | <i>International Law, Democracy and Professional Discretion</i>                          |
| Nilssen, E., Helgøy, I., Kildal, N.  | Ny yrkesrolle i en organisasjon i endring. (2011)  | <i>Nordiske Organisasjonsstudier</i>   |
| Nilssen, E., Kildal, N.  | Norwegian Welfare Reforms: Social Contracts and Activation Policies. (2011)  | <i>Activation and Labour Market Reforms in Europe. Challenges to Social Citizenship.</i> |
| Isaksen, A. and Jakobsen, S-E.   | New path development between innovation systems and individual actors (2016)   | <i>European Planning Studies,</i>  |
| Christiansen, E. and Jakobsen, S-E.  | Diversity in narratives to green the Norwegian salmon farming industry (2016)  | <i>Marine Policy</i>   |
| Njøs, R., Jakobsen, S-E, Aslesen, H.W. and Fløysand, A.  | Encounters between cluster theory, policy and practice in Norway: Hubbing, blending and conceptual stretching. (2016)  | <i>European Urban and Regional Studies,</i>  |
| Jakobsen, S-E. and Lorentzen,  | Explaining innovation. An empirical analysis of industry data from Norway (2016)   | <i>Journal of Entrepreneurship, Management, and Innovation</i>                           |
| Aarset, B. and Jakobsen, S-E   | Path dependency, institutionalization and co-evolution: The missing diffusion of the blue revolution in Norwegian aquaculture (2015)                         | <i>Journal of Rural Studies,</i>   |
| Christiansen, E.A.N and Jakobsen, S-E  | Embedded and disembedded practice in the firm/place nexus: A study of two world-leading manufacturers of ski equipment in the Lillehammer ski cluster (2012) | <i>Geografiska Annaler: Series B, Human Geography</i>                                    |
| Fløysand, A., Jakobsen, S-E. and Bjarnar, O  | The dynamism of clustering: Interweaving material and discursive processes (2012)  | <i>Geoforum</i>  |
| Jakobsen, S-E., Byrkjeland, M., Båtevik, F.O., Pettersen, I.B., Skogseid, I. Yttredal E.R                          | Continuity and change in path dependent regional policy development: The regional implementation of the Norwegian VRI programme                              | <i>Norwegian Journal of Geography</i>  |
| Velauthapillai, D., Rajesh, G.M., N. Batabyal, S.  | Annealing Induced Shape Transformation of CZTS Nanorods Based Thin Films. (2017)   | <i>Langmuir</i>  |
| Velauthapillai, D., Thambidurai, M., Kim, J.Y., Song, J., Ko, Y., Muthukumarasamy, N., Velauthapillai, D., Lee, C. | Nanocrystalline Ga-doped ZnO thin films for inverted polymer solar cells. (2014)   | <i>Solar Energy</i>  |

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|---|---|---|
| Velauthapillai, D., Thambidurai, M., Jun, Y.K., Song, H-J, Ko, Y., Muthukumarasamy, N., Bergmann, V.W., Weber, S.A. L., Lee, C.   | Enhanced Power Conversion Efficiency of Inverted Organic Solar Cells by Using Solution Processed Sn-Doped TiO <sub>2</sub> as an Electron Transport Layer. (2014) | <i>Journal of Materials Chemistry</i>                 |
| Hoell, I.A., Olsen, R. O., Hess-Erga, O.-K., Larsen, A., Hoffmann, F., Thuestad, G.   | Dual staining with CFDA-AM and SYTOX Blue in flow cytometry analysis of UV-irradiated Tetraselmis suecica to evaluate vitality. (2016)                            | <i>Aquatic Biology</i>                                |
| Hoell, I.A., Olsen, R. O., Hess-Erga, O.-K., Larsen, A., Thuestad, G., Tobiesen, A. E. D.,  | Flow cytometric applicability to evaluate UV inactivation of phytoplankton in marine water samples. (2015)  | <i>Marine Pollution Bulletin</i>                      |
| Hoell, I.A., Heggset, E. B., Tuveng, T. R., Liu Z. L., Eijsink, V. G. H., and Vårum, K. M.  | Mode of Action of a Family 75 Chitosanase from Streptomyces avermitilis. (2012)   | <i>Biomacromolecules</i>                              |
| Schwanitz V.J., Wilson C, Kriegler E, van Vuuren DP, Guivarch C, Frame D, Krey V, Osborn TJ   | Evaluating Process-Based Integrated Assessment Models of Climate Change Mitigation. (2017)  | <i>IIASA Working Paper</i>                            |
| Schwanitz V.J., Marian L., Elmar K., Niklas R.  | Future growth patterns of world regions – A GDP scenario approach. (2017)   | <i>Global Environmental Change</i>                    |
| Schwanitz V.J., Kriegler, E., Bauer, N., Popp, A., Humenöder, F., Leimbach, M., Streffer, J., Baumstark, L., Bodirsky, L., Hilaire, J., Klein, D., Mouratiadou, I., Weindl, I., Bertram, Christoph, Dietrich, J-P. Luderer, G. Pehl, M., Pietzker, R., Piontek, F., Lotze-Campen, H., Biewald, A., Bonsch, M., Giannousakis, A., Kreidenweis, U., Müller, C., Rolinski, S., Schultes, A., Schwanitz, V. J., Stevanovic, M. Calvin, K., Emmerling, J., Fujimori, S., Edenhofer, O. | Fossil-fueled development (SSP5): An energy and resource intensive scenario for the 21st century. (2016)  | <i>Global Environmental Change</i>                    |
| Holden, E., Linnerud K., Banister D. and Wierling, A.   | The Imperatives of sustainable development: Needs, Justice, Limits. (2017)  | <i>Routledge</i>                                      |
| Holden, E., Berger, G., Feindt, P., Rubik, F.   | Sustainable Mobility – Challenges for a Complex Transition. (2014)  | <i>Journal of Environmental Policy &amp; Planning</i> |
| Holden, E., Linnerud, K. and Banister, D.   | Sustainable Development: 'Our Common Future'. (2014)  | <i>Global Environmental Change</i>                    |



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|---|---|--|
| Fløysand, A., Jakobsen, S.-E., & Sánchez Hernández, J. L.   | Regional Industrial Policy in Norway and Spain Entrepreneurship, Human Capital And Regional Development Labor Networks. (2015)  | <i>Knowledge Flows, and Industry Growth</i>          |
| Fløysand, A., Barton, J.R.  | The Political Ecology of Chilean Salmon Aquaculture, 1982-2010: a trajectory from economic development to global sustainability. (2010)   | <i>Global Environmental Change</i>                   |
| Fløysand, A., Barton, J.R., Román, A.   | La doble jerarquía del desarrollo económico y gobierno local en Chile: El caso de la salmonicultura y los municipios chilotes. (2010)   | <i>EURE</i>  |
| Aarstad, J., Ness, H., Haugland, S.A.   | Network position and tourism firms' co-branding practice. (2015)  | <i>Journal of Business Research</i> 68(8), 1667-1677 |
| Aarstad, J., Ness, H., Haugland, S.A.   | Innovation, uncertainty, and inter-firm shortcut ties in a tourism destination context. (2015)  | <i>Tourism Management</i>                            |
| Aarstad, J., Haugland, S.A., Greve, A.  | Performance spillover effects in entrepreneurial networks: Assessing a dyadic theory of social capital. (2010)  | <i>Entrepreneurship Theory and Practice</i>          |
| Mæhle, N., Hauge, Elisabet S., Nina Kyllingstad, and Ann Camilla Schulze-Krogh  | Developing Cross-Industry Innovation Capability: Regional Drivers and Indicators within Firms (2017)  | <i>European Planning Studies</i>                     |
| Mæhle, N., Presi, C., and Kleppe, I.  | . (2016) Brand Selfies: Consumer Experiences and Marketplace Conversations  | <i>European Journal of Marketing</i>                 |
| Mæhle, N., Nina Iversen, Leif Hem and Cele Otnes  | Consumers' Food Choice: Exploring Consumers' Preferences for Different Product Attributes for Hedonic and Utilitarian Foods (2015)  | <i>British Food Journal</i>                          |
| Øye, C., Jacobsen, F.F, Mekki, T.E, Fjørland, O., Folkestad, B., Kirkevold, Ø., Skår, R., Tveit, E-M, Ø. Kirkevold (NTNU) og A-M. Tveit | How staff and their working contexts influence implementation of person-centered dementia care in nursing homes. A mixed method study of an education intervention to reduce use of restraint (forthcoming) | <i>BMC Nursing</i>                                   |
| Øye, C., Glasdam, S. & Thrysoee, L.   | Patients' participation in decision-making in the medical field – 'projectification' of patients in a neoliberal framed healthcare system. (2015)   | <i>Nursing philosophy</i>                            |

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| Øye, C., Testad, I., Mekki, T.E., Forland, O., Tveit, E-M., Jacobsen, F. & Kirkevold, Ø. | Modelling and evaluating evidence based continuing education program in nursing home dementia care (MEDCED). Training of care home staff to reduce use of restraint in care home residents with dementia. A cluster randomised controlled trial. (2015) | <i>International journal of geriatric psychiatry</i>    |
| Osland, L., Bivand, R, Zhe S., and Sandvig Thorsen, I.                                   | A comparison of estimation method for multilevel models of spatially structured data. (2017)  | <i>Spatial Statistics</i>                               |
| Osland, L., Gibb, Ken, and Gwilym P.   | Describing Inequalities in Access to Employment and the Associated Geography of Wellbeing. (2014)   | <i>Urban Studies</i>                                    |
| Osland, L. and Gwilym P.   | Housing prices and multiple employment nodes: Is the relationship nonmonotonic? (2012)  | <i>Housing Studies</i>                                  |
| Chunyan X., Richard P.B., and Grønhaug, K.   | The role of moral emotions and individual differences in consumers responses to corporate green and non-green actions. (2015)   | <i>Journal of the Academy of Marketing Science</i>      |
| Xie, C., Gjøsæter, Å. and Grønhaug, K.   | Strategising for environmentally sustainable praxis: The case of 'green operations'. (2014)   | <i>Scandinavian Journal of Business Research</i>        |
| Xie, C., Hillestad, T. and Haugland, S.A.  | Innovative corporate social responsibility: the founder's role in creating a trustworthy corporate brand through 'green innovation'. (2015)   | <i>Journal of Product &amp; Brand Management</i>        |
| Bukve, O. and Saxi, H.P.   | Institutional change and system support – reforming the executive in Norwegian cities and regions. (2017)   | <i>Scandinavian Journal of Public Administration</i>    |
| Bukve, O. and Hovlid, E.   | Entreprenørskap eller institusjonaliseringsprosesser? Om mekanismer i organisasjonsendring. (2014)  | <i>Nordiske Organisasjonsstudier</i>                    |
| Bukve, O. Hovlid, E., Haug, K., Aslaksen, A.B. and von Plessen, C.                       | Sustainability of healthcare improvement: what can we learn from learning theory? (2012)  | <i>BMC Health Services Research</i>                     |
| Hope, K.L. and Homme, A.   | Innovative government initiatives to prevent upper secondary school dropout: Organisational learning and institutional change at the local level. (Forthcoming)   | <i>International Journal of Innovation in Education</i> |

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| Hope K.L., de Bont A., van Exel J., Coretti S., Ökem Z.G., Janssen M., Ludwicki T., Zander B., Zvonickova M., Bond C., and Wallenburg I. | Reconfiguring health workforce: "A case-based comparative study explaining the increasingly diverse professional roles in Europe" (2016) | <i>BMC Health Services Research</i> |
| Hope, K.L. et al.  | European Universities as Complete Organisations? Understanding Identity, Hierarchy and Rationality in Public Organisations. (2015)       | <i>Public Management Review</i>     |
| Linnerud, K. and Simonsen, M.  | The Swedish-Norwegian Tradable Green Certificate Scheme: Scheme Design Flaws and Perceived Investment Barriers. (2017)                   | <i>Energy Policy</i>                |

| <b>Table 14: Attachments addressing requirements for academic environment / Vedlegg til krav til fagmiljø:</b>   |  | <b>Attachment No. / Vedlegg nr.</b> |
|--|--|-------------------------------------|
| Highlight as «not relevant» if the attachment is not relevant for the phd programme / Marker med «Ikke relevant» dersom et vedlegg ikke er aktuelt for studiet   |  |                                     |
| CV for all employees in the academic environment of the phd programme (using the template) / CV for alle som inngår i studiets fagmiljø (CV-ene skal følge malen)  |  | 3.1                                 |
| Publication lists for the five years preceding the relevant deadline / Publikasjonslister for de siste fem årene før gjeldende søknadsfrist  |  | 3.2                                 |
| Other documentation of artistic development work and/or academic development work / Eventuell annen dokumentasjon på kunstnerisk utviklingsarbeid og/eller faglig utviklingsarbeid.                                |  | Not relevant                        |
| Documentation of national and international cooperations that the academic environments actively takes part in / Dokumentasjon på nasjonale og internasjonale samarbeid og nettverk som fagmiljøet deltar aktivt i |  | 3.3                                 |

Appendix / Table section

**Table 15: Expected number of students admitted to the PhD programme /  
Forventet antall studenter ved studietilbudet**

| <b>No. of students admitted to the phd programme / Antall studenter ved studietilbudet det søkes om</b> | <b>Total No. of students during the first year of the phd programme / Studenter totalt første studieår</b> | <b>Total No. of students at full capacity of the phd programme/ Studenter totalt ved full drift</b> |
|---|--|---|
| No. of full-time students / Antall fulltidsstudenter  | 12   | 18  |
| No. of part-time students / Antall deltidsstudenter   |  |   |

Comments: PhD students will be evenly distributed between the three research groups.

**Table 16: academic environment contributing more than 0.1 man years.**

| 1                           | 2                   | 3                     | 4  | 5        | 6        | 7             | 8                               | 9 | 10                              |
|-----------------------------|---------------------|-----------------------|--|----------|----------|---------------|---------------------------------|---|---------------------------------|
|                             |                     |                       | Man-years in phd programme / Faglige årsverk i studiet |          |          |               |                                 |   |                                 |
|                             |                     |                       | Total <sup>3</sup>                                     | T&S /U&V | R&D /FoU | Other / Annet |                                 |   |                                 |
| Jarle Aarstad               | Professor           | Main/fixed Hoved/fast | 0,6  | 0,2      | 0,4      |               | 0,4 BA/MA                       |   | Course/Industry Innovation      |
| Sylvia Encheva              | Professor           | Main/fixed Hoved/fast | 0,6  | 0,2      | 0,4      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Arnt Fløysand*              | Professor           | Main/fixedHoved /fast | 1,0  | 0,1      | 0,4      | 0,5           | PhD-programme                   |   | Course/Kurs/Industry Innovation |
| Ilona Heldal                | Professor           | Main/fixed Hoved/fast | 0,4  | 0,2      | 0,2      |               | 0,2 BA/MS 0,4 PhD ICT           |   | Course/Kurs/Industry Innovation |
| Prof. In tech. Mangement ** | Professor           | Main/fixed Hoved/fast | 0,6  | 0,2      | 0,4      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Stig-Erik Jakobsen          | Professor           | Main/fixed Hoved/fast | 0,5  | 0,2      | 0,3      |               | 0,5 Center leader / Senterleder |   | Course/Kurs/Industry Innovation |
| Marina Solesvik             | Professor           | Main/fixed Hoved/fast | 0,6  | 0,1      | 0,5      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Chunyan Xie                 | Professor           | Main/fixed Hoved/fast | 0,6  | 0,2      | 0,4      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Talal Rahman                | Professor           | Main/fixed Hoved/fast | 0,2  | 0,1      | 0,1      |               | 0,4 BA/MA, 0,4 PhD ICT          |   | Course/Kurs/Industry Innovation |
| Philip Cooke                | Professor           | Main/fixed Hoved/fast | 0,2  | 0,0      | 0,2      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Ole Jakob Bergfjord         | Associate Professor | Main/fixed Hoved/fast | 0,4  | 0,0      | 0,4      |               | 0,6 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Olav Kvitastein             | Associate Professor | Main/fixed Hoved/fast | 0,4  | 0,0      | 0,4      |               | 0,6 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Ingunn Alne Hoell           | Associate Professor | Main/fixed Hoved/fast | 0,6  | 0,2      | 0,4      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Natalie Mæhle               | Associate Professor | Main/fixed Hoved/fast | 0,6  | 0,2      | 0,4      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |
| Inger Beate Pettersen       | Associate Professor | Main/fixed Hoved/fast | 0,6  | 0,2      | 0,4      |               | 0,4 BA/MA                       |   | Course/Kurs/Industry Innovation |

|                              |                        |                          |     |     |     |  |                           |           |                                  |
|------------------------------|------------------------|--------------------------|-----|-----|-----|--|---------------------------|-----------|----------------------------------|
| Jan Kåre Breivik             | Professor              | Main/fixed<br>Hoved/fast | 0,6 | 0,1 | 0,5 |  | 0,4 BA/MA                 |           | Course/Kurs/Social<br>Innovation |
| Oddbjørn Bukve               | Professor              | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Social<br>Innovation |
| Frode Fadnes<br>Jacobsen     | Professor              | Main/fixed<br>Hoved/fast | 0,5 | 0,2 | 0,3 |  | 0,5 Senterleder           | IFPU      | Course/Kurs/Social<br>Innovation |
| Eva Langeland                | Professor              | Main/fixed<br>Hoved/fast | 0,2 | 0,1 | 0,1 |  | 0,2 BA/MA<br>0,6 PhD Hels | PPU + APU | Course/Kurs/Social<br>Innovation |
| Even Nilsen                  | Professor              | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Social<br>Innovation |
| Siri Ytrehus                 | Professor              | Main/fixed<br>Hoved/fast | 0,4 | 0,1 | 0,3 |  | 0,2 BA/MA 0,4 PhD Hels    | PPU       | Course/Kurs/Social<br>Innovation |
| Christine Øye                | Professor              | Main/fixed<br>Hoved/fast | 0,2 | 0,0 | 0,2 |  | 0,2 BA/MS 0,6 PhD Hels    |           | Course/Kurs/Social<br>Innovation |
| Elisabeth Ersvær             | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6 | 0,1 | 0,5 |  | 0,4 BA/MA                 |           | Course/Kurs/Social<br>Innovation |
| Jens Kristian Fosse          | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Social<br>Innovation |
| Oddvard Førland              | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,4 | 0,0 | 0,4 |  | 0,2 BA/MA 0,4 PhD Hels    | IFPU      | Course/Kurs/Social<br>Innovation |
| Kristin Hope                 | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Social<br>Innovation |
| Jill Merethe Loga            | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Social<br>Innovation |
| Anne-Mette<br>Magnussen      | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,4 | 0,0 | 0,4 |  | 0,2 BA/MS 0,4 PhD Hels    | IFPU      | Course/Kurs/Social<br>Innovation |
| Tone Elin Mekki              | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,4 | 0,0 | 0,4 |  | 0,2 BA/MS 0,4 PhD Hels    | PPU       | Course/Kurs/Social<br>Innovation |
| Tobba Therkildsen<br>Sudmann | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,2 | 0,1 | 0,1 |  | 0,2 BA/MS 0,6 PhD Hels    | PPU       | Course/Kurs/Social<br>Innovation |
| Erling Holden                | Professor              | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Green<br>Innovation  |
| Kristin Linnerud             | Professor              | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Green<br>Innovation  |
| Liv Osland                   | Professor              | Main/fixed<br>Hoved/fast | 0,6 | 0,2 | 0,4 |  | 0,4 BA/MA                 |           | Course/Kurs/Green<br>Innovation  |
| Inge Thorsen                 | Professor              | Main/fixed<br>Hoved/fast | 0,6 | 0,1 | 0,5 |  | 0,4 BA/MA                 |           | Course/Kurs/Green<br>Innovation  |
| Dhayalan<br>Velauthapillai   | Professor              | Main/fixed<br>Hoved/fast | 0,2 | 0,0 | 0,2 |  | 0,4 BA/MA, 0,4 PhD ICT    |           | Course/Kurs/Green<br>Innovation  |

|                        |                        |                          |      |     |      |     |   |  |                                 |
|------------------------|------------------------|--------------------------|------|-----|------|-----|---|--|---------------------------------|
| Akkelies van Nes       | Professor              | Main/fixed<br>Hoved/fast | 0,6  | 0,1 | 0,5  |     | 0,4 BA/MA                                   |  | Course/Kurs/Green<br>Innovation |
| Ole Andreas Brekke     | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6  | 0,2 | 0,4  |     | 0,4 BA/MA                                   |  | Course/Kurs/Green<br>Innovation |
| Geoffrey Gilpin        | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6  | 0,2 | 0,4  |     | 0,4 BA/MA                                   |  | Course/Kurs/Green<br>Innovation |
| Bente Johnsen Rygg     | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6  | 0,2 | 0,4  |     | 0,4 BA/MA                                   |  | Course/Kurs/Green<br>Innovation |
| Valeria Jana Schwanitz | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6  | 0,2 | 0,4  |     | 0,4 BA/MA                                   |  | Course/Kurs/Green<br>Innovation |
| Tom Skauge             | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,5  | 0,1 | 0,4  |     | 0,5 Leader of institute /<br>Instituttleder |  | Course/Kurs/Green<br>Innovation |
| August Wierling        | Associate<br>Professor | Main/fixed<br>Hoved/fast | 0,6  | 0,2 | 0,4  |     | 0,4 BA/MA                                   |  | Course/Kurs/Green<br>Innovation |
| SUM                    |                        |                          | 22,0 | 5,7 | 15,8 | 0,5 |   |  |                                 |

\*Programme coordinator

\*\* From January 2018

**Comments:** Numbers for professors/associate professors

# PhD Programme

## Responsible Innovation and Regional Development

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Full-time Programme of Study

180 ECTS

Western Norway University College of Applied Sciences

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## 2. Introduction

The PhD programme in Responsible Innovation and Regional Development (RESINNREG) is a doctoral education in innovation based on a profession- and society-based perspectives. The programme is aimed at candidates who want to qualify for research and scientific work at a high international level and enables the graduates to pursue a research career in academia as well as in industry linked to responsible innovation efforts.

THE RESINNREG programme encompasses the research fields of Industry Innovation, Social Innovation and Green Innovation. Each respective research group have the responsibility for one elective course. The field of Innovation and Industry Development is concerned with drivers and obstacles for innovation and industry development. The field of Innovation in the Public Sector is concerned with public sector innovations and the creation and institutionalization of new practices. The field of Innovation and Sustainable Transition is concerned with fundamental transition of our society in order to cope with sustainability challenges that are increasingly of global dimension. Each of the research groups contributes to the programme with a course based on research within the group.

The program specifically puts emphasis on exploring and exploiting innovation. Independent of the specific area of specialisation, PhD candidates graduating from the programme will have state-of-the-art research knowledge, skills, and competences within exploring innovation, and will also be trained in exploiting innovation. In addition, PhD candidates graduating from the programme will have state-of-the-art research knowledge, skills, and competences within one or more of the research fields of the research groups of *Industry Innovation*, *Social Innovation* and *Green Innovation*.

The PhD programme is offered by the Western Norway University College of Applied Sciences (HVL). HVL offers one of the largest engineering programmes in Norway, including master's programmes that are closely related to the PhD programme. An extensive list is included in the application. The PhD programme is furthermore based on the research activities at all the campuses of HVL, with a particular emphasis on the Mohn Centre for Innovation and Regional Development, Centre for Care Research West Norway and Department of Natural Science at the Sogndal campus. The PhD programme has research links to several other engineering departments and faculties at HVL.

The PhD programme is governed by the Act relating to Universities and University Colleges, the Regulations of the Doctor of Philosophy Degree (PhD) at Western Norway University College of Applied

Sciences, the quality assurance system for PhD programmes at HVL and the Supplementary Regulations for the PhD programme in Responsible Innovation and Regional Development.

## • **Learning Outcomes**

Upon completion of the programme, the candidate ...

### **Knowledge**

- **K1:** is in the forefront of researching Responsible Innovation and Regional Development and in a specialization area rooted in one of the fields of Innovation and Industry Development, Innovation in the Public Sector, and Innovation and Sustainable Transition.
- **K2:** has comprehensive knowledge on state-of-the-art concepts and methods within the research field of Responsible Innovation and Regional Development and within his/her area of specialization.
- **K3:** is a contributor to new knowledge and potential new theories and concepts, methods and documentation within the field of exploring innovation
- **K4:** has comprehensive knowledge on methods and practices for exploiting research knowledge and transforming research findings into innovations

### **Skills**

- **S1:** can formulate research hypotheses, plan, and carry out independent theoretical- and applied research work within his/her area of specialization.
- **S2:** is able to carry out research work of high international standards that advances the forefront of knowledge and application of Responsible Innovation and Regional Development within his/her area of specialization.
- **S3:** can review research work within his/her area of specialization, relate it to the forefront of knowledge, and assess its applicability for society.
- **S4:** is able to perform research that challenges established theory, concepts, approaches and methods within the research field of Responsible Innovation and Regional Development.
- **S5:** can identify and assess the need for responsibility in innovation and regional development.
- **S6:** initiate and contribute to innovation projects that involve Industry Innovation, Social Innovation and Green Innovation.

### **General competence**

- **G1:** can identify relevant ethical issues pertinent to Innovation and Regional Development research and its application in society.
- **G2:** can carry out research work with scholarly integrity and in accordance with the established scientific norms and traditions for research within the field of Responsible Innovation and Regional Development.
- **G3:** can participate in interdisciplinary assignments and projects involving research into, and application of, one or more of the fields of Industry Innovation, Social Innovation, and Green Innovation.
- **G4:** can disseminate and publish research results through recognized channels, including scientific workshops, conferences, and journals within the research field of innovation.
- **G5:** can participate in research discussions and research collaboration internationally on scientific topics within his/her area of specialization.
- **G3:** can participate in interdisciplinary assignments and projects involving research into, and application of, one or more of the fields of Industry Innovation, Social Innovation, and Green Innovation.
- **G4:** can disseminate and publish research results through recognized channels, including scientific workshops, conferences, and journals within the research field of innovation.
- **G5:** can participate in research discussions and research collaboration internationally on scientific topics within his/her area of specialization.

Successful completion of the programme of study leads to the degree of Philosophiae Doctor (PhD).

### 3. Admission Requirements

Admission to the PhD programme requires a master's degree in innovation such as a master's degree in *Innovation and Entrepreneurship*, *Innovation Management ++* . Candidates from other disciplines having completed a master's degree with a strong emphasis on innovation may also qualify for admission into the programme.

The applicant must document completion of the master's studies with strong results. A grade of B or better (according to the Norwegian grading scale) on the master's thesis, and an average higher than C on the associated coursework are normally required for admission into the programme. Courses completed prior to admission into the programme and which is to be part of the course work component of the PhD education should not be older than two years at the time of admission.

Application for admission to the programme uses a predefined form and must document the formal qualifications of the candidate and contain a plan for the studies. The plan must contain a project description, description of plans for the studies, funding, and any planned visits to external institutions. The applicant must also specify the need for supervision, infrastructure and equipment, and the

language in which the PhD thesis will be written. The thesis is normally written in English, but can be written in another language subject to approval by the programme committee for the PhD studies. The application must also account for any legal or ethical aspects relevant for the completion of the studies. The project description must be developed in cooperation with the main academic supervisor and the application must be accompanied by a recommendation from at least one academic supervisor.

The assessment of the relevance of the master's degree will be done by the programme committee. In addition to grades on the coursework and the master's thesis, the committee will evaluate the quality and relevance of the project description, any prior scientific publications, and relevant work-life experience of the candidate. Admission into the programme takes places on a continuous basis throughout the year. The programme committee for the PhD studies makes the decision on admission.

At the time of admission, a formal agreement must be entered into between the candidate, HVL, the supervisors(s), and any other parties that are to contribute scientifically, economically or otherwise to the research project and education of the candidate. The agreement is to regulate the mutual responsibility and rights of the involved parties for the duration of the agreement.

## **4. Content and Structure of the Programme**

The PhD programme is a full-time programme with a nominal completion time of 3 years. For candidates employed in PhD research fellow positions of four years with 25 % teaching duties, the PhD studies will span a period of four years.

THE RESINNREG PROGRAMME is divided into a coursework (training) part of 30 ECTS, and a dissertation part of 150 ECTS that is completed with the PhD defence.

### **4.1 Coursework**

The coursework part consists of three mandatory courses. One on Philosophy of Science, Research Ethics and Innovation in Scientific Work. This course is designed such the candidates may develop a thorough understanding of research methodologies and their foundation in the philosophy and history of science, and the application of these to practical work within the field of innovation research. This will serve as the base foundation of the scientific work to be conducted as part of the dissertation work. The courses Understanding and Exploring Innovation and Doing and Exploiting Innovation are also mandatory. The course Understanding and Exploring Innovation will provide the candidates with theoretical perspectives and conceptual foundation in the research field of innovation. All candidates will write an essay on theoretical-, methodological- and/or ethical issues related to own PhD project and presented in a seminar arranged by the institute/campus of the candidate. The course Doing and Exploiting Innovation will provide participants with an increased understanding of handling innovation in practice. After discussing seminal theories from e.g. diffusion of innovation, innovation transition and influence from entrepreneurship, concrete examples for handling innovation in organizations will be presented and discussed.

The mandatory coursework also include a methodology course of minimum five ECTS. THE RESINNREG PROGRAMME offers one methodology course in Mathematical Modelling of Decision Making. Depending on the particular needs of methodology specialisation of the candidate, either candidates are required to follow this course or an alternative relevant PHD approved methodology course at HVL or an external research and education institution.

The portfolio of elective courses is designed to give the candidates a solid foundation for obtaining state-of-the-art knowledge and skills on the topic of their PhD project. The candidates will typically select one of the elective courses and obtain the additional five ECTS by a combination of popular science presentations, scientific writing courses, conference/workshop presentations, participation in national or international PhD summer/winter schools linked to the topic of their dissertation, and longer research visits to international institutions.

The choice of elective courses will depend on the particular area of specialisation of the candidate. PhD candidates specializing in Industry Development will typically follow the PHDINN 906 (Innovation and Industry Development). PhD candidates specializing in Public Sector innovation will typically follow PHDINN 907 (Public Sector Innovation). PhD candidates specializing in sustainable transition will typically follow the PHDINN 908 (Innovation and sustainable transition).

Candidates are required to follow at least one of the elective courses offered in the programme.

The table below provides an overview of the mandatory and elective courses in the coursework part of the programme.

| Course code | Course title   | Credits (ECTS) | Mandatory/<br>Elective |
|-------------|--|----------------|------------------------|
| PHDINN 902  | Philosophy of Science, Research Ethics and Innovation in Scientific Work | 5              | Mandatory              |
| PHDINN 903  | Understanding and Exploring Innovation                                   | 5              | Mandatory              |
| PHDINN 904  | Doing and Exploiting Innovation  | 5              | Mandatory              |
| PHDINN 905  | Decision making for responsible innovation                               | 5              | Mandatory/Elective     |
| PHDINN 906  | Innovation and Industry Development                                      | 5              | Elective               |
| PHDINN 907  | Innovation in the Public Sector  | 5              | Elective               |
| PHDINN 908  | Innovation and Sustainable Transition                                    | 5              | Elective               |

## **4.2 Dissertation**

The PhD thesis constitutes the central part of the programme and documents an independent research project carried out under individualised academic supervision. The research project is required to contribute new knowledge and original research results in one or more of the areas of Innovation and Industry Development, Innovation in the Public Sector and Innovation and Sustainable Transition. The thesis must document the individual scientific work conducted by the candidate in accordance with international standards for research ethics, scientific level, and work practices in the field of innovation research.

Either the thesis may have the form of a monograph or a collection of papers published in, or submitted to, peer-reviewed international workshops, conferences or journals. In the latter case, at least one paper must have been published or accepted for publication in a high-quality journal or conference. Theses based on a collection of papers must include an overview chapter that provides an introduction to the research field, clearly states the research questions and goals, provides an overview of the research results obtained, and positions the scientific results contained within state-of-the art in the research field.

Papers that are part of a thesis consisting of published and submitted papers are allowed to have co-authors. The thesis must then be accompanied by co-authors' statements specifying that the candidate contributed with a substantial amount of the work.

## **5. Work Structure and Teaching Methods**

The candidates will be exposed to a wide range of forms of teaching, including lectures, group work, seminars, and self-study. In the coursework component, the teaching is largely based on a combination of lectures, seminars by visiting researchers and the candidates themselves, and discussions and practical work in smaller groups. The candidates will give oral presentations and write reports, essays and papers in all courses that are offered in the programme. Furthermore, the candidates will conduct reviews of papers, and provide assessment of oral presentations by fellow PhD candidates. Some PhD research projects and coursework involves practical work linked to the development, evaluation, and application of innovations.

The PhD candidates will be part of one of the research groups and are expected to actively participate in scientific discussions at meetings and seminars organised by the research group. The PhD candidates will take part in the weekly/biweekly meetings of the research group in which the daily work of the research group is discussed and planned. In these meetings, the PhD candidates typically contribute with short presentations of work-in-progress, and receives feedback on dry-runs of workshop and conference presentations. The PhD candidates participates in a weekly research seminar for all faculty members, PhD candidates, and master's thesis students. In these seminars, the PhD candidates presents their research work to a broader audience. The seminars also include presentations by faculty

members, visiting researchers, and other external guests. The PhD candidates organise an informal monthly PhD forum in which the PhD candidates discuss matters related to their research and their work environment. A main purpose of this forum is to support the integration of new PhD candidates into the research environment.

THE RESINNREG PROGRAMME organizes an annual retreat for all involved HVL researchers, post-doctoral fellows, and PhD candidates. At this annual retreat, the PhD candidates give presentations in relation to their PhD project. The retreat also contains lectures – some from external guest - on topics related to researcher education such as dissemination of research, research ethics, paper reviewing, writing of project proposals and funding applications, writing research papers, giving scientific presentation, and building a network and research career. As part of the retreat, the PhD candidates also contribute to group work on proposals for cross-disciplinary projects and collaboration, and project proposals for external funding.

This implies that a candidate will regularly be giving oral presentations on the current work undertaken in the context of his/her research project, and will engage in discussions with other researchers and PhD candidates on related topics. Candidates will also regularly attend national and international scientific workshops and conferences that will lead to collaboration and interaction with researchers at other institutions. Candidates typically attend one or more PhD summer/winter schools related to the topic of their research project.

The work on the research project of the candidate will be based largely on self-study under individual supervision that address a broad spectrum of the learning outcomes of the programme. This will involve both literature studies, and theoretical and practically-oriented work. Candidates are entitled to receive 200 hours of supervision in relation to the research project. The hours of supervision includes preparation, discussion with the candidate, and any follow up tasks.

The main element in the individual supervision is to ensure the academic development of the candidate in terms of skills and independence in research and writing, and the timely scientific progress on the PhD project in accordance with the rules and regulations of the programme. For the course work component, the supervisor will provide advice on courses and PhD summer/winter schools to ensure that the candidate obtains the required background to carry out his/her PhD project. The supervision also includes: guidance on the focus of the research project; guidance on formulating hypotheses and delimiting the scope of the project; and guidance on ensuring that the project is carried out with scientific integrity and in accordance with the established ethical norms of the research field.

The PhD candidate typically writes several research papers in the course of their project (in addition to the thesis itself). For both the writing of the research papers and the thesis, the work form is typically iterative. The supervisor(s) will provide advice on the structure and content, and give feedback on draft versions of research papers. In relation to this, the supervision also includes advice on workshops, conferences and journals for submission of papers, and discussions on how to address feedback from review reports in a professional and constructive manner. For workshops, conferences and journals, important factors are relevance in relation to the project and scientific quality. In many cases, the PhD

candidate and the supervisor(s) (or other PhD candidates) also write joint research papers which further aids the candidate in obtaining the required skills in scientific writing. Other important issues in the supervision are advice on relevant literature and related work, feedback and advice on oral presentations, and advice on career planning. The supervision may also include risk management, revision and change of original plans.

The supervisors normally serves as members of international programme committees and in relation to this, the PhD candidates will receive advice on scientific reviewing and may act as sub-reviewers in order to be exposed to the evaluation aspects of research work. The supervisor(s) also introduces the PhD candidates to their international contact network and, in relation to this, supports the PhD candidates in planning the compulsory international research visit and in building their own network.

The PhD candidates will have two academic supervisors from HVL one of whom will be the main supervisor. In general, the main HVL supervisor will have full-time permanent positions at Western Norway University College of Applied Sciences and the primary academic responsibility for the candidate, including the formal responsibility on matters related to the education and scientific work of the candidate. The candidate may apply to have one or more co-supervisors from other institutions when special competence in the PhD project is required. In the case of an external main supervisor, at least one co-supervisor from HVL must be assigned. An important duty of the HVL-based supervisor(s) is to ensure that the candidate shows good progress in the course of studies and that the candidate becomes part of the research environment at HVL.

## **6. Internationalisation**

The research environment responsible for THE RESINNREG PROGRAMME has extensive international collaborations including both research collaborations and supervision of PhD candidates. The PhD candidates will have the opportunity to present research work as part of seminars and meetings with international visitors, and to engage in discussion with other researchers in the field.

The PhD students are strongly encouraged to visit an international research group for a period of 1-6 months. A visit at an international research institution can be accredited up to five ECTS subject to approval by the programme committee. Candidates will also give research presentations at international scientific meetings, workshops and conferences, and it is expected that PhD candidates give at least one talk at an international venue in the course of the studies.

## **7. Assessment and Exams**

The assessment at exams that is part of the course work component is done in accordance with the regulations for studies and exams at Western Norway University College of Applied Sciences (FOR-2013-06-16-786).

The assessment in the coursework component involves a combination of seminar presentations and project reports. In many cases, the project reports will have the form of a research paper. Exams in



courses that are part of the PhD programme are assessed by an internal and an external examiner. All courses in the programme are graded pass/fail. For courses comprising multiple pass/fail components, a pass grade must be obtained on all components in order to receive a pass grade on the course.

**Annual progress reports.** The PhD candidate and the supervisor(s) must submit an annual report to the programme committee detailing the progress on the coursework and the research project of the candidate. The annual progress report will be followed up by a meeting involving the programme coordinator, the candidate, and the supervisor(s) assessing the progress and updating the plan for the studies.

**Mid-term evaluation.** Approximately half-way through the PhD studies, each candidate must provide a written report documenting the progress made on the research project, and give an oral presentation of the current state of the thesis project and the future plans and directions. The purpose of the progress report and presentation is to assess the scientific progress related to the coursework and the research project of the candidate. The evaluation will be undertaken by a committee consisting of the supervisor(s), one external researcher, and the coordinator of the programme. The coordinator prepares an evaluation report based on the written report and the oral presentation. If applicable, the report may contain a specification of any measures to be implemented in order to ensure satisfactory progress in the research project. The programme committee is responsible for monitoring that the recommendations from the status report are followed by the candidate.

The coursework component of the PhD studies must have been approved by the programme committee before the candidate can apply for an assessment of the thesis. The assessment of the dissertation is made by an evaluation committee consisting of at least three members and in accordance with the regulations for the PhD programme §14-§15.

The PhD degree within RESINNREG: Innovation and Industry Development; Public Sector and Sustainable Transition is awarded on the basis of:

- approved coursework component (mandatory and elective parts),
- an approved thesis,
- a trial lecture on a specified topic,
- an approved public defense of the thesis.

The assessment is made in accordance with §12-§23 in the regulations of the PhD programme. The diploma will specify the title of the thesis and contain information about the coursework conducted as part of the training component.

## **8. Course Descriptions**

### **8.1 PHDINN 901 - PhD Dissertation in Responsible Innovation and Regional**

#### **Development**

**Credits:** 150 ECTS

**Mandatory course**

**Language of instruction:** English

#### **Introduction**

It is required that the PhD dissertation contributes with new knowledge and original research results in Responsible Innovation and Regional Development and in one of the areas of Innovation and Industry Development; Public Sector and Sustainable Transition. The thesis documents individual scientific work conducted by the candidate in accordance with international standards for research ethics, scientific level, and work practices in the area of Responsible Innovation and Regional Development.

#### **Learning outcomes**

Upon completion of the course, the candidate

##### **Knowledge**

- is in the forefront of knowledge in a specialization area within one or more of the fields of Innovation and Industry Development, Innovation in the Public Sector, and Innovation and Sustainable Transition.
- has a comprehensive overview of the state-of-the art concepts, methods and technologies, and their application and limitations in his/her specific area of specialization.
- knows the scientific work practices, methods, and concepts in one or more of the fields of Innovation and Industry Development, Innovation in the Public Sector, and Innovation and Sustainable Transition.

##### **Skills**

- has the ability to formulate, plan and carry out research work in Responsible Innovation and Regional Development and contribute with theoretical- and practical research results that advances state-of-the-art
- can carry out research work according to international standards in the field of Responsible Innovation and Regional Development that advances the forefront of knowledge within his/her area of specialization.
- can handle complex academic issues and assess his/her research work relative to the state-of-the art and applicability for Responsible Innovation and Regional Development.

## **General competence**

- can carry out research work with scholarly integrity and in accordance with the established scientific norms and traditions for research in Responsible Innovation and Regional Development.
- can disseminate and publish research results through recognized channels, including scientific workshops, conferences and journal within his/her area of specialization Innovation and Industry Development, Innovation in the Public Sector, and Innovation and Sustainable Transition.
- can participate in research discussions and research collaboration internally on scientific topics within his/her area of specialization.

## **Organisation and Work Structure**

The main part of the work will be individual scientific work conducted by the candidate under supervision. In addition, the candidates are expected to give presentation of their research in internal fora such as meetings in the candidate's research group, seminars at the faculty level and the annual retreat of the programme of study. The candidates are also expected to participate in national and international workshops, conferences and seminars in order to meet and discuss with peer researchers within the field of innovation research.

## **Assessment**

The PhD degree is awarded based on approved coursework (mandatory and elective parts), an approved interim evaluation, an approved thesis, a trial lecture on a specified topic, and an approved public defense of the thesis.

The thesis may have the form of either a monograph or of a collection of papers published in, or submitted to, peer-reviewed international workshops, conferences or journals. In the latter case, at least one paper must have been already published or accepted for publication in a high-quality journal or conference. Theses based on a collection of papers must include an overview chapter that provides an introduction to the research field, clearly states the research questions and goals, provides an overview of the research results obtained, and positions the scientific results contained in the state-of-the art in the research field.

Papers that are part of a thesis consisting of published and submitted papers are allowed to have co-authors. The thesis must then be accompanied by co-authors' statements specifying the proportion of work contributed by the candidate.

## **Prerequisites**

General admission criteria for the PhD programme.

## **Literature**

Attachment 2.1

The literature consists of the references provided as the part of the thesis which is required to reflect the state-of-the art in the specialisation area of the thesis.

## 8.2 PHDINN 902: Philosophy of Science, Research Ethics and Responsible Innovation

**Credits:** 5 ECTS

**Mandatory course**

**Language of instruction:** English

### Introduction

This is a mandatory course for all PhD candidates enrolled in the PhD programme in Responsible Innovation and Regional Development. The aim of the course is for the candidates to develop a thorough understanding of research methodologies and their grounding in the philosophy and history of science, and the application of these to practical work in the field of innovation research. Further, the course will perform a critical discussion of the research tradition of 'Responsible Research and Innovation'. The course also aims to give a solid foundation for understanding and reflecting on the ethical and legal aspects related to conducting scientific research. Finally, the course will introduce the candidates to the process of innovation as a link between ethics, the research process and industrial operations. This includes introduction to perspectives of responsible research and innovation.

### Learning outcomes

Upon completion of the course, the candidate should be able to:

#### Knowledge

- **explain** the main positions in the philosophy of science that are relevant to innovation research, and contemporary critiques of these.
- **define** the main methodological approaches to natural and social science research and the theoretical underpinnings of these.
- **distinguish** the different types of ethical responsibilities that come with scientific work: professional, community, social and environmental.
- **describe** the central ethical principles for research work including problems pertaining to handling of data and observations.
- **explain** and **identify** what constitutes plagiarism and self-plagiarism.
- **describe** the perspective of responsible research and innovation.

#### Skills

- **identify** the scientific-theoretical foundations for a specific research project.
- **apply** existing research methodologies to their own research projects and critically **evaluate** the results of this in the light of eventual weaknesses or reservations in the theoretical foundations of these methodologies.
- **recognize** what ethical problems that are relevant for a given research project, and carry out the research and publication work based on deliberations and reflections over these problems.

- **review** scientific papers and **reference** other works correctly.

### General competence

- **recognize** and discuss scientific-theoretic, methodological and ethical aspects of innovation projects.
- **identify** ideas and technologies in a research project that may be commercialized, and **plan** how to bring these into a market while handling questions such as intellectual property rights, patents and copyrights.

### Content

The course is divided into three modules.

#### Module 1 – History of Science and Research Methodologies

This module in the course gives an introduction to the most important traditions within the theory of science that are applied in innovation research. This includes the critical rationalism of Popper and the theory of scientific revolutions of Kuhn. The most important methodological approaches in natural science are introduced: deductive and inductive approaches to research, and hypothesis construction. A special emphasis will be put on methodologies that are prevalent in innovation research such as constructive research methods. Central problems pertaining to the use of the above methodologies will also be discussed: the relationship between observations and theory, the problem of theory-dependence, and reasoning methods and argumentation.

#### Module 2 – Ethics and Scientific Integrity

This module introduces the ethical foundations of research, and ethical responsibilities in scientific work including independent and commissioned research. Different aspects of responsibility are presented and discussed: professional, societal and environmental responsibilities. This module will also cover ethics guidelines for research projects and related issues such as data retention and reproducibility and handling of research data to guard against fabrication and manipulation. Plagiarism and self-plagiarism will also be discussed.

#### Module 3 – Responsible Research and Innovation

‘Responsible Research and Innovation ‘ (RRI) is a specific approach on how to conduct research and innovation. It has a strong focus on the ethical dimension, the impact of research, and the responsibility of the research community and the organizations and institutions involved in these activities. It deals both with the process of doing research and the practice of commercializing research ideas and technologies. Based on the scientific principles discussed in module 1 and 2, this model will be dedicated to a critical discussion of RRI and its applicability within natural and social science.

### Organisation and Work Structure

The course is organized into 3 modules:

**Module 1 – Philosophy of Science and Research Methodology**

Lectures: 10h - Colloquiums: 5h

**Module 2 – Ethics and Integrity in Scientific Work**

Lectures: 10h - Colloquiums: 5h

**Module 3 – Responsible Research and Innovation**

Lectures: 10h - Colloquiums: 5h

Each module is taught intensively during a period of 1 week including lectures, colloquiums and self-study. In total there are 28h of lectures and 12h of colloquiums. Students are expected to use 1 hour for preparation and debriefing for every hour of lectures or 2 hours for every seminar or colloquium. In addition, the mandatory report is estimated to take about 35 hours of work, for a total of 140 hours.

**Assessment**

Participants must take actively part in the colloquiums by giving oral presentations on subjects and literature in each of the three modules. The participants must participate in discussions, including critical discussions based on the writing of scientific reviews. The participants must deliver a written report in which the PhD project of the candidate is discussed in relation to selected topics covered by the course. The report will be graded with Pass/Fail.

**Prerequisites**

General admission requirements for the PhD programme.

**Subject Responsible**

Prof. Ole Andreas Brekke (primarily responsible), Prof. Ilona Heldal, Assoc. Prof. Tobba Therkildsen Sudmann

**Literature**

**Module 1 – Philosophy of Science and Research Methodology**

- T. Kuhn. The Structure of Scientific Revolutions. University of Chicago Press, 1972. Selected chapters.
- K. Popper. The Logic of Scientific Discovery, Routledge, 1959. Selected chapters.
- George, A.L. and Bennett, A. (2005). Case Studies and Theory Development in the Social Sciences MIT Press, Cambridge. Selected chapters
- J. W. Creswell. Research Design: Qualitative, Quantitative and Mixed Methods Approaches. Sage, 2002.
- M. Jørgensen and D. K. Sjøberg. Generalization and Theory-Building in Software Engineering Research. IEEE Proceedings, Workshop on Empirical Assessment in Software Engineering (EASE'04), at ICSE'04, pp. 29–36, 2004.
- G. D. Crnkovic. Constructive research and info-computational knowledge generation. Model-Based Reasoning in Science and Technology. Springer Berlin Heidelberg, 2010. 359-380.

## **Module 2 – Ethics and Integrity in Scientific Work**

- D. Elliot and J. E. Stern. Research Ethics. A Reader. University Press of New England, 1997. Selected chapters.
- P. A. Griffiths (ed.). On Being a Scientist: Responsible Conduct in Research. National Academy Press, 1995. Selected chapters.
- J. M. Ziman. An Introduction to Science Studies: The Philosophical and Social Aspects of Science and Technology. Cambridge Press, 1984. Selected chapters.

## **Module 3 – Responsible Research and Innovation**

- Godin B. (2011) καινοτομία: An Old Word for a New World, or, The De-Contestation of a Political and Contested Concept. Project on the Intellectual History of Innovation, INRS: Montreal. A shorter version has been published in Karl-Erik Sveiby, Pemilla Gripenberg and Beata Segercrantz (eds.), Challenging the Innovation Paradigm, London: Routledge 2012: 37-60. <http://www.csiic.ca/PDF/Old-New.pdf>
- Guston, D. H., et al. (2014) "Responsible innovation: motivations for a new journal.". Journal of Responsible Innovation 1(1): 1-8.
- Owen, R, J. Bessant, and M. Heintz, eds. (2013) *Responsible innovation: managing the responsible emergence of science and innovation in society*. John Wiley & Sons. Selected chapters.
- Owen, R, Macnaghten, P. and Stilgoe, J. (2012) "Responsible research and innovation: From science in society to science for society, with society." *Science and Public Policy* 39.6: 751-760.
- Stilgoe, J., Owen, R. and Macnaghten, P. (2013) "Developing a framework for responsible innovation." *Research Policy* 42.9: 1568-1580.
- Von Schomberg, R. (2012) "Prospects for technology assessment in a framework of responsible research and innovation." *Technikfolgen abschätzen lehren: Bildungspotenziale transdisziplinärer Methoden*: 39-61.



### 8.3 PHDINN 903: Understanding and Exploring Innovation

**Credits:** 5 ECTS

**Mandatory course**

**Language of instruction:** English

#### Introduction

The aim of the course “Understanding innovation – innovation as exploration” is to give an overview of the state of the art within the research field of innovation. The course focuses on ontological and epistemological issues pertaining to the concept of innovation and explores the multiple understandings of innovation; how the concept of innovation is defined; how innovation is analytically framed and empirically approached; and how innovation research inform policy makers and other stakeholders. In the course, these and related pending issues are addressed by the PhD-students in tandem with established innovation researchers. The course entails approximately one month of work. It is compulsory to take part in a three-day workshop coalescing lectures and seminars; in an essay writing process of approximately three weeks; and in a 45 minutes oral presentation of the written essay.

#### Learning outcomes

Upon completion of the course, the candidate should be able to:

##### Knowledge

- **provide** an overview of the general academic debates in the research field of exploring innovation.
- **reflect** critically upon the theoretical and conceptual foundations of the multiple understandings of innovation in the field of research.
- **describe** main methodological approaches and their theoretical and conceptual underpinnings currently applied in the research field of exploring innovation.
- **reflect** critically upon intangible and intangible societal implications of innovation.
- **write** an essay on theoretical-, methodological- and/or ethical issues related to own PhD project.

##### Skills

- **Identify** the theoretical perspectives and conceptual foundation in the research field of exploring innovation.
- **recognize** the methodological approach of a given exploring innovation study and its theoretical and conceptual underpinnings.
- **structure analyses of** intangible and intangible societal implications of innovation
- **develop** own research ideas in close collaboration with established innovation researchers.
- **apply** state-of-the-art knowledge in the research field of exploring innovation in own PhD project.

## General competence

- **assess** the applicability and limitations of theoretical and conceptual foundations in the research field of exploring innovation.
- **discuss** and **relate** recent developments and research trends within the research field of exploring innovation.
- **identify** central scientific venues and journals within the research field of exploring innovation.

## Content

The course will provide state-of-the-art knowledge, skills, and competence in the research field of innovation. We investigate 'innovation as exploration' and the workshop covers lectures on theoretical perspectives and core concepts central in innovation research providing an overview of the field including approaches on responsible innovation, innovation systems, cluster development, actor-network theory, and different types of entrepreneurship. In addition, the workshop will include seminars where the relations between relevant theories and the individual PhD projects will be discussed. The seminars will function as a kick off for the writing process of an essay closely related to some of the theoretical, methodological and ethical questions in the students PhD project. The essay should be closely related to the topic of the thesis, not exceed 5000 words, and must include a reading list of approximately 500 pages.

## Organisation and Work Structure

The course is organized into three modules and consists of a combination of lectures, colloquiums, seminars, essay writing and an oral essay dissemination.

### Module 1 – Theories of Innovation

Lectures, colloquiums and seminars are organised in an intensive four-day workshop at the Mohn Centre for Innovation and Regional Development. The lectures are covering the state of the art of the research field. In the workshop, there will be arranged colloquiums where the attending students discuss how their PhD project links to the state of the art of the research field. The seminars will be based on these colloquiums and used for student presentations of an idea for an essay on the intangible-tangible of processes of innovation.

### Module 2 – Writing Essay Exploring Innovation

The end of the workshop in terms of the student seminars marks the kick off for an essay writing process. Based on the seminar and in collaboration with the course responsible from the Mohn Centre for Innovation and Regional Development, the PhD students suggest a topic for their individual essay on exploring innovation.

### Module 3 –Essay Seminar

The candidate give an oral presentation of the essay in an open session at campus/department level of the student.

**Module 1 – Lectures, Colloquiums, Seminars**

Lectures: 10h – Colloquiums: 5h - Seminars: 5h

**Module 2 – Essay**

Approximately three full weeks of work for writing essay

**Module 3 – Oral dissemination**

Essay presentation of 25 minutes, followed by a 20 minutes discussion.

Students are expected to use 1 hour for preparation and debriefing for every hour of lectures and 2 hours for colloquiums and seminar. In addition, the essay writing is estimated to take about 90 hours of work, for a total of 140 hours.

**Assessment**

A committee consisting of two members from the institute/campus of the candidate and one member from the course responsible from the Mohn Centre for Innovation and Regional Development is grading the essay and the oral presentation. The faculty involved approves the committee. Each of the two course components must result in a pass grade in order to obtain a pass grade for the entire course. The essay is graded pass/fail; only approved essays may be presented orally; the oral presentation is graded pass/fail. The requirement for passing corresponds to the grade B.

**Prerequisites**

General admission criteria for the PhD programme.

**Subject responsible**

Prof. Arnt Fløysand (primarily responsible), Prof. Jarle Aarstad, Ass. Prof. Jill Merethe Loga

**Literature (reading list, more to come).**

Balconi M, Brusoni S and Orsenigo L. (2010) In defence of the linear model: An essay. *Research Policy* 39: 1-13. <http://www.sciencedirect.com/science/article/pii/S0048733309001899>

Bloch C. (2007) Assessing recent developments in innovation measurement: the third edition of the *Oslo Manual*. *Science and Public Policy* 34: 23-34. <https://doi.org/10.3152/030234207X190487>

Carlsson B and Stankiewicz R. (1991) On the nature, function and composition of technological systems. *Journal of Evolutionary Economics* 1: 93-118. <http://link.springer.com/article/10.1007/BF01224915>

Castellacci F. (2006) A critical realist interpretation of evolutionary growth theorising. *Cambridge Journal of Economics* 30: 861-880. <https://academic.oup.com/cje/article-abstract/30/6/861/1730089/A-critical-realist-interpretation-of-evolutionary?redirectedFrom=fulltext>

David PA. (1985) Clio and the Economics of QWERTY. *The American Economic Review* 75: 332-337. <http://www.jstor.org/stable/1805621>

Fagerberg, J. and Verspagen, B. (2000): Innovation studies – The emerging structure of a new scientific field, *Research Policy* 38, 218-233.

Flanagan K and Uyarra E. (2016) Four dangers in innovation policy studies—and how to avoid them. *Industry and innovation* 23: 177-188. <http://www.tandfonline.com/doi/abs/10.1080/13662716.2016.1146126?journalCode=ciai20>

Fløysand A and Jakobsen S-E. (2011) The complexity of innovation: A relational turn. *Progress in Human Geography* 35: 328-344. <http://journals.sagepub.com/doi/abs/10.1177/0309132510376257>

Geels, F.W and Schot, J. (2007): Typology of sociotechnical transition pathways. *Research Policy* 36, 399-417

Lundvall BÅ. (2007) National innovation systems—analytical concept and development tool. *Industry and innovation* 14: 95-119. <http://www.tandfonline.com/doi/abs/10.1080/13662710601130863>

Martin, B. (2012): The evolution of science policy and innovation studies, *Research Policy* 41, 1219-1239

Martin, B. (2016): Twenty challenges for innovation studies. *Science and Public Policy*, 43, 432-450.

Martin R. and Sunley P. (2015): Towards a Developmental Turn in Evolutionary Economic Geography? *Regional Studies* 49, 712-732.

Meissner D, Polt W and Vonortas NS. (2016) Towards a broad understanding of innovation and its importance for innovation policy. *The Journal of Technology Transfer*: 1-28. <http://link.springer.com/article/10.1007/s10961-016-9485-4>

Moodysson J and Zukauskaitė E. (2014) Institutional conditions and innovation systems: on the impact of regional policy on firms in different sectors. *Regional Studies* 48: 127-138. <http://www.tandfonline.com/doi/abs/10.1080/00343404.2011.649004>

Nightingale P and Coad A. (2014) Muppets and gazelles: political and methodological biases in entrepreneurship research. *Industrial and Corporate Change* 23: 113-143. <https://academic.oup.com/icc/article-lookup/doi/10.1093/icc/dtt057>

## 8.4 PHDINN 904: Doing and Exploiting Innovation

**Credits:** 5 ECTS

**Mandatory course**

**Language of instruction:** English

### Introduction

This course aims to provide participants an increased understanding of handling innovation in practice. After discussing seminal theories from e.g. diffusion of innovation, innovation transition and influence from entrepreneurship, concrete examples for handling innovation in organizations will be presented and discussed. While the course deals with innovation in general, the emphasis is on managing technological innovations. An important focus in this course is understanding the context of innovation, with its social, cultural, economic and business roots. By meeting guest lecturers from organizations, and be allowed to experience environments considered to be innovative in practice at organizations from the Region, the students will re-examine the value of theories and models from research, e.g. the role of supporting processes, strategies and key elements. This approach will help participants to conceptualize these issues and plan and better formulate their own research. To use a certain approach a critical discussion around it needs to be initiated.

The course requires approximately one month of work based on lectures, guest lectures, literature seminars, working with a process model showing the ability to handle innovation in own research and oral examination.

### Learning outcomes

Upon completion of the course, the candidate should be able to:

#### Knowledge

- **Reflect** upon different parts and key elements from innovation management contributing to organizational performance and can be applied in own research project
- **Demonstrate** a thorough understanding of related or competing concepts from innovation management research
- **Describe** pros and contras for choosing and using concepts and theories from innovation management research for a usage area
- **Reflect** constructively upon practical implications for innovation of own research

#### Skills

- **Argue** for relevant theories and practical examples needed to build innovation processes
- **Apply** state-of-the-art knowledge in the research field of exploiting innovation in own research project
- **Argue** its applicability for society
- **Discuss** and **relate** cases of doing innovation (exploiting innovation) to innovation theories and concepts (exploring innovation)
- **Describe** the process of entrepreneurship based in cases of doing innovation

### General competence

- **Assess** the applicability and limitations of theoretical and conceptual foundations in the research field of exploring innovation
- **Critically** reflect on using actual theories, models and tools to exploit innovation in society
- **Recognize** practical challenges of a given exploiting innovation case.

### Content

The course will provide the participant possibilities to recapitulate basic theories and models on managing innovation. To connect the learned theories and models with the practical settings, a major part of the course will focus on concrete experiences of doing innovations in private and public organizations. This will be done via guest lectures, discussions at literature seminars and experiencing innovative environments at organizations. In addition, the course include practical, working seminars where not only the relations between relevant theories and practices are going to be discussed, but also their influence on own individual PhD projects. This later uses templates from a process model designed to support doctoral theses.

### Organisation and Work Structure

The course is organized into three modules: Module 1 is focusing on theories and models, Module 2 on doing innovation and Module 3 on practicing innovation. Module 1-2 incorporates full day workshops with lections, literature seminars and working seminars. Each full day workshop include a lecture (1-2 hours), a literature seminar (2-1 hours) and a working seminar (1 hour). Module 3 involves activities in practical environments.

#### **Module 1 – Theories and models on exploiting innovation**

Lectures: 6 hours – Literature seminars: 2 hours – Discussion, Implication on own research: 2 hours

This module includes two workshops in the beginning of the course. The workshops are focusing on basic theories and models from innovation management, innovation dissemination, and entrepreneurship.

#### **Module 2 – Doing innovation: Implication on own research**

Lectures: 6 hours – Literature seminars: 2 hours – Working seminars: 2 hours

This is a practical part of the course. The students will use a process steering model for their own doctoral work. They need to use theories, practices and identify potential beneficiaries for their own research results. They need to argue and critically assess the applied theories and methods.

#### **Module 3 – Practicing Innovation**

Approximately four weeks of practice for each individual doctoral student in a private or public organization.

This module includes at least two guest presentations (for all) followed by a literature (discussion) seminar.

- Lessons learnt from the private/public sector (invited speakers from selected industries)
- Presentations of the learning experience of the students

### **Organization**

Students will be expected to use 1 hour for preparation and debriefing for every lectures, and 2 hours of preparation for every hour of literature or discussion seminars. In addition, the practice in a private or public organization is estimated to take about 90 hours of work. Totally, the course take approximately of 140 hours.

### **Assessment**

To pass the course, students need to read and reflect upon the listed literature and present their own experience of practice (template based assignment) in a doing-seminar as well as review and be opponent for a fellow student's presentation. More precisely, examination consists of the following moment:

1. Active participation with reflective comments during the course (10%)
2. Presentation of a paper (chapter) from the literature at the literature seminars (20%)
3. Defining and presenting the own doctoral progress with focus on innovation from theories and practices (50%).
4. Review and critical reflections on another project (20%).

### **Grades**

The course is graded pass/fail based on the research paper on experimental projects.

### **Prerequisites**

General admission criteria for the PhD program and preferably 'Understanding and Exploring Innovation'.

### **Subject responsible**

Prof. Ilona Heldal (primarily responsible), Ass.Prof. Jens Kristian Fosse, Ass.Prof. Inger Beate Pettersen

### **Reading list**

Depending on the lecturers, guest lecturers, and the area of interests of the participants for each lecture 1-2 mandatory and 2-3 optional papers or chapters will be suggested.

Some basic works (selected chapters, excerpts from the following books):

Aldrich, H.E. (1999), *Organizations Evolving*, Thousand Oaks, CA: Sage.

Jeanes, E. and T. Huzzard (2014). *Critical management research: Reflections from the field*, Sage

Booth, Wayne C., Gregory G. Colomb, and Joseph M. Williams (2003). *The craft of research*. University of Chicago press.

Chesbrough, H. W. (2006) *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.

Rogers, E. M. and F. F. Shoemaker (1971). *Communication of Innovations; A Cross-Cultural Approach*.

Additional papers (will be completed):

Adner, R. and D. C. Snow (2010). "'Old' Technology Responses to 'New' Technology Threats: Demand Heterogeneity and Graceful Technology Retreats." *Industrial and Corporate Change* **19**(5): 1655-1675.

Agarwal, R., M. Ahuja, P. E. Carter and M. Gans (1998). *Early and late adopters of IT innovations: extensions to innovation diffusion theory*. Proceedings of the DIGIT Conference.

Ahuja, G. (2000). "Collaboration Networks, Structural Holes, and Innovation: A Longitudinal Study." *Administrative Science Quarterly* **45**(3): 425-455.

Elmquist, M., T. Fredberg and S. Ollila (2009). "Exploring the field of open innovation." *European Journal of Innovation Management* **12**(3): 326-345.

Fichman, R. G., B. L. Dos Santos and Z. E. Zheng (2014). "Digital innovation as a fundamental and powerful concept in the information Systems curriculum." *MIS quarterly* **38**(2).

Geels, F. W. (2011). "The multi-level perspective on sustainability transitions: Responses to seven criticisms." *Environmental innovation and societal transitions* **1**(1): 24-40.

Heldal, I. (2016). "Supporting Communication between Stakeholders Involved in Industrial Doctoral Projects by a Process Steering Instrument." *UAS, Journal of Finish Universities of Applied Sciences* (Spec Issue: Bridging professionalization and working life in context of responsiveness to change in society and the workplace).

Kallio, K., T. Russo-Spena, I. Lappalainen and C. Mele (2017). Practice-based approaches to learning and innovating. *Innovating in Practice*, Springer: 83-109.

Orlikowski, W. J. (1992). "The Duality of Technology: Rethinking the Concept of Technology in Organizations." *Organization Science* **3**(3): 398-427.

Orlikowski, W. J. (2000). "Using technology and constituting structures: A practice lens for studying technology in organizations." *Organization science* **11**(4): 404-428.

Pellikka, J., and T. Ali-Vehmas (2016). "Managing Innovation Ecosystems to Create and Capture Value in ICT Industries." *Technology Innovation Management Review* 6.10).

Saebi, T. and N. J. Foss (2015). "Business models for open innovation: Matching heterogeneous open innovation strategies with business model dimensions." *European Management Journal* **33**(3): 201-213.



## 8.5 PHDINN 905: Decision making for responsible innovation

**Credits:** 5 ECTS

**Mandatory course**

**Language of instruction:** English

### Introduction

Decision making is the process of making choices by identifying a decision, gathering information, and assessing alternative resolutions. Using a step-by-step decision making process can help making more deliberate, thoughtful decisions by organizing relevant information and defining alternatives. The majority of innovation practitioners agree that decision-making is one of the biggest progress-halting problems in corporations pursuing innovation as a continuous process. To deal with all the situations and problems that may arise in the innovation process, different approaches for making decisions and understanding innovation are needed. This course focuses on modeling of decision making for responsible innovation in organizations and firms. The training will allow students to conduct research on the cutting-edge of interesting questions in decision making related to innovation.

### Learning outcomes

Upon completion of the course, the candidate should be able to:

#### Knowledge

- **reflect** critically upon the theoretical and conceptual foundations of decision making.
- **explain** the principles behind state-of-the-art tools and frameworks used for decision making.
- **describe** main methodological approaches and their theoretical and conceptual underpinnings currently applied in the research field of decision making.
- **demonstrate** a thorough understanding of essential elements of quantitative decision analysis with a particular focus on decision making.

#### Skills

- **formulate** correctness and quality criteria for decision making models.
- **use** the most important elements in decision analysis relevant to decision making.
- **be able to** recognize and account for the human biases and errors that most often affect decision making.
- **plan and conduct** experimental evaluation of decision making models.
- **apply** computer tools facilitating decision making.

### **General competence**

- ***understand*** fundamental logical principles and analyses within decision making.
- ***be able to*** communicate choices and recommendations clearly.

### **Content**

This course will discuss the principles and fundamental concepts for the theory of decision making. The future of a business depends on the outcome when innovation is in focus, therefore it's important to reduce cognitive biases and calculate carefully. Students will develop a language, set of theories, and tools to transform complex decisions into ones where the course of action is clear, followed by studies of current technologies for supporting business decisions in innovation. The skills learned will be applicable to exploration and production decisions from relatively small investments to major field development. Particular attention will be paid to methods supporting decision making concerning innovation, i. e. Bayesian statistics, causal decision theory, choice modeling, constraint satisfaction, evidential decision theory, multi-criteria decision making, optimal decision, and personal and group preferences. In order to equip students with methods and tools for handling uncertainties in innovation process some non-classical logics will be introduced along with their applications to real life problematics.

### **Organisation and Work Structure**

The course is delivered through a combination of lectures, seminars, practical and computational class work. Student performance is assessed through coursework, experimental projects and class presentations.

#### **Module 1 – Introduction to theory of decision making**

#### **Module 2 - Practical and computational class work**

#### **Module 3 – Research paper on experimental project**

#### **Module 1 – Lectures and seminars.**

Lectures: 6h – Seminars: 4h

#### **Module 2 – Practice**

Three weeks of practical, computational class work, and on developing research paper on experimental projects.

#### **Module 3 – Class presentations.**

Seminars: 6h – Colloquiums: 4h

Students are expected to use 1 hour for preparation and debriefing for every hour of lectures, and 2 hours of preparation for every hour of colloquiums and seminar. In addition, the work load of module 2 is estimated to 90 hours.

### **Assessment**

The course is graded pass/fail based on the research paper on experimental projects.

### **Prerequisites**

General admission criteria for the PhD programme.

### **Subject responsible**

Prof. Sylvia Encheva (primarily responsible), Prof. Talal Rahman.

### **Literature**

- R.B. Bratvold, and S.H. Begg, Making Good Decisions, Richardson, Texas, USA, 2010.
- S. Encheva, Providing Support for Today's Decision Making Processes, Advances in Intelligent Systems Research 122, 2015, pp. 378-380.
- S. Encheva, Inferences for Multicriteria Decision Making, Lecture Notes in Electrical Engineering 308, 2014, pp. 193-197.
- S. Encheva, Towards Optimal Solutions in a Constantly Changing Environment. Intelligent Decision Technologies, IOS Press, 2013, pp. 419-428
- M. Fitting and E Orlowska (Eds.), Beyond Two: Theory and Applications of Multiple-Valued Logic, Physica-Verlag Heidelberg, 2003.
- E. Gutiérrez, G. Ölundh Sandström, J. Janhager, and S. Ritzén, Innovation and decision making: understanding selection and prioritization of development projects, IEEE ICMIT, vols. 1-3, 2008, pp. 333-338.
- K. Hakkarainen, and T. Alonen, The Innovation Funnel Fallacy, International Journal of Innovation Science 6(2), 2014, pp. 63–72.
- Y. P. Kondratenko, S. Encheva, I. V. Sidenko, Synthesis of Modular-Structured Systems for Automatization of DecisionMaking Processes in Transport Logistics, International Scientific Journal of Computing 11(4), 2013, pp. 336-344.
- P. C. Nutt, and D. C. Wilson, Handbook of Decision making, Wiley-Blackwell 2010.
- S. Lichtenstein, and P. Solvic, The Construction of Preference: An Overview, Chapter 1 from The Construction of Preference by Lichtenstein, S., and Solvic, P., Cambridge University Press Trivers, 2006.
- P. Magnusson, J. Netz, and E. Wästlund, Exploring holistic intuitive ideascreeing in the light of formal criteria, Technovation 34, 2014, pp. 315-326.

- M. Martinsuo, and J. Poskela, Use of Evaluation Criteria and Innovation Performance in the Front End of Innovation, Journal of Product Innovation Management 28(6), 2011, pp. 896–914.
- M. Peterson, An Introduction to Decision Theory, Cambridge University Press, 2<sup>nd</sup> edition, 2017.
- D. J. Power, R. Sharda, and F. Burstein, Decision support systems, John Wiley & Sons, Ltd, 2015.
- A. K. Sangaiah, A. Abraham, P. Siarry, M., Sheng, (Eds.), Intelligent Decision Support Systems for Sustainable Computing, Springer, Studies in Computational Intelligence 705, 2017.

## 8.6 PHDINN 906: Innovation and Industry Development

**Credits:** 5 ECTS

**Elective course**

**Language of instruction:** English

### Introduction

Acknowledging the systemic nature of the innovation process, this course we will elaborate upon actors, organizations and institutions, and their interlinkages, to understanding drivers and obstacles for innovation and industry development. Innovation systems can have different scale and scope, and have been investigated and operationalized through analytical concepts such as industry clusters, regional innovation systems and regional industry structures, national innovation systems, sectoral innovation systems and sociotechnical regimes. We will investigate how the dynamism of these systems are linked to system internal and system external factors, and driven by different types of agency (individual, collective, private, public etc). The course entails approximately four weeks of work. It is compulsory to write a turn paper not exceeding 2000 words.

### Learning outcomes

Upon completion of the course, the candidate should be able to:

#### Knowledge

- **provide** an overview of the general academic debates in the research field of innovation systems
- **reflect** on the role of actors in innovation systems
- **describe** main methodological approaches and their theoretical and conceptual underpinnings currently applied in the research field of innovation system.
- **write** an essay on theoretical-, methodological- and/or ethical issues related to own PhD

project.

### Skills

- **Identify** the theoretical perspectives and conceptual foundation in the research field of innovation systems.
- **recognize** the methodological approach of a given exploring innovation study and its theoretical and conceptual underpinnings.
- **structure analyses** of the dynamism of innovation system
- **develop** own research ideas in close collaboration with established innovation researchers.
- **apply** state-of-the-art knowledge on innovation systems in a turn paper

### General competence

- **assess** the applicability and limitations of theoretical and conceptual foundations in the research field of innovation system
- **discuss** and **relate** recent developments and research trends within the research field of innovation system
- **identify** central scientific venues and journals within the research field of innovation system.

### Content

The course will provide insight into state-of-the-art knowledge of innovation systems. We will investigate how to understand cluster development, key issues within regional and national innovation system research and how to investigate the evolutionary dynamics and the renewal of systems and regions. The dynamism of these systems are linked both to systemic dimension, such as the co-evolution and interdependency of different sub-system, and the agency of actors. Agency are often overlooked within the literature, and in this course we will put a special emphasis on how entrepreneurs, firms leaders, policy makers and other stakeholders contribute to renewal and transformation of innovation systems and its institutions. We will especially look into the challenge of developing more responsible and sustainable innovation system.

The course will consist of the four modules:

#### Module 1-Path dependency and regional development

- The path dependent dynamics of the regional innovation systems and clusters, and the development of regional industry structures through time and space

#### Module 2-Innovation and renewal in established firms and industries

- Innovation management and the challenges of renewal and strategic reorientation in incumbent firms

#### Module 3-Entrepreneurs and starts ups

- The role of entrepreneurs and starts ups for industry development and regional renewal

**Module 4-Policy institutions and transformation**

- The role of policy makers and policy institutions in processes of regional renewal and transformation

**Organisation and Work Structure**

- Lectures and dedicated time for reading
- Writing of a short turn paper (extended abstract) for an international conference. The paper must not exceed 2000 word
- Presentation of turn papers

**Assessment**

- The turn paper is graded pass/fail by an internal committee.

**Prerequisites**

- General admission criteria for the PhD programme.

**Subject responsible**

Prof. Stig-Erik Jakobsen (primarily responsible), Prof. Chunyan Xie, Ass.Prof. Natalia Mæhle.

**Literature**

- Aarset, B. & Jakobsen, S-E. (2015). Path dependency, institutionalization and co-evolution: The missing diffusion of the blue revolution in Norwegian aquaculture. *Journal of Rural Studies* 41, pp. 37-46.
- Aarstad, Jarle, Olav A. Kvitastein, and Stig-Erik Jakobsen. 2016. "Related and unrelated variety as regional drivers of enterprise productivity and innovation: A multilevel study." *Research Policy* 45 (4):844-856. doi: <http://dx.doi.org/10.1016/j.respol.2016.01.013>.
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- W. M. Cohen and D. A. Levinthal. Innovation and learning: the two faces of R & D. *The economic journal* (1989): 569-596.
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- Enkel, E. and Gassmann, O. (2010): Creative imitations. Exploring the case of cross-industry innovation. *R&D Management*, 40, 256-270.
- Fløysand, A. & Jakobsen, S-E. (2016). In the footprints of evolutionary economic geography. [\*Norsk Geografisk Tidsskrift-Norwegian Journal of Geography\* 70\(3\), pp. 137-139.](#)
- Fløysand, A. & Jakobsen, S-E. (2016). Industrial renewal: narratives in play in the development of green technologies in the Norwegian salmon farming industry. [\*Geographical Journal\* 182, pp. 1-12.](#)
- Foss, N.J. and Saebi, T. (2017): Business models and business models innovation: Between wicked and paradigmatic problems. *Long Range Planning*, vol 50
- Fosse J.K. & Normann, R.H. (2016). Management Strategies in Cluster Projects – Cases and Discussion. I Hassink, R. & Fornahl, D. (red.) *Cluster Policies from a Cluster Life Cycle Perspective*. Edgar Elgar.
- Frenken, Koen, Frank Van Oort, and Thijs Verburg. 2007. "Related Variety, Unrelated Variety and Regional Economic Growth." *Regional Studies* 41 (5):685-697. doi: 10.1080/00343400601120296.
- Garud, R. and Karnøe, P. (2003): Bricolage versus breakthrough: Distributed and embedded agency in technology entrepreneurship. *Research Policy*, 32, 277-300
- Gjelsvik, Martin, and Jarle Aarstad. 2017. "Entrepreneurial industry structures and financial institutions as agents for path dependence in Southwest Norway: the role of the macroeconomic environment." *European Planning Studies* 25 (3):406-424. doi: 10.1080/09654313.2016.1226786.
- Hauge, E. S., Kyllingstad, N., Mæhle, N., & Schulze-Krogh, A.C. (2017): Developing Cross-Industry Innovation Capability: Regional Drivers and Indicators within Firms. *European Planning Studies*, 25, 388-405
- Isaksen, Arne, and Stig-Erik Jakobsen. 2017. "New path development between innovation systems and individual actors." *European Planning Studies* 25 (3):355-370. doi: 10.1080/09654313.2016.1268570.
- Isaksen, Arne, Michaela Trippl, MD Parrilli, RD Fitjar, and A Rodriguez-Pose. 2016. "Path development in different regional innovation systems." *Innovation Drivers and Regional Innovation Strategies*, Routledge: New York and London: pp. 66-84.

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- Martin, R. 2010. Roepke lecture in economic geography – Rethinking regional path dependence: Beyond lock-in to evolution. *Economic Geography* 86, 1–27.
- Njøs, Rune, Stig-Erik Jakobsen, Heidi Wiig Aslesen, and Arnt Fløysand (2016). "Encounters between cluster theory, policy and practice in Norway: Hubbing, blending and conceptual stretching." *European Urban and Regional Studies* 0 (0):0969776416655860. doi: doi:10.1177/0969776416655860.
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- Njøs, R., Jakobsen, S-E & Rosnes, V. (2016). Market-driven organizational lock-in: A case study of a former first mover. [\*Norsk Geografisk Tidsskrift – Norwegian Journal of Geography\* 70\(3\): 140-151.](#)
- Pettersen, I.B., Aarstad, J., Høvig, Ø.S. & Tobiassen, A.E. (2016). Business incubation and the network resources of start-ups. [\*Journal of Innovation and Entrepreneurship\* 5\(7\), pp. .](#)
- Sotarauta, M. and Pulkkinen, R. (2011): Institutional entrepreneurship for knowledge regions: In search of a fresh set of questions for regional innovation studies. *Environment and Planning C* 29, 96-112.
- Sydow, J., Schreyögg, G. and Koch, J. (2009): Organizational path dependence: Opening the black box. *Academy of Management Review* 34, 689–709.
- West, J, Salter, A. Vanhaverbeke, W. and Chesbrough, H. (2014): Open innovation: The next decade. *Research Policy*, 43 (2014), 805-811.



## **8.7 PHDINN 907: Innovation in the Public Sector**

**Credits:** 5 ECTS

**Elective course**

**Language of instruction:** English

### **Introduction**

Public sector innovations are often institutional innovations. They involve the creation and institutionalization of new practices. In this way, institutional innovations are socially constructed. They transform the way we think about public organizations as well as the practices within these organizations.

The course focuses on three distinct, but related aspects of public sector innovations. Firstly, we aim at an understanding of how comprehensive governance innovations and concepts are developed and spread. New Public Management, network governance and New Public Governance are examples of conceptual innovations that change our understanding of the purposes and practices of the public sector. Next, we focus the current trend towards collaborative, cross sector organization forms as tools for public sector innovation. These forms often involve voluntary organizations or business actors through public-private partnerships. Co-production and co-creation, where target groups participate in policy development, is another example. We may study these forms as innovative forms of governance, but it is also important to understand whether and how they contribute to innovative practices within their field and with regard to economic efficiency or democratic legitimacy. Lastly, we study innovations in public service production and delivery, with a special focus on health and welfare services. We give a particular attention to the role of professions and professionals as drivers of change, together with the impact of new technologies and organizational forms on innovative practices.

These are distinct types of public sector innovations, but they also interrelate in different ways. Sometimes, overarching reform concepts are guiding more specific organizational changes and changes in service production. When this is the case, questions of diffusion and local implementation come to the forefront. In other cases, local innovations are spreading to a wider field, instigating questions about copying and learning. It is also possible that couplings between levels are loose, resulting in a cleavage between what is said and what is done.

For each of the mentioned topics, the course will stress processes of innovation, exploring how various actors (individuals, groups, organizations, corporations) have a role in the origin, spread and implementation of innovations. Several important aspects of innovation processes will be explored, like: 1. How different types of innovations come into existence, and under which conditions. 2. How those innovations spread passively (by diffusion) or actively (by dissemination) and how innovations that spread are made local in localities adopting them, partly or fully. 3. How the innovations interplay in complex combinations, for the bottom up development of new and innovative practices as well as for the top down diffusion of comprehensive reform attempts. 4. How service innovations involve

knowledge development and changes in professional roles. 5. What hindering and promoting factors that may be identified with regard to implementation and sustainability of innovations.

The course combines lectures, cases and writing of essays by the PhD-students. During the course, the students get the opportunity to work in tandem with established innovation researchers. The course entails approximately one month of work. It is compulsory to take part in workshops (see later description).

## Learning outcomes (needs to be supplemented)

Upon completion of the course, the candidate should be able to:

### Knowledge

The student

- is in the **forefront of knowledge** within his/her academic field on features and processes of public sector innovation and service production, their origin, spread and implementation.
- can **understand** distinctive features and processes of public sector innovation and service production, their origin, spread and implementation.
- can **evaluate critically** the expediency and application of innovation processes and the way they are institutional and professional embedded
- is able to **explain** the relevance of different innovation types and complex combinations of the types for innovation in the public sector, with and without an interplay with private (for-profit and non-profit) actors.
- can **present** the forefront knowledge in the field and an overview of the academic debates on innovative governance and innovative service production.
- is able to **discuss critically** the theoretical and methodological approaches used in the field
- can **contribute** to the development of new knowledge, new theories, methods, interpretations and forms of documentation in the field.

### Skills

The student

- can **recognize and evaluate** the theoretical and methodological approach of a given study in the field of innovative governance, institution building and professional development.
- is able to **write** an essay on theoretical-, methodological- and/or ethical issues related to innovative governance
- can **develop** own research ideas in collaboration with established innovation researchers.
- can **formulate** a research design for a project in the field of innovative governance and public service production
- can **carry out** own research and scholarly research work of a high international standard and handle complex academic issues and challenge established knowledge and practice in the field.

### General competence

### The student

- can **assess** the applicability and limitations of theoretical and conceptual foundations in the research field
- is able to **identify** needs and challenges for new research, and for development of innovative practices, in the field of innovative governance and public service delivery, including ethical assessment.
- **can manage** complex and interdisciplinary projects, which involves collaboration with other researchers and practitioners in the field
- can **communicate** own research and development work at academic conferences, in journals, and also for the wider public
- is **able to participate** in academic and other debates in the field, both nationally and internationally

### Content

The course will provide state-of-the-art knowledge, skills, and competence in the research field of innovative governance and public service provision, and in particular, the health and social care services.

The course will consist of three modules:

#### Module 1- Innovative governance and public service provision

- focus on the concepts of institutional innovation and new practice creation, the distinctive features of innovation in the public sectors, different innovation types, and how these types are combining in real world innovative practices.
- The module provides particular attention to recent development trends known as collaborative governance and co-production of public services, and analyze cases from different policy sectors.

#### Module 2-Innovation in public service production,

- focus on health services and other welfare services, in particular related to municipal service provision, and the role of the welfare professions in innovative processes.
- Attention is paid to both organizational change and transformations, including processes of organizational learning, and, to innovation in service provision, including new technological elements in provision of health services and social services.

#### Module 3- Feature article/poster

- Students and teachers discuss the relations between relevant theories and the individual PhD projects. The seminars launch the process of writing a feature article/develop a poster presentation, which must relate to the students' PhD project and be presented in a seminar in the end of the course.

### Organisation and Work Structure

The course consists of two workshops. Workshop 1 is an intensive three-day workshop of lectures covering the state of the art of the research field and of collegiums discussing issues related to Innovative governance and public service provision and innovation in the health and social care sector. Workshop 1 also functions as a kick off seminar for the development of a feature article/poster presentation linked to the PhD project of the candidate. In advance of the workshop 1, the attending students have to submit an abstract of their PhD project. In the end of the workshop 1, the PhD students select a topic for their feature article/poster project. Workshop 2 is a one-day workshop where the students present their feature article or poster. In the period between workshop1 and workshop 2, there will be two consultations of supervision of the feature article writing-/poster development working process.

### **Assessment**

A committee consisting of two members from the institute/campus of the candidate and one member from the course responsible from the course giving center/school/institute is grading the feature article/poster presentation pass/fail.

### **Prerequisites**

General admission criteria for the PhD programme.

### **Subject responsible**

Prof. Frode F. Jacobsen (primarily responsible), Prof. Oddbjørn Bukve, Prof. Even Nilssen

### **Literature**

Bukve, O., & Hovlid, E. (2014). Entreprenørskap eller institusjonaliseringsprosessar? Om mekanismar i organisasjonsendring. *Nordiske organisasjonsstudier*, **16**(1), 5-29.

Bovaird, T. & Loeffler, E. (2012). From Engagement to Co-production: the Contribution of Users and Communities to Outcomes and Public Value. *Voluntas*, **23**(4), 1119–1138.

Greenhalgh, T. et al. (2004). "Diffusion of innovations in service organizations: systematic review and recommendations. *The Milbank Quarterly* **82**(4): 581-629.

Greenhalgh, T. and Swinglehurst, D (2011). "Studying technology use as social practice: the untapped potential of ethnography". *BMC Medicine* **9**(1): p. 45.

Hartley, J. (2005). "Innovation in Governance and Public Services: Past and Present." *Public Money & Management* **25**(1): 27-34.

Hartley, J., et al. (2013). "Collaborative Innovation: A Viable Alternative to Market Competition and Organizational Entrepreneurship." *Public Administration Review* **73**(6): 821-830.

Ingstad, Eline Synneva Lorentzen & Loga, Jill (2016). Sosialt entreprenørskap i Norge : en introduksjon til feltet . Praktisk økonomi og finans. ISSN 1501-0074. 32 [i.e. 33](1), s 21- 33 . doi: 10.18261/issn.1504-2871-2016-01-04

Jacobsen, F. F. (2015). Continuity and change in Norwegian nursing homes, in the context of Norwegian welfare state ambitions. *Ageing International*. **40**(3):219-228.

Loga, J. (2017) "Sivilsamfunnets roller i velferdsstatens omstilling» i *Sosiologi i dag*, årgang 47, nr. 4/2017.

Lounsbury, M. and E. T. Crumley (2007). "New Practice Creation: An Institutional Perspective on Innovation." *Organization Studies* **28**(7): 993-1012.

March, J. G. (1991). "Exploration and exploitation in organizational learning." *Organization science* 2(1): 71-87.

Moore, M. H. (2005). "Break-Through Innovations and Continuous Improvement: Two Different Models of Innovative Processes in the Public Sector." *Public Money & Management* **25**(1): 43-50.

Moore, M. and J. Hartley (2008). "Innovations in governance." *Public Management Review* **10**(1): 3-20.

Olsen, J. P. (2004). Innovasjon, politikk og institusjonell dynamikk, ARENA.

Osborne, S. P., Radnor, Z., & Strokosch, K. (2016). Co-Production and the Co-Creation of Value in Public Services: A suitable case for treatment? *Public Management Review*, **18**(5), 639-653. doi:10.1080/14719037.2015.1111927

Ravneberg, B. & S. Sørderstrøm (2017). Disability, Society and Assistive Technology: a multidisciplinary field" in Disability, Society and Assistive Technology. New York: Routledge. P.1-15.

Torfin, J. (2016). *Collaborative innovation in the public sector*. Georgetown University Press. Excerpt.

Torfin, J. and P. Triantafillou (2016). *Enhancing public innovation by transforming public governance*. Cambridge, Cambridge University Press. Excerpt.

Verschuere, B., Brandsen, T., & Pestoff, V. (2012). Co-production: The State of the Art in Research and the Future Agenda. *Voluntas: International Journal of Voluntary & Nonprofit Organizations*, **23**(4), 1083-1101. doi:10.1007/s11266-012-9307-8

Vos, J. & Wagenaar, H. (2014). The Münchhausen movement: improving the coordination of social services through the creation of a social movement. *American Review of Public Administration* Vol. **44**(4): 409–439.

273 article pages + excerpts from books.

## **8.8 PHDINN 908: Innovation and Sustainable Transition**

**Credits:** 5 ECTS

**Elective course**

**Language of instruction:** English

### **Introduction**

A fundamental transition of our global society is required in order to cope with sustainability challenges that are increasingly of global dimension, such as climate change, the provision of clean and reliable energy or the continued access to critical resources like water or rare earth materials. Their solution requires new inter-disciplinary and cross-sectoral approaches that do not only target single technology options but which do also account for potential wider societal impacts, including unintended repercussions.

### **Learning outcome**

Course participants acquire profound knowledge on how to assess yet immature and potentially disruptive technologies from an integrated perspective. Such technologies are the “next big things” and examples are artificial intelligence, energy storage, and advanced materials) from an integrated perspective.

Upon completion of the course, the candidate should be able to:

#### **Knowledge:**

- will have advanced knowledge on socio-technical challenges and transition strategies to foster a sustainability transition in different sectors
- will gather knowledge about decision support methods and tools used (or under development) and advanced knowledge about methods to assess environmental consequences
- will be enabled to critically follow the discussion and the further development and adaptation of key future technologies
- can contribute to the development of new interdisciplinary and cross-sectoral knowledge, theories, methods, and their interpretations

#### **Skills:**

- understand and be able to explain the resource potential, technical properties, socio-economic challenges, and environmental impacts of future key technologies
- synthesize material from a broad range of relevant areas in addressing specific questions about challenges of a global sustainability transition
- can independently design research projects targeting an multi-faceted evaluation of a prospective technology
- apply conceptual and theoretical arguments in the discussion of the transition of industrial and societal systems
- is able to perform qualitative analysis handling critically reviewed, multi-dimensional sets of data

**General competence:**

- understands major topics, facts and issues related to a global sustainability transition with respect to technological prospects and limitations, environmental considerations, as well as societal effects
- develops the skills needed to undertake independent research both in industry and in academia
- contributes to new ideas and transition measures that foster societal changes towards a sustainable future
- disseminate their own comprehensive, independent research or applied research, and utilize relevant scientific theory, concepts and terminology

**Content**

The course is based on a socio-technological systems approach and is rooted in transition theories, covering major systems of energy- and material-production & consumption that is linked to an analytical toolbox and related.

The course will consist of three modules:

**Module 1-** Future technologies and greening

Selected future technologies will be introduced and discussed regarding their potential contribution to influence a global sustainability transition while also considering the potential risks for the society (e. g. geoengineering options). The discussion of their diffusion in and uptake by the society complements the picture.

**Module 2-**The analytical toolbox

The analytical toolbox of the course comprises foresight analysis, agent based modelling, dynamic network analysis, and methods for decision making under uncertainty. Focal methods to analyze sustainability effects are integrated assessment, life-cycle-assessment and material flow analysis.

**Module 3-** Sustainability effects

This module introduces focal methods to analyze sustainability effects are integrated assessment, life-cycle-assessment and material flow analysis

### **Organisation and Work Structure**

- Lectures, dedicated time for reading and watching assignments
- Panel discussion at the end of the course with technology experts, politicians and academics
- Writing of a short turn paper (extended abstract) for an international conference. The paper must not exceed 2000 word

### **Assessment**

Assessment of turn paper (extended abstract)

### **Prerequisites**

- Background in engineering or natural sciences or social scientists with strong analytical and quantitative skills

### **Subject responsible**

Prof. Erling Holden (primarily responsible), Prof. Kristin Linnerud and Prof. Liv Osland.

### **Literature (Literature, preliminary)**

West, Bruce J., Turalska, Malgorzata, Grigolini, Paolo (2014): Networks of Echoes – Imitation, innovation & invisible leaders, Springer

von Weizsäcker, E., Hargroves, K., Smith, M., Desha, C. and Stasinopoulos, P. (2009). Factor 5: Transforming the Global Economy through 80% Increase in Resource Productivity, Earthscan, UK and Droemer, Germany

Schwab, Klaus (2017): The Fourth Industrial Revolution, Crown Business





# Erasmus+ Programme

## Key Action 1 – Mobility for learners and staff – Higher Education Student and Staff Mobility

### Inter-institutional<sup>1</sup> agreement 2017-20[21]<sup>2</sup> between programme countries

The institutions named below agree to cooperate for the exchange of students and/or staff in the context of the Erasmus+ programme. They commit to respect the quality requirements of the Erasmus Charter for Higher Education in all aspects related to the organisation and management of the mobility, in particular the recognition of the credits awarded to students by the partner institution.

#### A. Information about higher education Institutions

| Name of the institution<br>(and department, where relevant)                        | Erasmus code  | Contact details <sup>3</sup><br>(email, phone)  | Website<br>(eg. of the course catalogue)           |
|--|---------------|---|--|
| Høgskulen på Vestlandet (HVL)<br><br>Western Norway University of Applied Sciences | N<br>BERGEN14 | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00<br><br>Academic contact:<br>Hans Lund<br><a href="mailto:Hans.lund@hvl.no">Hans.lund@hvl.no</a> | <a href="http://www.hvl.no/en/">www.hvl.no/en/</a> |
| <b>Aarhus University</b>   | DK<br>ARHUS01 | Institutional Erasmus Coordinator<br>Mette Brandeborg<br>International Centre<br>Høegh-Guldbergs<br>Gade 4<br>DK-8000 Aarhus C  | <a href="http://www.au.dk/ic">www.au.dk/ic</a>     |

<sup>1</sup> Inter-institutional agreements can be signed by two or more higher education Institutions

<sup>2</sup> Higher Education Institutions have to agree on the period of validity of this agreement

<sup>3</sup> Contact details to reach the senior officer in charge of this agreement and of its possible updates.

|                          |               |  |                      |
|--------------------------|---------------|--|----------------------|
|                          |               | mb@adm.au.dk<br>+45 8715 2554  |                      |
| <b>Faculty of Health</b> | DK<br>ARHUS01 | International<br>Coordinator<br>Rikke Præstegaard<br>Faculty of Health<br>Ndr. Ringgade 1<br>DK-8000 Aarhus c<br>Tel: +45 9350 8396<br>E-mail: rkp@au.dk | http://health.au.dk/ |

### B. Mobility numbers<sup>4</sup> per academic year

The partners commit to amend the table below in case of changes in the mobility data by no later than the end of January in the preceding academic year.

| FROM<br>[Erasmus<br>code of the<br>sending<br>institution] | TO<br>[Erasmus<br>code of the<br>receiving<br>institution] | Subject<br>area<br>code<br>*<br>[ISCED] | Subject<br>area<br>name<br>* | Study<br>cycle<br>[short<br>cycle,<br>1 <sup>st</sup> , 2 <sup>nd</sup><br>or 3 <sup>rd</sup> ]<br>* | Number of student<br>mobility periods  |  |
|--|--|---|------------------------------|--|--|--|
|  |  |   |                              |  | Student<br>Mobility for<br>Studies<br><br>[total number of<br>months of the<br>study periods or<br>average<br>duration ' ] | Student<br>Mobility for<br>Traineeships<br>† |
| DK<br>ARHUS01  | N<br>BERGEN1<br>4  | 72                                      | Health                       | 3 <sup>rd</sup> cycle  | 2 x 6 months   |  |
| N<br>BERGEN1<br>4  | DK<br>ARHUS01  | 72                                      | Health                       | 3 <sup>rd</sup> cycle  | 2 x 6 months   |  |

| FROM<br>[Erasmus<br>code of the<br>sending<br>institution] | TO<br>[Erasmus<br>code of the<br>receiving<br>institution] | Subject<br>area<br>code<br>*<br>[ISCED] | Subject<br>area<br>name<br>* | Number of staff mobility periods  |                                     |
|--|--|---|------------------------------|---|-------------------------------------|
|  |  |   |                              | Staff Mobility for<br>Teaching<br><br>[total number of days<br>of teaching periods or<br>average duration ' ] | Staff Mobility<br>for Training<br>* |

<sup>4</sup> Mobility numbers can be given per sending/receiving institutions and per education field (optional\*:  
<http://www.uis.unesco.org/Education/Pages/International-standard-classification-of-education.aspx>)

|               |               |    |        |            |  |
|---------------|---------------|----|--------|------------|--|
| DK<br>ARHUS01 | N<br>BERGEN14 | 72 | Health | 2 x 1 week |  |
| N<br>BERGEN14 | DK<br>ARHUS01 | 72 | Health | 2 x 1 week |  |

### C. Recommended language skills

The sending institution, following agreement with the receiving institution, is responsible for providing support to its nominated candidates so that they can have the recommended language skills at the start of the study or teaching period:

| Receiving institution<br>[Erasmus code] | Optional: Subject area | Language of instruction 1 | Language of instruction 2 | Recommended language of instruction level <sup>5</sup>          |  |
|---|------------------------|---------------------------|---------------------------|---|--|
|   |                        |                           |                           | Student Mobility for Studies<br>[Minimum recommended level: B1] | Staff Mobility for Teaching<br>[Minimum recommended level: B2] |
| DK<br>ARHUS01                           | Health                 | English                   | Danish                    | English CEFR C1, TOEFL 83 (IBT), IELTS 6.5<br>Danish B2         |  |
| N<br>BERGEN14                           |                        | English                   | Norwegian                 | English B2<br>Norwegian B2                                      | English C1   |

For more details on the language of instruction recommendations, see the course catalogue of each institution [Links provided on the first page].

<sup>5</sup> For an easier and consistent understanding of language requirements, use of the Common European Framework of Reference for Languages (CEFR) is recommended, see <http://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr>



## D. Additional requirements

HVL has the appropriate infrastructure for students and staff with disabilities. Please inform the international office in advance of any special needs of the exchange student or staff member.

## E. Calendar

1. Applications/information on nominated students to HVL should reach the receiving institution by:

| Receiving institution<br>[Erasmus code] | Autumn term*<br>[month] | Spring term*<br>[month]  |
|---|-------------------------|--------------------------|
| N BERGEN14                              | April 15 <sup>th</sup>  | October 15 <sup>th</sup> |

[\* to be adapted in case of a trimester system]

2. The receiving institution will send its decision within 4 weeks.
3. Termination of the agreement

*A notice of at least one academic year should be given. This means that a unilateral decision to discontinue the exchanges notified to the other party by 1 September 20XX will only take effect as of 1 September 20XX+1. The termination clauses must include the following disclaimer: "Neither the European Commission nor the National Agencies can be held responsible in case of a conflict."*

## F. Information

### 1. Grading systems of the institutions

HVL - <https://www.hvl.no/en/studies-at-hvl/>

DK-ARHUS01 - <http://eng.uvm.dk/Education/General/7-point-grading-scale>

### 2. Visa

The sending and receiving institutions will provide assistance, when required, in securing visas for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)  | Website for information  |
|-------------------------------|--|--|
| DK ARHUS01                    | AU International<br>Centre<br><br><a href="mailto:ic@au.dk">ic@au.dk</a> | <a href="http://www.au.dk/en/exchange/living-in-denmark/visaresidencedocuments/">http://www.au.dk/en/exchange/living-in-denmark/visaresidencedocuments/</a><br><br><a href="http://ias.au.dk/permits/#c7644">http://ias.au.dk/permits/#c7644</a> |

|            |   |   |
|------------|---|---|
| N BERGEN14 | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00 | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a> |
|------------|---|---|

### **3. Insurance**

The sending and receiving institutions will provide assistance in obtaining insurance for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

The receiving institution will inform mobile participants of cases in which insurance cover is not automatically provided. Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)  | Website for information  |
|-------------------------------|--|--|
| DK ARHUS01                    | AU International Centre<br><a href="mailto:ic@au.dk">ic@au.dk</a><br>+45 8715 0220 | <a href="http://www.au.dk/en/exchange/living-in-denmark/healthinsurances/">http://www.au.dk/en/exchange/living-in-denmark/healthinsurances/</a><br><a href="http://las.au.dk/insurance/">http://las.au.dk/insurance/</a> |
| N BERGEN14                    | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00            | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a>  |

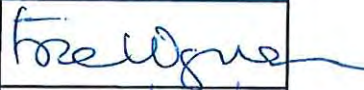
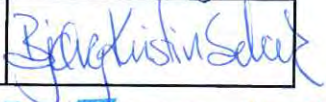
### **4. Housing**


The receiving institution will guide incoming mobile participants in finding accommodation, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following persons and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)  | Website for information   |
|-------------------------------|--|---|
| DK ARHUS01                    | AU International Centre<br><a href="mailto:ic@au.dk">ic@au.dk</a><br>+45 8715 0220 | <a href="http://www.au.dk/en/internationalcentre/housing/">http://www.au.dk/en/internationalcentre/housing/</a>     |
| N BERGEN14                    | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00            | Find the relevant campus at:<br><a href="https://www.hvl.no/en/campus-life/">https://www.hvl.no/en/campus-life/</a> |

**G. SIGNATURES OF THE INSTITUTIONS (legal representatives)**

| Institution<br>[Erasmus code] | Name, function                       | Date           | Signature <sup>6</sup>  |
|-------------------------------|--------------------------------------|----------------|---|
| DK ARHUS01                    | Lise Wogensen, Vice<br>Dean          | 25.05<br>2017  |  |
| N BERGEN14                    | Björg Kristin Selvik, Vice<br>Rector | 05.05.<br>2017 |   |



Western Norway  
University of  
Applied Sciences

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<sup>6</sup> Scanned signatures are accepted





# Erasmus+ Programme

## Key Action 1 – Mobility for learners and staff – Higher Education Student and Staff Mobility

### Inter-institutional<sup>1</sup> agreement 2017-20[21]<sup>2</sup> between programme countries

The institutions named below agree to cooperate for the exchange of students and/or staff in the context of the Erasmus+ programme. They commit to respect the quality requirements of the Erasmus Charter for Higher Education in all aspects related to the organisation and management of the mobility, in particular the recognition of the credits awarded to students by the partner institution.

#### A. Information about higher education institutions

| Name of the institution<br>(and department, where relevant)    | Erasmus code | Contact details <sup>3</sup><br>(email, phone)   | Website<br>(eg. of the course catalogue)                   |
|--|--------------|--|--|
| <b>Charles University in Prague</b><br>1st Faculty of Medicine | CZ PRAHA07   | Department Coordinator:<br>Prof. MUDr. Jaroslav Pokorný, DrSc.<br>jaroslav.pokorny@lf1.cuni.cz<br>+420 224 968 416<br><br>Administrative Officer:<br>Mgr. Lenka Medová<br>lenka.medova@lf1.cuni.cz<br>+420 224 964 372 | <a href="http://www.lf1.cuni.cz/en">www.lf1.cuni.cz/en</a> |

<sup>1</sup> Inter-institutional agreements can be signed by two or more higher education Institutions

<sup>2</sup> Higher Education Institutions have to agree on the period of validity of this agreement

<sup>3</sup> Contact details to reach the senior officer in charge of this agreement and of its possible updates.

|  |               |  |  |
|--|---------------|--|--|
| Høgskulen på Vestlandet<br>(HVL)<br><br>Western Norway University<br>of Applied Sciences | N<br>BERGEN14 | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00<br><br><b>Academic contact:</b><br>Kjersti Alsaker<br>Kjersti.alsaker@hvl.no | <a href="http://www.hvl.no/en/">www.hvl.no/en/</a> |
| [...]  |               |  |  |

## B. Mobility numbers<sup>4</sup> per academic year

*[Paragraph to be added, if the agreement is signed for more than one academic year:*

*The partners commit to amend the table below in case of changes in the mobility data by no later than the end of January in the preceding academic year.]*

| FROM<br>[Erasmus<br>code of the<br>sending<br>institution] | TO<br>[Erasmus<br>code of the<br>receiving<br>institution] | Subject area<br>code<br>*<br>[ISCED] | Subject area<br>name<br>* | Study<br>cycle<br>[short<br>cycle,<br>1 <sup>st</sup> , 2 <sup>nd</sup><br>or 3 <sup>rd</sup> ]<br>* | Number of student<br>mobility periods  |  |
|--|--|--------------------------------------|---------------------------|--|--|--|
|  |  |                                      |                           |  | Student<br>Mobility for<br>Studies   | Student<br>Mobility for<br>Traineeships<br>* |
|  |  |                                      |                           |  | [total number of<br>months of the<br>study periods or<br>average<br>duration*] |  |
| CZ<br>PRAHA07  | N<br>BERGEN14  | 720                                  | Public<br>Health          | 2 <sup>nd</sup> and<br>3 <sup>rd</sup>   | 2 student/3<br>months *  |  |
| N<br>BERGEN14  | CZ<br>PRAHA07  | 720                                  | Public<br>Health          | 2 <sup>nd</sup> and<br>3 <sup>rd</sup>   | 2 student/3<br>months *  |  |

*[\*Optional: subject area code & name and study cycle are optional. Inter-institutional agreements are not compulsory for Student Mobility for Traineeships or Staff Mobility for Training. Institutions may agree to cooperate on the organisation of traineeship; in this case they should indicate the number of students that they intend to send to the partner country. Total duration in months/days of the student/staff mobility periods or average duration can be indicated if relevant.]*

<sup>4</sup> Mobility numbers can be given per sending/receiving institutions and per education field (optional\*:  
<http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>)



| [Erasmus code of the sending institution] | [Erasmus code of the receiving institution] | <b>area code</b><br>*<br>[ISCED] | <b>area name</b><br>* | Staff Mobility for Teaching<br><br>[total number of days of teaching periods or average duration *] | Staff Mobility for Training<br>* |
|---|---|----------------------------------|-----------------------|---|----------------------------------|
| CZ PRAHA07                                | N BERGEN14                                  | 720                              | Public Health         | 2 x 1 week (min. 8 hours)   |                                  |
| N BERGEN14                                | CZ PRAHA07                                  | 720                              | Public Health         | 2 x 1 week (min. 8 hours)   |                                  |

### C. Recommended language skills

The sending institution, following agreement with the receiving institution, is responsible for providing support to its nominated candidates so that they can have the recommended language skills at the start of the study or teaching period:

| Receiving institution<br>[Erasmus code] | Optional: Subject area | Language of instruction 1 | Language of instruction 2 | Recommended language of instruction level <sup>5</sup>          |  |
|---|------------------------|---------------------------|---------------------------|---|--|
|   |                        |                           |                           | Student Mobility for Studies<br>[Minimum recommended level: B1] | Staff Mobility for Teaching<br>[Minimum recommended level: B2] |
| CZ PRAHA07                              |                        | English                   | Czech                     | B2  | B2   |
| N BERGEN14                              |                        | English                   | Norwegian                 | English B2<br>Norwegian B2                                      | English C1   |

For more details on the language of instruction recommendations, see the course catalogue of each institution [Links provided on the first page].

<sup>5</sup> For an easier and consistent understanding of language requirements, use of the Common European Framework of Reference for Languages (CEFR) is recommended, see <http://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr>

## D. Additional requirements

HVL has the appropriate infrastructure for students and staff with disabilities. Please inform the international office in advance of any special needs of the exchange student or staff member.

## E. Calendar

1. Applications/information on nominated students must reach the receiving institution by:

| Receiving institution<br>[Erasmus code] | Autumn term*<br>[month] | Spring term*<br>[month]  |
|---|-------------------------|--------------------------|
| CZ PRAHA07                              | June 15 <sup>th</sup>   | October 31 <sup>st</sup> |
| N BERGEN14                              | April 15 <sup>th</sup>  | October 15 <sup>th</sup> |

[\* to be adapted in case of a trimester system]

2. The receiving Institution will send its decision within 4 weeks.
3. A Transcript of Records will be issued by the receiving institution no later than 5 weeks after the assessment period has finished at the receiving HEI.
4. Termination of the agreement

*A notice of at least one academic year should be given. This means that a unilateral decision to discontinue the exchanges notified to the other party by 1 September 20XX will only take effect as of 1 September 20XX+1. The termination clauses must include the following disclaimer: "Neither the European Commission nor the National Agencies can be held responsible in case of a conflict."*

## F. Information

### 1. Grading systems of the institutions

HVL - <https://www.hvl.no/en/studies-at-hvl/>

### 2. Visa

The sending and receiving institutions will provide assistance, when required, in securing visas for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone) | Website for information   |
|-------------------------------|-----------------------------------|---|
| CZ PRAHA07                    | erasmus@ruk.cuni.cz               | <a href="http://www.cuni.cz/UK-2045.html">http://www.cuni.cz/UK-2045.html</a> |



|            |   |   |
|------------|---|---|
|            | +420 224 491 710  |   |
| N BERGEN14 | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00 | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a> |

### **3. Insurance**

The sending and receiving institutions will provide assistance in obtaining insurance for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

The receiving institution will inform mobile participants of cases in which insurance cover is not automatically provided. Information and assistance can be provided by the following contact points and information sources:

| <b>Institution</b><br>[Erasmus code] | <b>Contact details</b><br>(email, phone)   | <b>Website for information</b>  |
|--------------------------------------|--|---|
| CZ PRAHA07                           | <a href="mailto:erasmus@ruk.cuni.cz">erasmus@ruk.cuni.cz</a><br>+420 224 491 710 | <a href="http://www.cuni.cz/UK-2045.html">http://www.cuni.cz/UK-2045.html</a>             |
| N BERGEN14                           | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00          | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a> |



### **4. Housing**

The receiving institution will guide incoming mobile participants in finding accommodation, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following persons and information sources:

| <b>Institution</b><br>[Erasmus code] | <b>Contact details</b><br>(email, phone)   | <b>Website for information</b>  |
|--------------------------------------|--|---|
| CZ PRAHA07                           | <a href="mailto:erasmus@ruk.cuni.cz">erasmus@ruk.cuni.cz</a><br>+420 224 491 710 | <a href="http://www.cuni.cz/UK-2073.html">http://www.cuni.cz/UK-2073.html</a>                                       |
| N BERGEN14                           | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00          | Find the relevant campus at:<br><a href="https://www.hvl.no/en/campus-life/">https://www.hvl.no/en/campus-life/</a> |

## **G. SIGNATURES OF THE INSTITUTIONS (legal representatives)**

| Institution<br>[Erasmus code] | Name, function  | Date      | Signature <sup>6</sup>  |
|-------------------------------|---|-----------|---|
| CZ PRAHA07                    | Prof.MUDr. Jaroslav<br>Pokorný, DrSc.<br>Department Coordinator | 11.5.2014 |    |
| N BERGEN14                    | Björg Kristin Selvik, Vice<br>Rector                            | 11.5.2017 | <br>Western Norway<br>University of<br>Applied Sciences |

<sup>6</sup> Scanned signatures are accepted



# Erasmus+ Programme

## Key Action 1 – Mobility for learners and staff – Higher Education Student and Staff Mobility

### Inter-institutional<sup>1</sup> agreement 2017-20[21]<sup>2</sup> between programme countries

The institutions named below agree to cooperate for the exchange of students and/or staff in the context of the Erasmus+ programme. They commit to respect the quality requirements of the Erasmus Charter for Higher Education in all aspects related to the organisation and management of the mobility, in particular the recognition of the credits awarded to students by the partner institution.

#### A. Information about higher education institutions

| Name of the institution<br>(and department, where relevant) | Erasmus code   | Contact details <sup>3</sup><br>(email, phone)   | Website<br>(eg. of the course catalogue)   |
|---|----------------|--|--|
| University of Southern Denmark                              | DK<br>ODENSE01 | <u>Institutional Coordinator:</u><br>Ms Tine Noto<br>Tel.: +45 6550 2098<br>Email: <a href="mailto:tino@sdu.dk">tino@sdu.dk</a><br><br><u>Administrative contact:</u><br>Ms Inger Marie Jessen<br>Tel.: +45 6550 4408<br>Email: <a href="mailto:imj@sdu.dk">imj@sdu.dk</a><br><br><u>Academic contact:</u><br>Carsten Juhl<br><a href="mailto:cjuhl@health.sdu.dk">cjuhl@health.sdu.dk</a> | <a href="http://www.international-office.sdu.dk">www.international-office.sdu.dk</a> |

<sup>1</sup> Inter-institutional agreements can be signed by two or more higher education Institutions

<sup>2</sup> Higher Education Institutions have to agree on the period of validity of this agreement

<sup>3</sup> Contact details to reach the senior officer in charge of this agreement and of its possible updates.



|  |            |   |                |
|--|------------|---|----------------|
|  |            |   |                |
| Høgskulen på Vestlandet (HVL)<br>Western Norway University of Applied Sciences | N BERGEN14 | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00<br><b>Academic Contacts:</b><br>Hans Lund<br><a href="mailto:hlund@health.sdu.dk">hlund@health.sdu.dk</a><br>Nina Rydland Olsen<br><a href="mailto:nina.rydland.olsen@hib.no">nina.rydland.olsen@hib.no</a><br>Hildegunn Lygren<br><a href="mailto:Hildegunn.Lygren@hib.no">Hildegunn.Lygren@hib.no</a> | www.hvl.no/en/ |

## B. Mobility numbers<sup>4</sup> per academic year

| FROM<br>[Erasmus code of the sending institution] | TO<br>[Erasmus code of the receiving institution] | Subject area code [ISCED] | Subject area name              | Study cycle [short cycle, 1 <sup>st</sup> , 2 <sup>nd</sup> or 3 <sup>rd</sup> ] | Number of student mobility periods                                  |                                   |
|---|---|---------------------------|--------------------------------|--|---|-----------------------------------|
|   |   |                           |                                |  | Student Mobility for Studies<br>(total number of students / months) | Student Mobility for Traineeships |
| DK ODENSE01                                       | N BERGEN14  | 0915                      | Therapy and rehabilitation     | 2 <sup>nd</sup> and 3 <sup>rd</sup>  | 2 students/10 months *  | 0                                 |
|   |   | 091                       | Health/Evidence based practice | 2 <sup>nd</sup> and 3 <sup>rd</sup>  | 2 students/10 months  | 0                                 |
| N BERGEN14  | DK ODENSE01                                       | 0915                      | Therapy and rehabilitation     | 2 <sup>nd</sup> and 3 <sup>rd</sup>  | 2 students/10 months *  | 0                                 |
|   |   | 091                       | Health/Evidence based practice | 2 <sup>nd</sup> and 3 <sup>rd</sup>  | 2 students/10 months  | 0                                 |

\* Alternatively: 4 students for a total of 20 months every second year.

[\*Optional: subject area code & name and study cycle are optional. Inter-institutional agreements are not compulsory for Student Mobility for Traineeships or Staff Mobility for Training. Institutions may agree to cooperate on the organisation of traineeship; in this case they should indicate the number of students that they intend to send to the partner country. Total duration in months/days of the student/staff mobility periods or average duration can be indicated if relevant.]

<sup>4</sup> Mobility numbers can be given per sending/receiving institutions and per education field (optional\*:  
<http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>)

| FROM<br>[Erasmus code of the sending institution] | TO<br>[Erasmus code of the receiving institution] | Subject area code<br>*<br>[ISCED] | Subject area name*             | Number of staff mobility periods   |                             |
|---|---|-----------------------------------|--------------------------------|--|-----------------------------|
|   |   |                                   |                                | Staff Mobility for Teaching<br><br>[total number of days of teaching periods or average duration*] | Staff Mobility for Training |
| DK ODENSE01                                       | N BERGEN14  | 0915                              | Therapy and rehabilitation     | 5 days / 8 hours   | TBD                         |
|   |   | 091                               | Health/Evidence based practice | 5 days / 8 hours   | TBD                         |
| N BERGEN14  | DK ODENSE01                                       | 0915                              | Therapy and rehabilitation     | 5 days / 8 hours   | TBD                         |
|   |   | 091                               | Health/Evidence based practice | 5 days / 8 hours   | TBD                         |

### C. Recommended language skills

The sending institution, following agreement with the receiving institution, is responsible for providing support to its nominated candidates so that they can have the recommended language skills at the start of the study or teaching period:

| Receiving institution<br>[Erasmus code] | Optional: Subject area | Language of instruction 1 | Language of instruction 2 | Recommended language of instruction level <sup>5</sup>  |  |
|---|------------------------|---------------------------|---------------------------|---|--|
|   |                        |                           |                           | Student Mobility for Studies<br>[Minimum recommended level: B1]                                   | Staff Mobility for Teaching<br>[Minimum recommended level: B2] |
| DK ODENSE01                             | N BERGEN14             | English                   | Danish                    | C1<br><a href="http://www.sdu.dk/en/Uddannelse/Optage">http://www.sdu.dk/en/Uddannelse/Optage</a> | C1   |

<sup>5</sup> For an easier and consistent understanding of language requirements, use of the Common European Framework of Reference for Languages (CEFR) is recommended, see <http://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr>



|            |             |         |           |  |            |
|------------|-------------|---------|-----------|--|------------|
|            |             |         |           | <a href="#">Ise/English+language+requirement</a> |            |
| N BERGEN14 | DK ODENSE01 | English | Norwegian | English B2<br>Norwegian B2                       | English C1 |

For more details on the language of instruction recommendations, see the course catalogue of each institution *[Links provided on the first page]*.

## D. Additional requirements

HVL has the appropriate infrastructure for students and staff with disabilities. Please inform the international office in advance of any special needs of the exchange student or staff member.

DK ODENSE01:

In case of additional requirements in regard to academic, organisational or other aspects (e.g. students with special needs) please contact the International Office: [int@sdu.dk](mailto:int@sdu.dk)  
University of Southern Denmark has excellent infrastructure to welcome students and staff with disabilities.

## E. Calendar

1. Applications/information on nominated students must reach the receiving institution by:

| Receiving institution<br>[Erasmus code] | Autumn term*<br>[month]   | Spring term*<br>[month]   |
|---|---|---|
| DK ODENSE01                             | Official semester dates: Sep 1 – Jan 31<br>(mandatory introduction last week of August)<br><br>Application deadlines:<br>April 1: Non-EU/EEA citizens<br>May 1: EU/EEA and Swiss citizens | Official semester dates: Feb 1 – June 30<br>(mandatory introduction last week of August; all 1st exams held in May or June; only resits in August)<br><br>Application deadlines:<br>October 1: Non-EU/EEA citizens<br>November 1: EU/EEA and Swiss citizens |
| N BERGEN14                              | April 15 <sup>th</sup>  | October 15 <sup>th</sup>  |

*[\* to be adapted in case of a trimester system]*

2. The receiving institution will send its decision within 4 weeks.
3. A Transcript of Records will be issued by the receiving institution no later than 5 weeks after the assessment period has finished at the receiving HEI.
4. Termination of the agreement



*A notice of at least one academic year should be given. This means that a unilateral decision to discontinue the exchanges notified to the other party by 1 September 20XX will only take effect as of 1 September 20XX+1. The termination clauses must include the following disclaimer: "Neither the European Commission nor the National Agencies can be held responsible in case of a conflict."*

## F. Information

### 1. Grading systems of the institutions

HVL: <https://www.hvl.no/en/studies-at-hvl/>

DK ODENSE01:

[http://www.sdu.dk/en/Information\\_til/Studerende\\_ved\\_SDU/Eksamen/nykarakterskala](http://www.sdu.dk/en/Information_til/Studerende_ved_SDU/Eksamen/nykarakterskala)

### 2. Visa

The sending and receiving institutions will provide assistance, when required, in securing visas for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)                              | Website for information   |
|-------------------------------|--|---|
| DK ODENSE01                   | <a href="mailto:int@sdu.dk">int@sdu.dk</a><br>+45 6550 2264    | <a href="http://www.sdu.dk/en/Information_til/Internationale_studerende/Arrival/Residence_Permit">http://www.sdu.dk/en/Information_til/Internationale_studerende/Arrival/Residence_Permit</a> |
| N BERGEN14                    | <a href="mailto:International@hvl.no">International@hvl.no</a> | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a>   |

### 3. Insurance

The sending and receiving institutions will provide assistance in obtaining insurance for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

The receiving institution will inform mobile participants of cases in which insurance cover is not automatically provided. Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)                           | Website for information   |
|-------------------------------|---|---|
| DK ODENSE01                   | <a href="mailto:int@sdu.dk">int@sdu.dk</a><br>+45 6550 2264 | Loss and Liability;<br><a href="http://www.sdu.dk/en/Information_til/Internationale_studerende/Health_Safety/Private_Insurance">http://www.sdu.dk/en/Information_til/Internationale_studerende/Health_Safety/Private_Insurance</a><br>Health: <a href="http://www.sdu.dk/en/Information_til/Internationale_s">http://www.sdu.dk/en/Information_til/Internationale s</a> |

|            |  |   |
|------------|--|---|
|            |  | <a href="#">tuderende/Health Safety</a>   |
| N BERGEN14 | <a href="mailto:International@hvl.no">International@hvl.no</a> | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a> |

#### 4. Housing

The receiving institution will guide incoming mobile participants in finding accommodation, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following persons and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)   | Website for information   |
|-------------------------------|---|---|
| DK ODENSE01                   | int@sdu.dk<br>+45 6550 2264   | <a href="http://sdu.dk/en/Information_til/Internationale_studerende/Accommodation">http://sdu.dk/en/Information_til/Internationale_studerende/Accommodation</a> |
| N BERGEN14                    | <a href="mailto:International@hvl.no">International@hvl.no</a><br>(+47) 55 58 58 00 | <a href="https://www.hvl.no/en/campus-life/">https://www.hvl.no/en/campus-life/</a>   |

#### G. SIGNATURES OF THE INSTITUTIONS (legal representatives)

| Institution<br>[Erasmus code] | Name, function                                    | Date           | Signature <sup>6</sup>  |
|-------------------------------|---|----------------|---|
| DK ODENSE01                   | Tine Noto<br>Institutional Erasmus<br>Coordinator | 04.05.2017     |  |
| N BERGEN14                    | Björg Kristin Selvik<br>Vice Rector               | 05.05.<br>2017 |  |



Western Norway  
University of  
Applied Sciences

<sup>6</sup> Scanned signatures are accepted





MEMORANDUM OF UNDERSTANDING  
between

WESTERN NORWAY UNIVERSITY OF APPLIED SCIENCES  
and  
AUSTRALIAN CATHOLIC UNIVERSITY Limited (ACN 050 192 660)  
40 Edward Street, North Sydney NSW 2060  
Australia  
on  
ACADEMIC AND RESEARCH COLLABORATION

---

**Recognising:**

- that cultural and scientific interaction is indispensable to institutions of higher education in developing their educational and research activities, and
- that institutions of higher education are enriched by international collaboration,

the named institutions hereby record their understanding.

ARTICLE I

The purpose of this Memorandum of Understanding is to develop and carry out collaborative activities within areas of common interest of the named institutions.

ARTICLE II

The scope of collaboration on academic and research activities in this Memorandum of Understanding can include, but are not limited to, the following categories:

1. Exchange of staff and students.
2. Research and teaching collaboration in the areas of mutual interest to both parties
3. Joint scientific publications
4. Exchange of academic materials made available by both parties.
5. Organisation of symposia, conferences, short courses and meetings on research issues of mutual interest.

## ARTICLE III

To implement the aims and purposes expressed in ARTICLES I and II, the following is mutually understood and agreed:

1. Development of a specific project taking place within this Memorandum of Understanding should take the form of a supplementary agreement which will in detail outline key responsible people, sources of funding, and specific collaborative activities.
2. The final approval of any project will be dependent upon the availability of guaranteed support funds.
3. Progress of work of any supplementary agreement under the Memorandum of Understanding will be reviewed and approved by designated responsible people of both parties.
4. Neither the Western Norway University of Applied Sciences nor the Australian Catholic University will be held responsible for any liability whatsoever; furthermore, neither party shall be required to purchase any insurance against loss or damage to any personal property to which this Memorandum of Understanding relates.
5. Based on the principles of mutual respect and mutual benefit, the parties will protect each other's reputation and support each other's programmes and work.
6. The joint language of collaboration will be English.


## ARTICLE IV

## Duration of the Memorandum of Understanding:

This Memorandum of Understanding will come into effect on the last date of signing and shall be effective for a period of five years. Thereafter it will be reviewed and can be amended or renewed as agreed by both parties. Amendments to the Memorandum of Understanding can take place at any time by an exchange of letters.

Either party may terminate the agreement by written notice submitted at least 90 days in advance of the next academic semester.

Signed



Professor Berit Rokne  
Rector  
Western Norway University  
of Applied Sciences



Professor Michelle Campbell  
Executive Dean  
Faculty of Health Sciences  
Australian Catholic University

Date: 28/4/2017

Date: 27/4/2017



## Erasmus+ Programme

### Key Action 1 – Mobility for learners and staff – Higher Education Student and Staff Mobility

### Inter-institutional<sup>1</sup> agreement 2017-20[21]<sup>2</sup> between programme countries

The institutions named below agree to cooperate for the exchange of students and/or staff in the context of the Erasmus+ programme. They commit to respect the quality requirements of the Erasmus Charter for Higher Education in all aspects related to the organisation and management of the mobility, in particular the recognition of the credits awarded to students by the partner institution.

#### A. Information about higher education institutions

| Name of the institution<br>(and department, where relevant) | Erasmus code   | Contact details <sup>3</sup><br>(email, phone)  | Website<br>(eg. of the course catalogue)  |
|---|----------------|---|---|
| Högskolan Väst<br>University West                           | S<br>TROLLHA01 | <p><u>Institutional Erasmus Coordinator</u><br/>Ingela STRIVE<br/><a href="mailto:ingela.strive@hv.se">ingela.strive@hv.se</a></p> <p><b><u>Academic contact:</u></b><br/>Gunnar Peterson,<br/><u>Dean of School of Business, Economics and IT</u><br/><a href="mailto:gunnar.peterson@hv.se">gunnar.peterson@hv.se</a><br/>Tel : +46 520 22 35 58</p> <p>Erika Karlsson,<br/><u>Departmental</u></p> | <p><a href="http://www.hv.se/exchange">www.hv.se/exchange</a></p> <p><b>Course Catalogue:</b><br/><a href="http://www.hv.se/en/education/exchange-student/course-list-online">http://www.hv.se/en/education/exchange-student/course-list-online</a></p> <p><b>For incoming students:</b><br/><a href="mailto:international@hv.se">international@hv.se</a></p> |

<sup>1</sup> Inter-institutional agreements can be signed by two or more higher education institutions

<sup>2</sup> Higher Education Institutions have to agree on the period of validity of this agreement

<sup>3</sup> Contact details to reach the senior officer in charge of this agreement and of its possible updates.



|  |               |   |                |
|--|---------------|---|----------------|
|  |               | <u>coordinator</u><br><u>erika.karlsson@hv.se</u><br>Tel : +46 520 22 36 63   |                |
| Høgskulen på Vestlandet<br>(HVL)<br><br>Western Norway University<br>of Applied Sciences | N<br>BERGEN14 | <u>erasmus@hvl.no</u><br>(+47) 55 58 58 00<br><br><b>Academic contact:</b><br>Ilona Heldal<br><u>Ilona.Heldal@hvl.no</u><br>+47 55 58 75 24 | www.hvl.no/en/ |
| [...]  |               |   |                |

**B. Mobility numbers<sup>4</sup> per academic year**

[Paragraph to be added, if the agreement is signed for more than one academic year:

The partners commit to amend the table below in case of changes in the mobility data by no later than the end of January in the preceding academic year.]

| FROM<br>[Erasmus<br>code of the<br>sending<br>institution] | TO<br>[Erasmus<br>code of the<br>receiving<br>institution] | Subject<br>area<br>code<br>*<br>[ISCED] | Subject<br>area<br>name<br>*                                 | Study<br>cycle<br>[short<br>cycle,<br>1 <sup>st</sup> , 2 <sup>nd</sup><br>or 3 <sup>rd</sup> ]<br>* | Number of student<br>mobility periods  |  |
|--|--|---|--|--|--|--|
|  |  |   |  |  | Student<br>Mobility for<br>Studies   | Student<br>Mobility for<br>Traineeships<br>* |
|  |  |   |  |  | [total number of<br>months of the<br>study periods or<br>average<br>duration*] |  |
| S<br>TROLLHA<br>01   | N<br>BERGEN1<br>4  | 061                                     | Informat<br>ion and<br>Commun<br>ication<br>Technolo<br>gies | 3rd  | 2/10   |  |
|  |  |   |  |  |  |  |
| N<br>BERGEN1<br>4  | S<br>TROLLHA0<br>1   | 061                                     | Informat<br>ion and<br>Commun<br>ication<br>Technolo<br>gies | 3rd  | 2/10   |  |

<sup>4</sup> Mobility numbers can be given per sending/receiving institutions and per education field (optional\*:  
<http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>)

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

[\*Optional: subject area code & name and study cycle are optional. Inter-institutional agreements are not compulsory for Student Mobility for Traineeships or Staff Mobility for Training. Institutions may agree to cooperate on the organisation of traineeship; in this case they should indicate the number of students that they intend to send to the partner country. Total duration in months/days of the student/staff mobility periods or average duration can be indicated if relevant.]

| FROM<br>[Erasmus<br>code of the<br>sending<br>institution] | TO<br>[Erasmus<br>code of the<br>receiving<br>institution] | Subject<br>area<br>code<br>*<br>[ISCED] | Subject<br>area<br>name<br>*                                | Number of staff mobility periods                                       |                                     |
|--|--|---|---|--|-------------------------------------|
|  |  |   |   | Staff Mobility for<br>Teaching   | Staff Mobility<br>for Training<br>* |
|  |  |   |   | [total number of days<br>of teaching periods or<br>average duration ~] |                                     |
| S<br>TROLLHA0<br>1   | N<br>BERGEN14  | 061                                     | Information<br>and<br>Communi<br>cation<br>Technolog<br>ies | 2 x 1 week (min.<br>8 hours)   |                                     |
| N<br>BERGEN14  | S<br>TROLLHA01   | 061                                     | Information<br>and<br>Communi<br>cation<br>Technolog<br>ies | 2 x 1 week (min.<br>8 hours)   |                                     |

### C. Recommended language skills

The sending institution, following agreement with the receiving institution, is responsible for providing support to its nominated candidates so that they can have the recommended language skills at the start of the study or teaching period:

| Receiving<br>institution<br>[Erasmus<br>code] | Optional:<br>Subject<br>area | Language<br>of<br>instruc-<br>tion 1 | Language<br>of<br>instruc-<br>tion 2 | Recommended language of<br>instruction level <sup>5</sup>                |   |
|---|------------------------------|--------------------------------------|--------------------------------------|--|---|
|   |                              |                                      |                                      | Student Mobility<br>for Studies<br>[Minimum<br>recommended level:<br>B1] | Staff Mobility for<br>Teaching<br>[Minimum<br>recommended level:<br>B2] |
| S   |                              | English                              | Swedish                              | English B1   | English B2  |

<sup>5</sup> For an easier and consistent understanding of language requirements, use of the Common European Framework of Reference for Languages (CEFR) is recommended, see

<http://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr>



|            |  |         |           |                            |            |
|------------|--|---------|-----------|----------------------------|------------|
| TROLLHA01  |  |         |           | Swedish B2                 |            |
| N BERGEN14 |  | English | Norwegian | English B2<br>Norwegian B2 | English C1 |

For more details on the language of instruction recommendations, see the course catalogue of each institution *[Links provided on the first page]*.

#### D. Additional requirements

HVL has the appropriate infrastructure for students and staff with disabilities. Please inform the international office in advance of any special needs of the exchange student or staff member.

#### E. Calendar

1. Applications/information on nominated students must reach the receiving institution by:

| Receiving institution<br>[Erasmus code] | Autumn term*<br>[month] | Spring term*<br>[month]  |
|---|-------------------------|--------------------------|
| S TROLLHA01                             | April 1 <sup>st</sup>   | October 1 <sup>st</sup>  |
| N BERGEN14                              | April 15 <sup>th</sup>  | October 15 <sup>th</sup> |

*[\* to be adapted in case of a trimester system]*

2. The receiving institution will send its decision within 4 weeks.
3. A Transcript of Records will be issued by the receiving institution no later than 5 weeks after the assessment period has finished at the receiving HEI.
4. Termination of the agreement

*A notice of at least one academic year should be given. This means that a unilateral decision to discontinue the exchanges notified to the other party by 1 September 20XX will only take effect as of 1 September 20XX+1. The termination clauses must include the following disclaimer: "Neither the European Commission nor the National Agencies can be held responsible in case of a conflict."*

#### F. Information

##### 1. Grading systems of the institutions

HVL - <https://www.hvl.no/en/studies-at-hvl/>

S TROLLHA01:

<http://www.hv.se/en/education/exchange-student/recognition>



**2. Visa**

The sending and receiving institutions will provide assistance, when required, in securing visas for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)                                       | Website for information  |
|-------------------------------|---|--|
| S TROLLHA01                   | <a href="mailto:international@hv.se">international@hv.se</a>            | <a href="http://www.hv.se/en/education/visa-insurance">www.hv.se/en/education/visa-insurance</a> |
| N BERGEN14                    | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00 | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a>        |

**3. Insurance**

The sending and receiving institutions will provide assistance in obtaining insurance for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

The receiving institution will inform mobile participants of cases in which insurance cover is not automatically provided. Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)                                       | Website for information  |
|-------------------------------|---|--|
| S TROLLHA01                   | <a href="mailto:international@hv.se">international@hv.se</a>            | <a href="http://www.hv.se/en/education/visa-insurance">www.hv.se/en/education/visa-insurance</a> |
| N BERGEN14                    | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00 | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a>        |

**4. Housing**


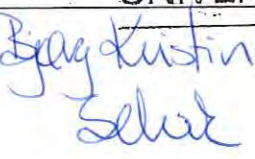
The receiving institution will guide incoming mobile participants in finding accommodation, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following persons and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone) | Website for information |
|-------------------------------|-----------------------------------|-------------------------|
|-------------------------------|-----------------------------------|-------------------------|

| code]              |   |   |
|--------------------|---|---|
| S<br>TROLLHA<br>01 | <a href="mailto:international@hvl.no">international@hvl.no</a>          | <a href="https://www.hvl.no/en/education/practicalities/accommodation/">https://www.hvl.no/en/education/practicalities/accommodation/</a> |
| N<br>BERGEN1<br>4  | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00 | Find the relevant campus at:<br><a href="https://www.hvl.no/en/campus-life/">https://www.hvl.no/en/campus-life/</a>                       |

**G. SIGNATURES OF THE INSTITUTIONS (legal representatives)**

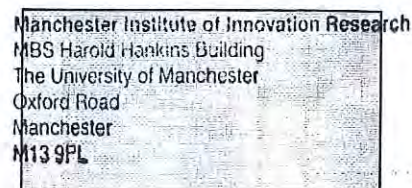
| Institution<br>[Erasmus code] | Name, function  | Date     | Signature <sup>6</sup>   |
|-------------------------------|---|----------|--|
| S TROLLHA01                   | Gunnar Peterson<br>Dean of School of<br>Business, Economics<br>and IT | 11/04/17 | <br>UNIVERSITY WEST |
| N BERGEN14                    | Björg Kristin Selvik, Vice<br>Rector                                  | 18/4/17  |                    |



<sup>6</sup> Scanned signatures are accepted



**Western Norway  
University of  
Applied Sciences**



MEMORANDUM OF UNDERSTANDING  
between

WESTERN NORWAY UNIVERSITY OF APPLIED SCIENCES (HVL)  
and  
Manchester Institute of Innovation Research  
on  
ACADEMIC AND RESEARCH COLLABORATION

---

Recognising:

- that cultural and scientific interaction is indispensable to institutions of higher education in developing their educational and research activities, and
- that institutions of higher education are enriched by international collaboration,

the named institutions hereby record their understanding.

ARTICLE I

The purpose of this Memorandum of Understanding is to develop and carry out collaborative activities within areas of common interest of the named institutions.

ARTICLE II

The scope of collaboration on academic and research activities in this Memorandum of Understanding can include, but are not limited to, the following categories:

1. Exchange of staff and students.
2. Research and teaching collaboration in the areas of mutual interest to both parties
3. Joint scientific publications
4. Exchange of academic materials made available by both parties.
5. Organisation of symposia, conferences, short courses and meetings on research issues of mutual interest.



## ARTICLE III

To implement the aims and purposes expressed in ARTICLES I and II, the following is mutually understood and agreed:

1. Development of a specific project taking place within this Memorandum of Understanding should take the form of a supplementary agreement which will in detail outline key responsible people, sources of funding, and specific collaborative activities.
2. The final approval of any project will be dependent upon the availability of guaranteed support funds.
3. Progress of work of any supplementary agreement under the Memorandum of Understanding will be reviewed and approved by designated responsible people of both parties.
4. Neither the Western Norway University of Applied Sciences nor the [name of partner institution] will be held responsible for any liability whatsoever; furthermore, neither party shall be required to purchase any insurance against loss or damage to any personal property to which this Memorandum of Understanding relates.
5. Based on the principles of mutual respect and mutual benefit, the parties will protect each other's reputation and support each other's programmes and work.
6. The joint language of collaboration will be English.

## ARTICLE IV

## Duration of the Memorandum of Understanding:

This Memorandum of Understanding will come into effect on the last date of signing and shall be effective for a period of five years. Thereafter it will be reviewed and can be amended or renewed as agreed by both parties. Amendments to the Memorandum of Understanding can take place at any time by an exchange of letters.

Either party may terminate the agreement by written notice submitted at least 90 days in advance of the next academic semester.

Signed



Dr. Berit Rokne

Rector

Western Norway University  
of Applied Sciences

Date: 11/09/17

Deborah Cox, Institute Manager  
Manchester Institute of Innovation  
Research

Date: 1/09/17



## Erasmus+ Programme

### Key Action 1 – Mobility for learners and staff – Higher Education Student and Staff Mobility

### Inter-institutional<sup>1</sup> agreement 2017-20[21]<sup>2</sup> between programme countries

The Institutions named below agree to cooperate for the exchange of students and/or staff in the context of the Erasmus+ programme. They commit to respect the quality requirements of the Erasmus Charter for Higher Education in all aspects related to the organisation and management of the mobility, in particular the recognition of the credits awarded to students by the partner institution.

#### A. Information about higher education institutions

| Name of the institution<br>(and department, where relevant)  | Erasmus code    | Contact details <sup>3</sup><br>(email, phone)  | Website<br>(eg. of the course catalogue)   |
|--|-----------------|---|--|
| Universitatea de Vest din Timișoara/ West University of Timisoara<br><br> <b>Universitatea de Vest</b><br>din Timișoara | RO<br>TIMISOA01 | Department of International Relations:<br>Andra-Miruna STAN-DRAGOTESC<br>Tel: +40-245-592 352<br>Fax: +40-256-592 313<br>E-mail: andra.dragotesco@e-uvt.ro<br><br>Erasmus Office:<br>Oana-Roxana IVAN<br>Tel: +40-245-592 372 | <a href="http://www.uvt.ro/en/">http://www.uvt.ro/en/</a><br><br><a href="http://ri.uvt.ro/?page_id=8868&amp;lang=en">http://ri.uvt.ro/?page_id=8868&amp;lang=en</a> |

<sup>1</sup> Inter-institutional agreements can be signed by two or more higher education institutions

<sup>2</sup> Higher Education Institutions have to agree on the period of validity of this agreement

<sup>3</sup> Contact details to reach the senior officer in charge of this agreement and of its possible updates.

|  |               |   |                |
|--|---------------|---|----------------|
|  |               | Fax: +40-256-592 313<br>E-mail: oana.ivan@e-uvr.ro  |                |
| Høgskulen på Vestlandet<br>(HVL)<br><br>Western Norway University<br>of Applied Sciences | N<br>BERGEN14 | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00<br><br><b>Academic contact:</b><br>Ilona Heldal<br><a href="mailto:Ilona.heldal@hvl.no">Ilona.heldal@hvl.no</a><br>+47-55587524 | www.hvl.no/en/ |

### B. Mobility numbers<sup>4</sup> per academic year

[Paragraph to be added, if the agreement is signed for more than one academic year:

The partners commit to amend the table below in case of changes in the mobility data by no later than the end of January in the preceding academic year.]

| FROM<br>[Erasmus<br>code of the<br>sending<br>institution] | TO<br>[Erasmus<br>code of the<br>receiving<br>institution] | Subj<br>ect<br>area<br>code<br>*<br>[ISCE<br>D] | Subject<br>area name<br>*           | Stud<br>y<br>cycle<br>[short<br>cycle,<br>1 <sup>st</sup> ,<br>2 <sup>nd</sup> or<br>3 <sup>rd</sup> ]<br>* | Number of student<br>mobility periods  |  |
|--|--|---|-------------------------------------|---|--|--|
|  |  |   |                                     |   | Student<br>Mobility for<br>Studies   | Student<br>Mobility for<br>Traineeships<br>* |
|  |  |   |                                     |   | [total number of<br>months of the<br>study periods or<br>average<br>duration*] |  |
| RO<br>TIMISOA01  | N<br>BERGEN14  | 03  | Social and<br>Political<br>sciences | 3 <sup>rd</sup>   | 2/10 months  |  |
| N<br>BERGEN14  | RO<br>TIMISOA01  | 03  | Social and<br>Political<br>sciences | 3 <sup>rd</sup>   | 2/10 months  |  |

[\*Optional: subject area code & name and study cycle are optional. Inter-institutional agreements are not compulsory for Student Mobility for Traineeships or Staff Mobility for Training. Institutions may agree to cooperate on the organisation of traineeship; in this case they should indicate the number of students that they intend to send to the partner country. Total duration in months/days of the student/staff mobility periods or average duration can be indicated if relevant.]

| FROM | TO | Subject | Subject | Number of staff mobility periods |
|------|----|---------|---------|----------------------------------|
|------|----|---------|---------|----------------------------------|

<sup>4</sup> Mobility numbers can be given per sending/receiving institutions and per education field (optional\*:

<http://www.uis.unesco.org/Education/Pages/International-standard-classification-of-education.aspx>)



| [Erasmus code of the sending institution] | [Erasmus code of the receiving institution] | <b>area code</b><br>*<br>[ISCED] | <b>area name</b><br>*         | Staff Mobility for Teaching<br><br>[total number of days of teaching periods or average duration *] | Staff Mobility for Training<br>* |
|---|---|----------------------------------|-------------------------------|---|----------------------------------|
| RO<br>TIMISOA01                           | N<br>BERGEN14                               | 0312                             | Social and Political Sciences | 1 x 5 days  | 1 x 5 days                       |
| N<br>BERGEN14                             | RO<br>TIMISOA01                             | 0312                             | Social and Political Sciences | 1 x 5 days  | 1 x 5 days                       |

### C. Recommended language skills

The sending institution, following agreement with the receiving institution, is responsible for providing support to its nominated candidates so that they can have the recommended language skills at the start of the study or teaching period:

| Receiving institution<br>[Erasmus code] | Optional:<br>Subject area | Language of instruction 1 | Language of instruction 2 | Recommended language of instruction level <sup>5</sup>          |  |
|---|---------------------------|---------------------------|---------------------------|---|--|
|   |                           |                           |                           | Student Mobility for Studies<br>[Minimum recommended level: B1] | Staff Mobility for Teaching<br>[Minimum recommended level: B2] |
| RO<br>TIMISOA01                         |                           | Romanian                  | English                   | B1  | B2   |
| N<br>BERGEN14                           |                           | English                   | Norwegian                 | English B2<br>Norwegian B2                                      | English C1   |

For more details on the language of instruction recommendations, see the course catalogue of each institution [Links provided on the first page].

<sup>5</sup> For an easier and consistent understanding of language requirements, use of the Common European Framework of Reference for Languages (CEFR) is recommended, see

<http://europass.cedefop.europa.eu/en/resources/european-language-levels-cefr>

## D. Additional requirements

HVL has the appropriate Infrastructure for students and staff with disabilities. Please inform the International office in advance of any special needs of the exchange student or staff member.

## E. Calendar

1. Applications/Information on nominated students must reach the receiving institution by:

| Receiving institution<br>[Erasmus code] | Autumn term*<br>[month] | Spring term*<br>[month]  |
|---|-------------------------|--------------------------|
| RO TIMISOA01                            | 1 <sup>st</sup> July    | 1 <sup>st</sup> December |
| N BERGEN14                              | April 15 <sup>th</sup>  | October 15 <sup>th</sup> |

[\* to be adapted in case of a trimester system]

2. The receiving Institution will send its decision within 4 weeks.
3. A Transcript of Records will be issued by the receiving Institution no later than 5 weeks after the assessment period has finished at the receiving HEI.
4. Termination of the agreement

*A notice of at least one academic year should be given. This means that a unilateral decision to discontinue the exchanges notified to the other party by 1 September 20XX will only take effect as of 1 September 20XX+1. The termination clauses must include the following disclaimer: "Neither the European Commission nor the National Agencies can be held responsible in case of a conflict."*

## F. Information

### 1. Grading systems of the institutions

HVL - <https://www.hvl.no/en/studies-at-hvl/>

ECTS grading scale:

| ECTS Grade | Romanian Grade | Definition   |  |
|------------|----------------|--------------|--|
| A          | 10             | EXCELLENT    | outstanding performance with only minor errors           |
| B          | 9              | VERY GOOD    | above the average standard but with some errors          |
| C          | 8              | GOOD         | generally sound work with a number of notable errors     |
| D          | 6, 7           | SATISFACTORY | fair but with significant shortcomings                   |
| E          | 5              | SUFFICIENT   | performance meets the minimum criteria                   |
| FX         | 4              | FAIL         | some more work required before the credit can be awarded |
| F          | 1 + 3          | FAIL         | considerable further work is required                    |

ECTS credits:



one semester

one full academic year

30 ECTS credits

60 ECTS credits

**2. Visa**

The sending and receiving institutions will provide assistance, when required, in securing visas for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)  | Website for information   |
|-------------------------------|--|---|
| RO TIMISOA01                  | Erasmus Incoming<br>Officer:<br>Horațiu HOT<br>Tel: +40-256-592 271<br>Fax: +40-256-592 313<br>E-mail:<br>horatiu.hot@e-uvt.ro | <a href="http://www.ri.uvt.ro/en/">http://www.ri.uvt.ro/en/</a>                           |
| N BERGEN14                    | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00  | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a> |

**3. Insurance**

The sending and receiving institutions will provide assistance in obtaining insurance for incoming and outbound mobile participants, according to the requirements of the Erasmus Charter for Higher Education.

The receiving institution will inform mobile participants of cases in which insurance cover is not automatically provided. Information and assistance can be provided by the following contact points and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)  | Website for information   |
|-------------------------------|--|---|
| RO TIMISOA01                  | Erasmus Incoming<br>Officer:<br>Horațiu HOT<br>Tel: +40-256-592 271<br>Fax: +40-256-592 313<br>E-mail:<br>horatiu.hot@e-uvt.ro | <a href="http://www.ri.uvt.ro/en/">http://www.ri.uvt.ro/en/</a>                           |
| N BERGEN14                    | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00  | <a href="https://www.hvl.no/en/studies-at-hvl/">https://www.hvl.no/en/studies-at-hvl/</a> |




#### 4. Housing

The receiving institution will guide incoming mobile participants in finding accommodation, according to the requirements of the Erasmus Charter for Higher Education.

Information and assistance can be provided by the following persons and information sources:

| Institution<br>[Erasmus code] | Contact details<br>(email, phone)   | Website for information   |
|-------------------------------|---|---|
| RO TIMISOA01                  | Erasmus Incoming Officer:<br>Horațiu HOT<br>Tel: +40-256-592 271<br>Fax: +40-256-592 313<br>E-mail:<br>horatiu.hot@e-uvt.ro | <a href="http://www.ri.uvt.ro/en/">http://www.ri.uvt.ro/en/</a>   |
| N BERGEN14                    | <a href="mailto:erasmus@hvl.no">erasmus@hvl.no</a><br>(+47) 55 58 58 00   | Find the relevant campus at:<br><a href="https://www.hvl.no/en/campus-life/">https://www.hvl.no/en/campus-life/</a> |

#### G. SIGNATURES OF THE INSTITUTIONS (legal representatives)

| Institution<br>[Erasmus code] | Name, function  | Date          | Signature <sup>6</sup>   |
|-------------------------------|---|---------------|--|
| RO TIMISOA01                  | Andra-Mirna STAN-DRAGOTESC, PhD.<br>Erasmus Institutional Coordinator | 23.05<br>2017 | <br> |
| N BERGEN14                    | Björg Kristin Selvik, Vice Rector                                     | 26.4<br>2017  |    |



<sup>6</sup> Scanned signatures are accepted

AGREEMENT OF COOPERATION  
BETWEEN  
BERGEN UNIVERSITY COLLEGE  
AND  
UNIVERSITY OF CALIFORNIA, SAN FRANCISCO (UCSF)  
SCHOOL OF NURSING

This agreement of cooperation provides a mechanism for collaborative activity in health sciences education and research between Bergen University College, and the University of California, San Francisco (UCSF) School of Nursing for the purpose of developing and drawing upon the strengths of the two institutions.

This agreement is intended to benefit both institutions as well as their respective communities and nations.

PROVISIONS

I. Faculty Exchange

- A. Faculty from each institution may be exchanged on a short- or long-term basis for collaboration or assistance in research, teaching, service or participation as external examiners for doctoral students.
- B. Requests for visits will be made three (3) months in advance, whenever possible; names of visitors, their positions, backgrounds and specific interests will be provided to the receiving institutions. The principle to be observed is that efforts will be made to match the capability and availability of faculty within the providing institution with the areas of greatest need and priority as identified by the requesting institution.
- C. Appointments, titles and qualifications will be negotiated in advance, after appropriate consultation. Visiting Lecturers or Professors approved in advance by the respective Faculties will be accorded privileges based on the title given in the host institution and, in the case of clinical disciplines, their licensing status.

II. Student and Postdoctoral Exchanges

Eligible students may be accepted for non-matriculated or matriculated status. Qualifications, requirements, and limitations will be specified in advance.

III. Literature, Information, and Learning Resources

Each institution will endeavor to keep the other informed with respect to literature, research, learning resources, and conferences in areas of specified interests.

IV. Costs

- A. In general, the sending institution will bear the costs of continuing faculty salary support; all other associated costs will be negotiated.
- B. In the case of faculty visits to serve as external examiners for doctoral students, the receiving institution will pay all travel and expenses.
- C. Each institution will strive to seek outside support for faculty and student exchanges from governmental, international, or philanthropic organizations.

V. Liability

Faculty and students shall abide by the host and sending institution's policies regarding liability insurance, health insurance, and worker's compensation coverage where applicable.

## VI. Implementation

- A. In order to carry out and fulfill the goals of this agreement, each institution will appoint a coordinator for the development and management of joint activities.
- B. Through coordinators, either institution may initiate proposals for activities under this agreement. Specific details of any activity will be set forth in a supplement to the agreement which will become an integral part of this general agreement upon signing by appropriate authorities at both institutions.

The supplement will include such items as:

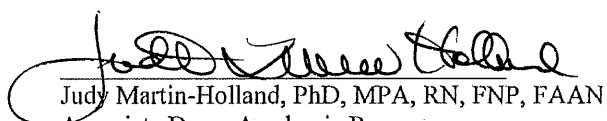
1. Elaboration of the RESPONSIBILITIES of each institution for the agreed upon activity.
2. SCHEDULES for the specific activity.
3. BUDGETS and sources of financing of each activity.
4. Any other items necessary for the smooth and efficient management of the activity.

The coordinators will be responsible for the evaluation of activities under this agreement according to the practices of their respective institutions. Supplementary agreements will be approved at each institution according to the normal procedures for the type of activities proposed therein.

This agreement will be effective immediately upon ratification by all signatories for a period of five (5) years, and will be renewable for the same period of time, at the consent of both parties.

This agreement may be canceled at any time by either institution; cancellation must be made in writing. The terminating institution should give written notice of intention to terminate at least three (3) months prior to termination.

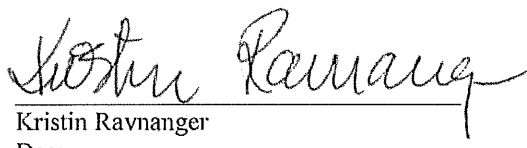
SIGNATORY FOR  
UCSF SCHOOL OF NURSING

  
Judy Martin-Holland, PhD, MPA, RN, FNP, FAAN  
Associate Dean, Academic Programs  
UCSF School of Nursing  
2 Koret Way, N319  
San Francisco, CA 94143-0604

Date

7.24.2015

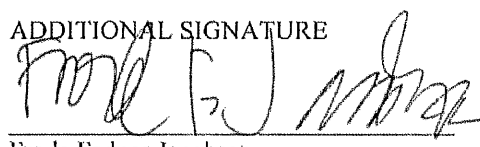
SIGNATORY FOR  
BERGEN UNIVERSITY COLLEGE

  
Kristin Ravnanger  
Dean  
Bergen University College  
Postboks 7030  
5020 Bergen

Date

17.06.2015

ADDITIONAL SIGNATURE

  
Frode Fadnes Jacobsen  
Research Director  
Centre for Care Research – Western Norway

**Global Health  
Memorandum of Understanding (MOU)  
Supplement Form**

Please attach this form to the MOU when submitting to appropriate UCSF SON office for review.

1. Names of key personnel in each institution

Sally H. Rankin, RN, PhD, UCSF School of Nursing Center for Global Health  
Frode Fabnes Jacobsen, Professor and Director of Center for Care Research – Western Norway (university and university college research network), hosted by Bergen University College

2. Is collaborating organization an ☐ NGO? ☒ University?
3. Does the agreed upon activity focus on students or faculty or both? Both
4. Please specify the type of agreed upon activities (research, clinical, observation, etc.) and provide a brief description.

Short visits as well as longer visits of 6 months or a year including students and faculty. Would appreciate having a good working relationship for research and field visits. Work will focus on areas such as home-based care, nursing home care, aging and elder care.

5. Please elaborate on the RESPONSIBILITIES of each institution for the agreed upon activity.

Each institution will establish guidelines and objectives for visits and will work with identified faculty pertinent to the area of research.

## Curriculum Vitae

### Industry Innovation

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| <b>NAME</b>  | <b>Jarle Aarstad</b>   |
| <b>ACADEMIC TITLE</b>  | Dr. Oecon.   |
| <b>POSITION</b>  | Professor  |
| <b>EDUCATION</b>   | <ul style="list-style-type: none"> <li>▪ “Siviløkonom”, NHH Norwegian School of Economics, Norway, June 1999</li> <li>▪ Cand. Merc./M.Phil., NHH Norwegian School of Economics, Norway, June 2001</li> <li>▪ Dr. Oecon., NHH Norwegian School of Economics, Norway, June 2004</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b>                            | <p><i>Research expertise in innovation and entrepreneurship research. Expertise in using a variety of quantitative methodologies, e.g. network research and multilevel analyses.</i></p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>• Participation in VRI3 and VRI Synthesis (2014-2016), funded by the Research Council of Norway, in collaboration with a number of national and international research partners</li> <li>• Participation in the FORFI project «How can policymakers create industrial clusters?» funded by the Research Council of Norway, in collaboration with national partners.</li> <li>• Participation in the project “Alliances and networks in the strategic development of destinations in the Norwegian tourism industry”, funded by the Research Council of Norway, in collaboration with national partners</li> <li>• Project manager of the research project “Petroleum dependency and implications for value creation and entrepreneurship in a regional perspective” [translated from Norwegian]. Funded by the Research Council of Norway.</li> </ul> <p><b>Mobility and internationalization</b></p> <p><i>Visiting Scholar at Scandinavian Consortium for Organizational Research (SCANCOR), Stanford University, 2003.</i></p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience</b> | <p><b>Research management and administrative experience</b></p> <p>Participating in the development of a master’s program in innovation and entrepreneurship. Particularly developed a course in technology-based entrepreneurship.</p> <p><b>Reviewing activities</b></p>   |

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| <b>from the practice field if applicable):</b>                            | <p>External reviewer in numerous journals, such as Academy of Management Journal, Research Policy, Human Relations, Journal of Business Ethics, European Planning Studies, Tourism Management, and many others.</p> <p><b>Master and PhD supervision</b></p> <p>Supervised two master theses per year since about 2011. Coauthored papers with master- and PhD-students.</p> |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <p><b>Courses attended</b></p> <p>5 ect. Pedagogy for higher education "University college pedagogics"</p>   |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <p><b>Digital competence</b></p> <p>Competence in using network programs (Ucinet) and programs in statistics and econometrics (Stata, SAS/JMP).</p>  |

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| <b>NAME</b>   | <b>Ole Jakob Bergfjord</b>   |
| <b>ACADEMIC TITLE</b>   | PhD  |
| <b>POSITION</b>   | Associate professor  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Ph.D in Business Economics, University of Southern Denmark, 2008</li> <li>▪ MSc, Finance, Norwegian School of Economics, 2001</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><i>For the past few years, I have primarily focused on innovative financial markets, as well as questions related to education and evaluation of education. I have published several scientific articles within these areas, and presented my research at a number of international conferences.</i></p> <p><b>PRESENTATIONS</b></p> <p>14.01.2017: Venture capital's effect on firm ownership structure, EBES Conference, Budapest, Hungary</p> <p>06.01.2017: Venture capital's effect on firm ownership structure, FIBE Conference, Bergen, Norway</p> <p>05.08.2016: Invited expert, PredictIt webcast on prediction markets</p> <p>10.03.2016: Political risk in life sciences, invited seminar, UPV, Valencia, Spain</p> <p>27.05.2015: Analyzing and managing political risk, ICRA, Barcelona, Spain</p> <p>05.02.2015: Political risk in life sciences, invited seminar, UPV, Valencia, Spain</p> <p>06.05.2014: Prediction markets vs polls - a reexamination of accuracy of election predictions, ATINER, Athens, Greece</p> <p>09.01.2014: Prediction markets vs polls - a reexamination of accuracy of election predictions, FIBE, Bergen</p> <p>13.12.2013: Om studentevaluering i høyere utdanning [On student evaluation in higher education], Research seminar, Bergen University College, Bergen, Norway</p> |



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|   | <p>14.06.2013: On student evaluation in higher education, ICEEPS, Beijing, China</p> <p>11.01.2013: Om studentevaluering i høyere utdanning [On student evaluation in higher education], FIBE, Bergen</p> <p>28.06.2012: Arbitrage trade in prediction markets, AFE, Samos, Greece</p> <p>05.01.2012: Arbitrage trade in prediction markets, FIBE Conference, Bergen, Norway</p>  |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>2016 - International coordinator, Dept of Economics and Administration</p> <p>2015-2017: Foreign expert member of two Danish accreditation committees for BSc programs in Finance</p> <p>2012-2020: Member of national committee on education in business and finance (NRØA)</p> <p><b>Reviewing activities (journals, grants)</b></p> <p>Decision Sciences Journal of Innovative Education, Information Systems Frontiers, PeerJ, Journal of Environmental Economics and Management, Public Choice, Aquaculture Economics and Management, European Review of Agricultural Economics, Marine Resource Economics, Journal of Risk Research, Emirates Journal of Food and Agriculture, International Journal of Climate Change Strategies and Management, Magma, European Planning Studies</p> |
| <p><b>Relevant pedagogical competence</b><br/>University-pedagogic, didactics</p>   | <p>Have developed and taught a wide range of courses within economics, finance and management science. Have taught at undergraduate and graduate level, for full time and part time students, and at several different institutions. Have supervised a number of bachelor and Master's theses.</p>  |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>  | <p>I am an experienced user of most common office software, as well as statistical software, learning management systems and other tools for facilitating distance learning.</p>  |

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| <b>NAME</b>           | <b>Sylvia Encheva</b>   |
| <b>ACADEMIC TITLE</b> | Dr. Philos  |
| <b>POSITION</b>       | Professor in mathematics and informatics, 100% HVL, campus Hugesund   |
| <b>EDUCATION</b>      | <p>M.Sc. in didactics of mathematics, University of Sofia, Bulgaria, Sept.1986</p> <p>Dr. Philos in information theory, University of Bergen, Norway, Dec. 1992</p> <p>Professor in mathematics, 2000</p> <p>Professor in informatics, 2001</p> |

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| <p><b>Research and Development work within the last five years prior to application deadline</b></p>  | <p>Ongoing research within mathematical modeling of decision support systems with focus on handling uncertain, incomplete and contradictory data. Application of decision support systems to innovation processes can speed up all the work related to choosing a course of action.</p> <p><b>Research projects and external funding</b></p> <p>Current project ' Application of decision support systems' with HVL as a financing source.</p> <p><b>Awards and Honors</b></p> <p>- Awards for Excellence, Highly commended paper, Journal of Economic Studies Forskningsarbeid Internasjonal 2015</p>  |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>Program committee member at</p> <ul style="list-style-type: none"> <li>- The Sixth International Conference on Knowledge Management: Theory, Research &amp; Practice, KMICE'12, 4-6, July, 2012</li> <li>- The 15th IASTED International Conference on Computers and Advanced Technology in Education (CATE 2012) June 25 - 27, 2012, Napoli, Italy</li> <li>- International Conference on Engineering Education, Instructional Technology, Assessment, and E-learning (EIAE 12), CISSE, December, 2012</li> <li>- The 9th FTIRA International Conference on Future Information Technology (FutureTech 2014)(FutureTech 2014), May 28-31, Zhangjiajie, China</li> <li>- International Conference on Advanced Data and Information Engineering, DaEng 2015, April 25th-26th, 2015, Bali, Indonesia</li> </ul> <p><b>Research management and administrative experience</b></p> <p>Leader of a R&amp;D program 'Applied Information Technology in Environment and Society', campus Haugesund, HVL.</p> <p><b>Reviewing activities (journals, grants)</b></p> <p>At present I am a reviewer of:</p> <ul style="list-style-type: none"> <li>- IEEE Transaction on Communications</li> <li>- Designs, Codes and Cryptography</li> <li>- Discrete Mathematics</li> <li>- Applicable Algebra in Engineering, Communication and Computing</li> <li>- Computers &amp; Education</li> </ul> <p><b>Evaluation committees</b></p> |

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|   | Served as an evaluation committee member for Ass. Prof, and Professor positions at Stord/Haugesund College, UiB and UiT, Norway. |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <b>Other relevant competence</b><br><br>M.Sc in didactics of mathematics   |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <b>Digital competence</b><br><br>Professor in informatics  |

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| <b>NAME</b>   | <b>Ilona Heldal</b>  |
| <b>ACADEMIC TITLE</b>   | Professor of Informatics   |
| <b>POSITION</b>   | Professor of Informatics, Faculty of Engineering and Business Adm. HVL, Guest Professor at University West, Trollhättan, Sweden  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>• MSc in Computer Science, Chalmers, Sweden (1998)</li> <li>• Ph.D. in Technology Management, Uni. of Chalmers, Sweden (2004)</li> <li>• Docent in Technology Management, Chalmers Sweden (2009)</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>Interested in technology management, recently about starting collaborative projects between industry and university. All research projects are focusing on developing new information and communication technologies, especially by utilizing visualization, simulation and serious games for collaboration.</p> <p><b>Research projects and external funding (ongoing)</b></p> <ul style="list-style-type: none"> <li>▪ Securing education for children in Tanzania (NFR, Totally 24 M NOK, and from this ca 3 M NOK for my group for technology development)</li> <li>▪ Digital HelseLab (NU, 0,7 M NOK, starting up collaborative student projects from health and engineering).</li> <li>▪ Simulation and Serious Games for Firefighter Training (MSB, 0,7 M SEK within a project at University West, Sweden).</li> <li>▪ ApplyIT (This project runs at my previous employer but I am not involved since 2016. Funded by KK and div. industries from Sweden, in two steps, approx. 16 M SEK starting 2013 and 19 M SEK starting 2015).</li> </ul> <p><b>Invited scientific talks, presentations and tutorials:</b></p> <p>2017: Presentation at "Context in Emergency Management", Paris (June) and "Bergen-Budapest WS on Qualitative and Numerical Aspects of Mathematical Modelling", (May). Talked at Informatics for health in Manchester (April), Lisbon invited presenter at the Center for Firefighter Education (May), presented papers at the conferences ISCRAM (May), and Context (June). Plan to talk at ECKM (Barcelona) and VSMM (Dublin).</p> <p>2016: Invited presenter at RAKEL day by MSB in Stockholm (Sept), talked at VSMM in Kuala Lumpur (Oct), Uni. of Veszprem (June), about Simulation in Training at the Estonian Academy of Security Sciences Tallinn (Dec).</p> |

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|   | <p>Presented papers about Serious Games for Firefighter Training at CADMICS (Febr), Simulation in Prehospital training at Data-Work in Healthcare at CSCW San-Francisco (Febr).</p> <p>2015: Presented papers on patient's pathway ICICKM, Bangkok (Oct), about introducing digital communication for public safety, and another about simulation support in firefighter training at RWL Singapore (Dec), on collaboration training for ambulance care at SALUS 2015, Trollhättan.</p> <p>2014: Presented 'Uppbyggnaden av ett Simulatorträningscenter' keynote at Högsolan West (Dec), about Industry-Academy collaboration (the own developed model TSM) at ECKM, Santarem (Sept) and at ACM ITiCSE Uppsala (June).</p> <p><b>Mobility and internationalization:</b> I have industrial background and use to work with several organizations and agencies.</p>   |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>Board member in the ISCRAM (Information Systems for Crisis Response and Management), and VSMM (Virtual Systems and Multimedia). Involved in the organizing committee at conference tracks and workshops. In 2017: ECKM, NOKOBIT, BB workshop, Context in Emergency Mgm.</p> <p><b>Research management and administrative experience</b></p> <p>Recently started the group CIG (Collaboration, Innovation and Graphics at HVL, Engineering dept in 2017), member in the committee for the PhD programme Computer Science: Software Engineering, Sensor Networks and Engineering Computing. Started the first industrial doctoral school in Applied Information Technologies ApplyIT 2013 (changed the name to IPSI 2016) at University of Skövde.</p> <p><b>Reviewing activities (journals, grants)</b></p> <p>In the ed. Board for the Springer Journal of Virtual Reality and for the Journal of Multidisciplinary Social Research (JMSR, starting 2017). I use to review papers at several journals, e.g. the MIT Journal of Presence, the Springer Journal of Virtual Reality, International Journal on Universal Access in the Information Society (UAIS), Journal of Interacting with Computers, Journal of Urban and Landscape Planning, Journal of Graphic Tools, International Journal of Knowledge and Web Intelligence, Journal of Cognition, Technology and Work.</p> <p>I am often PC member, organizing workshops and reviewing for conferences within human factors and computing system, e.g. CHI, CSCW, IEEE Virtual Reality, IEEE 3D User Interfaces, UIST, International workshop on Presence, VSMM, JCVR, ECKM, ICICKM.</p> <p><b>Supervision:</b></p> <ul style="list-style-type: none"> <li>• I supervised two postdoc students: Cesar Pozzer and Dino Lincoln F.</li> <li>• During the time I was responsible for the industrial PhD environment ApplyIT, U. of Skövde I started 15 industrial PhD projects.</li> <li>• PhD students: Beata Stahle, Ard-Paru Nattawut, Chalita Srinuan, Orada Teppayayon, Pratompong Srinuan and Kaj Suneson from the Chalmers University.</li> <li>• I was the evaluation / gradingcommittee for six PhD students: Magnus Hagiwara (U. of Jönköping), Tove Hedin. (U. of Skövde), Mohamad</li> </ul> |

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|   | <p>Nadim Hazim Adi. (Salford U.), Anders Olof Larsson (Uppsala U.), Andrea Brogni (Barcelona U.), Maria Riveiro. (U. of Skövde))</p> <ul style="list-style-type: none"> <li>Supervised and examined 30+ Master and BSc thesis.</li> </ul> <p><b>Industrial experience:</b><br/>I was working at Ericsson (1999-2002), collaborated with Lars Bråthe from Volvo AB (ongoing), with Jens Holtinger (Volvo AB) and several other employees from ABB, Volvo, Actea AB for leading the industrial PhD school in Skövde</p> |
| <b>Relevant pedagogical competence</b>                                    | <p><b>Courses attended</b><br/>I have taken Diploma of Higher Education (10 points course). I also have published several pedagogical papers.</p>   |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <p><b>Digital competence</b><br/>As professor of Informatics I have good digital competences both in terms of theory and practice.</p> <p><b>Courses attended</b><br/>2016-2017 the research leadership program at HVL.</p> <p><b>Involvement in teaching and/or developing digital courses (IT in education)</b> At the Uni. Of Skövde I was responsible for distance courses involving several digital tools.</p>   |

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| <b>NAME</b>   | <b>Carsten Helgesen</b>  |
| <b>ACADEMIC TITLE</b>   | PhD (Dr. Scient)   |
| <b>POSITION</b>   | Associate Professor, Western Norway University of Applied Sciences   |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>Cand. Real. Mathematics, University of Bergen, Norway, March 1983</li> <li>M.Sc. Knowledge Based Systems, Heriot-Watt University, UK, 1988</li> <li>Ph.D. Informatics (bioinformatics), University of Bergen, July 1994</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><b>Research projects and external funding</b></p> <p><i>“Digital Health Lab”</i>, innovative project developing a course for cross-disciplinary cooperation and knowledge exchange between computing- and health care students. Budget: Total 1 mill NOK, 600.000 NOK from Norgesuniversitetet. Duration: 2016-2018.</p> <p><i>“Securing education for children in Tanzania”</i>, joint project between HVL colleagues from Computing, Visual Impairment and Teacher Training and Patandi Teacher College in Tanzania, aiming to identify visually impaired children, train teachers in visual impairment topics, and improve the learning conditions in classrooms. Budget: Total 20 mill NOK, 15 mill NOK Vision 2030 grant from NFR. Duration: 2017-2021.</p> <p>Participant in the INTPART project application to NFR from Mohn Center.</p> <p><b>Awards and Honors</b></p> <p>British Council Grant for studying at Heriot-Watt University, 1987-88.</p> <p><b>Mobility and internationalization</b></p> |

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|   | <p>Lately Erasmus+ staff exchange to TU Ilmenau and Hochschule Mittweida in 2015, as well as frequent staff exchange visits over the last 15 years.</p> <p>Staff Scientist, European Bioinformatics Institute, UK, 1996-98.<br/>Visiting PhD student, European Molecular Biology Lab, Heidelberg, 1992.</p>   |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>Expert evaluator for Erasmus+ and Eurasia grant program at SIU 2015-20. Evaluated ca 25 applications so far.</p> <p><b>Research management and administrative experience</b></p> <p>Head of Department of computing, mathematics and physics 2005-2007.<br/>Pro-rector at Bergen University College 2007-2011.<br/>Head of Department of computing, mathematics and physics 2011-2015.<br/>Vice-Dean (research), Faculty of engineering and business adm. 2017-</p> <p><b>Master and PhD supervision</b></p> <p>Supervised 20 Master projects with varying topics, many with partners from companies. Lately:</p> <p>2015-17: "Detecting eye-motoric problems in children using eye tracking"<br/>2016-18: "Training system to improve eye-motoric capabilities"<br/>2016-18: "Monitoring patients' food intake in hospitals and nursing homes"</p> <p>Particularly interested in projects arising from practical issues in the commercial or public sector.</p> <p><b>Evaluation committees</b></p> <p>Evaluated and hired many new employees as Head of Department.</p> <p><b>Industrial experience</b></p> <p>Senior Consultant at Capgemini 1998-2002, working with IT system development in the telecom and financial sector.</p> <p>Software developer at Christian Michelsen Institute (CMI), 1983-1990, working with IT systems for economic analysis in the oil and gas sector.</p> |
| <p><b>Relevant pedagogical competence</b><br/>University-pedagogic, didactics</p>   | <p><b>Other relevant competence</b></p> <p>More than 20 years of teaching experience, all the way from being a student assistant during my studies until now teaching courses at HVL. Favorable feedback from students.</p> <p>Supervisor / mentor for multi-disciplinary student projects in Master in innovation.</p>   |

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| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <b>Digital competence</b><br><br>Good working knowledge of creating study material for IT topics. |
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| <b>NAME</b>   | <b>Ingunn Alne Hoell</b>   |
| <b>ACADEMIC TITLE</b>   | PhD  |
| <b>POSITION</b>   | Associate professor  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>• <i>Cand. Scient in Molecular Microbiology, Institute of Chemistry and Biotechnology, The Agricultural University of Norway, NORWAY, JANUARY 2001.</i></li> <li>• <i>Ph.D in Biochemistry, Institute of Chemistry, Biotechnology and Food Science, Norwegian University of Life Sciences, NORWAY JUNE 2009.</i></li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><i>The last years my research focus has been on environmental research, mainly on monitoring marine waters and ballast water. Together with Knutsen OAS Shipping, I have helped developing KBAL, a Veritas-certificated ballast water treatment system. New IMO legislations for treatment of ballast water will enter into force in 2017, with the aim of better protecting marine environment from invading species. In relationship with the development of different ballast water treatment systems and compliance of the IMO guidelines, we have observed the need for faster and better methods for water analysis. In this prospect we have developed new, flow cytometry based methods to analyse water samples containing indicator organisms. In combination with different stains, flow cytometry can be used for live/dead-detection in nearly real time.</i></p> <p><i>My interest in marine environment is also apparent in research related to the aquaculture industry. Together with the trend towards closed and/or semi-closed fish-farms there is a great need for water analysis and monitoring also within aquaculture. Current, PhD-student Mathilde Lindivat is developing new flow cytometry based methods for monitoring of fish pathogens. Also, parasitic infestation of salmon represents a major source of economic loss for fish farmers, and severely impacts the welfare of the farmed animals. There is currently a great need for new treatments. We have send a patent application for a new method to control sea lice.</i></p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>• <i>Contract research, 2016 – ongoing, Knutsen Ballast Water AS, Norway.</i></li> <li>• <i>NRC-grant 208653/O70 “Realtime Monitoring of Ballast Water with Flow Cytometry”, 2011 – 2016, 9 mill NOK, project owner: Knutsen OAS Shipping AS, MAROFF, Norwegian Research Council, Norway.</i></li> <li>• <i>Forprosjekt VRI Maritime, 2010, sak 646/10 «Rensing av</i></li> </ul> |



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|   | <p><i>Ballastvann» together with Knutsen OAS Shipping AS, 90 000 NOK, VRI Rogaland, Norway.</i></p> <ul style="list-style-type: none"> <li>• <i>Research fellow in NRC-grant 140497, "Characterization and engineering for enzymes for the conversion of chitin and related polymers", Institute of Chemistry, Biotechnology and Food Science, Norwegian University of Life Sciences, Ås, Norway.</i></li> </ul> <p><b>Invited scientific talks, presentations and tutorials</b><br/> <b>Invited speaker at:</b></p> <ul style="list-style-type: none"> <li>• <i>2nd IC3EM 2016 (Lisbon, Portugal)</i></li> <li>• <i>EMN Meeting on membranes 2016 (Dubai, United Arab Emirates)</i></li> <li>• <i>World Congress of Ocean 2015 (Qingdao, China)</i></li> </ul> <p><b>Awards and Honors</b></p> <ul style="list-style-type: none"> <li>• <i>Professorship funding programme, 2016-2018, Stord/Haugesund University College, Haugesund, Norway.</i></li> <li>• <i>Teaching award received for Experimental and Applied Biochemistry Course, 2006, Institute of Chemistry, Biotechnology and Food Science, Norwegian University of Life Sciences, Ås, Norway</i></li> </ul>   |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Research management and administrative experience</b></p> <ul style="list-style-type: none"> <li>• <i>Project leader for NRC-grant 208653/O70 "Realtime Monitoring of Ballast Water with Flow Cytometry".</i></li> <li>• <i>Temporarily appointed Head, Department of Engineering (60%), 2015, Stord/Haugesund University College, Haugesund, Norway (7 months)</i></li> <li>• <i>Union representative in The Norwegian Association of Researcher, 2010-2014, Stord/Haugesund University College, division Haugesund.</i></li> </ul> <p><b>Reviewing activities (journals, grants)</b><br/> <i>Journal of Applied Phycology, Journal of Water and Health, Environmental Science and Technology Letters, Sea Research</i></p> <p><b>Master and PhD supervision</b></p> <ul style="list-style-type: none"> <li>• <i>2 PhD students (Mathilde Lindivat, started her PhD January 2017, University of Bergen, and Ranveig Ottøy Olsen defended her thesis in June 2016, University of Bergen)</i></li> <li>• <i>2 Master students (Ingrid Bakke and Ellinor Bævre Heggset) Norwegian University of Life sciences.</i></li> <li>• <i>4 Bachelor students, Stord/Haugesund University College.</i></li> </ul> <p><b>Industrial experience</b><br/> <i>Collaborations with Knutsen OAS Shipping, Board member of HydroLice AS, Patent application <b>No. 20160259</b></i></p> |
| <p><b>Relevant pedagogical competence</b><br/> University-pedagogic, didactics</p>  | <p><b>Courses attended</b><br/> Didactics for engineering (EDU 6300), 2014, Norwegian University of Science and Engineering, Trondheim (15 ECTS credits)</p> <p><b>Other relevant competence</b><br/> Project administration and management (EVA-ØKB3119), 2015,</p>  |

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|   | Stord/Haugesund University College, Haugesund (10 ECTS credits)   |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <b>Digital competence</b><br><i>Microsoft office (Word, Excel, Powerpoint, Outlook), Endnote, Skype for Business, Web of Science.</i> |

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| <b>NAME</b>   | <b>Stig-Erik Jakobsen</b>  |
| <b>ACADEMIC TITLE</b>   | Professor  |
| <b>POSITION</b>   | -Main position: Professor in innovation studies at Western Norway University of Applied Sciences (HVL) and leader of the Mohn Centre for Innovation and Regional Development<br><br>-20% position: Professor II at Faculty of Mathematics and Natural Science, University of Bergen  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ M.Sc in geography, University of Bergen, Norway, June 1992.</li> <li>▪ Ph.D in economic geography, University of Bergen, Norway, April 1992</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><b>Biography</b><br/>Jakobsen is a professor in innovation studies and is experienced with studies of innovation, entrepreneurship, regional development and innovation policy. He has an extensive publication record (40 articles in peer-reviewed journals), and has coordinated several research projects founded by the Research Council of Norway. Recently he has been working with the challenge of regional industry restructuring and the possibilities of promoting a green shift within key industries in the region of Western Norway.</p> <p><b>Research projects and external funding (selected)</b><br/> <i>-2016-2019: EMBRIC: European Marine Biological Research Infrastructure Cluster</i><br/> Financing: EU (Horizon 2020), 100 MNOK<br/> International collaborators: UPMC Sorbonne Universites (Frankrike), University of St Andrews (Scotland), Ghent University (Belgium) (and others)</p> <p><i>-2014-2016: Path development in different regional settings. Regional policy approaches in the global economy.</i><br/> Financing: VRI programmet (The Research Council of Norway) 25 MNOK<br/> International collaborators: Circle (Sverige), London School of Economic (UK), Orchestra (Spain)</p> <p><i>-2014-2016: Exploring the role of VRI in regional innovation system formation and new path development.</i><br/> Financing: VRI programmet (The Research Council of Norway) 5 MNOK<br/> International collaborators: Circle (Sverige), London School of Economic (UK), Orchestra (Spain)</p> <p><i>-2016-2017: Evaluation of the industry park and incubation program</i></p> |

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|   | <p>Financing: SIVA 1 MNOK</p> <p>-2013-2014: <i>How can policy makers create industrial clusters?</i><br/>Financing: FORFI (The Research Council of Norway) 4 MNOK<br/>International collaborators: University of Wales (UK)</p> <p>-2012-2015: <i>Innovation in rural areas</i><br/>Financing: Hordaland County Council 3 MNOK</p> <p>-2011-2013: <i>Innovation in firms, networks and clusters</i><br/>Financing: The Research Council of Norway 4 MNOK</p> <p><b>Awards and Honors</b><br/>-2015: The Research Award, Bergen University College</p> <p><b>Mobility and internationalization</b><br/>-1998: University of Plymouth (4 weeks)</p>  |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b><br/>-Member of the program committee for the 10th Regional Innovation Policy Conference in Bergen<br/>-Associate editor for European Planning Studies (Taylor and Francis)<br/>-Member of the editorial board for Norwegian Journal of Geography (Taylor &amp; Francis)</p> <p><b>Research management and administrative experience</b><br/>-Project coordinator for 7 projects funded by the Research Council of Norway<br/>-Manager for Center for innovation/Mohn Centre for Innovation and regional Development at HVL since 2011<br/>-Coordinator for the PhD-program at the human geography section at University of Oslo (2009-2010)</p> <p><b>Reviewing activities (selected)</b><br/>-European Planning Studies, Norwegian Journal of Geography, Progress in Human Geography, Regional Studies, Urban Studies, Marine Policy, Journal of Economic &amp; Social Geography Tidsskrift for Samfunnsforskning (norsk)</p> <p><b>Master and PhD supervision</b><br/>-Approx 20 master students<br/>-5 PhD students (Erling A. Christiansen, Øystein Stavø Høvig, Rune Njøs, Svein Sjøtun, Kaya Færøvik)</p> <p><b>Evaluation committees</b><br/>-2 PhD committees<br/>-5 Ass. professor committees<br/>-2 Professor committees</p> <p><b>Industrial experience</b><br/>-Collaboration with industry and industry network in several research projects (2007-2017). Board member for the Nyskapingsparken Incubator and the innovation company Industry Development West</p> |

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| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <b>Other relevant competence</b><br>-Contributed to the development of several master courses at University of Oslo and at HVL |
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| <b>NAME</b>  | <b>Olav Andreas Kvitastein</b>   |
| <b>ACADEMIC TITLE</b>  | Ph.D, associate professor  |
| <b>POSITION</b>  | Associate Professor  |
| <b>EDUCATION</b>   | <ul style="list-style-type: none"> <li>▪ M.A. in Economics, University of Santa Barbara, USA, June 1977.</li> <li>▪ Cand. Polit., Org. Science, University of Bergen, Norway, Dec. 1979</li> <li>▪ Ph.D in Economics, Norwegian School of Econ., Norway, June 2010.</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b>  | <p>My research fields focus quantitative research methods in economics and the social sciences.</p> <p><b>Research projects and external funding</b></p> <p>Evaluation of the SIVA program (The Mohn- Center) 2017, evaluation of the new Norwegian pre-school program 2017, both externally funded.</p> <p><b>Invited scientific talks, presentations and tutorials</b></p> <p>Invited speaker Spss User Conference, Glasgow 1982</p> <p><b>Awards and Honors</b></p> <p>Education abroad program, University of Bergen, Ruhrgas Scholarship 2002</p> <p><b>Mobility and internationalization</b></p> <p>Visiting Scholar University of Michigan, Ann Arbor 1982, Visiting Scholar Texas Tech University 1987</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Reviewing activities (journals, grants)</b></p> <p>Reviewer Academy of Management and The British Journal of Management.</p> <p><b>Master and PhD supervision</b></p> <p>Secondary supervisor for 3 PhD students and 5 master students at the Norwegian School of Economics, 1 master students at the University of Bergen and 4 master students at the Bergen University College</p>  |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics  | Bergen University College Pedagogical Course, 20 years teaching experience   |
| <b>Relevant digital competence and</b>   | Digital competence is good. I have been teaching research methods using Spss, SAS, Stata and other relevant digital tools for many years.  |

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| <b>courses/knowledge about E-learning</b> |  |
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| <b>NAME</b>   | <b>Natalia Mæhle</b>   |
| <b>ACADEMIC TITLE</b>   | Ph.D   |
| <b>POSITION</b>   | Associate professor, Mohn Centre for Innovation and Regional Development, Western Norway University of Applied Sciences (HVL)  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Master in International Business, Norwegian School of Economics (NHH), Norway, August 2004.</li> <li>▪ Master in Economics, Ural State University, Russia, June 2002.</li> <li>▪ Ph.D in Marketing, Norwegian School of Economics (NHH), Norway, December 2008.</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>My research interests include innovation, branding, consumer behavior and digital economy. In the recent years, I worked with projects related to the innovative digital business models and building cross-industry innovation capability in firms. My articles are published in the following international journals: European Planning Studies, European Journal of Marketing, Cogent Business &amp; Management, British Food Journal, Journal of Marketing Communications, Journal of Marketing, Journal of Consumer Behaviour, International Journal of Market Research, and Journal of Product &amp; Brand Management.</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>▪ Leader of two work packages in the NFR-financed project “Local crowdfunding for a low-emission society: Investigating the concept of local climate crowdfunding for Norway” (COOLCROWD).</li> <li>▪ Participated in the NFR-financed project “Path development in different regional settings. Regional policy approaches in the global economy.”</li> <li>▪ Project manager for the research project “Gamification: A New Approach to Motivating Knowledge Workers”, with Statoil and Accounting Norway involved as business partners. This project was part of the research program “FOCUS: Future-Oriented Corporate Solutions” at the Norwegian School of Economics.</li> <li>▪ Participated in the NFR-financed project “Eco-values as product quality attributes in manufacturing of agricultural food ingredients”.</li> </ul> <p><b>Invited scientific talks, presentations and tutorials (selected)</b></p> <ul style="list-style-type: none"> <li>▪ The 11th Regional Innovation Policies Conference 2016, Cardiff, UK.</li> <li>▪ The 2016 International Conference on Business and Information, Nagoya, Japan</li> <li>▪ EU-SPRI 2016 Annual Conference “Exploring New Avenues for Innovation and Research Policies”, Lund, Sweden.</li> <li>▪ RSA Annual Conference 2016 “Building Bridges: Cities and Regions in a Transnational World”, Graz, Austria.</li> <li>▪ Fagkonferansen i bedriftsøkonomiske emner (FIBE) 2016 (Conference on Business Administration 2014), Norwegian School of Economics, Bergen, Norway.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>▪ Research in Entrepreneurship and Small Business Conference 2015, Zagreb, Croatia.</li> <li>▪ The 2015 North American Conference of the Association for Consumer Research “Advancing Connections”, New Orleans, USA.</li> <li>▪ Johan Arndt conference 2015, Norwegian School of Economics, Bergen, Norway.</li> <li>▪ The 44th European Marketing Academy Conference “Collaboration in Research, 2015, Leuven, Belgium.</li> <li>▪ The 2014 North American Conference of the Association for Consumer Research “Back to Fun”, Baltimore, USA.</li> <li>▪ The 43rd European Marketing Academy Conference “Paradigm Shifts and Interactions”, 2014, Valencia, Spain.</li> <li>▪ The 2013 North American Conference of the Association for Consumer Research “Making a Difference”, Chicago, USA.</li> <li>▪ The 2013 European Conference of the Association for Consumer Research, Roundtable chair, Barcelona, Spain.</li> <li>▪ The 2012 North American Conference of the Association for Consumer Research “Appreciating Diversity”, Vancouver, Canada.</li> </ul> <p><b>Mobility and internationalization</b><br/> Erasmus+ Staff Mobility for teaching, University of Strathclyde, March 2017.<br/> Erasmus+ Staff Mobility for training, London Metropolitan University Accelerator, May 2016.<br/> Visiting scholar, University of Illinois at Urbana-Champaign, College of Business, USA, Fall 2012.</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Research management and administrative experience</b></p> <ul style="list-style-type: none"> <li>▪ Leader of two work packages in the NFR-financed project “Local crowdfunding for a low-emission society: Investigating the concept of local climate crowdfunding for Norway” (COOLCROWD).</li> <li>▪ Project manager for the research project “Gamification: A New Approach to Motivating Knowledge Workers”, with Statoil and Accounting Norway involved as business partners.</li> </ul> <p><b>Reviewing activities</b><br/> Journal of Brand Management, Journal of Advertising, Journal of Interactive Marketing, Journal of Consumer Behaviour, British Food Journal, Journal of Business Research, European Planning Studies, European Journal of Marketing, International Journal of Entrepreneurial Behavior &amp; Research</p> <p><b>Master and PhD supervision</b><br/> PhD: Daoyan Jin, University College of Southeast Norway.<br/> Several Master students in two Master programs “Innovation and Entrepreneurship” and “Innovation and Business Administration”, HVL.</p> <p><b>Industrial experience</b><br/> Collaborations with industry partners in several research projects.</p>  |
| <b>Relevant pedagogical competence</b>   | The course in Pedagogy, Ural State University, Russia, 2001.  |

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| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <b>Digital competence</b><br>Good, including text editing, formatting, Endnote, Excel. Apply relevant software for my empirical research (mainly SPSS).<br><b>Involvement in teaching and/or developing digital courses (IT in education)</b><br>Extensive use of e-mail, text messages and skype in supervision. Use the Itslearning platform when communicating with students. |
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| <b>NAME</b>   | <b>Inger Beate Pettersen</b>   |
| <b>ACADEMIC TITLE</b>   | Dr.oecon   |
| <b>POSITION</b>   | Associate professor  |
| <b>EDUCATION</b>  | Dr.oecon, PhD, NHH, Norway, September, 2005<br>cand.polit., master's degree (Department of Geography, UIB, Norway), 1998<br>Bachelor's degree, UIO, Oslo, Norway, 1992   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <b>Research areas/ interests:</b><br><br><u>Innovation</u> : open innovation, radical innovation and commercialization processes, design and innovation<br><br><u>entrepreneurship</u> : business incubation, entrepreneurial learning, entrepreneurs and network resources, entrepreneurship education and learning outcomes<br><br><u>internationalization</u> : the internationalization process, learning in foreign markets, headquarter-subsidiary relationships, born globals<br><br><b>Research projects and external funding</b><br><br>SANORD (South African –Nordic Centre): Seed funded project: The Enterprising tendency of SANORD students. Comparative research (survey) across three countries on the effect of entrepreneurship education. Research collaboration between Bergen University College, Nord University (Bodø), University of Turku (Finland), University of Pretoria (Gauteng), University of Stellenbosch (Western Cape) and University of NMMU (Eastern Cape). 2016<br>Researcher in VRI- Researcher Project: Path development in different regional settings. Regional policy approaches in the global economy. Financed by The Research Council of Norway and the regional counties (2013-2016).<br><br>Research project: Increased value creation by the use of design in the marine, maritime and energy related industries Financed by VRI researcher project, UH-Nett Vest and regional county. 1) Survey mapping regional design firms' traits, innovation, markets, cooperation, performance (2014), 2) Survey on the perception, use and effects of design in the marine, health and maritime related industries (during 2016). |



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|   | <p>Pre-project: Dominance of the petroleum sector and implications for innovation and entrepreneurship in a regional perspective. Financed by Regionalt Forskningsfond Vestlandet, RFFV (2014-2015).</p> <p>Research on entrepreneurship education related to practice based learning in a master program with a focus on lengthy internships in a foreign cultural setting. Research cooperation with one researcher at NMBU. Internal funding. (2014-2015).</p> <p>Research on regional entrepreneurship: incubator firms and network resources (2013), novices and experienced entrepreneurs, network resources and the entrepreneurial process (2014). Internal funding.</p> <p>Researcher in FORFI- Project: How can policy makers create industrial clusters? (2013-14). Financed by The Research Council of Norway.</p> <p>Project leader for KMB-Project: Local cluster going international: balancing local and non-local networking? Financed by The Research Council of Norway, co-financed by the regional cluster partners NCE Subsea and NCE Maritime (3 years from 2009-2012).</p> |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Research management and administrative experience</b></p> <p>Teaching responsibility for two courses in a master program in innovation and entrepreneurship, involved in the development of 1 PhD-course at HVL. Involved in project acquisition at HVL.</p> <p><b>Master and PhD supervision</b></p> <p>Supervisor of master theses in the master program in innovation and entrepreneurship at HVL</p> <p>Co-supervisor for two PhD-students (HVL and NMBU)</p> <p>Committee work for PhD-projects (UIB and Molde University College)</p> <p><b>Industrial experience</b></p> <p>Involved in strategic and long-term collaborations with industry clusters, BTO, Connect Vest-Norge to realize practice-based entrepreneurship courses in real-life contexts</p>  |
| <p><b>Relevant pedagogical competence</b><br/>University-pedagogic, didactics</p>   | <p><b>Courses attended</b></p> <p>Accomplished University college pedagogics course at HVL, 2014/15.</p> <p>Engaged in entrepreneurship education research with national and international research partners, in publishing papers, attending the international 3 E Conference (ESCB) on entrepreneurship education research, and writing applications to promote and advance entrepreneurship education</p>  |

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| <b>NAME</b>  | <b>Marina Z. Solesvik</b>   |
| <b>ACADEMIC TITLE</b>  | PhD   |
| <b>POSITION</b>  | Professor of innovation and management<br>Western Norway University of Applied Sciences   |
| <b>EDUCATION</b>   | <ul style="list-style-type: none"> <li>▪ M.Sc in shipbuilding and industrial management, National University of Shipbuilding, Ukraine, July 1997</li> <li>▪ Ph.D in Entrepreneurship, Institute of Agrarian Economics, National Scientific Centre, Kiev, Ukraine June 2001</li> <li>▪ PhD in Business Management, Nord University, Norway, August 2010</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b>  | <p>I do research in teaching in innovation (regional innovation, maritime innovation, open innovation), entrepreneurship (female entrepreneurship, entrepreneurial intentions).</p> <p><b>Research projects and external funding</b></p> <p>Took part in VRI project Oslo and Akershus (RCN) (2012-2014), University of Oslo</p> <p>Maroff (RCN) (2013-2017), Nord University. The project has international collaborators.</p> <p><b>Invited scientific talks, presentations and tutorials</b></p> <p>Keynote speaker Maritime Future Conference, Rostock 2010..</p> <p><b>Awards and Honors</b></p> <p>Best reviewer awards Journal of Small Business and Enterprise Development in 2016 and 2017</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Reviewing activities (journals, grants)</b></p> <p>Reviewer for numerous journals and publishing houses, as well as for the RCN.</p> <p><b>Master and PhD supervision</b></p> <p>Supervised master students</p> <p><b>Evaluation committees</b></p> <p>I participated in evaluation committees for PhD, Postdocs, Associate Professors and full Professors at the University of Oslo, Nord University, UiT Arctic University, and South Norway University.</p> <p><b>Industrial experience</b></p>  |

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|   | <i>Deputy Chairman, Riksteatret (2014-now)</i>  |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <b>Courses attended</b><br><br>Practical pedagogical course (30 sp), Stord/Haugesund University College |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <b>Digital competence</b><br><br>User of SPSS, Amos, Fronter, Its Learning, MS Office                   |

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| <b>NAME</b>   | <b>Talal Rahman</b>   |
| <b>ACADEMIC TITLE</b>   | Dr.scient.  |
| <b>POSITION</b>   | Professor   |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Cand.scient. in Numerical Analysis, University of Bergen, Norway, 1994</li> <li>▪ Dr.scient. in Numerical Analysis, University of Bergen, Norway, 2000</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>Rahman's research interests lie in the areas of computational and applied mathematics, focusing on topics related to numerically solving problems in the areas of computational fluid mechanics, computer vision, and marine resource management.</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>• <i>Multi-scale Domain Decomposition: Algorithms and Analysis</i>. <b>PI</b>. Supported by the Norwegian Research Council. 5.7 MNOK, 2010-2015. International collaborator: University of Warsaw (Warsaw, Poland), Chinese Academy of Sciences (Beijing, China)</li> <li>• <i>Efficient preconditioners for problems with multiple scales</i>. <b>PI</b>. Supported by the Norwegian Research Council and DAAD. 130 KNOK. 2014-2015. International collaborator: Bielefeld University of Applied Sciences (Bielefeld, Germany)</li> <li>• <i>Computational Medicine: Numerical models for medical images and signals</i>. Network project. Supported by UH-Nett Vest. 100 KNOK. 2015.</li> </ul> <p><b>Invited scientific talks, presentations and tutorials</b></p> <ul style="list-style-type: none"> <li>• Invited lecture (keynote) at ICAEES 2016: International conference advances of electrical, electronic and system engineering, Putrajaya, Malaysia, 14-16 November 2016.</li> <li>• Invited lecture (plenary) at SPOMECH 2012: Supercomputing and computational solid and fluid mechanics, VSB-TUO and IGK, Ostrava, Czech Republic, November 2012.</li> </ul> |

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|   | <p><b>Mobility and internationalization</b></p> <p>Visiting professor at University of Cambridge, Department of Applied Mathematics and Theoretical Physics (DAMTP), UK, February - July 2012</p>  |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>International program committees and boards</b></p> <ul style="list-style-type: none"> <li>▪ PC member of DD24 2017: International Conference on Domain Decomposition Methods, Svalbard, Norway</li> <li>▪ PC member of Workshop: <i>Applied High Performance Numerical Algorithms in PDEs</i>, International Conference on Parallel Processing and Applied Mathematics (PPAM 2015), Cracow, Poland</li> <li>▪ PC member of Workshop: <i>Applied High Performance Numerical Algorithms in PDEs</i>, International Conference on Parallel Processing and Applied Mathematics (PPAM 2013), Warsaw, Poland</li> <li>▪ PC member of Section: <i>Numerical Methods of Differential Equations</i>, at the Gesellschaft für Angewandte Mathematik und Mechanik (GAMM 2013), Novi-Sad, Serbia</li> </ul> <p><b>Research management and administrative experience</b></p> <ul style="list-style-type: none"> <li>▪ Member of steering committee of the strategic research program on Software Technologies for Distributed Systems at Bergen University College, 2011 – 2016</li> <li>▪ Member of the programme committee for the PhD study in Computer Science: Software engineering, sensor networks, and engineering computing, since 2017</li> </ul> <p><b>Reviewing activities (journals)</b></p> <p>Mathematics of Computation, SISC, SINUM, BIT Numerical Mathematics, Optimization Methods and Software, Numerical Methods for PDE, AIP Advances, IEEE Transactions Industrial Electronics</p> <p><b>Master and PhD supervision</b></p> <ul style="list-style-type: none"> <li>▪ Ph.D supervisor (jointly with X.-C. Tai) for Bin Wu - <i>3D surface reconstruction</i>. Due in 2017.</li> <li>▪ Ph.D supervisor (jointly with P. E. Bjørstad) for Erik Eikeland - <i>Domain decomposition for multiscale problems with less regular subdomains</i>. Due in 2017.</li> <li>▪ Ph.D supervisor (jointly with P. E. Bjørstad) for Atle Loneland - <i>Domain decomposition for multiscale problems</i>. Defended in 2016.</li> <li>▪ Ph.D supervisor (jointly with X. Xu) for Yunfei Ma - <i>Domain decomposition for mutiscale problems</i>. Enrolled at the Chinese Academy of Sciences. Defended in 2012.</li> <li>▪ Master supervisor (jointly with Jon Eivind Vatne) for Alexander Mjøs - <i>Naive and adapted utilization of the GPU for general purpose computing</i>. Due in 2017.</li> </ul> |

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|   | <b>Evaluation committees</b> <ul style="list-style-type: none"> <li>Member of the evaluation committee (2014) for promotion to full professor in Applied Mathematics for Dr. Mohamed El Ghami at Nesna University College.</li> <li>Member of the evaluation committee (2017) for PhD thesis of Sanjib Kumar Acharya at the LNM Institute of Information Technology, Jaipur, India.</li> </ul> |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <b>Other relevant competence</b><br><br>Attended the short term pedagogical training for employees at the Western Norway University of Applied Sciences. Autumn 2010.  |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <b>Involvement in teaching and/or developing digital courses (IT in education)</b><br><br>Used the learning platform its-learning for all courses taught since Autumn 2010, and the MIT open courseware ( <a href="https://ocw.mit.edu/index.htm">https://ocw.mit.edu/index.htm</a> )  |

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| <b>NAME</b>   | <b>Chunyan Xie</b>   |
| <b>ACADEMIC TITLE</b>   | Professor  |
| <b>POSITION</b>   | Professor at the Western Norway University of Applied Sciences, Campus Haugesund.  |
| <b>EDUCATION</b>  | Master of Philosophy in System Dynamics, University of Bergen, July 1999.<br>Cand. merc. in Marketing, Norwegian School of Economics, August 2001.<br>Dr. Oecon in Marketing, Norwegian School of Economics, December 2005.  |
| <b>Research and Development work within the last five years prior to application deadline</b> | My research centers on consumer co-creation, corporate reputation/ corporate social responsibility, and marketing strategy issues such as integration of innovation processes and corporate social responsibility (e.g., “green” innovation).<br><br><b>Research projects and external funding</b><br>2009-2012 Scientifically and administrative responsible for carrying out application and implementation of one sub-project on corporate reputation financed by the Research Council of Norway. Name of the overall project: “Managing Complexity in Petro Maritime operations”. Project number: 192270. One international research partner in this project is University of Michigan, USA.<br><br>2012-2013 Scientifically and administrative responsible for the project “Driving forces for ‘green innovations’ in the Norwegian petro-maritime sector”, supported by University College Network in Western Norway (UH-nett Vest). |

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|   | <p>2013-2017 Scientifically responsible for one sub-project under the project “Risk in Offshore Operations”, supported by the Research Council of Norway. Project number: 225311. The international research partner in this sub-project is University of Michigan, USA.</p> <p><b>Invited scientific talks, presentations and tutorials</b><br/>I regularly participate in and have presentations on international scientific conferences, such as North American Conference of the Association for Consumer Research (ACR) and European Marketing Association Conference (EMAC). Below is a list of arrangements I have attended:<br/>North American Conference of the Association for Consumer Research 2014, 2015, 2016; European Marketing Association Conference (EMAC) 2016; Johan Arndt Marketing Conference 2015; FIBE conference 2015.</p> <p><b>Mobility and internationalization</b><br/>I have good international research collaboration with top researchers in my field. International collaborators include researchers from University of Michigan (USA), Bentley University (USA), Hunan University (China), and University of Milano-Bicocca (Italia):<br/>2007-to date, Short visits to University of Michigan, USA<br/>2006-to date, Short visits to Hunan University, China<br/>2016-to date, Two short visits (ERASMUS staff exchange) to University of Milano-Bicocca, Italia</p> |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Research management and administrative experience</b><br/>09. 2016- to date, Fagkomité for administrasjonsfag, NRØA (Nasjonalt råd for økonomisk-administrativ utdanning)<br/>2017-2018 Studieprogramråd-Økonomi og administrasjon, Western Norway University of Applied Sciences, Haugesund campus</p> <p><b>Reviewing activities (journals)</b><br/>Reviewer in Journal of Academy of Marketing Science, Journal of Business Research, Journal of International Marketing, Journal of International Consumer Marketing, EMAC annual conference (European Marketing Association Conference), ACR North America annual Conference (Association of Consumer Research).</p> <p><b>Master and PhD supervision</b><br/><i>Master thesis:</i><br/>Informal co-supervisor for 3 master theses written by master students from Norwegian School of Economics (NHH). The theses are part of the work package I led under the research project “Managing Complexity in Petro Maritime operations”.<br/><i>PhD candidates:</i><br/>Chen Chen (from Fall 2016): PhD candidate in marketing management, University College of Southeast Norway, Norway.<br/>Yueyan Wu (from Fall 2015): PhD candidate in marketing, Department of Marketing, College of Business Administration, Hunan University, China.</p> <p><b>Evaluation committees</b></p>   |

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|   | <p>2016 Member of a grading committee appointed to assess candidates for a position as Associate professor in organization studies and management at the Bergen University College. Contact: Associate Prof. Tor Halvorsen, University of Bergen.</p> <p>2017 Member of a grading committee appointed to assess candidates for a position as Professor in consumer behavior in rural tourism at Western Norway University of Applied Sciences. Contact: Professor Øyvind Helgesen, Norwegian School of Economics.</p> <p><b>Industrial experience</b><br/>Scientifically and administrative responsible for carrying out application and implementation of one sub-project on corporate reputation financed by the Research Council of Norway. Name of the overall project: "Managing Complexity in Petro Maritime operations". Project number: 192270.</p> |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <p><b>Courses attended</b></p> <p>2011 HPED110 Når læring er det viktigste (10 ECT), University College Stord/Haugesund</p> <p>2007 HPED-310 Høgskolepedagogikk-IKT som verktøy i læring og undervisning (10ECT), University College Stord/Haugesund</p>  |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | Competence in relation to applying relevant software for my empirical research (mainly SPSS, PROCESS, LISREL, excel). As is the case for most lecturers at my institution, I use the learning platform Fronter when communicating with students.  |

## Social Innovation

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| <b>NAME</b>   | <b>Jan-Kåre Breivik</b>  |
| <b>ACADEMIC TITLE</b>   | PhD in social anthropology   |
| <b>POSITION</b>   | Professor in community work from 2012  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Cand.Polit in Social anthropology, University of Oslo, Norway, 1996.</li> <li>▪ Ph.D in Social anthropology, University of Oslo, Norway, May 2001</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><i>Breiviks research profile shows that he have been engage in a range of projects that have been innovative and original. Social innovation and social/organizational entrepreneurship in the field of disability (primarily deaf identities in the making, but also in the field of disability and identity politics more generally). He has also been doing gender research (the men's movement form the 1970s), research on homelessness, research on ethnic minorities and migration (also emigrating Norwegians to Gran Canary) and more. He has lately been active in developing the HVL master in community work with new relevant research and innovations in educational approaches. The new research deals with crisis management in disasters and storytelling in times of crisis. The innovative educational approach deals with action learning and</i></p> |



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|  | <p><i>community building through the arts. Included in Breiviks productions are documentary films and theatre/performance. His latest production, the documentary film The fall of the bamboo – and the rise of a community, was recently invited to the prestigious Socially Relevant Film Festival in New York (march 2018). Breivik has figured as guest editor in two international journals (Scandinavian Journal of disability Research 2009, and Community Development Journal 2018) and one national journal (Tidsskrift for velferdsforskning 2015).</i></p> <p><i>Current research projects:</i><br/> <i>Community work, art and life stories (HVL)</i><br/> <i>The fall of the bamboo – and the rise of a community, involving further development of documentary film, action learning workshops, and article production on action learning through the arts (HVL)</i><br/> <i>Extraordinary communities – Growth and mobilization in crisis and catastrophes (HVL). Broad international network involved. In the process of applying NFR and EU-funds.</i></p> <p><i>Previous research projects:</i><br/> Funksjonshemmedes Studieforbund (1995 - 1998): “Disabled Adults – A Second Chance in Adult Education” (a European project financed by the EU-programme “Socrates/Adult Education”). Scientific and “user group” partners from Spain, Wales, Sweden, Ireland and Norway. Breivik as project manager.</p> <p>Uni Rokkansenteret 2001-2004: “Transnational Connections in Deaf Worlds” (Financed by the Norwegian Research Council, the Welfare Programme) Breivik as project manager.</p> <p>Uni Rokkansenteret 2005-2008: “Identity Politics among Disabled People and Public Service Provisions in a New Landscape” (Financed by the Norwegian Research Council, the Welfare Programme) Breivik as project manager (together with Bodil Ravneberg).</p> <p><i>The cultural rucksack (den kulturelle skolesekken) (2010-2013). Financed by the Norwegian Art council. Breivik as manager.</i></p> <p><b>Invited scientific talks, presentations and tutorials</b><br/> <i>Breivik have been used as keynote speaker at several occasions concerning his expertise on deaf studies, social housing issues, migration issues, the men’s movement from the 70s etc. Both nationally and internationally.</i></p> <p><b>Mobility and internationalization</b><br/> <i>Recently: 2015-2017 Visiting University of Utrecht, U of Glasgow and Universidad Complutense in Madrid in order to establish or strengthen Erasmus agreements. Staff exchange participation in Madrid march 2017.</i></p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience</b> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p><i>Active member of organizing committee for the Nordic Disability Research Conference in Bergen in May 2015.</i></p>  |

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| <p><b>from the practice field if applicable):</b></p> | <p><b>Research management and administrative experience</b></p> <p><i>2012-2017 Scientific responsible for Master in Community Work (Samfunnsarbeid), HVL</i></p> <p>2012-2017 Leader of the research group Samfunnsarbeid/Community work at HVL.</p> <p>Project manager for several projects at Uni Rokkansenteret, HVL and Funksjonshemmedes Studieforbund. (See above).</p> <p><i>Administrator/leader for two international PhD-courses: New perspectives in disability research (2007) and Disability research meets medical anthropology (2008)</i></p> <p>International and national cooperation, workshops and network activities have been integral to all these projects/courses. In the third project mentioned above – the international activities have been particularly strong.</p> <p>In the international PhD-course (led by me and Ravneberg) in Bergen, May 2007, “New Perspectives in Disability Research”, we incorporated some of our international and national partners as lecturers and essays-evaluators. These were:</p> <ul style="list-style-type: none"> <li>• Mårten Söder, professor in sociology, University of Uppsala, Sweden.</li> <li>• Steven E. Brown, Assistant Professor and Disabilities Scholar, Center on Disability Studies, U. of Hawai'i.</li> <li>• Nick Watson, Professor in Sociology/Disability Studies and Director of Strathclyde Centre for Disability Research at University of Glasgow, UK.</li> <li>• Ingunn Moser, Researcher at the <a href="#">Centre for technology, innovation and culture (TIK-centre)</a>, U. of Oslo.</li> <li>• Johans Sandvin, Professor at the Department of Social Science, Bodø University College.</li> <li>• Per Solvang, Professor in sociology, Oslo University College.</li> <li>• Karen Christensen, Assistant Professor in sociology, University of Bergen.</li> <li>• Torvald Sirnes, Research director and doctor in political science, Stein Rokkan Centre, UiB (now SVT/UiB)</li> </ul> <p>Together with some these scholars (and three prospective PhD-students) we have recently publishing jointly in SJDR with a special issue with the same title; “New Perspectives in Disability Research” (Breivik 2009) with Breivik as guest editor.</p> <p>Furthermore, as a following-up of this course, Breivik developed a new international PhD-course in Bergen, August 2008, as part of the new invention; Bergen Summer Research School (on Global Poverty), at the University of Bergen. The course “Disability, Illness, and Poverty”, was led by Breivik, together with one of our new partners in a present Welfare on</p> |
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|  | <p>the Run– project/application. This is Professor Stuart Blume, Department of Anthropology and Sociology, University of Amsterdam. Blume is also the leader of <i>Innovia Foundation on Medicine, Technology and Society</i> – a virtual research institute concerned with user perspectives on new health care technologies. Breivik is also a partner of Innovia:<br/> <a href="http://www.innoviafoundation.org/home.htm">www.innoviafoundation.org/home.htm</a></p> <p>Breivik is, in addition, also involved in several other international networks, such as the American SDS (Society for Disability Studies), the AAA (American Anthropological Association) and the NNDR (Nordic Network on Disability Research), as well as the projects and networks mentioned in the application.</p> <p>Breivik is also involved in different national networks. One is the Bergen based, anthropology initiated, network “Norske Rom” (Norwegian Spaces) - with open seminars and exchange of and collaboration on new projects and project ideas. This forum/network is “located” at the Department of Social Anthropology at UoB, where Breivik also has functioned as lecturer (for instance on the Norway/Norden- course in Regional Ethnography, spring 2008. Breivik has also been involved in a broad network initiated through the research program CULCOM, led by Professor Thomas Hylland Eriksen. In 2006 Breivik and Eriksen organised a multi-disciplinary conference on the topic “Normality” – which resulted in a book production, <i>Normalitet</i>, co-edited by Eriksen and Breivik.</p> <p><b>Reviewing activities (journals, grants)</b></p> <p>Breivik has been reviewer for Scandinavian Journal of Disability Research, Tidsskrift for Velferdsforskning, Norsk antropologisk Tidsskrift, Review of Disability Studies, Ethnographica: Journal of Disability and Culture (as editorial board member).</p> <p><b>Master and PhD supervision Evaluation committees</b></p> <p>Supervision of 8 master students.</p> <p>Evaluation committee member and opponent for 4 PhD dissertations/disputations:</p> <p><i>Member of evaluation committee for PhD Wenche Bekkens dissertation/disputation 8.feb 2014 “Children’s Participation in Paediatric Rehabilitation-An Exploration of Consultation Practices, University of Oslo</i></p> <p><i>Member of evaluation committee for PhD Gitte Winds dissertation/disputation September 2008 “Stiltiende fortællinger: Livet med kronisk sykdom i et antropologisk perspektiv” at Aarhus Universitet</i></p> <p><i>Member of evaluation committee for PhD Margrete Skårs dissertation/disputation april 2010 Natur i hverdagsliv / Experiencing Nature in Everyday Life, at Universitetet for miljø- og biovitenskap</i></p> |
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|   | <p><i>Member of evaluation committee for PhD Cecilie Høj Anviks dissertation/disputation november 2011: Synshemming, embodiment og meningsdannelse - Om bevegelse gjennom landskap av erfaringer, at NTNU Trondheim</i></p> <p>Leader of evaluation committee for employing assistant professor in public health at HVL/HiB May 2013.</p> <p>Leader of evaluation committee for employing professor in social work at Nord University, Bodø, September 2016.</p> |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <p><b>Courses attended</b></p> <p><b>An ongoing experimentation with action learning as part of the idea of social innovation in education and in community mobilization.</b></p> <p><b>Other relevant competence</b><br/> <b>The use of the arts in research and education. Creative writing, photo voice methodologies, film/documentary work.</b></p>   |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <p>Breivik has a general digital competence.</p>   |

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| <b>NAME</b>   | <b>Oddbjørn Bukve</b>   |
| <b>ACADEMIC TITLE</b>   | Dr. philos.   |
| <b>POSITION</b>   | Professor, organization and management  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>• Mag. art., Public Administration and Organisation Theory, University of Bergen 1977</li> <li>• Dr. philos., The Faculty of Social Sciences, University of Bergen 2001</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>My most long-standing research interests are local economic development and new forms of governance in local and regional government. More recently, I have also done research on multi-level governance, policy networks and quality improvement in health and welfare. Theoretically, my research draws on organization theory, institutional theory and theories of public policy.</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>• Local Government Reform (NLGR) processes 2014–2019 (2016–2020). <i>Funding: Norwegian Research Council. Int. partners: KORA (Denmark), Åbo Akademi</i></li> <li>• Mandated Collaboration in the Public Sector – a study of multilevel reform strategies (2016–2018). <i>Funding: SFUC</i></li> </ul> |

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|  | <ul style="list-style-type: none"> <li>• Between proximity and expertise. Organization of local emergency help after the coordination reform (2015-17). <i>Funding: SFUC</i></li> <li>• Local development policy issues in Norway and Slovakia (2015-2016). <i>Funding: EEA Grants. Int. partner: Matej Bel University</i></li> <li>• Development and Creation of Teaching Methods in Lifelong Learning Programmes (2014-15). <i>Funding: EEA Grants. Int. partner: Economic University, Prague</i></li> <li>• City and county parliamentarism compared (2014-16). <i>Funding: Ministry of Local Government and SFUC</i></li> <li>• Political accountability in the health sector (2011-2014). <i>Funding: UH-nett Vest and SFUC</i></li> <li>• Local and regional governance and institutional theory (2009-2012). <i>Funding SFUC and Det faglitterære fond</i></li> <li>• Health and welfare management in a system under pressure (2007-2013). <i>Funding: Norwegian Research Council and SFUC</i></li> </ul>  |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Research management and administrative experience</b></p> <p>Research manager for research program Collaboration, innovation and governance in the public sector 2013-17<br/> Co-manager for research program Innovation and quality management in public services and governance 2017 .<br/> Chair of the Organizing Committee, NEON 2012 Conference (Network on Organizational Science in Norway)</p> <p><b>Reviewing activities (journals, grants)</b></p> <ul style="list-style-type: none"> <li>• Scandinavian Journal of Public Administration</li> <li>• Nordiske Organisasjonsstudier</li> <li>• Nordisk Administrativt Tidsskrift</li> <li>• Tidsskrift for velferdsforskning</li> <li>• Norsk Statsvitenskapelig Tidsskrift</li> <li>• Regional and Federal Studies</li> <li>• European Planning Studies</li> <li>• Kart og Plan</li> <li>• Norwegian Research Council</li> <li>• Centre for Advanced Study, The Norwegian Academy of Science and Letters</li> </ul> <p><b>Master and PhD supervision</b></p> <ul style="list-style-type: none"> <li>• PhD: Einar Hovlid: <i>Reducing cancellations of planned operations. A case study of improving the quality of care at a district general hospital</i></li> <li>• Åge Vebostad: <i>Hva nå, fylkeskommune. En translasjonsteoretisk analyse av regionreformen</i></li> <li>• Master supervision: 19 (15 finished since 2012, 4 in progress)</li> </ul> |

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|   | <b>Evaluation committees</b><br><br>Chair of professor assessment committees, (Høgskulen i Volda for Professorship in organization and Management, Høgskolen i Ålesund for Professorship in Project Management),  |
| <b>Relevant pedagogical competence</b><br><br>University-pedagogic, didactics | <b>Courses attended</b><br>No courses<br><br><b>Other relevant competence</b><br>Author of text books<br><br>30 years teaching experience at graduate and undergraduate level: courses in research strategies and methods, academic writing, political theory, governance, public policy and management, local and regional governance, local economic development, organisation theory |
| <b>Relevant digital competence and courses/knowledge about E-learning</b>     | <b>Courses attended</b><br>No courses<br><br><b>Involvement in teaching and/or developing digital courses (IT in education)</b><br>Planning, development and teaching in master program combining session-based and digital teaching since 2004   |

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| <b>NAME</b>           | <b>Elisabeth Ersvær</b>  |
| <b>ACADEMIC TITLE</b> | PhD  |
| <b>POSITION</b>       | Associate professor  |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ M.Sc in molecular biology, University of Bergen, Norway, August 2002.</li> <li>▪ Ph.D in “Immunological Aspects of Acute Myelogenous Leukemia”, University of Bergen, Norway January 2007.</li> </ul> |

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| <p><b>Research and Development work within the last five years prior to application deadline</b></p> | <p>One of the main part of my research work has been devoted to human health and biomedical sciences, and I have with the use of already developed laboratory methodology/products, however, establishing conventions and standards appropriate for my research question (optimization) that made possible the use of the given technology. Presently, I am devoted to initiate a project of importance for the Biomedical Laboratory Scientist Education Program: Biological specimen tracking system that tracks specimen samples in real-time as they are collected and progress through the delivery cycle to their destination laboratories; including monitoring of possible pre-analytical errors.</p> <p>I have developed and released digital learning resources on an open access webpage (<a href="http://www.epraksis.no">www.epraksis.no</a>) and introduced a blended learning/flipped classroom approach in the Biomedical Laboratory Scientist Education Program in Bergen (article in preparation); this in order to facilitate deep learning and more active students. I believe that integration of e-learning into the biomedical laboratory scientist education program can catalyze a shift from educators (and supervisors in clinical practices) serving mainly as the distributors of content to become more involved as facilitators of learning and assessors of competency. Presently, I am devoted to initiate new projects of note (i) an systematic educational app to assess learning time for students, and (ii) gamification and digital simulation of the biomedical laboratory scientist profession.</p> <p><b>Research projects and external funding</b><br/> <b>2016/17</b> Biomarkers for physical activity and restitution (PI, funded by UHNettVest ). <b>2016</b> miRNA in Exercise and Restitution (Co-PI, funded by Olympiatoppen). <b>2015-2017</b> ePraksis (Co-PI, funded by Utviklingsmidler Helse-Vest). <b>2015-2017</b> ePraksis (Co-PI, funded by Norgesuniversitetet). <b>2013-2015</b> ePraksis (PI, funded by Utviklingsmidler Helse-Vest). <b>2010-2013</b> Immunomodulation in AML (PI, funded by Helse-Vest)</p> <p><b>Invited scientific talks, presentations and tutorials</b><br/> <b>2017</b> Oral presentation: ePraksis and eLearning (Læringsfestivalen, Norway). <b>2017</b> Invited oral presentation: ePraksis and eLearning (NITO, Norway). <b>2016</b> Invited oral presentation: <a href="http://www.ePraksis.no">www.ePraksis.no</a> (HUS, Norway). <b>2016</b> Oral presentation: Office Mix and video podcast for blended learning (HiB, Norway). <b>2015</b> Invited oral presentation: ePraksis and eLearning (NITO, Norway). <b>2015</b> Invited oral presentation: ePraksis and blended learning (HUS, Norway). <b>2012</b> Invited oral presentation: T cell exhaustion in cancer (UiB/HUS, Norway).</p> |
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| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b><br/> <i>2016 – 2017 Member of Management Committee for Mye-EUNITER (<a href="http://www.mye-euniter.eu/">http://www.mye-euniter.eu/</a>) COST ACTION (MC for Norway)</i></p> <p><b>Research management and administrative experience</b><br/> <i>2016 – 2017 Group leader of the BioMedical Analytical Research Group (HVL) (Two years appointment). 2016-17 Participant in the Research Leadership Programme (HVL, Norway). 2015-16 Adept in the project: Gender Balance in Senior Positions and Research Management in Bergen (BALANSE) (UiB/HVL/IMR, Norway)</i></p> <p><b>Reviewing activities (journals, grants)</b><br/> <i>Referee activities for BMC Immunology, APMIS, Haematological Oncology, International Journal of Molecular Sciences, Bioingeniøren, SAGE Open Medicine</i></p> <p><b>Master and PhD supervision</b><br/> <i>2016 – 2019 Co-supervisor for PhD student Ida Marie Rundgren (fellowship from HVL): Characterization of circulating monocyte subsets: clinical relevance (PhD/UiB). 2015 – 2018 Co-supervisor for PhD student Tor Henrik Anderson Tvedt, MD. Tentative title of thesis: Immunological aspects of leukemia (PhD/UiB). 2012 – 2018 Co-supervisor for PhD student Guro K Melve, MD. Tentative title of thesis: Immunological aspects of allogeneous stem cell transplantation (PhD/ UiB) 2010 - 2011 Main supervisor for master student Kristin Vetås. Title of thesis: Effects of ATRA, Valproate and Cytarabine on the immune system (Master/ UiB)</i></p> <p><b>Evaluation committees</b><br/> <i>2016 Member of evaluation committee for a postdoc position at UiB (10 applicants). 2016 Member of evaluation committee for a postdoc position at UiB (8 applicants). 2015/2016 Leader of evaluation committee for a permanent position as associate professor at HVB(34 applicants). 2015 Member of interviewing committee for a PhD fellowship at HVL (3 applicants).</i></p> |
| <p><b>Relevant pedagogical competence</b><br/> University-pedagogic, didactics</p>  | <p><b>Courses attended</b><br/> 2009 University Pedagogies: Assessment for learning (5 ECT) (UiB, Norway)<br/> 2008 University Pedagogies: Basic module (10 ECT) (UiB, Norway)<br/> 2008 University Pedagogies: Research supervision (5 ECT) (UiB, Norway)</p>  |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>  | <p><b>Digital competence</b><br/> Adobe illustrator/photoshop/captivate 8. OfficeMix. Movie Maker.</p> <p><b>Involvement in teaching and/or developing digital courses (IT in education)</b><br/> Developed digital learning resources (open access <a href="http://www.epraksis.no">www.epraksis.no</a>)</p>   |

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| <b>NAME</b>   | <b>Frode Fadnes Jacobsen</b>  |
| <b>ACAD. TITLE</b>  | Dr. polit./PhD  |
| <b>POSITION</b>   | Professor and research director, Center for Care Research – Western Norway, Western Norway University of Applied Sciences; Professor II at VID Specialized University   |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Master (hovedfag) in Social Anthropology, 1990, University of Bergen</li> <li>▪ PhD (Dr.polit) in Social Anthropology, 1997, University of Bergen</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><b>Research field and interests:</b><br/>Jacobsen's research interests are organization of municipal health and care services, health services research, innovation in care services, staff organization and staff culture, health and health practices in context of culture and society. Jacobsen employs international comparative perspectives in much of his research.</p> <p><b>Publications 2012-17:</b><br/>Total number of scientific publications: 34<br/>Peer reviewed articles: 26<br/>-«- Books/book chapters: 5<br/>-«- Scientific reports: 3</p> <p><b>Research projects led by Frode F. Jacobsen, with source of founding:</b></p> <ul style="list-style-type: none"> <li>• 2010-2018: Leader of the Norwegian contribution to the six country project "Re-imagining long-term residential care: An international study of promising practices", financed by the Candian Research Council. Internationally, the project is led by Prof. Pat Armstrong, York University, Toronto, Canada.</li> <li>• 2011-2015: Research grant from the Norwegian Research Council, for the research project "Modeling and evaluating evidence-base continuing education in nursing homes".</li> <li>• 2011-2015: Research grant from the Norwegian Research Council, received for the project «Contested spaces", in partnership with NOVA and with NOVA as the lead institution.</li> <li>• 2011: Research grant from the Regional Research Trust (RFF Hovedstaden) for a one year pilot project on Green Care.</li> <li>• 2012-2015: Research grant from the Regional Research Trust (RFF Vest) for a three year care telecare research project.</li> <li>• 2013-2016: Research grant from the Regional Research Trust (RFF Vest) for the three year "Reablement – early rehabilitation for home dwelling frail elderly".</li> <li>• 2013-2016: Research grant from the Norwegian Research Council for the four year project "Voluntary work in Norwegian long term care – prevalence, forms, interaction with professionals and potentials for the future" (together with CCR Eastern Norway).</li> <li>• 2013-2016: European Economic Area (EEA) grant for the project "Care support for elderly and disabled people by radar sensor technology (RADCARE" together with Warsaw Technological University (WUT)</li> </ul> |

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|   | <ul style="list-style-type: none"> <li>• 2016-2019: Norwegian Research Council grant for the project “Multicultural workforce in Nursing Homes: Contemporary challenges, opportunities and potentials for the future in the Norwegian municipal care sector (MULTICARE)”</li> </ul> <p><b>Awards and Honors</b></p> <ul style="list-style-type: none"> <li>• Research price of the year at Bergen University College, 2014</li> <li>• 2015 Highly Commended Paper Award, International Journal of Sociology and Social Policy.</li> </ul> <p><b>Mobility and internationalization</b><br/>Jacobsen has been a visiting scientist at the Department of Anthropology at University of California, San Diego, for 13 months from 1996-1997. He has done extensive fieldworks in Northern Sudan (PhD), Indonesia (Postdoc), Jordan, Bolivia and Ecuador. Recently he has done shorter periods of fieldwork in Great Britain, Canada and the US. He is involved in ongoing research projects with comparative work on eldercare in Canada, the US, Great Britain, Germany and Sweden.</p>  |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>PhD supervision:</b></p> <ul style="list-style-type: none"> <li>• Gudmund Ågotnes, “The Institutional Practice. Dynamics of practice at nursing homes: An ethnographic study of variation in hospitalization amidst uncertainty and continuity”. Defended 10.06.2016</li> <li>• Mari Berge, “Care technology in the municipalities» (2012-17).</li> <li>• Oddrunn Samdal, “Family-based care for homedwelling frail elderly”</li> <li>• Yngvild Brandser, “Telecare technologies in the context of Norwegian home care services: on roles, professional practices and distribution of care” (2015-18)</li> <li>• Roar Hansen, “Care work in the age of innovation; focus on first-line leaders in the nursing home sector».</li> </ul> <p><b>Evaluation activities:</b><br/>Opponent role, PhD dissertations: a total of 16, at University of Bergen, University of Oslo, Oslo and Akershus University College, NTNU, University of Tromsø. Jacobsen has been member of a number of evaluation committees for assessing PhD applications and for evaluating application for positions as (full) professor.</p> <p><b>Peer review activities:</b><br/>Jacobsen has been peer reviewer for the following journals: Ageing International, Norsk Antropologisk Tidsskrift, Tidsskrift for Velferdsforskning, Scandinavian Journal of Caring Research</p> <p><b>Research management:</b><br/>See description for Research projects.</p> <p><b>Networks (national and international):</b> University of California, San Francisco; York University, Toronto, Canada; University of California, San Diego; Universitetet i Stockholm; University of Dortmund, Germany; University of Eastern Finland; Bristol University; Universitetet i Lund</p> <p><b>Participation in international program committees, organizing committees and boards</b></p> |

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|  | <p>Coordinator for the Norwegian participation in the research project “Re-imagining long-term residential care: An international study of promising practices” (se earlier description).</p> <p><b>Industrial experience</b></p> <ul style="list-style-type: none"> <li>• The three year care telecare research project 2012-2015 (Research grant from the Regional Research Trust (RFF Vest) involved close contact and cooperation with industrial companies.</li> </ul> |
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| <b>NAME</b>  | <b>Jens Kristian Fosse</b>   |
| <b>ACADEMIC TITLE</b>  | PhD  |
| <b>POSITION</b>  | Assistant Professor  |
| <b>EDUCATION</b>   | <ul style="list-style-type: none"> <li>▪ M.Phil. in Geography, Norwegian University of Science and Technology, Norway, January 2000.</li> <li>▪ Ph.D in Geography, Norwegian University of Science and Technology, Norway, June 2010.</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b>                            | <p><i>Innovation studies with a particular focus on the facilitation and management of innovation in clusters and networks, and innovation policy.</i></p> <p><b>Research projects and external funding</b></p> <p><b>2012-2014:</b> CLEAR – Creativity and innovation: pedagogical framework for the learning chain. EU Leonardo - Support for European cooperation in education and training, the Life Long Learning Program</p> <p><b>2013-2014</b> <i>How can policy makers create industrial cluster? RCN (FORFI)</i></p> <p><b>2014-2016:</b> Path development in different regional settings. Regional policy approaches in the global economy. <i>RCN VRI program</i></p> <p><b>2014-2016:</b> Exploring the role of VRI in regional innovation system formation and new path development. <i>RCN VRI program</i></p> <p><b>2013-2015:</b> Kunnskapsfundament, arbeidsmodeller og verktøy for NCE- og Arenaprogrammene. Innovasjon Norge</p> <p><b>2014:</b> Hvordan kan kompetansemekling bidra til å fremme innovasjon i offentlig sektor. Regionalt Forskningsfond, Vestlandet</p> <p><b>2015:</b> Analyse av Forskningsrådet nye regional satsing for mobilisering og forskningsbasert innovasjon. NRC</p> <p><b>2015:</b> Kunnskapsgrunnlaget for NFRs regionale satsing. RCN</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience</b> | <p><b>Research management and administrative experience</b></p> <p>Coordinator of master programs in ‘<i>Innovation and Entrepreneurship</i>’ and in ‘<i>Innovation and leadership</i>’, Western Norway University of Applied Sciences (HVL). 10 years of experience as ‘competence broker’ – mobilization and development of research based innovation projects in collaboration</p>  |

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| <p><b>from the practice field if applicable):</b></p> | <p><i>between businesses and R&amp;D institutions, financed by the RCN in the Regional innovation and R&amp;D program.</i></p> <p><b>Reviewing activities</b><br/> European Planning Studies, Taylor &amp; Francis<br/> Norwegian Journal of Geography, Taylor &amp; Francis</p> <p><b>Master supervision</b><br/> 2011</p> <ul style="list-style-type: none"> <li>• Simon Matthiesen: Samarbeid om innovasjon - En casestudie av samarbeidet i industrielle forsknings- og utviklingskontrakter</li> <li>• Paul O. Ternes: Innovasjon, læring og kunnskap i KIFT føretak - Cloud Computing</li> </ul> <p>2012</p> <ul style="list-style-type: none"> <li>• Christine Engelsen: Samspill og kunnskapsflyt i NORCOWE (Norwegian Centre of Offshore Wind Energy)</li> <li>• Fredrik Lundekvam: Hvordan kan man, ved å øke kunnskapen om villaksen, skape tillit i samarbeidet om bærekraftig sameksistens mellom oppdrettsnæring og bevaring av lokale laksestammer</li> </ul> <p>2013</p> <ul style="list-style-type: none"> <li>• Lene Beate Furset: Læring, nettverk og sentrale drivkrefter i berekraftige grønne innovasjonar i maritim sektor</li> <li>• Robert K. Falkevik: Betydningen av nettverk og ressurser for oppstartsbedrifter – En komparativ studie av fire medieteknologibedrifter</li> </ul> <p>2014</p> <ul style="list-style-type: none"> <li>• Odd Kristian Tøgersen: Innovasjon og ny teknologi utfordrer kunnskap- og kompetansebehovet i elektroinstallatørbransjen.</li> </ul> <p>2015</p> <ul style="list-style-type: none"> <li>• Anders Dale: Digitalisering av olje- og gassnæringen. En analyse av fire digitaliseringsprosjekter</li> </ul> <p>2017</p> <ul style="list-style-type: none"> <li>• Katinka Sjøvik Bratland og Kim Kristoffersen: Tilrettelegging for innovasjon i klyngeprosjekter</li> <li>• Arja Erdal og Ingjerd Lie: Praksisfellesskap, kunnskapsdeling og kunnskapsanvendelse i Statens Vegvesen</li> </ul> <p><b>PhD supervision</b><br/> 2017- Thomas Owren, HVL (co-supervisor)</p> <p><b>Evaluation committees</b><br/> 2014: PhD positions in 'Innovasjon' ved Høgskulen i Sogn og Fjordane<br/> 2016: 2 PhD positions in 'Innovasjon og profesjonsutøving' ved Høgskolen i Bergen (HiB)<br/> 2016: PhD position in 'Industrial networks and cluster development' at department of geography, NTNU.<br/> 2016: Position as assistant professor in technology and restructuring at Bergen University College (Stilling som høgskolelektor innen teknologifag med vekt på kompetanseomstilling ved Høgskolen i Bergen)</p> <p><b>Industrial experience</b><br/> 2010-2011 Senior Facilitator Recruitment &amp; Competence NCE Subsea</p> |
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| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | Teaching experience on master level since 2009 |
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| <b>NAME</b>   | <b>Oddvar Førland</b>  |
| <b>ACADEMIC TITLE</b>   | Associate professor  |
| <b>POSITION</b>   | Senior Research Fellow at Centre for Care Research – Western Norway.<br>Western Norway University of Applied Sciences  |
| <b>EDUCATION</b>  | Cand. Polit. in Sociology, University of Bergen, NORWAY, 1998.<br>Philosophy of Science, University of Bergen, NORWAY, 2006.   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>Public organization and service development and innovation, dissemination and implementation of reforms and new knowledge, health service research, municipal care services, elderly care, rehabilitation services, user involvement, family carers, voluntary sector, professionalism and trust studies.</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>• 2017: Evaluation of fixed time schedules in Home Care services. Bergen municipality. Centre for Care Research Western Norway.</li> <li>• 2017-2021: <i>Prioritizing Care: emerging dilemmas in the Norwegian care service landscape</i>. RCN (Research project - HELSEVEL): Project Number: 262858. Centre for Care Research/NTNU. International collaborators.</li> <li>• 2012-2018: <i>Voluntary work in Norwegian Long Term Care - Prevalence, Forms, Interaction with. Professionals and Potentials for the Future</i>. RCN (Researcher project - HELSEOMSORG). Project Number: 222312. NTNU/Centre for Care Research. International collaborators.</li> <li>• 2010-2015: <i>Modeling and evaluating evidence based continuing education in nursing home dementia care</i> RCN (Researcher project - HELSEOMSORG). Project Number: 204548. Bergen University College. Faculty of health and social sciences. Centre for Care Research Western Norway.</li> <li>• 2012-2015: Reablement – Early effort for home dwelling adults (Hverdagsrehabilitering - tidlig innsats for hjemmeboende eldre i Voss kommune). RCN Western Norway - RFFVEST).</li> <li>• And other commissioned research projects for the Ministry of Health and Care Services, Norwegian Directorate of Health, The County Governor of Hordaland and Norwegian municipalities.</li> <li>• Publications: 28 scientific articles and 20 scientific reports.</li> </ul> <p><b>Other current positions and experiences:</b></p> |

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|  | <ul style="list-style-type: none"> <li>• Editor at the National documentation Centre for Municipal health and care services (Omsorgsbiblioteket).</li> <li>• Executive committee for the research group: Public Service Research: Municipal health- and care services in an ageing society, Faculty of health and Social sciences, Western Norway, University of Applied Sciences.</li> <li>• Executive committee for the research group: Omsorgens grunnlag, fenomener og vilkår (Philosophical and theoretical foundation of care) Centre for Care Research – Western Norway.</li> <li>• Member of other research groups: 1. Rehabilitation and Health Promotion. 2. Voluntary work in Norwegian Long Term Care.</li> <li>• Main editor at the Journal of Care Research (Tidsskrift for omsorgsforskning) from 1.th. of July 2017.</li> </ul>  |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Participation in program committees, organizing committees and boards</b></p> <ul style="list-style-type: none"> <li>• Board member of The Norwegian Agency for Quality Assurance in Education (NOKUT) 2010-2015.</li> <li>• External expert member of The Norwegian Labour Party's board for "Family, Time and equality" with particular tasks related to "Care in the family." 2015-2016.</li> <li>• Research advisor for the four Centres for Development of Institutional and Home Care Services in Western Norway. 2010-2017.</li> </ul> <p><b>Research management and administrative experience:</b></p> <p>2012-2014: Co-director, Centre for Care Research – Western Norway, hosted by Bergen University College and financed by the Norwegian Research Council.</p> <p><b>Reviewing activities (journals, grants):</b></p> <ul style="list-style-type: none"> <li>• Peer review work for different scientific journals and books.</li> <li>• Expert committee for The Research Council of Norway (RCN): Innovation Project in Public Sector (Innovasjonsprosjekt i offentlig sektor – HELSEVEL) 2017.</li> </ul> <p><b>Master and PhD supervision</b></p> <p>Three PhD-students now. Several post-bachelor students earlier.</p> <p><b>Evaluation committees</b></p> <ul style="list-style-type: none"> <li>• Leader of seven scientific committees.</li> <li>• Member of eight scientific committees.</li> </ul> |
| <b>Relevant pedagogical competence</b>   | <p>Courses attended: Practical pedagogy 1993</p>   |



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| <b>NAME</b>   | <b>Kristin Lofthus Hope</b>   |
| <b>ACADEMIC TITLE</b>   | Ph.D. (Dr. art) in science and technology studies   |
| <b>POSITION</b>   | Associate professor at Western Norway University of Applied Science (HVL), campus Bergen (100%)   |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>• Master's degree (Cand. Polit) in Sociology, Norwegian University of Science and Technology (NTNU), Norway, 1999</li> <li>• Ph.D. (Dr. Art) in Technology and Science Studies, NTNU, Norway, 2006</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>Hope's research experience and interests covers the study of organization and technology, in particular knowledge production, cultural studies, reforms and implementation in education. This includes organizational and institutional theory, governance, management and organization of policy, cultures of knowledge-producing organizations or knowledge-intensive workplaces, and comparative European studies of professional roles. Hopes doctoral thesis analysed and explored into the cultures of knowledge-producing organizations where this exploration identified the interstitial world between the academy and "the public", where it examined the "who" and "how" of co-production.</p> <p><b>Research projects and external funding (selections)</b></p> <ul style="list-style-type: none"> <li>• 2017-2018: Moving Towards the Responsible University? A cross-disciplinary network on higher education's role in the context of growing social and economic inequalities. Financed by The Joint Committee for Nordic research councils in the Humanities and Social Sciences (NOS-HS). Nordic research collaboration.</li> <li>• 2014-2018: "Lost in Transition: Governance, Management and Organization of Policy Programs to Improve Completion of Upper Secondary Education". A research project funded by FINNUT, The Research Council of Norway. International collaborators.</li> <li>• 2015: "Generell del av læreplanverket: Erfaringer med bruk og synspunkter på hvordan den kan fornyes". Project, commissioned research for the Ministry of Education and Research, Norway.</li> <li>• 2012-2017: MUNROS (Health Care Reform: The impact on practice, outcomes and costs of new roles of health professionals) a joint European project funded by the European Commission. International collaborators.</li> <li>• 2010-2013: TRUE (Transforming Universities in Europe) a joint European project realized under the EUROHESC program of the European Science Foundation and supported by RCN for the Norwegian project. International collaborators.</li> <li>• 2011: "Klimatilpasning i et flernivåsystem". Pilot project, funded by Regional Research Funds, RCN.</li> </ul> <p><b>Invited scientific talks, presentations and tutorials</b></p> |

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|  | <p>I regularly participate and presents research at international scientific conferences, such as ECER (European Conference on Educational Research), CHER (Consortium of Higher Education Researchers), EGOS (European Group for Organizational Studies), EGPA (European Group for Public Administration) and 4S (Annual Meeting of the Society for Social Studies of Science). Last year we presented our research at the Annual Meeting of EGPA in Utrecht, the Netherlands; this year we will participate at the ECER conference in Copenhagen, Denmark. In addition, I have participated at several of the CHER meetings, EGOS, the NEON conferences which is a Norwegian network for organizational research studies and followed the 4S annual meetings throughout the years.</p> <p><b>Awards and Honors</b><br/> 2011: Grant for research visit at The Norwegian University Centre in Paris, NUCP<br/> 2007: The NEON award given to the Bergen committee for organizing and starting up the network.</p> <p><b>Mobility and internationalization</b><br/> 2011: 2 months' research visit at Centre Universitaire de Norvège à Paris, CUNP (The Norwegian University Centre in Paris, NUCP). Office at Fondation Maison des Sciences de l'Homme, Paris, France.</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <ul style="list-style-type: none"> <li>• 2004-2006: Member of the organizing committee for the EGOS conference in Bergen, Norway.</li> <li>• 2008-2009: Member of the organizing committee for the first World Social Science Forum</li> </ul> <p><b>Research management and administrative experience</b><br/> Project manager for NEON (Network for Organization Studies in Norway) (2007-2011). External examiner for the HVL course Technology Management and Research Design (10 ECTS) (2010-2016), and external examiner for the HVL master thesis in Innovation and Entrepreneurship (30 ECTS) (2011-2016).</p> <p><b>Reviewing activities (journals, grants)</b><br/> Reviewer in Statsvitenskapelig Tidsskrift, Public Policy and Administration, International Studies in the Philosophy of Science, Tidsskrift for velferdsforskning, Nordiske organisasjonsstudier.</p> <p><b>Evaluation committees</b><br/> Participated in appointment committees for hiring of PhD.</p>   |
| <b>Relevant digital competence and courses/knowledge about E-learning</b>  | Competence in relation to applying relevant software for my empirical research   |

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| <b>NAME</b>   | <b>Einar Hovlid</b>  |
| <b>ACADEMIC TITLE</b>   | PhD  |
| <b>POSITION</b>   | Associate professor  |
| <b>EDUCATION</b>  | <p><b>1997:</b> Medicine, cand.med degree, University of Bergen</p> <p><b>2008:</b> Master of management, BI Norwegian Business School</p> <p><b>2012:</b> PhD dissertation, University of Bergen</p>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>My main reserch field is how quality improvement health care can be accomplished. I use both qualitative and quantitative methods and theoretically my reaserch draws on different kind of organizational theories, leraning theroy and system theory.</p> <p><b>Research projects and external funding</b></p> <p>Effects of external insepcions in health care, funded by the Norwegian Board of Health Supervision and HVL. This is a large prosject with international collaboration</p> <p>Hartveit, M., Aslaksen, A., Vanhaecht, K., Thorsen, O., Hove, O., Haug, K., Hovlid, E., Assmuss, J., Biringer, E. (2015). Development and testing of an instrument in Western Norway to measure the quality of referral information from primary care to specialised mental health care. International Journal of Care Coordination.</p> <p>Hovlid, E., Høifødt, H., Smedbråten, B., &amp; Braut, G. S. (2015). A retrospective review of how nonconformities are expressed and finalized in external inspections of health-care facilities. BMC Health Services Research, 15, 11.</p> <p>Bukve, O., &amp; Hovlid, E. (2014). Entreprenørskap eller institusjonaliseringsprosessar? Om mekanismar i organisasjonsendring. Nordiske organisasjonsstudier, 16(1), 5-29.</p> <p>Hovlid, E., &amp; Bukve, O. (2014). A qualitative study of contextual factors' impact on measures to reduce surgery cancellations. BMC Health Services Research, 14:215, 11. doi:http://dx.doi.org10.1186/1472-6963-14-215</p> <p>Hovlid, E., von Plessen, C., Haug, K., Aslaksen, A., &amp; Bukve, O. (2013). Patient experiences with interventions to reduce surgery cancellations: a qualitative study. BMC Surgery, 13.</p> <p>Hovlid, E., Bukve, O., Haug, K., Aslaksen, A., &amp; von Plessen, C. (2012a). A new pathway for elective surgery to reduce cancellation rates. BMC Health Services Research, 12. doi:http://dx.doi.org10.1186/1472-6963-12-154</p> <p>Hovlid, E., Bukve, O., Haug, K., Aslaksen, A., &amp; von Plessen, C. (2012b). Sustainability of healthcare improvement: what can we learn from</p> |

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|  | <p>learning theory? BMC Health Services Research, 12.<br/>doi:<a href="http://dx.doi.org/10.1186/1472-6963-12-235">http://dx.doi.org/10.1186/1472-6963-12-235</a></p> <p>Bukve, Oddbjørn; Hovlid, Einar.<br/>Kvalitetsforbedring i sjukehus. I: Samhandling og kvalitet i helseorganisasjonar. Universitetsforlaget 2014 ISBN 978-82-15-02341-0. s. 43-58<br/>HISF</p> <p>Hovlid, Einar.<br/>Kvalitet og kvalitetsforbedring i helsetenester. I: Samhandling og kvalitet i helseorganisasjonar. Universitetsforlaget 2014 ISBN 978-82-15-02341-0. s. 27-42<br/>HISF</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> |   |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics  | PE387 Undervisning for læring - 5stp  |
| <b>Relevant digital competence and courses/knowledge about E-learning</b>  | IT308 Digital kompetanse i høgare utdannning - 5stp   |

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| <b>NAME</b>           | <b>Eva Langeland</b>  |
| <b>ACADEMIC TITLE</b> | Dr.polit/PhD  |
| <b>POSITION</b>       | Professor in Health Science   |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ 2007: PhD degree, Dr.polit. University of Bergen</li> <li>▪ 1994: Master of Nursing Science, Cand.polit, University of Bergen</li> <li>▪ 1991-1984: Pedagogy (60 ECT), Nursing sciences (90 ECT), Examen Philosophicum (15 ECT), Method examen in Social Sciences (15 ECT), Pedagogic Seminar (30 ECT),</li> <li>▪ 1981: Postgraduate education in mental health nursing (60 ECT)</li> <li>▪ 1976-1979: Bachelor in Nursing</li> </ul> |

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| <b>Research and Development work within the last five years prior to application deadline</b>  | <p>Eva Langeland has expertise in complex intervention research. She has developed an intervention program based on salutogenesis. She has explored the effects of different interventions in RCTs or clinical controlled trials and has competence in exploring in depth health promoting change processes among participants in different intervention studies.</p> <p><b>Projects (Completed):</b></p> <ul style="list-style-type: none"> <li>• Health promoting competence among persons with psoriasis with emphasis on mental health and coping. Principal investigator. Financing source: Western Norway University of Applied Sciences.</li> <li>• Reablement among home dwelling adults. A national multi-center study. Principal investigator. Financing source: The Norwegian Directorate of Health</li> </ul> <p><b>Projects (ongoing):</b></p> <ul style="list-style-type: none"> <li>• Change processes among participants in salutogenic talk therapy-groups. Principal investigator. Financing source: Western Norway University of Applied Sciences.</li> <li>• A need to be it to be able to do it: Exploring the phenomenon of being salutogenic and its role in practising professional health promotion. Participant. Financing source: Western Norway University of Applied Sciences. Nordic project. Collaboration with Monica Erikson, Høgskolan West, Sweden</li> <li>• Empowering Persons with Severe Mental Illness to Work Participation: Members' and Staffs' Experiences of Working Alongside in Clubhouses. Participant. International project including collaboration with Larry Davidson og Timiko Tanaka, Yale University</li> </ul> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <ul style="list-style-type: none"> <li>• 2008-2013: Board member. Research and Development Board at Sogn and Fjordane University College, Faculty of health sciences.</li> <li>• 1994-1995: Member of council of postgraduate education for Health and Social Sciences and developed the national curriculum for postgraduate in interdisciplinary education in mental health work (60 credits).</li> </ul> <p><b>Research management and administrative experience</b></p> <ul style="list-style-type: none"> <li>• 2016-pp: Established and Leader of the Research group Rehabilitation and Health Promotion, Faculty of health and Social sciences, Western Norway University of Applied Sciences.</li> <li>• Member of the group that develop application for a PhD in health, function and participation at Western Norway University of Applied Sciences. Planned submission, autumn, 2017. Leader of in depth course in health promotion and coping.</li> <li>• 2016-pp: Member of the Research group Mental Health, Faculty of health and Social sciences, Western Norway University of Applied Sciences</li> <li>• 2008-2013: Established and Leader of the Research group Mental Health at Sogn and Fjordane University College.</li> <li>• 2008-2013: Course Coordinator postgraduate education Mental Health Work (60 credits), postgraduate education Active Care, (15 credits) and mental health work in bachelor in nursing at Sogn and Fjordane University College.</li> </ul>   |

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|   | <p><b>Reviewing activities (journals, grants)</b><br/>Referee in fifteen international journals.</p> <p><b>Master and PhD supervision</b></p> <ul style="list-style-type: none"> <li>• Co-supervisor, PhD student Hanne Tuntland: "Reablement in home-dwelling older adults: With emphasis on the use of Canadian Occupational Performance Measure". University of Bergen. Thesis submitted January 2017. Accepted for disputation April 5. Defense of thesis June 2.</li> <li>• Co-supervisor, PhD student Heidi Bringsvor (from 2015) : Coping with symptoms and promoting of health among people with server chronic obstructive pulmonary disease.</li> <li>• Co-supervisor, PhD student (from august, 2016): Building Skills or Transforming Selves? –Persons with Severe Mental Illness Experiences of Work-side-by-side with Staff and Peers in Clubhouses</li> <li>• Main supervisor for PhD-student Torunn Højdahl: Rehabilitation program for women in the Criminal Justice System – impact on sense of coherence. Defended her thesis 25.1.16</li> <li>• Main supervisor for eleven and co- supervisor for three master students who have successfully defended their theses.</li> </ul> <p><b>Evaluation committees</b></p> <ul style="list-style-type: none"> <li>• Leader and member of six scientific Committees for employment in scientific positions.</li> <li>• External opponent on PhD dissertation at the University of Agder. (November, 2016).</li> <li>• External opponent on PhD dissertation at the University of Bergen. (January, 2017)</li> </ul> |
| <p><b>Relevant pedagogical competence</b><br/>University-pedagogic, didactics</p> | <p><b>Courses attended</b></p> <ul style="list-style-type: none"> <li>- 1991: Approved supervisor in nursing services</li> <li>- 1992: Pedagogical exam (60 ECTS) Norwegian Teacher Academy</li> <li>- 1998: Education in Gestalt supervision, 132 Hours.</li> <li>- 2012: Research guidance course for supervision of PhD fellows</li> <li>- 2016/17; Manager Development Program in Research Management</li> </ul>  |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>  | <p><b>Digital competence:</b> Good</p> <p><b>Involvement in teaching and/or developing digital courses (IT in education)</b> Extensive use of e-mail, text messages and skype in supervision.</p>   |

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| <b>NAME</b>           | Jill Merethe Loga  |
| <b>ACADEMIC TITLE</b> | Dr. polit  |
| <b>POSITION</b>       | Assistant professor, Western Norway University of Applied Science  |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ M.Sc/ Cand.polit, Univ. of Bergen 1999. Department of Administration and Organization Theory.</li> <li>▪ Ph.D/ Dr.polit./, Univ. of Bergen 2005. Department of Administration and Organization Theory.</li> </ul> |

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| <p><b>Research and Development work within the last five years prior to application deadline</b></p> | <p>Loga has been employed as a senior researcher at Uni Research Rokkan Centre since 2006. She has been a research coordinator for the program “Centre for research on Civil Society and Voluntary Sector” since 2013 and was an affiliated researcher at this same centre from 2008. This research program/Centre has been funded in two periods (2008-2013, 2014-2018) by seven different Ministries. Loga’s research interests have been concentrated on social entrepreneurship and social innovation, governance, co-creation and co-production between sectors the last three years. From 2008 her research interests was focused on social participation, inclusion, local community NGOs, religious migrant organisations, integration, trust and social capital. Her dissertation from 2005 was an analysis of the concept of social values and a case study of the Government appointed Social Values Commission (1997-2003) funded by the Norwegian Research Council (NFR). Loga has published extensively, and participated and led several externally funded research projects on these topics.</p> <p><b>Research projects and external funding</b></p> <p>Loga has led several projects organized through the Centre for research on Civil Society and Voluntary Sector, financed by e.g. The Ministry of Culture, the Ministry of Local Government and Modernisation and the Ministry of Labour and Social Affairs. In addition, she has led externally funded projects on similar topics funded by KS (Kommunenes organisasjon), The Norwegian Directorate for Children, Youth and Family Affairs (Bufdir) and The Norwegian State Housing Bank (Husbanken). Her PhD project was funded by the Norwegian research council (NRC) and she was also affiliated to a NRC-funded research project shortly after her PhD exam.</p> <p>As part of the research centre on Civil Society and Voluntary sector Loga has participated in different research networks. She is a member of the third sector research network ISTR and the European network on research on social enterprises and social entrepreneurship (EMES). She has also worked closely, e.g. in three different book projects the last years, with associates in the Nordic third sector research network, associates from e.g. Ersta Sköndal University College, University of Copenhagen, University of Aalborg and University of Helsinki.</p> <p><b>Invited scientific talks, presentations and tutorials</b></p> <p>Loga is invited to give several lectures each year on the different topics on third sector in Norway, both at academic conferences and institutions, conferences for public sector and third sector, seminars and conferences in different municipals and arranged by a large number of NHO’s all over the country and also in other Nordic countries. As examples, she held a presentation at the last international third sector ISTR-conference at Ersta Sköndal in Stockholm June 2016. She was keynote at the Ministry of Local Government and Modernization’s dialogue meeting on social entrepreneurship in 2017 and the keynote at the KS conference on social entrepreneurship in 2016.</p> |
| <p><b>Other relevant competence / experience in the past</b></p>                                     | <p>Loga has participated in Government committees and inquiries for Ministries, e.g. Advisor on Social entrepreneurship for the Minister of Local Government and Modernisation (2016), member of the Inclusion</p>  |



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| <b>five years prior to application deadline (including experience from the practice field if applicable):</b> | <p>Committee (Kaldheimutvalget, 2010-11) with an editing responsibility for parts of the White Paper/NOU. She was engaged in the Committee for Religious and Life Stance Communities (Stålsettutvalget, 2012-13) with responsibility of writing part of the White Paper/NOU.</p> <p>Other relevant experiences:</p> <ul style="list-style-type: none"> <li>- Research coordinator at the Center for Research on Civil Society and Voluntary Sector, 2013-2017.</li> <li>- Member of the board of Uni Research Rokkansenteret, 2010-2015. This include As the employee representative at the board, she has participated in several employment committees, including the employment of the administrative director at Uni research Rokkansenter in 2015.</li> <li>- Referee for journals: VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations, Nordic organization studies, Norwegian Journal of Political Science, Norwegian Journal of Welfare Research, Norwegian Journal of Social Science Research, Nordic Journal of Migration Research, Norwegian Journal of Sociology.</li> <li>- Referee on grants: the Norwegian Research Council (NRC) and the Swedish Research Council (SRC).</li> <li>- Teaching: at the Department of Administration and Organization Theory (UIB), Department of Comparative Politics (UIB), BI Norwegian Business School (Bergen), Bergen University College, Oslo University College, VID (Oslo).</li> <li>- Master supervision: Department of Administration and Organization Theory (UIB), Business Administration (North University).</li> </ul> <p><b><i>Participation in international program committees, organizing committees and boards</i></b></p> <p>Loga has collaborated close and extensively with different actors in the field of social entrepreneurship and social enterprise such as investors, incubators, NGOS, Ministries, and Municipals etc. For example the Social Impact HUB in Bergen, Ferd Social Entrepreneurs in Oslo, Samfunnssentralen and TDVeen Social Entrepreneurs in Stavanger.</p> |
| <b>Relevant pedagogical competence</b>  | <p>Loga is attending pedagogical courses in autumn 2017 at HVL.</p>   |
| <b>Relevant digital competence</b>  | <p>Loga has a general digital competence. She has participated in courses in method and statistics (SPSS and Questback).</p>  |

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| <b>NAME</b>           | <b>Anne-Mette Magnussen</b>  |
| <b>ACADEMIC TITLE</b> | Dr. Political Science  |
| <b>POSITION</b>       | Associate Professor  |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ M.Sc in Political Science, UiB, Norway, December 1989.</li> <li>▪ Dr. in Political Science, UiB, Norway, May, 2006</li> </ul> |

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| <p><b>Research and Development work within the last five years prior to application deadline</b></p> | <p><b>Research projects with international cooperation (including funding source and role) :</b><br/> <i>Juridification and Social Citizenship</i> (The Norwegian Research Council) 2010-2016, senior researcher</p> <p><i>Prioritizing Health Care- Tensions and Interplay between Legal, Political, Economic and Professional Perspectives</i> (The Norwegian Research Council) (PI) 2013-2018</p> <p><i>Legitimacy and Fallibility in Child Welfare Services</i> (The Norwegian Research Council) 2010-2017, senior researcher</p> <p><b>Awards and Honors</b><br/> Nominated for the Research and Development Award (FOU pris), Bergen University College in 2015 and 2016</p> <p><b>Mobility and internationalization</b><br/> Visiting scientist 2014, Welma-Center (Legal Studies in Welfare and Marked), Faculty of Law, University of Copenhagen. Extensive research collaboration with the professional director of Welma-Center Professor Mette Hartlev</p>   |
|  | <p><b>PhD supervision</b><br/> Anna Banasiak (submitted): <i>A case of juridification: How regulation through the right to information and participation influences clinical practice.</i></p> <p>Maren Beate Holck Ekenes (midway): <i>Prioritization of rehabilitation services: a study of service allocation in municipalities after hospital care.</i></p> <p>Irene Aase Kvåle (start up phase): <i>Regulating prioritization of healthcare – how priority guidelines are shaped, understood and used</i></p> <p><b>Master supervision</b><br/> Master supervision (numbers): 8-10</p> <p><b>Reviewing activities</b><br/> International Journal of Social Welfare, European Journal of Social Security</p> <p><b>Editorial work</b><br/> Aasen, H., Gloppen, S., Magnussen A-M., Nilssen, E. (2014): "Juridification and Social Citizenship – international law, democracy and professional discretion" pp. 277-299 in <i>Juridification and Social Citizenship</i>. London: Edward Elgar</p> <p>Aasen.H, Bringedal,B. Bærøe, K., Magnussen, A-M (in preparation): <i>Prioritering i helsetjenesten: Samspill og spenninger mellom juss, politikk, økonomi og fag</i> (Prioritization in the Health Care Services: Interaction and Tensions between Law, Politics, Economics and Health-professions) Cappelen Damm Akademisk</p> <p><b>Evaluation Committee, research management, administrative experience:</b><br/> 2006 Engaged in the establishment of the Forum for</p> |

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|            | Professional Studies and Professional Dialogue at Bergen University College  |
| 2006-2008  | Leader of the research program: Community work and social marginalisation  |
| 2008- 2012 | Leader of the strategic research program: Productive Disruptions   |
| 2009       | Member of the working group appointed by the Principal and Higher Education Director at BuC, who prepared a comprehensive policy document for the IPR's, related to the results of staff work.   |
| 2010-2013  | Member of the group who assessed applications for research time from employees at the Department of Health and Social work (BuC) annually.   |
| 2010-      | Deputy member and member of the Central Research and development Committee BuC   |
| 2011       | BuCs member in a working group who investigated the possibility of establishing a research school in health and social studies in UH-nett Vest.  |
| 2012–2014  | Leader of the research group: Law, Democracy and Welfare   |
| 2013-2014  | BuCs member of the Scientific Committee for Bergen Summer Research School (BSRS) 2014 University of Bergen   |
| 2013-      | PI: Prioritizing Health Care- Tensions and Interplay between Legal, Political, Economic and Professional Perspectives (The Norwegian Research Council)   |
| 2016-      | Leader for the research group Law, Democracy and Welfare (RDV) at BUC/HVL  |
|            | <b>Network (national and international):</b> RDV eksternt<br><a href="http://www.hib.no/forskning/forskergrupper/rett-demokrati-velferd/">http://www.hib.no/forskning/forskergrupper/rett-demokrati-velferd/</a><br>Nordic Biomedichal Law Network |

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| <b>NAME</b>   | <b>Tone Elin Mekki</b>   |
| <b>ACADEMIC TITLE</b>                                     | Associate Professor, PhD   |
| <b>POSITION</b>   | Associate Professor, Centre for Care Research Western Norway   |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>M.Sc (equivalent) in Pedagogy, NLA University College, Bergen June 1984 /M.Sc in Nursing Science, University of Tromsø, NORWAY, June 1992. /Ph.D in PhD in Health and Social Science, Queen Margaret University, Edinburgh, Scotland April 2015.</li> </ul> |
| <b>Research and Development work within the last five</b> | My research field relates primarily to technological and organisational innovation and implementation within the primary health services. Within an action oriented approach, my research approaches addresses   |

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| <b>years prior to application deadline</b>   | <p>stakeholder and researcher collaboration and engagement for Knowledge Utilisation (e.g Knowledge translation or co-production).<br/>Research projects and external funding</p> <ul style="list-style-type: none"> <li>• Norwegian Research Council (NRC) (2011 – 2015): Modelling and Evaluating Modeling and evaluating evidence-based continuing education program in nursing home dementia care (MEDCED). Grant secured NOK 4.000.000</li> <li>• NRC (2016-2019): “Multicultural workforce in Nursing Homes: Contemporary challenges, opportunities and potentials for the future in the Norwegian municipal care sector “(MULTICARE). Grant secured NOK 22.000.000</li> <li>• The Candian Council for Health Research, for the project (2010-2018): “Reimagening long-term residential care: An international study of promising practices PI: Prof. Pat Armstrong, York University, Toronto, Canada. Participating countries: Canada, USA, Sweden, Germany, England and Norway. “Big grant – 7yrs”.</li> <li>• Vaksdal Municipality kommune / Fylkesmenn i Hordaland (2016 – 2019) “Lev Vel i Vaksdal” – Research &amp; development collaboration between Vaksdal Municipality, the Centre of Care Research and the Mohn Centre aiming to finding and implementing innovative ways of organising and delivering future health- and social services .</li> <li>• Austrheim and Modalen Municipality – “Bedre Sammen – Simulering og Samtrening i sykehjem” a Research &amp; development collaboration between two municipalities, the Centre of Care Research, HVL institute of nursing, and the Mohn Centre aiming to develop and pilot use of simulation technology as a mean to provide context– and teambased-continuing education targeting nursing home staff experiencing increasing demands in terms of acuity and complexity when caring for future nursing home patients. Pre-grant application to NRC (NOK 300.000) is submitted, and plans are made to apply for full grant from “Forskning og innovasjon i kommunesektoren – FORKOMMUNE” in February 2018.</li> <li>• Erasmus + Partnership application submitted March 2017 related to the project “Building the implementation workforce for health and social care”. HVL applicant organization( the Centre for Care research and the Mohn Centre, led by me) with partners from Dalarne University and Karolinska Institutet (Sweden), Bangor University (UK) and The Nursing School of Coimbra (Portugal)</li> </ul> <p>Mobility and internationalization<br/>Visiting Scientist Melbourne Australia – autumn 2012; Belfast, UK spring 2013; Edinburgh, UK autumn 2014, Halifax &amp; Wolfville Nova Scotia, Canada spring 2016</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience</b> | <ul style="list-style-type: none"> <li>• 2011 – 2015: Member in research reference group at NAKMI (The Norwegian Centre for Migration and Minority Health) related to a NRC financed project studying ‘Older migrants living with Dementia’</li> <li>• 2011 – 2015: project leader of a workpackage in the NRC financed MEDCED- project</li> <li>• 2012 – ongoing: responsible for supervising R&amp;D activities of two regional «Development Centres for Home Based and Institutional</li> </ul>   |

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| <b>from the practice field if applicable):</b>                                       | <p>Care” in Hordaland and Sogn- og Fjordane counties. Financed by the Norwegian Health Directorate.</p> <ul style="list-style-type: none"> <li>• 2016 - 2017: Headed RFF research application on behalf of Vaksdal Municipality</li> <li>• 2016 – 2017: Initiated and headed the above mentioned Erasmus application related to Implementation.</li> </ul> <p>Reviewing activities (journals, grants) International Journal of Geriatric Psychiatry; International Journal of Practice Development ; Tidsskrift for omsorgsforskning, Nordic Journal of Nursing Research; Klinisk sygepleie; Journal of Advanced Nursing</p> <p>National collaborations: Joint research with the four other regional Centres for Care Research, Partnership organization of Centre for Care Research – Western Norway with University of Bergen, Uni Rokkan Centre for Research, University of Stavanger, VID Specialized University, Sogn og Fjordane University College, Stord – Haugesund University College</p> <p>International collaborations:</p> <ul style="list-style-type: none"> <li>- The person-centred practice research international community of practice, PCPRICoP. Headed by UK, Queen Margaret University, Edinburgh.</li> <li>- Implementation and method development, research group Bergen University College</li> <li>- The international Knowledge Utilization Colloquia, consisting of 80 implementation researchers across four continents. Yearly seminars and joint research.</li> </ul> |
| <b>Relevant pedagogical competence</b><br><br><b>University-pedagogic, didactics</b> | 1986 Teachers Qualification Seminar (Pedagogisk seminar), 30 ECTS, University of Bergen 1987; Human Resources Course, 60 ECTS, BI Norwegian Business School; 1989; Professional counsellor in Nursing, 30 ECTS, University College of Finnmark  |
| <b>Relevant digital competence and courses/knowledge about E-learning</b>            | I have attended several courses delivered by HVL, and consider my proficient user of most programmes, including NVIVO and ‘Next Generation Learning Platforms’.   |

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| <b>NAME</b>           | <b>Grete Netteland</b>   |
| <b>ACADEMIC TITLE</b> | Dr. polit.   |
| <b>POSITION</b>       | Associate Professor in Information Science/ ICT (50%) –Institute leader (50%)  |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ Dr. polit. in Information Science, University of Bergen, 2008.</li> <li>▪ Master (hovedfag) in Information Science, University of Bergen, 1999.</li> <li>▪ Master (hovedfag) in German Language, University of Bergen, 1978.</li> </ul> |

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| <p><b>Research and Development work within the last five years prior to application deadline</b></p> | <p>My research interests are related to organizational implementations and the use of ICT-based Information Systems and technologies/media for collaboration, cooperation, communication and/or learning. Of particular interest is the interaction between humans, technology and ICT-supported activities (as computer supported collaborative work processes, knowledge building and technology-enhanced learning), how this interaction can be developed and expanded, and contribute to change within and across organizations. Of relevance is also how my empirical studies can inform the design and use of information and communication technologies. I study implementation, use and design of ICT in many contexts, such as e-Health, education and e-Government. My research is inspired by socio-cultural perspectives, especially activity theory, but also by theories of learning and change. The methodologies applied are mainly based on qualitative approaches and open coding techniques from Grounded theory, but lately I have also applied quantitative approaches.</p> <p><b>Research projects and external funding:</b></p> <p>iComPASS- Inquire Competence for better Practice and Assessments<br/> <i>Funding: Research Council of Norway 2015 - 2018. Int. partners University of Maastricht, Merit, University of Birmingham, Knowledge Technologies Institute, Graz University of Technology.</i></p> <p>Work immigration to Western Norway – Migrant workers as resource in regional development.<br/> <i>Funding: Regional Research Funding Western Norway, Hordaland County Municipality, Rogaland County Municipality, Sogn og Fjordane County Municipality and Møre og Romsdal County Municipality (2013-2017).</i></p> <p>Digitalization of Western Norway University of Applied Sciences (2016-2016)<br/> <i>Funding: HVL</i></p> <p>Improved digital dialogue in a multicultural municipality.<br/> <i>Funding: The County Governor in Sogn og Fjordane, the municipalities Stryn, Flora, Førde and Sogndal, and SFUC (2013-2016).</i></p> <p>The first line leader and the implementation of electronic health- and care messages between hospitals and municipal healthcare services (2013-2015).<br/> <i>Funding: SFUC.</i></p> <p>Digital care related collaboration (2010-2012).<br/> <i>Funding: SFUC</i></p> <p>Towards a multicultural community: Is minority integration a bumpy road or a superhighway – (Towards a multicultural Sogn og Fjordane) (2010-2012)</p> |
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|   | <p><i>Funding: Regional Research Fund Western Norway– Norwegian Research Council, The County Governor in Sogn og Fjordane, SFUC and Western Norway Research Institute.</i></p> <p>Competence Development through flexible and complex technology-supported learning environments (2010-2012)<br/> <i>Funding: Regional Health Authority South East, UiO, SFUC.</i></p> <p>Video feedback and web-based master student supervision (2013-2016)<br/> <i>Funding: HSH and SFUC</i></p> <p><b>Invited scientific talks, presentations and tutorials</b><br/> Invited speaker to the Innovation Conference 2015 Sogn og Fjordane; 2015-09-23 - 2015-09-23 ("E-messages- a basis for new and improved practices in the healthcare sector?")</p> <p><b>Awards and Honors</b><br/> Member of the National Expert Group for Quality in ICT- supported Education" – main focus: Higher Education (Norway Opening University 2011-2014).</p> <p><b>Mobility and internationalization</b><br/> Visiting scientist at The Centre of Activity Theory, University of Helsinki, Finland (2006, 2007)</p>                                  |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p>Member of the board of NOKOBIT – the Norwegian conference for the use of IT in Organizations (2013-2017).</p> <p>Member of the steering group for the project Digital Competence at SFUC (2011-)</p> <p>Member of the programme committee of NOKOBIT - the Norwegian conference for the use of IT in Organizations (2013-2017).</p> <p>Research management and administrative experience: Project leader (as well as researcher) in many of the mentioned research projects.</p> <p>Administrative positions: IT –manager Sogn og Fjordane County Municipality, Institute leader SFUC 2011-, Programme responsible for the master in Organization and management (2013-2015)</p> <p>Reviewing activities:</p> <ul style="list-style-type: none"> <li>• The Journal Nurse Research</li> <li>• Reviewer for the NOKOBIT Conference 2013-2017</li> </ul> <p>Master theses and PhD:</p> <ul style="list-style-type: none"> <li>• Supervisor for 4 master students (3 finished – 1 about to start)</li> <li>• It has been impossible to get in the position to supervise or co-supervise a PhD candidate so far.</li> </ul> |



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|   | <p>Evaluation committees:</p> <ul style="list-style-type: none"> <li>• HiL: Associate professor and Project manager, Høgskolen på Lillehammer, Senter for livslang læring, SELL (2016)</li> </ul> <p>Industrial experience (public organization):</p> <ul style="list-style-type: none"> <li>• IT-manager in Sogn og Fjordane County Municipality (1986-1994)</li> </ul> <p>Collaborations with industry, start-ups, patents, commercialization</p> <ul style="list-style-type: none"> <li>• In my projects I have collaborated with many municipalities, schools, government, hospitals</li> </ul>   |
| <p><b>Relevant pedagogical competence</b><br/>University-pedagogic, didactics</p> | <p>Courses attended:</p> <ul style="list-style-type: none"> <li>• Pedagogical seminar</li> <li>• Pedagogics for higher education – digital competence (ongoing)</li> </ul> <p>Other relevant competence:</p> <ul style="list-style-type: none"> <li>• Editor of an anthology (Together with Yngve Nordkvelle and Trine Fosslund) about Quality in flexible higher Education – Nordic Perspectives, Akademika forlag, Trondheim,</li> <li>• Technology – enhanced learning (PhD)</li> </ul>  |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>  | <p>Digital competence:</p> <ul style="list-style-type: none"> <li>• I developed and was responsible for the course “ICT-Systems for learning and Collaboration” (15 ECTS) in the bachelor programme ICT (about learning theories, learning at work, different Learning management systems, digital competences) (2004-2011)</li> <li>• Teacher and supervisor in the Bachelor Programme in ICT (1997-2011)</li> <li>• Teacher in the course digital competences for teachers in high schools.</li> <li>• Dr. polit. E-learning for change in large organizations.</li> </ul> <p>Courses attended</p> <ul style="list-style-type: none"> <li>• Many</li> </ul> <p>Involvement in teaching and/or developing digital courses (IT in education)</p> <ul style="list-style-type: none"> <li>• Teaching in the Master Programme – ICT in the health and welfare sector (2011-)</li> <li>• Guest lecturer in the Master in Education and Learning (2016)</li> </ul> |

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| <b>NAME</b> | <b>Even Nilssen</b> |
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| <b>ACADEMIC TITLE</b>  | Dr.polit.   |
| <b>POSITION</b>  | Professor (100%)  |
| <b>EDUCATION</b>   | <ul style="list-style-type: none"> <li>▪ M.Sc (cand.polit) in political science - Department of Administration and Organization Theory, University of Bergen, 1986.</li> <li>▪ Ph.D (dr.polit) in political science, University of Bergen, 1996</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b>  | <p>Comparative and national studies in the field of welfare and work, the role of international organizations in social policy, the impact of juridification processes on the construction of social citizenship and the relationship between legal regulation and professional discretion within the Norwegian welfare administration (Nav).</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>- Prioritization Health Care (the Norwegian Research Council - NFR)</li> <li>- The Social Contract as an Organizing and Justifying Principle in Welfare State Policies (NFR) (Frisam)</li> <li>- Judicialization and Social Citizenship, (NFR),</li> <li>- The Policy Ideas and Practice of Active Ageing: Political, Economic and Cultural Challenges in Europe, (NFR)</li> <li>- Evaluation of the Nav reform (modul 5) (NFR)</li> </ul> <p><b>Invited scientific talks, presentations and tutorials</b></p> <p>Invited to several conferences and seminars - talks on the Nav-reform, juridification in the welfare state, different topics concerning contractualism in Norwegian and European welfare policies.</p> <p><b>Mobility and internationalization</b></p> <p>Senior researcher at the Danish National Centre for Social Research for 3 years</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>Member of:</p> <ul style="list-style-type: none"> <li>-the Editorial Board i "The Open Political Science Journal", Bentham Science Publishers Ltd.</li> <li>- European Network of Excellence – Reconciling work and welfare in Europe (Recwowe) completed 2011.</li> <li>- Nordic Network of Excellence – Welfare Research</li> </ul> <p><b>Research management and administrative experience</b></p> <p>Have been project manager of several research projects such as: Evaluation of the Nav reform (module 5) NFR; - Evaluation of the social service act §§ 6-2, 6-2a og 6-3, financed by the Directorate of Health; -</p>   |

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|  | <p>Rettens refleksive rom (The reflexive space of law). Velferdsrettigheter, rettsanvendelse og lokalitet, NFR</p> <p>Managed different research groups on the field of welfare, democracy and law (head of the research group on Law, democracy and law (HVL) until may 2016). Arranged different workshops e.g. a workshop on juridification in the welfare state, Berlin 2015.</p> <p><b>Reviewing activities etc</b></p> <p>Reviews: Tidsskrift for velferdsforskning (several times), The Open Political Science Journal, European Journal of Social Work, Journal of Comparative Social Work.</p> <p>Editor, journals: Special issue of Nordic Journal of Law and Justice (Retfærd) on Juridification in the welfare state (2016).</p> <p>Editor, books: New Contractualism in European Welfare State Policies (Edward Elgar 2015), Juridification and Social Citizenship (Ashgate 2014).</p> <p><b>Master and PhD supervision</b></p> <p>Supervised several students at the master level both at the University of Bergen and HVL. Currently supervising two phd. students.</p> <p><b>Evaluation committees</b></p> <p>Two Phd scholarships, one associate professor position, assessing an application for a promotion to a full professor position, evaluation of a dr.philos. application, University of Bergen .</p> |
| <p><b>Relevant pedagogical competence</b></p> <p>University-pedagogic, didactics</p> | <p><b>Courses attended</b></p> <p>Extensive teaching experience at different levels both at the University of Bergen and HVL.</p>   |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>     | <p><b>Digital competence</b></p> <p>Good, have used several relevant programs such as Spss, Stata, Endnote, Questback.</p>  |

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| <b>NAME</b>           | <b>Siri Ytrehus</b>  |
| <b>ACADEMIC TITLE</b> | Professor, PhD   |
| <b>POSITION</b>       | Professor, Western Norway University of Applied Sciences   |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ PhD in Sociology (Dr. polit.), University of Bergen Norway, April 2005</li> <li>▪ Cand, sociol, University of Oslo Norway November, 1986</li> <li>▪ Nursing education, Molde University College, Norway, June 1978</li> </ul> |

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| <p><b>Research and Development work within the last five years prior to application deadline</b></p>  | <p>Specialized in research on welfare state issues and municipal health and social care, elderly care, housing policy, organization and development of housing and services for vulnerable groups, family care and dementia.</p> <p><b>Research projects</b></p> <p>Other ongoing research project</p> <p>“Home based care to elderly with advanced cancer” (external funding Norwegian Cancer Society 2012-2017),</p> <p>“An innovative ICT learning platform (DILP) for family caregivers” (external funding: Regional Research Funds Eastern Norway 2014-2017).</p> <p>“A new ICT based device for communication within a private family caregiver network (KontaktNett)” (external funding: Regional Research Funds Western Norway 2017-2020).</p> <p>“Family care to elderly with mental health problems” (funding: Western Norway University of Applied Sciences 2017-2019).</p> <p>Earlier research project:</p> <p>“The development of health and social care in Sogn og Fjordane”. (Project leader, external funding: Sogn and Fjordane County 2012-2015).</p> <p>“Homeless people and the family” (Project leader, external funding: The National Housing Bank 2012).</p> <p>“Homeless youth” (Project leader, external funding The National Housing Bank, 2012)</p> <p>“Interdisciplinary work within health and social care to the homeless” (Project leader, with international collaboration with the University of Sterling, 2012).</p> <p><b>Invited scientific talks</b></p> <p>Keynote at the China–EU innovation Forum on Active and Healthy Aging (CEIFAHA). Nanjing, China. 1<sup>st</sup> July, 2017.</p> <p><b>Mobility and internationalization</b></p> <p>Visiting scientist at University of Sterling, December 2012.</p> |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Research management and administrative experience</b></p> <p>Leader of the program “Master in Cooperation within the Health and Social Services” at Western Norway University of Applied Sciences. Leading the development of and leader of the “Master program in Eldery Care” at VID.</p> <p>Supervision with development of PhD project and research supervision from my additional position at Møre og Romsdal Hospital Trust.</p> <p><b>Reviewing activities</b></p> <p>Co-editor for the journal “Sykepleien Forskning”. Other reviewing activities last year: “Informatics for Health and Social Care” and “Tidsskrift for omsorgsforskning”.</p> <p><b>Master and PhD supervision</b></p> <p>Ongoing PhD supervision.</p> <ul style="list-style-type: none"> <li>○ Ingeborg Haugen: User involvement for persons with dementia</li> <li>○ Linn Hege Førstund: Moving to assisted living unit for persons with dementia – the partners perspective.</li> <li>○ Inger Hellem: How can an early rehabilitation help promote involvement and participation for persons with cognitive impairment?</li> <li>○ Oliva Sissi Sunde Family to elderly people with mental health problems.</li> <li>○ Runar Tengel Hovland: Studying Implementation of Routine Outcome Monitoring,</li> </ul>   |

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|  | <p>Ongoing and earlier master's supervision: 21 students.</p> <p><b>Evaluation committees</b></p> <p>Participation in evaluation committee awarding research funding for Vestre Viken Hospital Trust 2012, Møre og Romsdal Hospital Trust 2014, 2015, NTNU 2015 and 2016.</p> <p>Participation in committees for appointments (5 professors, 3 associate professors, 2 senior lecturers, 1 PhD scholarship) 2008-2016.</p> |
| <p><b>Relevant pedagogical competence</b></p> <p>University-pedagogic, didactics</p> | <p><b>Relevant pedagogical competence</b></p> <p>One-year basic level subject in pedagogy (Pre-2003 system), equal 60 credits full-time study.</p>   |

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| <b>NAME</b>   | <b>Tobba Therkildsen Sudmann</b>  |
| <b>ACADEMIC TITLE</b>   | Dr. PhD   |
| <b>POSITION</b>   | <p>Associate Professor (100%)</p> <p>Part time clinical position as riding physiotherapist (20%)</p>  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Psychology, University of Bergen, 1981, 60 ECTS</li> <li>▪ Physiotherapy, Bergen University College, Norway, 1984, 150 ECTS</li> <li>▪ University pedagogy, Oslo University College, 1990, 30 ECTS</li> <li>▪ Law, University of Oslo, 1991, 30 ECTS</li> <li>▪ Health and Social service administration, Sogn &amp; Fjordane University College, 1992, 60 ECTS</li> <li>▪ Ma. Phil, University of Bergen, Norway, 1997, 120 ECTS</li> <li>▪ Ph.D in Public Health, University of Bergen, Norway, February, 2009</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>Innovative health and social care, particularly Green Care and Telecare/welfare technology. My research contributes one the one hand to finding new ways of appropriating farms and the outdoors for health and social purposes, and on the other hand to how use of technology can assist or create barriers towards active ageing or ageing at home.</p> <p><b>Research projects and external funding</b></p> <p><i>Two projects on Green Care, i.e. innovative care and day activities for persons living with dementia, substance use disorders, mental health problems or youth dropping out of school. Financed by Regional Research Fund Western Norway and Innovation Norway.</i></p> <p><i>RADCARE – development of new radar based technology for movement analysis and fall detection, researchers from health care and engineering, EEA grant.</i></p> <p><b>Invited scientific talks, presentations and tutorials</b></p> <p><i>Invited presentations 50+ last 5 years concerning physical activity, health promotion and organization of health care systems. Target audience health and social worker in the municipalities, nursing homes, or home care.</i></p> |

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| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>Scientific Committee HETI: Horses in Education and Therapy International</p> <p>Riding physiotherapists Association/Norwegian Physiotherapist Association</p> <p><b>Research management and administrative experience</b></p> <p>Project manager 2 projects on Green Care (RFF-Vest, Innovasjon Norge)</p> <p>Head of master's program in Community Work 2002-2016</p> <p>Head of Physiotherapy Department at Haukeland University Hospital 1992-1998.</p> <p>Health and social service management, 60 ECTS, Sogn and Fjordane university College, 1992</p> <p><b>Reviewing activities (journals, grants)</b></p> <p>Referee: Physiotherapy Theory and Practice, Tidsskrift for omsorgsforskning, Tidsskrift for psykisk helsearbeid, Tidsskrift for velferdsforskning, Fontene forskning, Fond for etter og videreutdanning av fysioterapeuter, Regionalt Forskningsfond,</p> <p>Editor: Special issue Tidsskrift for velferdsforskning on Community Work in Norway 2015, Supplement Community Development Journal, Scandinavian Perspectives on community Work 2018</p> <p><b>Master and PhD supervision</b></p> <p>9 MA candidates 2012-2016, 1 "førstelektor".</p> <p><b>Evaluation committees</b></p> <p><i>Ass. Prof, Asc. Professor, PhD scholarships,</i></p> |
| <p><b>Relevant pedagogical competence</b></p> <p>University-pedagogic, didactics</p>  | <p>University pedagogy and didactics, Oslo and Akershus University of applied Sciences, Norway, June 1990, 30 ECTS</p> <p>University pedagogy and didactics, University of Bergen, Norway, 1995, 15 ECTS</p> <p>Head of Master's Program in Community Work, extensive experiences with teaching, supervision and involvement of students in planning, teaching, supervision, evaluation, and revision of curricula. <b><i>The program was nominated as the best Learning Environment at HVL in 2016.</i></b></p>   |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>  | <p><b>Digital competence</b></p> <p>Very good, including text editing, formatting, Endnote.</p> <p><b>Involvement in teaching and/or developing digital courses (IT in education)</b></p> <p>Extensive use of e-mail, text messages and skype in supervision,</p>  |

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| <b>NAME</b>   | <b>Christine Øye</b>  |
| <b>ACADEMIC TITLE</b>   | Phd.  |
| <b>POSITION</b>   | Professor   |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ M.Sc in social anthropology, University of Bergen, Norway, November 1995.</li> <li>▪ Ph.D Faculty of Psychology/Social Science, University of Bergen, Norway, August 2009.</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><b>Research projects and external funding</b></p> <p><b>2014-</b> Researcher «Re-imagining Long-term Residential Care: An International Study of Promising Practices», international funded project from Canada</p> <p><b>2012-2015</b> Post doc Center of caring science, West Bergen University College, MEDCED (Modeling and evaluating evidence based continuing education in nursing home dementia care), financed by The Norwegian research Council</p> <p><b>2012-2015</b> Leader of subproject MEDCED: “Institutional conditions for use of restraint and knowledge utilization in nursing homes”</p> <p><b>2013-2016</b> Leader of subproject MEDCED: «Facilitating workplace learning using action research in a nursing home», collaborative research between a Nursing home, development center for home care and nursing home care (USHT Helsefonna, Bjørgene)</p> <p><b>2008-</b> Project leader, research project: A qualitative study of care and coercion in community mental health, financed by Extrastiftelsen ca. 2 mill Nkr</p> <p><b>2009-2011</b> Project leader collaborative research based project: “Developing practice of milieu therapy when user participation is emphasized”, collaborative research development between a municipality, Helsefonna and user consultants in mental health.</p> <p><b>Invited scientific talks</b><br/> I have had more than 100 scientific talks on international, national and regional conferences and seminars, and a few keynotes which are:</p> <ul style="list-style-type: none"> <li>• 2011: Keynote speaker, phd. seminar, title: “Analytical possibilities doing ethnographies in the study of the welfare state – examples from user participation challenges in a psychiatric hospital”, seminar title: “The individual and the welfare state”, University of Copenhagen</li> <li>• 2014: keynote speaker title : «Brukerdeltagelse - en mulig umulighed? Perspektiver på magtforhold», [User involvement – a mission impossible? Perspectives on power relations» Dansk</li> </ul> |



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|   | <p>conference, UC-Nuvo «Utsatte voksne» [Vulnerable grown ups], Middelfart, Denmark 19. -20. August</p> <ul style="list-style-type: none"> <li>• 2016 Keynote title «Carers tacit roles: Informal use of restraint in nursing homes», Nordic seminar, Oslo, Oslo and Akershus University College, 15. og 16. oktober</li> </ul>   |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>Member of international research group : The person-centred practice research international community of practice, PCPR-ICoP (UK, Queen Margareths University)</p> <p><b>Research management and administrative experience</b></p> <ul style="list-style-type: none"> <li>• 2008 – 2012 Leader of program in mental health work on master level</li> <li>• 2015 - Leader of research group in care philosophy, Centre of care research</li> <li>• 2016 – Leader of collaborative research group between development centres for home care and nursing home care (USHTs), FouSam (collaborative unit HVL, Helsefonna and 18 municipalities in south western Norway) Title: Facilitation in community health services</li> </ul> <p><b>Reviewing activities (journals, grants)</b></p> <p><b>Grant review:</b> The Danish National Board of Health and Welfare (Socialstyrelsen) and the Danish Health Authority (Sundhedsstyrelsen)</p> <p><b>Journals:</b> Tidsskrift for psykisk helsearbeid, Klinisk sygepleje, Scandinavian Psychologist, International Practice Development Journal, Social Science and Medicine (nivå 2 tidsskrift), International Journal of Nursing Studies, Health</p> <p><b>Master and PhD supervision</b></p> <p>I supervise at the moment two master students and one phd. candidate</p> <p><b>Evaluation committees</b></p> <p>Evaluator of 8 phd. Thesis, 5 in Denmark, one in Sweden and one in Norway. Evaluator of several assistant professor positions, associate professors, post docs and phds</p> |
| <p><b>Relevant pedagogical competence</b></p>   | <p>University-pedagogic didactics from University of Bergen 1993-1995</p>   |

## Green Innovation

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| <b>NAME</b>   | <b>Ole Andreas Brekke</b>   |
| <b>ACADEMIC TITLE</b>   | Dr. Polit   |
| <b>POSITION</b>   | Associate Professor, Department of Business Administration, HVL.  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Cand. Polit., Political Science, University of Bergen, Norway May 1995</li> <li>▪ Dr. Polit., Political Science, University of Bergen, Norway, February 2005.</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><b>Main research fields.</b></p> <p>Science and technology studies, energy and climate politics, social and political theory. Relevant expertise related to the application concerns democratic governance of new technology, which was the subject of my PhD-thesis and of several other publications. It also includes energy and climate politics, where I have several recent publications and research projects.</p> <p><b>Ongoing and recent research projects (last 5 years)</b></p> <p>2016-2017: <i>Kommunal klimatilpasning i møte med ny kunnskap og komplekse beslutningsbehov</i> (Climate adaptation in municipalities – new knowledge and complex decisions) Commissioner: Regionalt forskningsfond /Hordaland Fylkeskommune. (project member).</p> <p>2015-2017: <i>Klimaservice i Hordaland</i> (Climate service in Hordaland). Commissioner: Regionalt Forskningsfond / Hordaland Fylkeskommune (Project member).</p> <p>2014-2016: <i>Science Communication: Actions and reactions to the 2009 swine flu outbreak.</i> Commissioner: The Research Council of Norway – Health and Care Services Programme. (Project member).</p> <p>2013-2015: <i>Kunst, Kulturbygg, Arena</i> (Art, Cultural Institution, Arena). Commissioner: Norsk kulturråd (Arts Council Norway). (Project manager / project member).</p> <p>2013-2015: <i>Evaluering av nettverk for forskning og kunnskapsutvikling om bruk av tvang i det psykiske helsevernet.</i> Commissioner: Directorate of health Norway. (Project manager).</p> <p>2013-2014: <i>Evaluering og omverdensanalyse av Nordisk Kulturfonds virksomhet.</i> Commissioner: Nordic Culture Fund, Copenhagen.(Project member).</p> <p>2012: <i>Evaluering av ny organisasjonsmodell ved Høgskulen i Volda.</i> (Project member).</p> |

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|   | <p>2011-2014: <i>Sustainable Grid development (Susgrid)</i>. Commissioner: The Research Council of Norway - Renergi - Programme. (Principal Investigator WP 1: "Grid development regimes in Norway, Sweden and Great Britain").</p> <p>2009-2013: <i>Governance for Renewable Electricity Production (GovRep)</i>. Commissioner: The Research Council of Norway - Renergi - Programme (Project member /Principal Investigator WP1: "An historic-institutional analysis of the licensing system for renewable electricity").</p>  |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Research management and administrative experience</b></p> <p>January 2012-May 2016: Research Manager, Research Group <i>Culture, Power and Meaning</i>, Uni Research Rokkan Centre</p> <p>Leadership courses:</p> <p>2012-2013: <i>Development Programme for Resarch Managers</i>, Uni Research AS-.</p> <p>2008-2016: Board member (employee representative), Uni Research AS.</p> <p><b>Reviewing activities (journals, grants)</b></p> <p><b>Reviewer:</b> <i>Biosocieties, Sosiologisk tidsskrift, Etikk I Prakis</i></p> <p><b>Master and PhD supervision</b></p> <p>PhD supervision:</p> <p>2007-2010: Supervisor doctoral thesis: Sølvi Marie Risøy Dr. polit 2010, Department of Administration and Organization Theory, University of Bergen.</p> <p>2008: Supervisor obligatory essay in theory of science for phd. Students at the Faculty of Social Sciences, University of Bergen</p> <p>Master supervision:</p> <p>Ongoing: Supervisor of 6 master students, Department of Business Administration, HVL.</p> <p>Previous: Department of Administration and Organization Theory, University of Bergen: Supervisor of two master theses (Jill Loga 1998), Helge Bjerknes (1998).</p> |

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| <b>NAME</b>           | <b>Arnt Fløysand</b>  |
| <b>ACADEMIC TITLE</b> | Dr.Polit  |
| <b>POSITION</b>       | <p>Professor in Human Geography, University of Bergen.</p> <p>Professor II Innovation Studies, Western Norway University of Applied Sciences.</p> |

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| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ M.Sc in Geography, University of Bergen, Norway, June 1990.</li> <li>▪ Dr. Polit (PhD), University of Bergen, Norway, June 1996</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p><b>Arnt Fløysand</b> is experienced in studies of development, economic restructuring and innovation in different regional contexts.</p> <p><b>Research projects and external funding 2012-2017</b></p> <ul style="list-style-type: none"> <li>• 2016-2019 ¿Quién es responsable del desarrollo local? Una geografía política del neoestructuralismo en "comunas de exportación". (FONDECYT, <i>Chile</i>). <i>International</i> collaborators: Pontificia Universidad Católica (Chile); University of Sheffield (UK)</li> <li>• 2015-2019 EMBRIC - European Marine Biological Research Infrastructure Cluster to promote the Blue Bioeconomy. (EU). <i>International</i>: Université Pierre et Marie Curie (France, coordinator + 23 European R&amp;D Universities/Research Institutions).</li> <li>• 2014-2016 Path development in different regional settings. Regional policy approaches in the global economy (RCN). <i>International</i> collaborators: Circle (Sweden), London School of Economic (UK), Orchestra (Spain).</li> <li>• 2013-2014 How can policy makers create industrial clusters? (RCN). (RCN). <i>International</i> collaborators: University of Wales (UK).</li> <li>• 2010-2013 Negotiating new political spaces: claims for redistribution and recognition in Chile and Bolivia. <i>International</i> collaborators: Pontificia Universidad Católica, (Peru), Pontificia Universidad Católica, (Chile).</li> <li>• <b>2010-2013 Planificando una monocultura: Actores y transformaciones territoriales en Chiloé frente al desarrollo de la salmonicultura.</b> (FONDECYT). <i>International</i> collaborators: Pontificia Universidad Católica (Chile), Victoria University (New Zealand).</li> <li>• 2011-2013 <i>Innovation in firms, networks and clusters</i>. (RCN).</li> </ul> <p><b>Invited scientific talks, presentations and tutorials</b></p> <ul style="list-style-type: none"> <li>• Pontificia Universidad Católica (Peru),</li> <li>• Universidad de Santiago de Compostela (Spain)</li> <li>• Universidad de Alicante, Universidad de Salamanca (Spain)</li> <li>• Universidad de Ferrol (Spain)</li> <li>• Pontificia Universidad Católica (Chile)</li> <li>• Universidad Nacional (Chile)</li> </ul> <p><b>Mobility and internationalization</b></p> <ul style="list-style-type: none"> <li>• Pontificia Universidad Católica (Peru-1996, 2000),</li> <li>• Universidad de Santiago de Compostela (Spain-1998),</li> <li>• Universidad de Alicante (Spain-2002),</li> <li>• Universidad de Salamanca (Spain-2004, 2014),</li> <li>• Pontificia Universidad Católica (Chile-2008, 2010, 2012, 2017), Victoria University (New Zealand-2015-2016)</li> <li>• Hosting numerous of academic collaborating visitors in sunshining Bergen.</li> </ul> |
| <b>Other relevant competence /</b>  | <b>Participation in international program committees, organizing committees and boards</b>   |

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| <b>experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <ul style="list-style-type: none"> <li>• Member of the FRISAM committee (RCN) (2008-2012), Chair (2012).</li> <li>• Program examiner (Tilsynssensor) Human Geography, University of Oslo (2008-2013).</li> <li>• Member of the Business Administration, Economics, Economic History, Human and Economic Geography, Statistics, Demography panel in the Swedish Research Council (2017).</li> <li>• Member of the program committee for the 10 the RIP Conference in Bergen</li> <li>• Co-editor Norwegian Journal of Geography (Taylor and Francis)</li> <li>• On the editorial board European Planning Studies (Taylor &amp; Francis)</li> </ul> <p><b>Research management and administrative experience</b></p> <ul style="list-style-type: none"> <li>• Project coordinator for 1 RCN projects (2010-2013).</li> <li>• Coordinator of the committee behind this application (2016-2017).</li> </ul> <p><b>Reviewing activities (journals, grants)</b></p> <ul style="list-style-type: none"> <li>• Journals: <i>Tijdschrift voor Economische en Sociale Geografie</i>, <i>Forum for Development Studies</i>, <i>European Planning Studies</i>, <i>Marin Policy</i>, <i>Geoforum</i>, <i>Journal of Rural Studies</i>, <i>Landscape Research</i>, <i>Globalization</i>, <i>Norwegian Journal of Geography</i>, etc.</li> <li>• Grants: Peder Sather Grant Awards, Meltzerfondet.</li> </ul> <p><b>Master and PhD supervision</b></p> <ul style="list-style-type: none"> <li>• Bachelor: 300</li> <li>• Master: 50</li> <li>• PhD thesis: 6</li> </ul> <p><b>Evaluation committees</b></p> <ul style="list-style-type: none"> <li>• PhD: 10</li> <li>• Ass. Prof: 8</li> <li>• Professor: 7</li> </ul> |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics  | <b>Courses attended</b><br>University-pedagogic didactic course, University of Bergen 1996.   |

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| <b>NAME</b>           | <b>Geoffrey Sean Gilpin</b>   |
| <b>ACADEMIC TITLE</b> | Philosophiae Doctor Environmental Physics and Renewable Energy  |
| <b>POSITION</b>       | Associate Professor   |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ M.Sc in Mechanical Engineering, University of Applied Sciences Aachen, Germany 06/2006.</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>Ph.D in Environmental Physics and Renewable Energy, University of Life Sciences (NMBU), Norway 11/2017.</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b>  | <p><b>Geoffrey Gilpin</b> is the program coordinator for the Renewable Energy Program at the Western Norway University of Applied Sciences (HVL). Gilpin worked as a researcher at NMBU (2006-2008) and at the Western Norway Research Institute (WNRI) (2008-2015) in the fields of renewable energy and sustainability assessment. Additionally, he has been head of the Social Sciences Environmental Research Group at WNRI in the period 2013 to 2015.</p> <p><b>Invited scientific talks, presentations and tutorial</b><br/>Andersen, O., Hille, J.C., <b>Gilpin, G.</b>, Andrae, A. (2014) Life cycle assessment of electronics. Paper presented at IEEE Technologies for Sustainability (SusTech), Portland.</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>Utilization of CRT waste glass in the glass tiles manufacturing process – developing technological parameters. EEA grants. (2013-2015) WNRI with Institute of Ceramics and Building Materials, Poland.</li> <li>Influence of bioethanol fuels treatment for operational performance, ecological properties and GHG emissions of spark ignition engine. EEA grants. (2013-2015) WNRI with Oil and Gas Institute- National Research Institute, Poland.</li> <li>Functional joining of dissimilar materials using directed self-assembly of nanoparticles by capillary-bridging. EU Commission. (2013-2015) WNRI with Sintef, IBM, Intrinsiq Materials, Conpart, AMIC, LORD, Fraunhofer, Technical University of Chemnitz.</li> <li>Development of a new process for the production of solar cells – SOLNOWAT. EU Commission. (2011-2013) WNRI with Fraunhofer, Alyxan, Solartec Nines PV.</li> </ul> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>International Energy Agency - Alternative Motor Fuels – Norwegian Observer (2010-2011).</p> <p>International Society for Industrial Ecology – Student Board Representative (2010-2011).</p> <p><b>Research management and administrative experience</b><br/>Program Coordinator - Renewable Energy Program – Western Norway University of Applied Sciences (2016-present).</p> <p>Head of Environmental Research – Western Norway Research Institute (2013-2015).</p> <p><b>Reviewing activities (journals, grants)</b><br/>Regular reviewer for the Journal of Cleaner Production (level 2), 1+ articles per year since 2013.</p> <p><b>Bachelor, Master and PhD supervision</b></p>   |

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|   | <p>Kleiven, E., Vindedal, H.S. (2017). Micro-algae cultivation in smolt run-off water as a means of bioremediation (bachelor thesis)</p> <p>Eie, M.B., Olsen, M.S., Trovåg, Ø.N. (2017). Determining the carbon-footprint of student life in Sogndal, Norway (bachelor thesis)</p> <p>Løken, E., Magnhildoen, E., Tinnes, S. (2016). Used cooking oil for biodiesel production in Sogn and Fjordane (bachelor thesis)</p> <p>Boge, B.O., Fedje, R., Johnsen, S.(2016). Carbon footprint of household consumption in Sogndal (bachelor thesis).</p> <p><b>Evaluation committees</b><br/>In his role as Program Coordinator (HVL 2016-present) and Head of Environmental Research (WNRI 2013-2015), Geoffrey Gilpin has been a member of numerous evaluation committees: 4 researcher-, 2 Assoc. Prof.- and 1 Post-doctor position(s).</p> <p><b>Industrial experience</b><br/>In his role as researcher (NMBU 2006-2008, WNRI 2008-2015, HVL 2015-present), Geoffrey Gilpin has collaborated on numerous research projects with industry, e.g. Sogn and Fjordane Energy, Sognekraft, Statkraft, IBM, Sintef, Intrinsiq Materials, Conpart, AMIC, LORD, Alyxan, Solartec, Nines PV etc.</p> |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <p><b>Other relevant competence</b></p> <p>Currently responsible for teaching:<br/>FE402 – Laboratory in Renewable Energy (HVL, bachelor)<br/>FE404 – Mathematics for Renewable Energy (HVL, bachelor)<br/>FE407 – Technical aspects of renewable energy (HVL, bachelor)<br/>PL4302 – Towards a low emissions society (HVL, masters)</p>  |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <p><b>Digital competence</b><br/>Microsoft Office Professional, SimaPro LCA software, Matlab, AutoCad, Cobham - Vector Fields (advanced finite element multi-physics design software for electromagnetic systems)</p>   |

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| NAME           | <b>Erling Holden</b>  |
| ACADEMIC TITLE | Dr.-Ing   |
| POSITION       | <ul style="list-style-type: none"> <li>• Professor in renewable energy at HVL</li> <li>• 20% position: Professor II at TIK Centre for Technology, Innovation and Culture, University of Oslo</li> </ul>                                   |
| EDUCATION      | <ul style="list-style-type: none"> <li>• Dr.-Ing in Urban Design and Planning, Norwegian University of Science and Technology (NTNU), Norway, February, 2002</li> <li>• M.Sc in Mechanical engineer, NTNU, Norway, April, 1988</li> </ul> |



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| <p>Research and Development work within the last five years prior to application deadline</p> | <p>Holden has worked with issues related to energy, transport and sustainable development since 1988, combining three different theoretical perspectives: technological-oriented environmental studies, sociological and socio-psychological behavioral studies, and physical planning studies. Since 2008, he has also worked with projects related to renewable energy projects' impacts on local economies, local societies, and local environments in pursuing a sustainable transition of the energy system.</p> <p><b>Research projects and external funding (selection)</b></p> <ul style="list-style-type: none"> <li>• 2014-2018: Renewable Energy Projects: Local Impacts and Sustainability (Release).<br/><i>Financing:</i> 25 MNOK - RCH, private businesses and public authorities<br/><i>International collaborators:</i> Oxford University Centre for the Environment, Aalborg University</li> <li>• 2011-2018: Centre for Sustainable Energy Studies (CenSES)<br/><i>Financing:</i> 243 MNOK - RCH, private businesses and public authorities<br/><i>International collaborators:</i> Oxford University Centre for the Environment, Aalborg University</li> <li>• 2011-2014: Fornybar energi, innovasjon og regional utvikling.<br/><i>Financing:</i> 10 MNOK – Den Interkommunale Næringsretta Utviklingsordninga (INU).</li> <li>• 2011-2014: Renewable Energy Transition (RenTrans).<br/><i>Financing:</i> 11 MNOK - RCH<br/><i>International collaborators:</i> Imperial College Business School, Linköping University, Utrecht University</li> <li>• 2011-2014: Social Enterprises in Community Renewable Energy.<br/><i>Financing:</i> 20 MNOK – EUs Northern Periphery Programme<br/><i>International collaborators:</i> Finnish Forest Research Institute, Lews Castle College, UHI, Scotland, Innovation Center, Iceland</li> <li>• 2008-2013: Renewable Energy Programme (REP)<br/><i>Financing:</i> 11 MNOK – private businesses and public authorities</li> </ul> <p><b>Invited scientific talks, presentations and tutorials (selection)</b></p> <ul style="list-style-type: none"> <li>• Sustainable mobility: the concept and its implications, NorRen Summer School 2016: The Norwegian sustainable energy system, Sogndal, August 10th 2016</li> <li>• What's wrong with the sustainable development goals? Oxford University Centre for the Environment, University of Oxford, 18 November 2015.</li> <li>• Sustainability and travel, Bartlett Planning School, University College London, 3 November 2015 (with Kristin Linnerud).</li> <li>• Sustainable Development: Main goals, indicators and 2030 thresholds, the 10th Conference on Sustainable Development of Energy, Water and Environment Systems, September 27 - October 3, 2015, Dubrovnik, Croatia.</li> <li>• The use of renewable energy cooperation mechanism. Evidence from hydropower projects in Norway, Sustainable Energy Policy and</li> </ul> |
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|   | <p>Strategies for Europe, October 28-31, 2014 in Rome, Italy, University of Rome (with Kristin Linnerud).</p> <ul style="list-style-type: none"> <li>• Sustainable transport and the troublesome leisure travel, Bartlett Planning School, University College London, 17 March 2014 (with Kristin Linnerud)</li> </ul> <p><b>Mobility and internationalization</b></p> <ul style="list-style-type: none"> <li>• 2016: Oxford University, Transport Studies Unit (6 weeks).</li> <li>• 2015: University College London, Bartlett School of Planning (1 week).</li> <li>• 2015: Oxford University, Transport Studies Unit (2 months).</li> <li>• 2014: Imperial College London (3 weeks).</li> </ul>   |
| Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable): | <p><b>Research management and administrative experience</b></p> <p><i>Research management:</i> Manager of Release; Censes (WP4.3); INU, REP</p> <p><i>Administrative positions:</i> Head of renewable energy program, HVL</p> <p><i>Master programs:</i> Development of Climate Change Management, HVL</p> <p><i>Other:</i> Leader of developed of NTNU Sustainability; strategic interdisciplinary university program</p> <p><b>Reviewer assignments</b></p> <p>Transportation research Part A: Policy and Practice; Urban Studies; Landscape and Urban Planning; Journal of Housing and the Built Environment; Housing Studies; Environmental Science &amp; Technology; Energy Policy; Journal of Sustainable Tourism; International Journal of Sustainable Energy Planning and Management</p> <p><b>Master and PhD supervision</b></p> <p><i>PhD:</i> O.I. Gjerald, B.J. Rygg, G. Gilpin, T. Weaver, J-E. Stavø (all at HVL)</p> <p><i>Master:</i> Several at TIK Centre for Technology, Innovation and Culture, UiO</p> <p><b>Evaluation committees</b></p> <p><i>Phd:</i> Hà Thi Bích Pham (UiO TIK, 2016); Hilde Nykamp (UiO TIK, 2017)</p> <p><b>Industrial experience</b></p> <p>Collaborated with industry in several research projects in which industry has granted 20 MNOK (2007-2017)</p> |

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| <b>NAME</b>   | <b>Kristin Linnerud</b>  |
| <b>ACADEMIC TITLE</b>   | Research professor (Forsker 1).  |
| <b>POSITION</b>   | Research professor (Forsker 1) at CICERO. She is part of a strategic research program (RELEASE) for HVL, and is currently applying for a 2-year Professor position in Renewable and Sustainable Energy at HVL/Sogndal.   |
| <b>EDUCATION</b>  | Linnerud has a Ph.D in economics from NHH Norwegian School of Economics (2008) and a M.Sc in finance, LSE London School of Economics and Political Science (1990).   |
| <b>Research and Development work within the last five years prior to application deadline</b> | Linnerud has research expertise in how policy instruments can be designed to direct development and deployment of clean technologies in the power sector. She uses real options theory to examine how uncertainty about future renewable energy policies affect investment decisions made today. Then, she applies statistical methods to historical |

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|  | <p>data to assess whether investors behave as predicted and to examine what other barriers may prevent them from investing in renewables.</p> <p>Another research topic is Sustainable development. Linnerud has focused on how to define, measure and operationalize the concept at a global and national level. In an ongoing research project (RELEASE), the focus is on the local impacts of renewable energy projects. Her contribution is on how to define and measure environmental limits using economics, and the role of uncertainty and irreversibility in this respect.</p> <p>Linnerud has a co-author of the book: <i>The Imperatives of Sustainable Development: Needs, Justice, Limits</i>, published by Routledge this summer.</p> <p><b>Research projects and external funding (selection)</b></p> <p>Linnerud led an interdisciplinary research project on the impacts of climate change on the power sector involving 9 national and international research institutions (CELECT). Linnerud has initiated and developed two research projects on policy uncertainty and investment risk in the power sector (PURELEC, RISKY-RES). She has been leading these projects together with the project owner Professor Stein-Erik Fleten at NTNU, institute of industrial economics and technological management. She has also contributed to the successful funding of the 25 million NOK strategic research program <i>Renewable Energy Projects: Local Impacts and Sustainability</i> (RELEASE). Here, she is leading the work package on economic impacts and is a co-supervisor for a PhD student. These projects are all funded by the Research Council of Norway and the energy sector. Important international collaborators are Oxford University, London School of Economics and the University of Copenhagen.</p> <p><b>Invited scientific talks, presentations and tutorials (selection)</b></p> <p>Linnerud has been specially invited to University of St. Gallen (Switzerland), University College London/UK Energy Research Centre (UK), Manchester University (UK) and CPB Netherlands Bureau for Economic Policy Analysis (Netherlands) to hold <i>guest lectures</i> on investment in renewable energy under policy uncertainty. Linnerud has been invited by the University of St. Gallen to help organize and have lectures at the <i>Summer school for PhD students</i> in June 2017 in Estland. The topic is Sustainable transition. Linnerud has given several guest lectures at bachelor and master courses in Norway on how policies can direct technology development and deployment. Worth mentioning is the lecture 'Innovation policy for directing technical change in the power sector' for Master students at University of Oslo/TIK in 2017. Linnerud has, together with Erling Holden, been specially invited to give lectures on sustainability at the Master program: <i>Transport and city planning</i> at University College London/Bartlett School of Planning. A paper published in Urban Studies (Holden and Linnerud, 2013) has for some years been part of the curriculum here.</p> <p><b>Mobility and internationalization</b></p> <p>Linnerud has been a visiting researcher at Oxford University Centre for the Environment, UK (2 months in 2015 and 3 months in 2016), London</p> |
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|  | Business School, UK (1 month in 2014) and Oxford Institute for Sustainable Development, Oxford Brookes University, UK (1 year in 2005/2006).   |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Research management and administrative experience</b><br/>Linnerud has since 2008 been a member of the committee for the Bachelor program: <i>Renewable energy</i> at the Sogn og Fjordane University College. In 2014- 2016 she was a member of the stakeholder advisory board for the planned Master program: <i>Climate change management</i> at the Sogn og Fjordane University College. Linnerud was a deputy director in finance and human resources at the Sogn og Fjordane University from 1995-2001. She has held board memberships in the industry. Linnerud has assisted developing both bachelor and master programs. Linnerud was Program director for the Bachelor program: <i>IT and economics</i> at Sogn og Fjordane University College in the years 2001-2004. Finally, she has experience from leading research projects. <b>PhD supervision:</b> Linnerud is a co-supervisor for the PhD-student Jorunn Elisabeth Stavø (Norwegian University of Life Sciences, Faculty of Environmental Sciences and Natural Resource Management). She has been a co-supervisor for the PhD-student Lars Ivar Hagfors (2014-16) (Norwegian University of Science and Technology (NTNU), Faculty of Industrial Economics and Technology Management). In 2013, she was hired by NTNU to help assist PhD student Ane Marte Andersson in completing her PhD dissertation (NTNU, Faculty of Industrial Economics and Technology Management). <b>Evaluation committees:</b> Linnerud was part of the PhD committee for Erik Haugom (NTNU, Norway, Faculty of Economics) in 2014. The same year, she headed a commission for expert assessment of applicants for an associate professor position in economics/finance at the Sogn og Fjordane University College.</p> <p><b>Industrial experience</b><br/>Linnerud has for 12 years (2002 – 2015) been a board member in a vertically integrated power company (SFE). She has for three years (2002-2005) been a board member in a producer of aluminium wheels (Fundo). She has also work experience from a petroleum company (Saga Petroleum) where she worked as an analyst in the Department of gas sales contracts.</p> |
| <b>Relevant digital competence</b>   | Linnerud uses data programs in her research and teaching.  |

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| <b>NAME</b>   | <b>Inge Thorsen</b>  |
| <b>ACADEMIC TITLE</b>   | Dr. Philos   |
| <b>POSITION</b>   | Professor (2007) of economics at Stord/Haugesund University College.   |
| <b>EDUCATION</b>  | Doctor of Philosophy (Dr. Philos) in Economics, at the University of Bergen, 1999.<br>Master of Economics at the University of Oslo, 1983.   |
| <b>Research and Development work within the last five years prior to application deadline</b> | For more than 20 years, I have been doing research on problems related to regional development, spatial interaction, regional labour markets, transportation, and housing markets. Over this period, I have regularly been publishing papers in these areas of research, many of them in highly ranked journals in transportation economics, as well as in regional and urban science. |

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|   | <p>Research projects and external funding</p> <p>In the period 2008-2010, I was responsible for carrying through a project (182639/V10) on Modeling Regional Development, which was financed by the Research Council of Norway. The project aimed at developing a comprehensive modelling framework for studying problems related to regional economic development.</p> <p>Over the last 5 years, I have participated in the project program "Crisis, Restructuring and Growth" at NHH, and the project "Neighbourhoods at risk: Residential mobility and neighbourhood tipping".</p> <p>Presentations at conferences and workshops</p> <p>I have regularly been presenting papers at international conferences and workshops, such as ERSA (European Regional Science Association) conferences, RSAI (Regional Science International) conferences, as well as conferences and workshops arranged by NECTAR and the Nordic Research Network on Modelling Transport, Land Use and the Environment (TLE).</p>  |
| <b>Other relevant competence / experience</b> | <p>Participation in organizing committees</p> <p>I was the local organizer of the Sixth Workshop in the Nordic Research Network on Modelling Transport, Land-Use and the Environment, September 27-29, 2002, Stord/Haugesund University College.</p> <p>Reviewing activities</p> <p>I frequently serve as a reviewer in international journals. I have been reviewing papers submitted for publication in Statsøkonomisk Tidsskrift (now Norsk Økonomisk Tidsskrift), Journal of Regional Science, Environment and Planning A, Annals of Regional Science, Journal of Transport Geography, Journal of Urban Economics, Norwegian Journal of Geography, The Review of Regional Studies, Network and Spatial Economics, Transportation Research Part A: Policy and Practice, Regional Studies, Samfunnsøkonomen, and EE-NECTAR book on "Accessibility and spatial interaction"</p> <p>PhD supervision</p> <p>I have been supervising two phd-students (David McArthur and Sahar Babri) at the Norwegian School of Economics.</p> <p>Evaluation committees</p> <p>I have participated in committees evaluating applicants for positions as associate professors, and also for Phd scholarship positions.</p> <p>Industrial experience and research for decision makers in private and public sectors</p> <p>I have conducted applied research projects for different government committees and local authorities. In the period 1988-1993 my research was primarily concentrated to conduct projects in evaluating specific aspects of the economy in Nord-Rogaland and Sunnhordland. In 2001 I was involved in a project made for Maritime Forum and Norwegian Shipowners' Association, focussing on the maritime cluster in the Nord-Rogaland/Sunnhordland. In 2003, I was involved in a project made for the Ministry of Local Government and Regional Development, offering a general, theoretical evaluation of investments in road infrastructure. In 2003, I was in addition employed by local authorities in Haugesund to evaluate a report from Veritas on the impact of a relocation of the Norwegian Maritime Directorate from Oslo to Haugesund. In 2010, I was</p> |

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|  | employed to do a report for the Ministry of Local Government and Regional Development on commuting flows for highly educated workers (Kompetansearbeidsplassutvalget).                                       |
| <b>Relevant pedagogical competence</b><br><b>University-pedagogic, didactics</b> | Relevant pedagogical competence<br><br>I have been teaching at universities and colleges for about 35 years. My teaching experience includes calculus, statistics, and a wide range of courses in economics. |

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| <b>NAME</b>   | <b>Liv Osland</b>  |
| <b>ACADEMIC TITLE</b>   | Professor  |
| <b>POSITION</b>   | Professor at the Western Norway University of Applied Sciences, Campus Haugesund.  |
| <b>EDUCATION</b>  | PhD in Economics, University of Bergen, Norway, June, 2008.  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>My research interests are rooted in housing markets and how they interact with other markets, such as labour markets and transport in a regional setting. In cooperation with other national and international scientist I have published papers on issues concerning regional development, providing input to the evaluation of public and private investment projects, and to spatial econometric modelling from an applied perspective.</p> <p><b>Research projects and external funding</b></p> <p>2012-2015      Participation in research project finance by NFR. Name of project: Neighbourhoods at risk: Residential mobility and neighbourhood tipping. Project number: 217210/H20.</p> <p>2011-2012      Scientifically and administrative responsible for carrying out the application and the completion of sub-project financed by NFR (MAROFF). Name of WP: <b>Evaluating measures to reduce air emissions in large port cities.</b> Name of overall project: Development of hybrid power generating system for Electrical Power Supply Ship. Project number: 210674/O70.</p> <p><b>Invited scientific talks, presentations and tutorials</b></p> <p>I regularly participate in and have presentations on international scientific conferences, such as NECTAR International Conferences and cluster meetings, European Regional Science Association (ERSA) conferences, Regional Science Association International (RSAI) conferences. Below is a list of arrangements I have attended:</p> <p>NECTAR, Cluster 4 meeting in Stockholm, 2014; NECTAR International Conference (XII), University of Azores, São Miguel Island 2013; European Regional Science Association (ERSA) Conference, Palermo 2013; Annual Meeting of the Norwegian Association of Economists, Stavanger 2013; World Congress (9) of the Regional Science Association International (RSAI), Timisoara 2012.</p> <p><b>Mobility and internationalization</b></p> |



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|  | Cooperation with teaching personnel at the University of Glasgow Caledonian since 1999 to date. Visits at the University of Glasgow, in April and December 2008 in connection with research collaboration with Professor Gwilym Pryce from 2008-2014.   |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p>Since 2010 and to date I have been a coordinator in NECTAR, Network of European Communications and Activities Research, Cluster 4: Travel, Migration, Housing and Labour markets (see: <a href="http://www.nectar-eu.org/">http://www.nectar-eu.org/</a>).</p> <p>2016 Working out a call and part of scientific committee, NECTAR Cluster 4 Special Session at the NECTAR XIV International Conference, Madrid, 2017.</p> <p>2015 Planning and working out a seminar to disseminate research from the NFR-project: Neighbourhood at Risk (217210/H20) to the general public.</p> <p>2014 Working out a call and organizing a NECTAR Cluster 4 Special Session at the 10<sup>th</sup> international world congress of the Regional Science Association International (RSAI) in Thailand, 2014. The congress was cancelled in the last minute because of a military coup.</p> <p>2013 Working out a call and organizing a Cluster 4 Special Session at the NECTAR XII International Conference at the Azores, May 2013. In all 18 papers were presented.</p> <p><b>Research management and administrative experience</b></p> <p>Guest editor in the journal of <i>Urban Studies</i> during the process of publishing a Special Issue in Urban Studies, 51(3), 2014. The title of the Special Issue: "Commuting, migration, housing and labour markets: Complex interactions". It contains 7 papers and an editorial introduction.</p> <p>From autumn 2016: appointed member of a committee of the Norwegian Association of Higher Education Institutions (NRØA).</p> <p>1989-1993: Head of studies, BI Norwegian Business School, Haugesund.</p> <p><b>Reviewing activities (journals)</b></p> <p>Reviewer in Environment and Planning A, Land Use Policy, Ecological Economics, Economic Geography, Journal of Family and Economic Issues, The Annals of Regional Science, Journal of Transport Geography, Urban Studies, Norsk Økonomisk Tidsskrift, Networks and Spatial Economics, Urban Geography, Spatial Economic Analysis, Journal of Real Estate Research, Real Estate Economics, Journal of Housing and the Built Environment, Housing Studies, Journal of Property Research, Empirical Economics, Letters in Spatial and Resource Sciences, Journal of Applied Geography, Journal of Environmental Planning and Management.</p> <p><b>Master and PhD supervision</b></p> <p><i>Master thesis:</i> Informal co-supervisor for Christine Olsen Schei, master student at the Norwegian School of Economics (NHH), 2015.</p> <p><i>PhD-thesis:</i> Guidance of Ignas Gostautas (Nottingham Trent University) during his visit at the Stord/Haugesund University College in August 2013. The discussion topic was spatial econometric modelling, which is an integral part of his PhD thesis on the UK Office Market.</p> |



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|   | <p><i>PhD-thesis:</i> Internal supervisor for associate professor Øivind Andre Aase's PhD-project from January 2015. The thesis is part of a project at the Norwegian School of Economics (NHH) which empirically studies impacts of taxation of capital in Norway.</p> <p><b>Evaluation committees</b><br/>Main opponent in a licentiate seminarium in Stockholm, KTH Royal Institute of Technology School of Architecture and the Built Environment. Candidate: Herman Donner. Title of thesis: Two essays on sales of distressed real estate. (2015)<br/>Member of a grading committee for the dissertation of Johan P. Larsson (2014). Title of thesis: "Non-market interactions and density externalities". The committee was set up by Jönköping International Business School, Jönköping University. Contact: Professor Johan Klaesson (2014).</p> <p><b>Industrial experience</b><br/>Scientifically and administrative responsible for carrying out the application and the completion of sub-project financed by NFR (MAROFF). Name of WP: <b>Evaluating measures to reduce air emissions in large port cities</b>. Name of overall project: Development of hybrid power generating system for Electrical Power Supply Ship. Project number: 210674/O70.</p> |
| <p><b>Relevant pedagogical competence</b><br/>University-pedagogic, didactics</p> | <p><b>Courses attended</b><br/>Pedagogical Education, University of Bergen, 30 credits, 1991.</p>  |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>  | <p>Competence in relation to applying relevant software for my empirical research (mainly Stata, R, excel, QGIS). As is the case for most lecturers at my institution I use the learning platform Fronter when communicating with students.</p>  |

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| <b>NAME</b>           | <b>Bente Johnsen Rygg</b>   |
| <b>ACADEMIC TITLE</b> | <b>Ph.D.</b>  |
| <b>POSITION</b>       | <b>Associate professor</b>  |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ M.Sc in political science, Norwegian University of Science and Technology, Norway, June 2005.</li> <li>▪ Ph.D, Norwegian University of Science and Technology, Faculty of Humanities, Norway, April 2015. Renewable Energy as a Community Concern: How Local Communities Face the Challenge of Increasing Use and Production of Renewable Energy.</li> </ul> |

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| <b>Publications</b>  | Rygg, Bente Johnsen (2014). Paving the way for heat. Local government policies for developing bioenergy in Norway. International Journal of Sustainable Energy Planning and Management (4) 57-70.<br>Rygg, Bente Johnsen (2012). Wind power – an assault on local landscapes or an opportunity for modernization? Energy Policy 48 (167-175).<br>I have contributed to the RELEASE application, and I am the leader of a work package in this project concerning small-scale hydropower projects and the role of ownership. |
| <b>Research projects and external funding</b>                | Censes annual conference, Oslo. Local government's engagement with bioenergy. 29.11.2012.   |
| <b>Invited scientific talks, presentations and tutorials</b> | Visiting Ph.D student at Aalborg University, department of planning, June-July 2012   |
| <b>Mobility and internationalization</b>                     |   |
| <b>Research management and administrative experience</b>     | <ul style="list-style-type: none"> <li>▪ Member of the R&amp;D board at dep. of natural science (2016 – d.d.).</li> <li>▪ Member of the study plan committee of Master in Climate Change Management (2014 – 2015).</li> <li>▪ Member of the study plan committee for bachelor degree in Renewable Energy (2009 – 2010).</li> </ul>  |
| <b>Reviewing activities (journals, grants)</b>               | <ul style="list-style-type: none"> <li>▪ Referee for Fagbokforlaget, chapter in the book «Innovasjonsøkosystem».</li> <li>▪ Referee for Energy Policy, one paper concerning wind power.</li> </ul>  |
| <b>Master and PhD supervision</b>                            | Co-supervisor for Ph.D student Gunnar Yttri related to RELEASE, until the fall of 2016.   |
| <b>Evaluation committees</b>                                 | Member of the evaluation committee for the position as associate professor in economics for renewable energy  |

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| <b>NAME</b>           | <b>Valeria Jana Schwanitz</b>   |
| <b>ACADEMIC TITLE</b> | Dr. rer. pol.   |
| <b>POSITION</b>       | Associate Professor/første amanuensis (economics for renewable energy and climate change)                                       |
| <b>EDUCATION</b>      | <ul style="list-style-type: none"> <li>▪ Bachelor in Physics (Vordiplom-Physik), University of Rostock, August, 1995</li> </ul> |

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|   | <ul style="list-style-type: none"> <li>▪ Master in Physics (Diplom-Physiker), University of Rostock, August, 1998</li> <li>▪ Master in Economics (Diplom-Wirtschaftsphysiker), University of Hagen, Germany, March, 2004</li> <li>▪ Dr. rer. pol (PhD) in Economics, University of Rostock, Germany, January, 2011</li> </ul>  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>My research is data- and model-driven with applications ranging from environmental economics, technological change, energy system analysis to integrated assessment of climate change.</p> <p><b>International research stays &amp; projects (since 2012):</b></p> <p>10/2016-01/2017 Okinawa Institute of Science &amp; Technology, University of the Ryukyus &amp; Osaka University, <b>Japan</b>: Guest Researcher (HVL mobility grant)</p> <p>Since 03/2015: Participation in international <b>RELEASE-project financed by Research Council of Norway</b>: Renewable Energy Projects: Local Impacts and Sustainability</p> <p>07/2015-09/2015 Contracted expert for German consultancy adelphi research (20%): Request to draft parts for the new Environmental Research Plan of the German Environmental Protection Agency. Tender "Economic potential of climate protection" with focus on innovation policies.</p> <p>02/2011-06/2013: Post-doc at the <b>Potsdam-Institute of Climate Impact Research</b>, Potsdam, Germany: scientific coordination of <b>EU FP7 project</b> "Assessment of Climate Change Mitigation Pathways and Evaluation of the Robustness of Mitigation Cost Estimates" (AMPERE) with <b>22 international partners</b>. Lead of work package on model validation. From 07/2013-06/2015 guest researcher.</p> <p><b>Research grants (prior to 2012):</b> Japanese Association of University Women (Kyoto University, Japan), German Academic Exchange Service (Osaka and Kyoto University, Japan)</p> <p><b>Relevant invited &amp; conference talks:</b></p> <p>Osaka University, Center for Atomic and Molecular Technologies: The world in 2050 – How to project what can't be projected (01/2017)</p> <p>IEAA Conference in Bergen: Expectations About Cost Developments of Energy Technologies (06/2016)</p> <p>IEAA Conference in Bergen: Extrapolated Trends versus Energy Model Projections -- Global Distribution Dynamics Derived from Regional Kaya Decomposition (with August Wierling, 06/2016)</p> <p>Real Option Workshop - ROW 15, Lappeenranta, Finland: Is geoengineering a real option? (08/2015)</p> |

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|  | <p>Invited lecture at Sustainable Summer School "Exploring ways for sustainable transformation in a limited world", Wuppertal, Germany: The way of travelling - some thoughts on practical sustainability solutions (09/2015)</p> <p>19th Annual International Conference on Real Options: Offshore Wind Park Investment with Feed-in Tariffs under the German Renewable Energy Act. (06/2015)</p> <p><b>Prior to 2012:</b><br/>Working as a researcher at the Technical University of Dresden, International Graduate School IHI Zittau, I was responsible to initiate and develop cross-border research and education projects. Leading over 10 applications, I was able to win &lt; 1 Million Euro project funding in total from various national and European funds (2004-2006).</p> |
| <b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b> | <p><b>Reviewing activities (journals, reports): e.g.</b> Energy, Energy Policy, Environmental Science and Modelling, Science of the Total Environment, International Journal of Transport, IPCC AR5</p> <p><b>Experience with EU funding programs:</b><br/>01/2008-12/2009 Project and Communication Officer for EU Regional Development Funds at the Investitionsbank Schleswig-Holstein, Germany</p> <p>Since 2010 external advisor and assessor of projects/project applications for various EU funding programs (e.g. South Baltic Cooperation Program, Horizon 2020)</p>  |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics  | None   |
| <b>Relevant digital competence and courses/knowledge about E-learning</b>  | <p><b>Digital competences</b></p> <ul style="list-style-type: none"> <li>• Programming languages and statistical computing (e.g. C/C++, R).</li> </ul>   |

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| <b>NAME</b>   | <b>Tom Skauge</b>   |
| <b>ACADEMIC TITLE</b>                                     | Associate Professor   |
| <b>POSITION</b>   | Head of Business Administration Department, Western Norway University of Applied Sciences, Campus Bergen.   |
| <b>EDUCATION</b>  | <p>1986 Cand. Polit., Department of Administration and Organization Theory, University of Bergen</p> <p>2002 Dr. Polit., Department of Administration and Organization Theory, University of Bergen</p>     |
| <b>Research and Development work within the last five</b> | My research and development work on green innovation has an educational and a research path. As academic coordinator for two master's – MSc in Innovation and entrepreneurship and Master in Innovation and |

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| <b>years prior to application deadline</b> | <p>Master in Innovation and Management – Social Science Track, we have facilitated courses and master thesis on green innovation, green technology and organization and competence building for climate change. The masters are organized in close cooperation with Mohnsenteret and with scholars from several engineering departments at HVL. This year we launched a new course on renewable energy (7.5 ECT) and engage aprox. 50 master students on data collection on two research project – one on green ferry technology revolution in the county of Hordaland and one on solar energy from houses. More than 10 master students has submitted thesis on theme relevant for green energy.</p> <p>My relevant research has two axis: One is responsible business, ethics and CSR. I am co-editor of a popular textbook for Business Administration in Norway: Ethics for decision makers in which the triple bottom line is important covering environmental issues. I am leader of National Network on Professional Ethics (<a href="http://www.profesjonsetikk.no/">http://www.profesjonsetikk.no/</a>) and also leader of the standing committee of Business Ethics and CSR in National Council for Economic Administrative Education. The last 5-6 years responsible organizer of the Faculty week on CSR for engineering students and students on business administration.</p> <p>The other research axis is green energy focusing governance, management, organizing, business models, competence and professionalization. Member of the research group on Transition to sustainable energy systems in emerging economies: A South African focused comparative project with South African and Norwegian Research Council – SANCOOP (2013-2016). The research in cooperation with master students covers Brazilian institutions promoting wind energy technology and jobs from solar industry in Norway and Germany.</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>- Transition to sustainable energy systems in emerging economies: A South African focused comparative project with South African and Norwegian Research Council – SANCOOP (2013-2016). With University of Cape Town and University of Bergen.</li> <li>-Research Fellow (20%): Identity Formation or Knowledge Shopping? A Comparative Study of University Education and Research. <i>The Research Council of Norway</i> (2002 – 2005)</li> <li>-Member of Research Group: Shaping Research Universities in Nile Basin Research Programme [<a href="http://nile.uib.no">http://nile.uib.no</a>] (2008 – 2010)</li> <li>-Invitation as external lecture for several years at Stord / Haugesund University College on Ethics and CSR.</li> <li>- Key Note speaker at the seminar for Defence Staff Norway, Akershus des 2016.</li> </ul> |
| <b>Other relevant competence /</b>         | <b>Participation in international program committees, organizing committees and boards</b>  |

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| <p><b>experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><i>Leader of National Network on Professional Ethics (<a href="http://www.profesjonsetikk.no/">http://www.profesjonsetikk.no/</a>) and also leader of the standing committee of Business Ethics and CSR in National Council for Economic Administrative Education.</i></p> <p><b>Research management and administrative experience</b></p> <p>2017 Head of Business Administration Department, Western Norway University of Applied Sciences, Campus Bergen.</p> <p>2013 -2016 Member of organizing committee for doctoral programme at Bergen University College: PhD in Innovation with Profession and Societal perspective.</p> <p>2013-2017 member of Faculty Committee on Research</p> <p>2009- Associate Professor (20%), <b>Faculty of Mathematics and Natural Sciences, University of Oslo</b></p> <p>2008 Course leader, Professions and Societal Development, PhD-course in Bergen Summer Research School. Organized by FORPRO, <i>Bergen University College</i> and Knowledge and Politics, <i>University of Bergen</i></p> <p>2006 - 2008 Scientific Director, <i>Comparative Research Programme on Poverty (CROP)</i> [<a href="http://www.crop.org">www.crop.org</a>]</p> <p>2006 - 2007 Vice Rector, <i>Bergen University College</i> [<a href="http://www.hib.no">www.hib.no</a>]</p> <p>2006 - 2008 Board Chair, Project Innovation Competence of behalf of <i>University of Bergen, Norwegian School of Economics and Business Administration</i> and <i>Bergen University College</i></p> <p><b>2001 - 2005 Head of Section, The Norwegian Centre for International Cooperation in Higher Education (SIU)</b></p> <p><b>Reviewing activities (journals, grants)</b></p> <p>Human Relations Journal</p> <p>Professions and Profesionalization</p> <p>Svensk historisk tidsskrift</p> <p>Fagbokforlaget</p> <p><b>Master and PhD supervision</b></p> <p>2-3 students spring semester. Two PhD-students.</p> <p><b>Evaluation committees</b></p> <p>- External examiner on a the PhD thesis submitted to the University of Cape Town fall 2017. Ms M Van Der Merwe. Energy transitions: the case of South African electric security.</p> <p>External Examiner, PhD, University of Nordland. (2010)</p> <p><b>Industrial experience</b></p> <p>2009- Leader of Coordination group for Research and Development between the Municipalities of Osterfjorden (Osterøy, Vaksdal and Modalen) and Bergen University College.</p> |
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| <b>NAME</b>           | <b>Dhayalan Velauthapillai</b> |
| <b>ACADEMIC TITLE</b> | PhD                            |

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| <b>POSITION</b>   | Professor  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ M.Sc in Electronics and Instrumentation, Department of Physics and Technology, University of Bergen, 1991</li> <li>▪ Ph.D in Physics, Department of Physics and Technology, University of Bergen, 1996</li> </ul>   |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>The research of Velauthapillai concentrates on electromagnetic theory and the use of advanced nanomaterials for solar cell and health applications. The research group of Velauthapillai focuses on modeling, synthesis, characterization of advanced nano materials for clean energy applications. Main part of the research is related to developing lightweight, low cost and flexible solar cells based on new nano material structures.</p> <p><b>Research projects and external funding</b></p> <ul style="list-style-type: none"> <li>▪ Clean energy policy and management – Comparison study, Capacity building and establishment of clean energy consortium, - External Funding from Ministry of Foreign affairs, v/ Royal Norwegian Embassy, Sri Lanka, 6,2 MNOK, 2017-2020, <b>Primary investigator</b></li> <li>▪ Experimental study on perovskite solar cells, Additional funding from HVL related to funding from the Royal Norwegian Embassy, 4,2 MNOK, 2017-2021, <b>Primary investigator</b></li> <li>▪ Higher education and Research on Nano materials for Clean Energy Technologies (HRNCET), - Funded by NORPART program, SIU, 4,7 MNOK, 2017-2021, <b>Primary investigator</b></li> <li>▪ Advanced Nano materials for clean energy and health applications – Funded by UTFORSK (long term) program, SIU/NFR, 2 MNOK, 2017-2021, <b>Primary investigator</b></li> <li>▪ Advanced Nano materials for Clean Energy Applications - A Joint collaborative project between HiB and Coimbatore Institute of Technology (CIT), India (Funded by SIU and University Grants Commission of India). 1,05 MNOK, 2015-2017, <b>Primary investigator</b></li> <li>▪ Modeling and GUI Development in Medical Optics in association with Balter Medicals, USA., 2009-2010</li> <li>▪ Advanced nano-materials for solar cell and health applications in collaboration with Coimbatore Institute of Technology, India 100 KNOK (2013) from NFR (International Conference), <b>Primary investigator</b></li> <li>▪ Development of high efficient polymer solar cells in collaboration with Seoul National University, South Korea and Coimbatore Institute of technology, India 95 KNOK (SFI/MIMT) (2013), 90 KNOK (SFI/UIB) (2013), 90 KNOK (SFI/MIMT), 95 KNOK (SFI/UIB) (2014), <b>Primary investigator.</b></li> <li>▪ Arranging International conferences on Nano materials for Clean energy Technologies (2013, 2015), and Sustainable Technologies (2014), total 300 KNOK from RCN</li> </ul> <p><b>Invited talks and presentations (recent)</b></p> <ul style="list-style-type: none"> <li>▪ Emerging solar cell technologies, Emerging technologies and their impact on the society, Bergen Energy Lab, March 2017, Norway</li> <li>▪ Advanced Nano materials for Clean Energy Applications, Physics Society, Jaffna, June 2016, Sri Lanka</li> </ul> |



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|   | <ul style="list-style-type: none"> <li>▪ Enhancement of Indo-Norwegian Research Collaboration in clean energy technologies, ICNFA2015, India, Dec 2015, India</li> <li>▪ Recent development in inorganic-organic solar cells (<i>Invited talk</i>), International Conference on Sustainable Energy Technologies (ICSET2014), December 2014, India</li> <li>▪ Numerical Techniques in modeling propagation of electromagnetic waves in anisotropic crystals, International Conference on Graph Algorithms, High Performance Implementations and Applications, India, December, 2014</li> <li>▪ Nanomaterials Research in Norway and the NANO2021 Program at NRC (<i>Invited talk</i>). International Conference on Nano materials for Frontier Applications (ICNFA2013), India, 2013</li> </ul>  |
| <b>Other relevance competence and experience within the last five years prior to application deadline</b> | <p><b>International programme committees and boards (recent)</b></p> <ul style="list-style-type: none"> <li>▪ Organizer and international coordinator, International Symposium on Nano materials for Clean energy and Health Applications (ISNCHA2017), Dec. 2017, India</li> <li>▪ Organizer and international coordinator, International conference on Advanced Nano materials for Clean Energy Applications (ICNFA2015), Dec. 2015, India</li> <li>▪ Guest editor, Special Issue on third and fourth generation solar cells, Solar Energy, (1-184), ISSN 0038-092X, Elsevier Publications, 2014</li> <li>▪ Conference Chair, International Conference on Sustainable Energy Technologies (ICSET2014), 2014, India</li> <li>▪ Co-organizer, International Conference on Graph Algorithms, High Performance Implementations and Applications, India, 2014</li> <li>▪ Conference Advisory Committee, International Conference On Nano Electronic Science &amp; Technology (Icnest-2014), India, 2014</li> <li>▪ PC member, Annual International Conference on Optoelectronics, Photonics and Applied Physics (OPAP 2014), Malaysia, 2014.</li> <li>▪ Co-organizer and International Coordinator, International Conference on Nanomaterials for Frontier Applications (ICNFA2013), India, 2013.</li> <li>▪ Chairman, Indo-Norwegian Workshop on Advanced Materials for Solar cell applications, India, 2013.</li> <li>▪ Conference steering chair, International Conference on Frontiers of Mechanical Engineering, Materials and Energy (ICFMEME 2012), China, 2012.</li> <li>▪ Conference steering chair, International Conference on Advanced Material and Manufacturing Science (ICAMMS 2012), China, 2012.</li> <li>▪ PC member, Annual International Conference on Optoelectronics, Photonics and Applied Physics (OPAP 2013), Singapore, 2013.</li> <li>▪ Co-organizer, International Conference on Advanced Materials (ICAM 2011), India, 2011.</li> </ul> <p><b>Research management and administrative experience</b></p> <ul style="list-style-type: none"> <li>▪ Initiator and Coordinator of RCN project applications involving national institutions BUC, UoB, UoO, CIT, IFE and SINTEF and international research institutions IMT, University of Neuchatel, Switzerland, CIT, Anna University, India, Texas Tech University, USA.</li> <li>▪ Primary investigator in several externally funded research projects with international partners (see above).</li> </ul> <p><b>PhD and Master's supervision</b></p> |

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|  | <ul style="list-style-type: none"> <li>▪ Supervisor for 8 PhD research studies on Advanced nano materials for clean energy and health applications</li> <li>▪ Co-supervisor for 7 completed PhD projects</li> <li>▪ Supervisor for 12 completed Master projects at HVL and UiB</li> </ul> <p><b>PhD evaluation committees:</b> Member of the PhD evaluation committee for 7 PhD thesis (India and Norway).</p> |
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| <b>NAME</b>   | <b>Akkelies van Nes</b>  |
| <b>ACADEMIC TITLE</b>   | Professor dr.  |
| <b>POSITION</b>   | Professor  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ M.Sc in Architecture, Oslo School of Architecture, Norway, January 1993.</li> <li>▪ M.Sc in Advanced Architectural Studies, University College London, UK, September 2000.</li> <li>▪ Ph.D in Land Use Planning and Landscape Architecture, University of Life Sciences, Norway, September 2002.</li> </ul>   |
| <p><b>Research and Development work within the last five years prior to application deadline</b></p> <p><i>Please fill in what applies for you and adjust the heading in yellow if necessary.</i></p> | <p>Akkelies van Nes is Full Professor at the Department of Civil Engineering at Western Norway University of Applied Sciences and Assistant Professor at the Department of Urbanism at the Faculty of Architecture at the Delft University of Technology. She specialises in the study on the relationship between road building and urban change, location pattern of shops in built environments, studies on larger groups of cities and metropolis, the configurable urban sustainability, and the spatial features of crime in urban areas. She developed also various spatial tools for analysing the relationship between buildings and streets. She has been a Space Syntax expert for over 15 years. She is invited on a yearly basis to run Space Syntax for newcomers workshops around the world and at the international space syntax symposium. She is regularly invited to give keynote presentations at conferences world-wide.</p> <p><b>Research projects and external funding</b></p> <p>2016-2019: Leader of the HIB team for the H2020 project ERA-NET, named SPACERGY (Space-Energy pattern for smart energy infrastructures, community reciprocities &amp; related governance).</p> <p>2012-2014: Member of the TU-Delft team for the 7<sup>th</sup> framework project NODES. Responsible for the knowledge management work package on the themes examples on good practice and space syntax analyses of transportation nodes in European cities. <a href="http://www.nodes-interchanges.eu">http://www.nodes-interchanges.eu</a></p> <p>2014: Space syntax analyses of the campus area at the TU-Delft.</p> <p>2011: Space Syntax analyses of metro stations in Brussel, Belgium</p> <p>2011: Application of Space Syntax in an Impact Assessment of different road alternatives and their effect on the economic vitality in the Leiden region, The Netherlands.</p> <p>2011: Application of Space Syntax, Spacematrix and the Function Mix model in the Buiksloterham area in the municipality of Amsterdam. The</p> |

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|  | <p>project is done together with Dr. Meta Berghauser Pont and Birgit Hausleitner.</p> <p>2011: Application of Space Syntax, Spacematrix and the Function Mix model in the municipality of Rotterdam's strategic plan. The project is done together with Dr. Meta Berghauser Pont and Bardia Masschoodi.</p> <p>2008-2012: Member of the TU-Delft team for the 7<sup>th</sup> framework project RUFUS. Web page: <a href="http://www.kubis-online.info/participation/38/cms_data/2937/files/de/rufus_brochure.pdf">http://www.kubis-online.info/participation/38/cms_data/2937/files/de/rufus_brochure.pdf</a></p> <p>2005-now: Member of the international steering committee and reviewing committee for the International Space Syntax symposia. <a href="http://www.spacesyntax.net">www.spacesyntax.net</a></p> <p>2003-2005: Chair woman for the 5<sup>th</sup> International Space Syntax Symposium. Held at TU Delft June 2005. Web page: <a href="http://www.spacesyntax.tudelft.nl">www.spacesyntax.tudelft.nl</a></p> <p>2005: Research project for the organisation Politie en Wetenschap (Police and Science Programme). The research project has been carried out in co-operation with the criminologist Manuel Lopez from RCM Advies, The Hague.</p> <p><b>Invited scientific talks, presentations and tutorials</b></p> <p>Invited as a keynote speaker for the First Algerian Space Syntax Symposium: School of Architecture, Universite Mohammed Khider Biskra, Biskra, Algeria, 25-26. February 2017.</p> <p>Invited as a keynote speaker for the Second Chinese Space Syntax Symposium: School of Architecture, Beijing Jiatong University, Beijing, China, 5-6. November 2016.</p> <p>Invited as a keynote speaker for the international women's day, The Architectural association, Bergen, Norway, 8<sup>th</sup> March 2016.</p> <p>Invited as a keynote speaker for the First Chinese Space Syntax Symposium: School of Architecture, Beijing Jiatong University, Beijing, China, 5-6. December 2015.</p> <p>Invited as a keynote speaker for the International Research Workshop: Spatial Urban Structures and Security of Inhabitants, Faculty of Architecture, Kaunas, Lithuania 28-30 November 2013</p> <p>Invited as a keynote speaker for the International Research Workshop: Planning Process for Sustainable Urban Form, Karlskrona, Sweden 7-8 November 2013</p> <p>Running the Depthmap workshop (the use of the space syntax software) at the 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup> and 11<sup>th</sup> International Space Syntax Symposia (from 2007 – 2017)</p> <p>Keynote speaker for a seminar held at the ministry of security and Justice, for members of the Swedish NGO organisation Stiftelsen Tryggare Sverige, The Hague, 23. September 2013.</p> <p>Invited as a keynote speaker at the first Geodesign Summit Europe conference, Geofort, The Netherlands 19. September 2013</p> <p>Invited as a keynote speaker for the International Conference Urban Development, Prague 11. April 2013</p> |
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|   | <p>Invited as a keynote speaker for the International Workshop 3 Planning and Design Process, Held at the National University of Singapore, 18-19 January 2012.</p> <p>Space Syntax workshops for staff, PhD and MSc students at the faculty of Architecture, Porto Alegre University, Brazil, 2012.</p> <p>Invited as a keynote speaker for the TOPOI Excellence Cluster International Workshop "Spatial analyses in past built environment", Berlin 1-2. April 2010.</p> <p><b>Awards and Honors</b></p> <p><b>Mobility and internationalization</b></p> <p><i>See above</i></p>   |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Participation in international program committees, organizing committees and boards</b></p> <p><i>Member of the international space syntax steering committee since 2005</i></p> <p><b>Research management and administrative experience</b></p> <p><i>Building up a post master in Urbanism at the TU Delft and build up the Land Use Planning master module for the new master in Land Use and Property Management at the Department of Civil Engineering at HVL</i></p> <p><b>Reviewing activities (journals, grants)</b></p> <p>Reviewer for the journals: Progress in Planning, Urban design international, Wessex University Press, Journal of Space Syntax and the proceedings for the international space syntax symposia.</p> <p><b>Master and PhD supervision</b></p> <p>Main daily supervisor for the PhD students: Camilo Pinilla (finished 2008), Jason Chiang, Jing Zhou (finished 2012), Remco E de Koning, and Luiz Carvalho Filho. Co-supervisor for PhD students: Olgu Caliscan (finished 2012), Gerhard Bruyns (finished 2011), and Sheng Qiang (finished 2011).</p> <p>Daily supervisor for guest PhD students Yu Ye from Hong Kong, Miguel Serra from Oporto in Portugal, Ilgi Toprak from Istanbul in Turkey, and Claudio Ugalde from Porto Alegre in Brazil. Miguel Serra, Yu Ye and Claudio Ugalde have submitted and defended their thesis.</p> <p>Have been main supervisor for about 80 master students since 2004.</p> <p><b>Evaluation committees</b></p> <p><i>For 2 phd students, for 2 associate professorships and for 3 professors</i></p> <p><b>Industrial experience</b></p> <p>2011-2013: Space Syntax analyses and physical improvement strategies for deprived neighbourhoods in the Netherlands. Together with RCM-Advies and Urban Synergy.</p> <p>2011: Application of Space Syntax in an Impact Assessment of two different road alternatives and their effect on the economic vitality of Leiden and Voorschoten urban centres.</p> <p>2011: Application of Space Syntax, Spacematrix and the Function Mix model in the Buiksloterham area in the municipality of Amsterdam. The</p> |

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|   | <p>project is done together with Dr. Meta Berghauser Pont and Birgit Hausleitner.</p> <p>2011: Application of Space Syntax, Spacematrix and the Function Mix model in the municipality of Rotterdam's strategic plan. The project is done together with Dr. Meta Berghauser Pont and Bardia Masschoodi.</p> <p>2003: Impact assessment of various road alternatives for the Norwegian town Tønsberg by using the Space Syntax method (Space Syntax Norway).</p>   |
| <b>Relevant pedagogical competence</b><br>University-pedagogic, didactics | <p><b>Courses attended</b></p> <p>Course in design teaching and making assignments, total 8 days course in 2013 (BKO courses) held at the TU Delft, The Netherlands. Course in supervision of MSc and PhD students. 7 days course. Held autumn 2012 by the TU Delft, The Netherlands. Course in supervision of PhD students. Held in Utrecht 2008.</p> <p><b>Other relevant competence</b></p> <p>Course in project leading, Bedriftspedagogisk Sentrum AS, 1997. Course in Project Management, Held autumn 2009 at the TBN, TU Delft</p> |
| <b>Relevant digital competence and courses/knowledge about E-learning</b> | <p><b>Digital competence</b></p> <p>Course in SPSS, arranged by TNO, Held September 2010 – December 2010</p> <p>Some GIS training courses, Adobe Photoshop and Vector works</p> <p><b>Courses attended</b></p> <p><b>Involvement in teaching and/or developing digital courses (IT in education)</b></p>  |

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| <b>NAME</b>   | <b>August Wierling</b>  |
| <b>ACADEMIC TITLE</b>   | Dr. rer. nat.   |
| <b>POSITION</b>   | Associate Professor (mathematics for renewable energies)  |
| <b>EDUCATION</b>  | <ul style="list-style-type: none"> <li>▪ Bachelor in Mathematics (Vordiplom), Westfälische Wilhelmsuniversität Münster, Germany, August, 1988</li> <li>▪ Bachelor in Physics (Vordiplom), Westfälische Wilhelmsuniversität Münster, Germany, August, 1988</li> <li>▪ Master in Physics (Diplom-Physiker), Westfälische Wilhelmsuniversität Münster, Germany, August, 1992</li> <li>▪ Ph.D in Physics (Dr. rer. nat.), University of Rostock, Germany, August, 1997.</li> </ul>                                  |
| <b>Research and Development work within the last five years prior to application deadline</b> | <p>My scientific background is theoretical physics with wide-ranging applications in many particle physics (since 1992). The common thread is properties of complex systems which involves the development of computer programs and stochastic data analysis. Since 2015, I shifted my research focus specifically to renewable technologies, energy system analysis and empirical studies of sustainable development.</p> <p><b>International research stays &amp; projects:</b></p> <p><b>Since 2012:</b></p> |

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|   | <p>11/2016-01/2017 University of the Ryukyus &amp; Osaka University, <b>Japan</b>: Guest Researcher</p> <p>Since 2015: Participation in international RELEASE-project: Renewable Energy Projects: Local Impacts and Sustainability</p> <p><b>Before 2012 (selection):</b></p> <p>Research grant by the Japanese Society for the Promotion of Science (Kyoto University), Research Grant by the German Academic Exchange Service (Osaka University), Lecturer at University of Georgia, Athens, GA; various research grants from the German Research Council (DFG) since 1992.</p> <p><b>Relevant invited talks:</b></p> <p>Osaka University, Center for Atomic and Molecular Technologies: The world in 2050 – How to project what can't be projected (01/2017)</p> |
| <p><b>Other relevant competence / experience in the past five years prior to application deadline (including experience from the practice field if applicable):</b></p> | <p><b>Reviewer assignments (Journals)</b></p> <p>e.g. Contributions to Plasma Physics, Symmetry, Physical Review E</p> <p><b>Master and PhD supervision</b></p> <p>Several PhD and Master students (in Germany, USA, Japan) five years prior to application deadline</p> <p><b>Experience as founder and manager of Publication Company</b></p> <p>Since 2011</p>   |
| <p><b>Relevant pedagogical competence</b></p> <p>University-pedagogic, didactics</p>  | <p>None</p>   |
| <p><b>Relevant digital competence and courses/knowledge about E-learning</b></p>  | <p><b>Digital competences</b></p> <ul style="list-style-type: none"> <li>• Programming languages (e.g. Fortran, java), statistical computing and graphics (e.g. R, Perl).</li> <li>• IT-System administration of Unix cluster (30 people) 1993-2001</li> <li>• 1993-2001 IT council in University of Rostock Commission</li> </ul> <p><b>Courses:</b></p> <p>E-teaching: NA 411/412 Natural science 15 physics</p>  |

## List of publication

### Industry Innovation

#### Oppsummering tellende NVI-publikasjoner for Industry Innovation 2012-2017:

| Publikasjoner | Nivå 2 | Periodikaartikler | Antologibidrag | Monografier |
|---------------|--------|-------------------|----------------|-------------|
| 239           | 22     | 200               | 38             | 0           |

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## Social Innovation

### Oppsummering tellende NVI-publikasjoner for Social Innovation 2012-2017:

| Publikasjoner | Nivå 2 | Periodikaartikler | Antologibidrag | Monografier |
|---------------|--------|-------------------|----------------|-------------|
| 245           | 48     | 146               | 90             | 4           |

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## Green Innovation

### Oppsummering tellende NVI-publikasjoner for Green Innovation 2012-2017:

| Publikasjoner | Nivå 2 | Periodikaartikler | Antologibidrag | Monografier |
|---------------|--------|-------------------|----------------|-------------|
| 157           | 60     | 121               | 21             | 1           |

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August Wierling

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Professor of Economic Geography  
President of the Regional Science Association International

London, February 14<sup>th</sup>, 2017

## Confirmation of participation in research project

To Whom It May Concern,

I confirm my participation in the proposed project '*The drivers of regional economic restructuring: Actors, institutions and policy*'.

I will contribute actively to theoretical development and critical analysis in the project and participate in the project team exploring the objectives stated in the project description.

Yours faithfully,

Andrés Rodríguez-Pose

Date 2017-02-13

**Confirmation of participation in project**

I confirm my participation in the proposed project '*The drivers of regional economic restructuring: Actors, institutions and policy*'

I will be an active partner and participate in the project team exploring the objectives stated in the project description



Per Davidsson

Director & Talbot Family Foundation Chair in Entrepreneurship, Australian Centre for Entrepreneurship Research (ACE), QUT Business School (Management), Brisbane



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Confirmation of participation in research project

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To Whom It May Concern,

I confirm my participation in the proposed project *'The drivers of regional economic restructuring: Actors, institutions and policy'*.

I will contribute actively to theoretical development and critical analysis in the project and participate in the project team exploring the objectives stated in the project description.

Yours faithfully,

A handwritten signature in dark ink, appearing to read 'R. Boschma'.

Ron Boschma

Professor in Regional Economics

Urban and Regional research centre Utrecht (URU)

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Professor in Innovation Studies

Centre for Innovation, Research and Competence in the Learning Economy (CIRCLE)

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Manchester, 9 February 2017

## **Re: Confirmation of participation in research project**

To Whom It May Concern,

I confirm my participation in the proposed project '*The drivers of regional economic restructuring: Actors, institutions and policy*'.

I will contribute actively to theoretical development and critical analysis in the project and participate in the project team exploring the objectives stated in the project description.

Yours faithfully,

Elvira Uyarra

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Dear Erling

**RELEASE**

**Renewable Energy Projects: Local Impacts and Sustainability**

I am writing in response to your invitation to participate in the above research proposal to the Norwegian Research Council. The proposal has been discussed here at Aalborg University and we would be delighted to participate as a cooperative partner.

The research outlined in WP3 is very much in accordance with our thinking on the understanding and development of ownership models and community acceptance for renewable energy. Our contribution in the project is based on our work with local and municipal energy planning in Denmark, where we explore and develop the technical, economic and planning capabilities of municipalities and other local actors. Of particular interest will be, which lessons can be drawn from different local approaches to planning, participation and ownership in renewable energy projects in Norway in Denmark.

We can contribute strongly to all of these objectives and wish you success in your application.

A 3-months term for Bente Johnsen Rygg would be arranged during the project period to further develop some of the ideas and objectives and to work on the deliverables.

We are also positive to spend time as researchers at HiSF during the project period to strengthen project cooperation.

With best wishes



Karl Sperling, Assistant Professor

Aalborg University

Vestre Havnepromenade 9, 3.

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Date  
27 January 2014

Subject

**RELEASE: Renewable Energy Projects: Local Impacts and Sustainability**

Dear Erling,

I am writing in response to your invitation to participate in the above research proposal to the Norwegian Research Council. The proposal has been discussed here at Radboud University, Nijmegen, the Netherlands, and we would be delighted to participate as a cooperative partner.

The research outlined in WP4 (Restoration ecology in the era of renewable energy) is very much in accordance with my thinking on restoration ecology. My contribution in the project is high quality expertise in population modelling, as well as to be external supervisor for the PhD student.

I can contribute strongly to all of these objectives and wish you success in your application.

A 3-months term for Knut Rydgren and/or the PhD student would be arranged during the project period to further develop some of the ideas and objectives and to work on the deliverables.

I am also positive to spend time as researchers at HiSF during the project period to strengthen project cooperation. I look forward to continue the successful collaboration with the researchers at HiSF.

With best wishes



Dr. Eelke Jongejans  
Assistant Professor, Radboud University, Nijmegen, the Netherlands



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Environment

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Professor Erling Holden  
Sogn og Fjordane University College  
P.O. Box 133  
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28th January 2014

Dear Erling

**RELEASE**

**Renewable Energy Projects: Local Impacts and Sustainability**

I am writing in response to your invitation to participate in the above research proposal to the Norwegian Research Council. The proposal has been discussed here at Transport Studies Unit in the Oxford University Centre for the Environment, and we would be delighted to participate as a cooperative partner.

The research outlined in WP1 is very much in accordance with our thinking on local sustainable development, and we can contribute international knowledge and extensive experience on this topic, as well as to other WPs in the proposal (e.g. on investment under policy uncertainty and new ownership models). We can contribute strongly to all of these objectives that form a central part of this existing proposal.

As an integral part of the project, we would arrange a 6-month visit for Erling Holden at the Transport Studies Unit in the University of Oxford to further develop some of the ideas and objectives, and to work on the deliverables. This would enable real collaboration to take place, and to give him the opportunity to work with other researchers here in renewable energy and with our Environmental Change Institute. We are also positive about the potential for UK researchers to spend time at HiSF during the project period to strengthen project cooperation.

We wish you success in your application and we look forward to the collaboration with the University of Oxford.

Yours sincerely

A handwritten signature in blue ink, reading 'David Banister', enclosed in a rectangular box.

David Banister. Professor of Transport Studies and Fellow at St Anne's College  
Director of the Transport Studies Unit, School of Geography and the Environment, University of Oxford