



EU INNOVATE

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Executive briefing on future research agenda and potential scientific pathways

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Future Research Agenda

The aim of EU-InnovatE was to understand the active, innovative and entrepreneurial role of users in the transition towards sustainable lifestyles. During the three years of the project, relevant new insights emerged. The EU-InnovatE project has clearly demonstrated that there is a lot of activity in the field of sustainable innovation and entrepreneurship. Users are increasingly getting involved in the process of sustainable innovation by companies (user-integrated innovation) and start their own ventures (sustainable entrepreneurship). The results of EU-InnovatE open up new avenues and priorities for scientific inquiries, which we summarise in form of a future research agenda in this report. Considering the central focus of EU-InnovatE on the innovative and entrepreneurial role of users in sustainable transitions, the future research agenda encompasses the following main scientific disciplines: innovation management; entrepreneurship; and the multi-level-perspective/ socio-technical transitions. Taking these main disciplines into consideration (figure 1), the future research agenda will focus on three promising lines of future scientific inquiry: 1) stakeholder integration in sustainable innovation; 2) collective action and institutions in sustainable entrepreneurship; and 3) the role of users in transition processes – a multi-level-perspective.

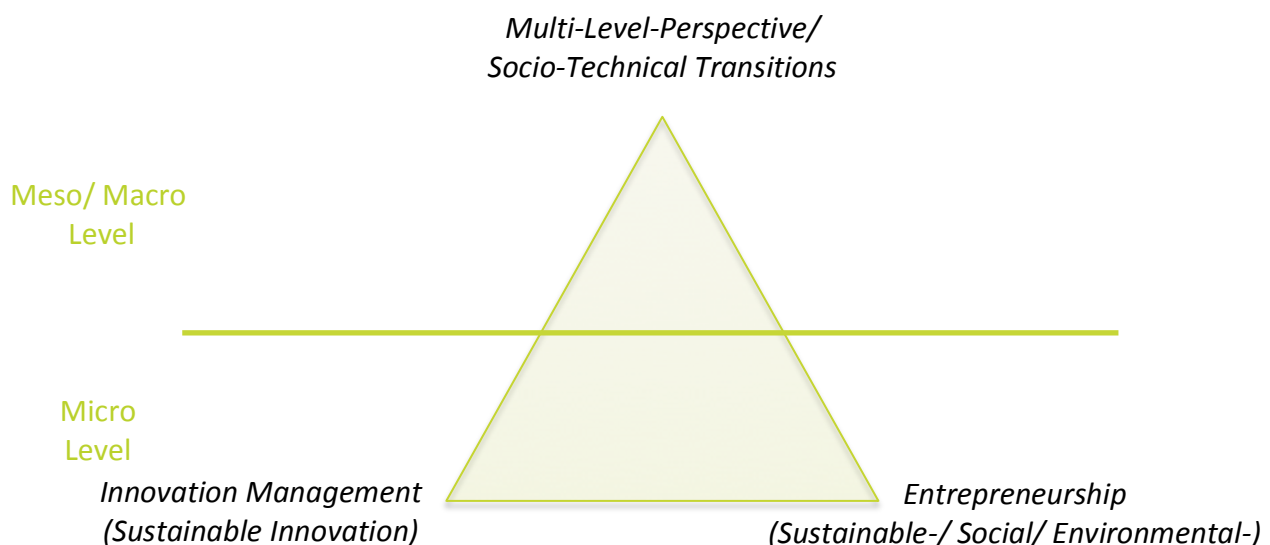


Figure 1 – Interdisciplinary future research agenda for sustainable lifestyles 2.0

1. Stakeholder Integration in Sustainable Innovation

Main discipline: Innovation management (specifically sustainable/ social/ green innovation)

The extensive analysis of the activities and roles of users in company-driven open sustainability innovation (COSI) processes in WP3 has provided us with detailed insights into the collaborative nature of the innovation process, which has traditionally been protected from outsiders. The following areas for future research have been identified:

Advancing Stakeholder Integration

Inter-organizational networks in sustainability innovation. There is great variation in how stakeholder collaboration comes to be and how legacy, long established relationships between organizations and individuals influence the selection process and knowledge transfer. Further research is needed to explore the objectives and motivations of stakeholders, the search processes of stakeholders, and how collaboration with stakeholders can be established and maintained. Qualitative inquiry could reveal how companies evaluate potential stakeholders for sustainable innovation purposes and how integration is implemented in everyday business practices, what type of tensions stakeholder integration may entail, particularly in case of deviant stakeholders.

Role of secondary stakeholders. Our case studies imply that a broader approach to studying open sustainability innovation, which includes a wide range of stakeholders, is needed. Particularly, secondary stakeholders appear to play a vital role in sustainability-oriented innovation processes of firms. Future research should therefore investigate the impact of secondary stakeholders on the sustainable nature of products and services.

Capabilities for stakeholder integration. Our findings highlight the need for a shift towards more decentralized organizational configurations, where stakeholders play more proactive, engaged and integrative roles. This implies that organizations will need to develop the capabilities to integrate stakeholders and their ideas, and capture competitive advantage from such collaborations. Further research into the capabilities needed by companies and how they can be built is needed.

Intra-organizational cooperation for stakeholder integration. There is still limited knowledge about how separate departments co-operate in stakeholder integration, for example how research and development, and corporate social responsibility teams bring stakeholder inputs to innovation processes. Further research is required to understand how inter-departmental cooperation affects stakeholder integration and resulting sustainability innovations.

Role of impact extenders. The extensive empirical work done in WP3 offers valuable data for future research into the ongoing debate of whether and how innovations for sustainability, and other types of innovation are similar or different. Future research opportunities lie in exploring particularly the role of secondary stakeholders as impact extenders, i.e. the extension of sustainability impacts of new products and services by promoting its use and extending the social and environmental impact into other domains.

Managing Stakeholder Integration

Learning processes in companies. It is also interesting to note that the companies under investigation experienced a learning process during user integration, changing their initial perception and expectations of its benefits and altering their methodological approaches. Whereas collaboration with third parties such as research institutes seems to be widely accepted, company representatives initially had little faith in the benefits of user integration. This might impede companies from engaging in user-centric development practices and hinder the integration of user ideas and suggestions. Future research could therefore investigate how to overcome such entry barriers to user integration in sustainability innovation processes, and how to stimulate the intensification of user integration.

Market attractiveness of COSI products / services. Another open question is whether user integration in sustainability innovation has increased market attractiveness. It has to be acknowledged that in all WP3 cases investigated, the newly developed product or service was only recently introduced to the market. By applying this criterion for case selection, we assured that all relevant employees involved in the innovation process were still available for interviews, and could remember the overall innovation process from the

very beginning. The downside of this approach is that we cannot draw any final conclusion yet about the effect of user integration on market attractiveness. The answer to these questions remains to be given in the future.

Changes in behavior of COSI customers. Deliverable 3.3. sheds light on the impact of COSI processes integrating customers on the sustainable lifestyles of these customers. However, much still needs to be done to generate a comprehensive understanding of the underlying dynamics of this relationship. As customer integration in COSI processes and spillover effects are of great importance with regard to the transformation to a more sustainable future, further research is essential in order to provide for a comprehensive picture. In order to find out under which mechanisms the interventions may spill over on participants' environmental self-identity and PEB, future research should collect, for instance, more information on the participants and on the integration processes and their different attributes. Further, it might also be interesting to examine longer-term projects and to monitor changes as spillover effects need time.

2. Collective Action and Institutions in Sustainable Entrepreneurship

Main discipline: Entrepreneurship (specifically sustainable/ social/ environmental entrepreneurship)

On basis of the extensive analysis of sustainable entrepreneurs in Europe (WP4), we were able to derive novel insights into the nature and processes of sustainable entrepreneurship. While there remain ample of research opportunities in this emergent field of scientific inquiry, we will focus on the role of collaborative action in this outline of future research possibilities.

Collective Action in Sustainable Entrepreneurship *(based on Binder, 2016)*

An intriguing and unexpected finding was that collaborative action played a pivotal role for the entrepreneurs in our sample. More pointedly, we found that sustainable

entrepreneurs approach their entrepreneurial activity very openly, also trying to integrate other users in the development process of a sustainable solution whether as 1) co-founder; 2) co-creators; or 3) collaborator.

Co-founding sustainable new ventures. The vast majority of cases of sustainable new ventures that we analysed as part of EU-InnovatE were co-founded by at least two founders. Thus, a promising line of future research can investigate the role that entrepreneurial teams play in the development and maintenance of sustainable ventures. Taking this collective action one step further, an unexpected and interesting finding was that in four cases this collective action resulted in a form of community entrepreneurship. Community entrepreneurship reflects a form of entrepreneurship, which focuses on local problems and aims to contribute to improving the living conditions of a specific group of people. Community members collectively establish, own, and manage businesses in pursuit of a common good for their community. The observations made in WP4 have been supported by findings in WP2, with the future scenarios predicting a transition from individual to collective users. Future research that sheds light on the dynamics and the effects that community established and/ or managed ventures have on sustainable lifestyles can be expected to hold relevant theoretical and practical implications.

Co-creation in sustainable new ventures. Moreover, collective action in form of co-creation deserves closer scholarly attention. An intriguing finding in our data was that many of the sustainable entrepreneurs approached their entrepreneurial activity very openly, trying to integrate others in the development process of a sustainable solution. The dynamics and process of co-creation would be interesting to illuminate, particularly in different contexts to chart the interplay of different actors or groups. Further research revealing how such co-creation affects the entrepreneurial process, but also the running and harvesting of the venture (e.g. stakeholder management) promises to shed light on this developmental aspect of sustainable enterprises.

Collaboration in sustainable new ventures. Lastly, collective action in the form of collaborations refers to sustainable ventures that get together to collectively reach overarching objectives, for example in raising awareness for certain topics of sustainability. Such collaborations are characterized by their openness and transparency,

thereby challenging some of the common held assumptions of mainstream entrepreneurship research (for example, intellectual property, competitive advantage). It would be interesting to examine further how these collaborations or clusters form as this would yield insights into how to cultivate them in the future.

Institutions and Sustainable Entrepreneurship *(based on Farny, 2016)*

Sustainable entrepreneurship as institutional work. The notion of institutional work highlights more reflexive forms of action that are aimed at intentionally affecting institutions. As part of EU-InnovatE we explored whether and how sustainable entrepreneurs can transform institutions in order to bring about change. Applying the theoretical lens of institutional work we found that the social practices of sustainable entrepreneurs are used as bottom up mechanism to induce institutional-level changes. Future research may thus find it useful to combine the two streams of research, i.e. social practices and institutional work, in order to further our understanding of how sustainable entrepreneurs can create, maintain, and disrupt institutions through their practices.

Collective emotions and institutions. The entrepreneurial journey is an emotionally charged process, yet, only few studies have integrated emotions as inherently social and dynamic processes of institutional work. Relating to our finding that collective action plays a pivotal role in sustainable entrepreneurship, findings of EU-InnovatE reveal the importance of collective emotions in institutional entrepreneurship. Further investigations could stress the local and temporal embeddedness of institutional entrepreneurship, and reveal other mechanisms of emotions in more stable environments.

Extreme environments and institutional voids. Extreme environments can be seen as a form of institutional void, i.e. environments in which intuitions are weak, absent or contradictory. The role entrepreneurship can play in addressing extreme environments, i.e. post-disaster environments, has only recently entered the scholarly debate (Shepherd & Williams, 2014; Williams & Shepherd, 2016). Farny (2016) is the first empirical work that combines entrepreneurship research and institutional theory after a major disaster. What these initial studies show more pointedly, is that entrepreneurship can play a key role in

the post-disaster management and in creating institutions. Further research that addresses the opportunities and creative potential of entrepreneurship in extreme environments could hold important theoretical and practical implications for the restoration of public order after different kinds of disasters.

3. The Role of Users in Transition Processes – A Multi-Level Perspective

Main disciplines: Multi-level perspective; socio-technical transitions

The multi-level perspective (MLP) on sustainability transitions has been the main theoretical lens in the EU InnovatE project. From the analysis of the on-going activities in the field of user involved sustainable innovations, using the MLP, it is obvious that in both cases these activities are still marginal in the context of dominant innovation processes and practices. Although promising, in terms of the MLP, they are still niche activities.

Multi-Level Interactions

Improving niche internal processes. General research issues include improving niche internal processes (articulation of expectations, social network formation and learning processes) by highlighting and communicating sustainable innovations and lifestyles, by broadening and improving the social networks supporting these innovations and lifestyles, and by exchanging and accumulating experiences and lessons learned. Experimentation is a key issue in a transition to more sustainable lifestyles. The many on-going projects and initiatives can be regarded as experiments.

Up-scaling of niches. One of the central points of the MLP is that for sustainability transitions to happen, more is needed than just encouraging and supporting the development of niches. Transitions occur as the result of multi-level interactions, that is the societal embedding of sustainable innovations and lifestyles and the destabilization of dominant regimes is necessary as well. Results from EU-InnovatE point to the need to

pay more attention to the other roles that actors, both at the niche level and in society at large, perform to help sustainable innovations to become mainstream. They can play a pivotal role in overcoming the resistance of incumbent actors and more general the barriers dominant regimes offer; they can help to empower niche actors in their struggle to change or adapt the rules in favor of more sustainable innovations and lifestyles. The barriers existing regulations pose have been identified in EU-InnovatE as an important one. From an MLP perspective, they require institutional entrepreneurship. This is an important field for further research.

Secondary stakeholders. In addition, an issue highlighted by the EU-InnovatE project is the formation of social networks supporting (sustainable) innovations. The focus in transition research and in business ecosystems research has been on the role of actors that are *directly* involved in the innovation process. However, the EU-InnovatE project has pointed at the pivotal role of *secondary* stakeholders to support and embed sustainable innovations. More research is needed to elaborate the role these secondary stakeholders can play, how they can be involved in the process of sustainable innovation, also highly relevant from a policy perspective.

Pathways Towards Sustainable Lifestyles

One important issue that we feel has not been addressed fully, is that of how pathways to more sustainable lifestyles could look like. There is need to develop more integral visions on sustainable lifestyles. Most visions focus too much on techno-economic issues. There is a need to develop more socially embedded visions on sustainable lifestyles. This should not be left to the experts but involvement of a broad range of societal actors is essential. Based on these visions pathways to a more sustainable lifestyles can be explored.

Business strategies. From a transition perspective it remains unclear which (business) strategies are the best to support the transition to a more sustainable society: staying first close to existing practices and gradually redirect the development in other direction or start with more radical way of doing things. Our hypothesis is that both strategies are

needed: the first one could be more effective on the long term, but the second is needed to provide examples that e.g. more sustainable lifestyles are feasible but not yet attainable or attractive for larger groups of people. Mixed or hybrid strategies also are an option. These business strategies are crucial for up scaling the various sustainable innovations. The typology of collective users roles developed in the EU-InnovatE project, offers a starting point to further research in this area but also for the development and implementation of policies and instruments; an important dimension is the need for institutional changes and adaptations and the role of institutional entrepreneurship.

User-centered business models. There are several issues that require further research: user-centered business models for sustainable innovations, embedding sustainable innovations by involving a larger number of stakeholders, visioning and new business strategies. The challenge of up scaling niches has triggered an interest in the field of business models (and industrial ecosystems). In order to enable a growth and diffusion of pilot projects, they have to become also economically feasible. There are interesting contributions for sustainable business models, including multiple value creation, and user-centered business models that are relevant for further research and experimentation in sustainable innovations and lifestyles: Sustainable business models focus on multiple value and shared value creation, that is they focus not only on economic and financial values but also include social and environmental values. This is a relatively new field of research in innovation management. User-centered business models include issues such as the links between the type of user involvement, phase of involvement, type of firm and the dominant business logic. For both user-centered business models and for sustainable business models more quantitative and qualitative research is needed to test whether these approaches lead to more success for the specific products and services and to assess their contribution to more sustainable lifestyles.

References

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