

Intersectionality in innovation and research content

Second Working paper KSH4 Innovation

THIS DOCUMENT IS FOR RESEARCH FUNDERS AND INNOVATION RESEARCHERS

Innovation has long been seen as a key driver of societal and economic progress. However, traditional innovation paradigms have often overlooked critical diversity dimensions, reinforcing systemic biases and limiting the inclusivity of research and technological advancements. This working paper is designed for research funders and innovation researchers who seek to integrate **gendered and intersectional perspectives** into funding strategies and innovation processes.

Building on the findings of an **INSPIRE literature review** on gendered innovations, this paper presents initial research findings from **two case studies of innovation funding strategies** from Sweden and Austria to identify effective strategies to support inclusive innovation.

The analysis highlights key challenges, including **knowledge gaps**, **resistance to implementation**, and concerns about **long-term sustainability** of the funding. At the same time, it identifies best practices, particularly in **methodological approaches**, **evaluator expertise**, and **cross-sector collaboration**. By moving beyond representation towards **structural change**, this paper provides actionable recommendations for research funders and innovators to foster truly inclusive and impactful innovation.

In addition, this paper summarizes how these findings and recommendations were discussed by IN-SPIRE CoP members from across Europe and what they may mean for the future work of the IN-SPIRE Knowledge Hub on Innovation.

1. INSPIRE Project Insights to Date

As already described in Working paper 1, INSPIRE's **Knowledge & Support Hub 4 (KSH 4)** aims to **create knowledge and tools** to implement inclusive gendered innovations and related research funding policies. This involves conducting a literature review on gendered innovation, analyzing case studies on gendered innovation policies, and establishing communities of practice (CoPs) with funding organizations, companies, and innovators.

KSH 4 addresses the traditional male-centric focus of innovation research (Foss and Henry, 2016) and the limited application of gendered innovation efforts in the private sector (EC, 2020). It highlights the importance of embedding gender considerations throughout the Research & Development process to ensure equitable outcomes (Schiebinger and Schraudner, 2011) and advocates for intersectional approaches that address broader inequalities beyond gender.

As a first step, KSH 4 conducted a **literature review** (see Karaulova et al. 2023) of gendered innovation research and policies based on a scoping review of 122 documents, which examines the field of "gendered innovations," focusing on the integration of gender considerations throughout research and development processes to foster more inclusive and equitable innovations. This strategic assessment revealed that focusing solely on representation, such as closing the "gender gap," fails to tackle systemic factors influencing gender dynamics in innovation. Merely **increasing female representation does not automatically transform innovation content or processes**. Instead, the review calls for reshaping innovation structures through methodological approaches that prioritize inclusivity, equity and aim at socially responsive solutions (Karaulova et al. 2023).

In addition, the literature review on gender innovations highlights the importance of intersectionality. Moreover, the literature review on gendered innovations emphasizes the importance of **intersectionality**, i.e. how different forms of discrimination (e.g. ethnicity, class, age, etc.) intersect with gender, and calls for approaches that consider multiple dimensions of marginalization beyond gender. It also identifies gaps in the field, especially regarding **private sector engagement**, and calls for more inclusive policies and practices to promote gender-responsive innovation frameworks (Karaulova et al. 2023).

Following on from these initial research findings from the literature review, we are interested in how the (inclusive) gendered innovation approach has been translated into concrete policies. Following concise selection criteria, we have selected four funding programs, which aim to foster inclusive gendered innovations, to conduct case studies. The aim of these **four case studies** in INSPIRE is to identify how to best fund and conduct inclusive gendered innovation targeting companies. The four case studies are:

- (1) **norm critical innovation calls** funded by VINNOVA (Sweden): these calls promote inclusive and diverse solutions in innovation processes. The initiative aimed to challenge traditional norms and structures, encouraging the development of products, services, and practices that consider different perspectives and needs, particularly those of marginalized or underrepresented groups. By supporting projects that questioned established assumptions and promoted equality, these calls sought to foster a more inclusive and sustainable innovation landscape in Sweden.
- (2) **FEMtech research projects** funded by the Austrian Research Promotion Agency (FFG, Austria): This funding program supports research and innovation projects that integrate gender perspectives into the development of new technologies and solutions. The program focuses on fostering gender equality in research and development, encouraging projects that challenge traditional gender roles and promote inclusive innovation. FEMtech funds projects in various technological fields, aiming to address societal and economic challenges. The program is open to research institutions and companies that are committed to creating innovative, gender-sensitive technologies.
- (3) **gender-flagged IT-Calls** funded by Horizon 2020 (European Commission) and
- (4) **innovation project funding** by the national research foundation Fonds National de la Recherche et de l'Innovation (FONRID) (Burkina Faso).

So far, the case studies have progressed to varying degrees, which is why we are providing here initial insights into the results of those that are already further advanced (VINNOVA, FFG). The case studies are based on document and data analyses of the funding programs, interviews with program managers, reviewers, leaders of funded innovation projects and participating companies. In the case studies we analysed the context of the funding program, the concept, its practical implementation by the RFO and the funded innovation processes on the basis of 5 projects.

The preliminary analysis of the case studies highlights key insights about initial challenges and learnings related to the funding and implementation of (inclusive) gendered innovations. These findings are based on interviews with programme managers and evaluators of funding programmes that implement various gendered innovation approaches:

Challenges in Funding Inclusive Gendered Innovations

Communicating the Rationale: Particularly when introducing (inclusive) gendered innovation funding programs, it is a challenge for research funding organizations to communicate this approach, as there is little knowledge about (inclusive) gendered innovation in the community of applicants. The quality of the first applications is therefore often modest.

Evaluator Expertise and Consistency: There is inconsistency in how gender criteria are applied across different funding programs. The effectiveness of assessments depends heavily on the expertise of evaluators, who may not always have sufficient training in gender and intersectional issues. This can lead to varied outcomes and a lack of depth in project evaluations.

Mainstreaming (inclusive) gendered innovation approaches: Funding organizations face difficulties in ensuring a meaningful integration of (inclusive) gendered innovation perspectives across all programs. Mainstreaming these approaches across different sectors may reach more applicants but at the cost of diluted, less impactful projects, whereas more targeted programs achieve greater depth but attract fewer applicants.

Challenges for Applicants and Project Implementers

Complexity of (inclusive) gendered innovation approaches: Applicants often lack the knowledge on how to implement gender and intersectional perspectives, leading to superficial proposals. These approaches are complex and require a deep understanding of societal norms and innovation processes. Many applicants do not have sufficient knowledge on this.

Competence Deficits: Many projects fail to reach the desired depth of innovation due to a lack of expertise in the team.

Internal and External Resistance: Both internal organizational resistance and external opposition from industry partners can impede the successful implementation of gendered innovations. Overcoming these barriers requires clear communication and engagement strategies to ensure stakeholder buy-in.

Long-Term Sustainability of Projects: Ensuring that (inclusive) gendered innovation projects are sustainable beyond the initial funding phase is difficult. Without long-term financial and institutional support, many projects struggle to maintain momentum and impact once the funding ends.

Learnings for Funding Organizations

Early Engagement and Support: Engaging potential applicants early in the funding process and offering pre-application guidance improves the quality of proposals. This helps applicants to better understand the expectations for (inclusive) gendered innovation and align their projects with program goals.

Cross-Sector Collaboration is Key: Cross-sector collaboration between public institutions, private companies, and academia is crucial for fostering innovation. These partnerships help spread the principles of (inclusive) gendered innovation and bring more diverse perspectives into projects.

Continuous Training for Evaluators: The effectiveness of funding programs depends on continuous training for evaluators. Providing evaluators with ongoing support and involving them throughout the project lifecycle helps improve assessments and ensures that projects meet the desired depth of integrating inclusivity in innovation.

Proactively Addressing Resistance: Resistance, whether internal or external, should be proactively addressed. Open dialogue with stakeholders and transparent communication about the value of (inclusive) gendered innovation can help mitigate opposition.

Learnings for Applicants and Project Implementers

Involvement of Experts is Crucial: Successful (inclusive) gendered innovation projects often rely on experts to lead and guide the process. Applicants should prioritize bringing in knowledgeable individuals to ensure that gender and intersectional dimensions are thoroughly integrated.

Iterative Development and Flexibility: Projects benefit from an iterative development process where concepts are continuously refined and adapted based on feedback. Flexibility in project execution allows for better adaptation to real-world conditions and leads to more successful outcomes.

Building Internal Capacity: For long-term success, organizations need to build internal capacity on (inclusive) gendered innovation. This helps embed these principles within the organization, reducing dependence on external consultants and ensuring sustainability.

In summary, funding and conducting (inclusive) gendered innovations come with significant challenges related to the integration of (inclusive) gendered innovation perspectives, engagement with stakeholders, and the sustainability of projects. However, with targeted funding strategies, continuous training, strong collaboration, and clear communication, these challenges can be overcome to achieve more inclusive and impactful innovations.

2. KE documentation of reflective discussions

The first research insights described above were presented in the second INSPIRE's Knowledge Exchange Event on intersectionality, held in Vienna on September 27th, 2024, to which the INSPIRE Communities of Practice members from all KSHs and respective experts were invited. The insights

served as a starting point of a reflexive interdisciplinary discussion with a group of participants who took part in the breakout session focused on "*Intersectionality in Innovation and Research Content*." The discussion revolved around the challenges and strategies for integrating gender and intersectionality into innovation and research processes. Here is a summary of key perspectives that were discussed:

Challenges in Implementation:

A major theme of the session was the **resistance** encountered, particularly in STEM (Science, Technology, Engineering, and Mathematics) fields. Efforts to introduce gender and intersectionality awareness often meet strong opposition, especially in disciplines like physics. This resistance can even become aggressive, making it difficult to embed these concepts within research practices. The group agreed that these challenges are amplified by the cultural and disciplinary differences across various research areas.

One participant pointed out that role models are crucial to overcoming these resistances. Having peers and examples from within the same field who successfully integrate gender and intersectionality into their work can inspire others and break down barriers. Showing **discipline-specific success stories** can make the concept of intersectionality more relatable and less abstract.

Training and Awareness:

Training emerged as a critical solution for fostering intersectionality in innovation. Participants acknowledged the need for **specialized training** for those working in research and innovation, with an emphasis on targeted and field-specific examples. While general awareness of gender issues is increasing, intersectionality is often seen as a more advanced and complex topic, making it harder to introduce in research projects.

Simplifying intersectionality for broader audiences was proposed as a possible solution. The group discussed whether breaking down the concept into more digestible elements could help researchers, especially those that are less familiar with it, to understand and implement it better.

A key point was the need for training of funding reviewers. The ability of reviewers to evaluate intersectional perspectives is critical, yet there are often gaps in their combined knowledge of their field and intersectionality. Specialized training could improve the quality of their assessments, ensuring that intersectionality and gender are considered appropriately in research proposals.

Funding as a Motivator:

Funding plays a pivotal role in motivating researchers to integrate gender and intersectionality into their work. The group discussed how funding bodies - such as the European Commission and the Austrian FFG (Austrian Research Promotion Agency) - are increasingly **requiring researchers to demonstrate societal impact**, particularly in terms of gender equality, as a condition for funding.

A survey conducted in Germany showed that 80% of researchers are motivated by the desire to create societal benefits. This aligns with the push to mainstream gender and intersectionality in innovation. The participants emphasized that **economic incentives**, such as mandatory gender and diversity criteria in funding applications, can be a powerful driver of change. As one participant noted, "money

talks," meaning that when gender considerations are tied to funding, researchers are more likely to incorporate them into their projects.

Intersectionality vs. Gender:

A significant part of the discussion centered on the difference between gender and intersectionality. While gender awareness is becoming more common, intersectionality is still seen as more complex and challenging to implement.

In some regions, frameworks like GESI (Gender Equality and Social Inclusion) are used, which overlap with intersectionality. These frameworks are more familiar in regions like East Africa, where they are integrated into safeguarding principles.

Future Directions:

Participants also discussed future strategies for embedding intersectionality into innovation. They emphasized the **need for networks and alliances**, such as the Catalonia Alliance, to support gendered innovation across different sectors.

The group concluded that **setting minimum standards for gender and intersectionality training** is crucial for ensuring that researchers and funding applicants are adequately prepared. They also suggested a **focus on specific practical challenges**, rather than broad concepts, as a way to make gendered innovations more accessible and tangible for researchers across disciplines.

Overall, the breakout session led to a productive exchange of ideas on how to overcome resistance to intersectionality in innovation and research content. The group recognized the importance of targeted training, economic incentives, and role models in fostering gender and intersectionality awareness, particularly in resistant fields like STEM. Despite the challenges, participants were optimistic that with the right support and funding structures, intersectionality could become a more integral part of innovation processes.

3. KSH leaders' and KSH experts' reflections

For us as KSH leaders, the discussion on gendered innovations and intersectionality at the Knowledge Exchange Event in Vienna was very helpful, as it showed that the participants see a need for the implementation of inclusive gendered innovations and that there is a willingness to implement specific funding programs. This has already been confirmed in the meetings of the RFO-CoP in KSH4, which started in February 2024. It also showed that the support package, which we will develop based on the research results of the case studies on inclusive gendered innovations, will meet the needs of the representatives of funding organizations. The support package will be strongly oriented towards the funding cycle and include templates for guidelines for reviewers and applicants. The Open Training Unit 7 on the innovation policy toolkit, which will be developed in the course of INSPIRE, will address Research Funding Organizations and reviewers to train them in inclusive gendered innovations.

The target group of companies is still difficult for INSPIRE to reach. Hardly any company representatives took part in the discussion in the Knowledge Exchange Event in Vienna. In previous CoP meetings where companies participated, they showed greater interest in questions of gender equality in the organization (e.g. recruiting) than in the implementation of inclusive gendered innovations (see Working paper 1). Since the first Knowledge Exchange Event in June 2024, however, the GAIA CoP has now also been formed on the basis of the GAIA project - a university-wide initiative that tackles climate change. Companies are also involved in GAIA and there is now hope for KSH4 to meet with increased interest in inclusive gendered innovations in the field of climate change in the GAIA CoP to involve them in reflections on development of support material for companies.

From the expert/advisory board side, the event was also seen as a success. It showcased how complex intersectionality in an innovation and research context is. For some participants who are experts on the term, calls for action were mirrored on non-experts challenges of fully understanding the concept and its applicability. One KSH expert particularly emphasizes that intersectionality needs to be explained much better and made more manageable. This requires better data sets for innovation processes that allow more insights. Better care for specific groups must be the objective of innovation, and this must be reconciled with data protection.

The workshop also provided valuable insight into the situatedness of intersectionality as terminology. A systematic articulation of the intersectionality principles (which broadly encompass the GESI principles), and exploring complementarity and learning based on context is important. Some regions and organizations have a quite advanced implementation in place already, while others are striving to implement basic intersectionality and diversity principles. Some regions also pointed out that intersectionality as well as related gender, diversity and inclusion concepts, are not universally recognised either. We recommend to keep the mapping and dialogue with related concepts open still and explore how to do this, as the project continues it's inspiring work. One of the KSH expert adds that the EU strategies regarding information, promotion and demand for inclusive innovation need to be implemented much more actively due to the gap in the understanding of intersectionality and the degree of implementation within Europe.

Revisiting the results from the INSPIRE literature review on inclusive gendered innovations, which points out that merely increasing female representation in innovation teams does not automatically lead to inclusive gendered innovation, another experts also recommends to integrate SSH experts in STEM innovation teams. They can bring in methodological knowledge how to assess user needs and involve them in a participatory innovation process.

AUTORS: Sybille Reidl, Carolina Wienand, Roger A. Søråa

CONTRIBUTORS: Helga Gudrun Jonasdottir (Bifrost University), Rosa Panades (UOC), Helene Schiffbänker (Joanneum Research), Monika Ryndzionek (NCBR Poland), Liv Baisner Petersen (SDU), Rikke Madsen (SDU), Ann Kingiri (ACTS Kenya), Katri-Liis Lepik (Tallinn University), Silvia Donoso (ICU/CSIC), Lisa Obereder (FFG), Eleni Georgakakou (Hellenic Open University), Martina Schraudner (TU Berlin / Fraunhofer CeRRI)