

EUROPEAN POLICY BRIEF



New Policy Approaches to Support Sustainable Entrepreneurship and Citizen Innovation in Europe

Finalised project

SUMMARY

Objectives of the research

For the past three years, the EU-InnovatE project has investigated the prospects and obstacles for Europe to achieve sustainable lifestyles and a green economy by 2050. This Policy Brief focuses on one of its major empirical research themes, namely: to assess current and future policies and instruments that promote these goals, with a special emphasis on how they might better enable and support user integration, innovation and entrepreneurship.

Scientific approach / methodology

EU-InnovatE has been delivered through an innovative mixed-methodology research design. The research findings presented here draw from a combination of qualitative and quantitative data collection, including a systematic literature review, innovation workshops, in-depth interviews, laboratory and online experiments, and an online crowdsourcing event.

New knowledge and/or European added value

Sustainable innovation and entrepreneurship (SIE) can be independent or facilitated, which has important implications for differentiated policy-making. New dynamic capabilities are needed for organizations to support SIE effectively, while crowdfunding offers an exciting channel to secure new investment for sustainability-oriented ventures, whether for-profit, non-profit or a hybrid enterprise model.

Key messages for policy-makers, businesses, trade unions and civil society actors

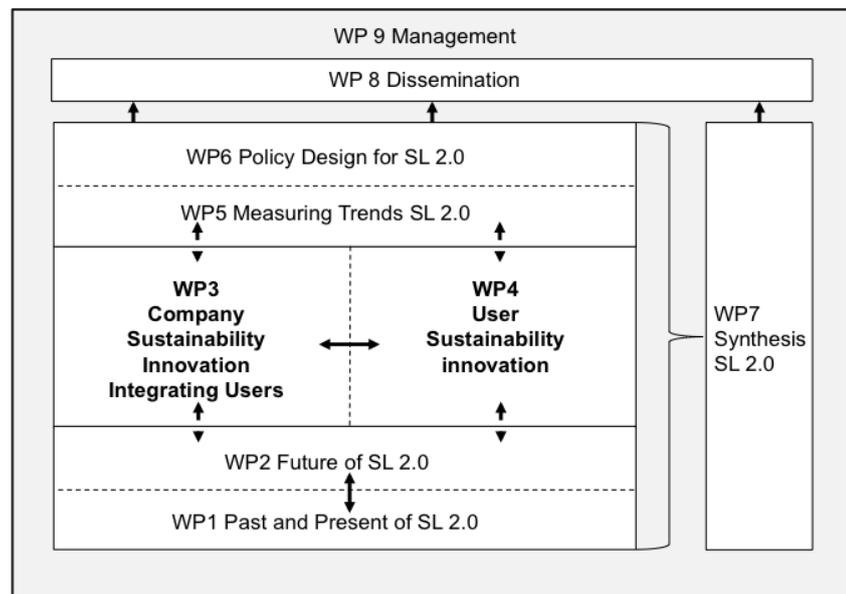
WP6 has generated 10 high-level recommendations to the EU to accelerate SIE in Europe, covering five critical dimensions in the lifecycle of a sustainable entrepreneur's journey: education & skills, building networks, funding / investing & scaling up, measuring impact, and open innovation in policy formulation processes.

<p>Objectives of the research</p>	<p>In the last of our six empirical work packages (WP6), the central objective was to investigate and assess current policies and instruments on communal, regional, national and EU levels which promote sustainable lifestyles and green economy in Europe, with a special emphasis on user integration, innovation and entrepreneurship as part of the overall policy mix.</p> <p>To achieve this goal, the WP6 research team set out to achieve the following goals:</p> <ul style="list-style-type: none"> ✓ To identify encouraging features, as well as potential barriers, in current policies on different levels (individual, institutional, systemic) for (a) company-driven sustainability innovation actively integrating users, and (b) user sustainability innovation with a special focus on the EU level. ✓ To suggest novel elements of a comprehensive EU policy framework to support company-driven sustainability innovation actively integrating users as well as user sustainability innovation, specifically user sustainability invention and user sustainability entrepreneurship. ✓ To test these new ideas empirically by means of experiments, as well as in a social-media enabled consumer conference.
<p>Scientific approach / methodology</p>	<p>As a reflection of the interdisciplinary and transdisciplinary complexity of our central theme and key objectives, the EU-InnovatE project featured an innovative mixed-methodology design applied across all work packages (WPs). The full project framework is shown below.</p> <p>In WP6, the research was grounded in a systematic review of available peer-reviewed literature on the field of sustainable user innovation and user entrepreneurship. The overall goal was to create a framework for understanding user-driven innovation for sustainability and the potential policy barriers and enablers of this type of innovation process.</p> <p>Our analyses from the literature review informed two Policy Innovation Workshops which convened reflective dialogue between scientists, managers, user innovators and entrepreneurs, with the intention of co-producing new policy ideas. The outcomes were then “reality checked” through 25 in-depth interviews with policy-makers in different parts of Europe.</p> <p>A laboratory experiment (n=204) was conducted to analyse the effects of extra payments on the intrinsic motivation of funders and a possible crowding-out effect within a crowdfunding context. Similarly, an online experiment (N=994) was</p>

conducted in order to explore the phenomenon of crowdfunding and specifically examine the causation between (un)sustainability-framed campaign texts and individual investment behavior. The aim was to understand when and if individuals invest in sustainability-oriented crowdfunding campaigns.

Last, but not least, a day-long, text-based, online crowdsourcing event was hosted jointly by Cranfield University and a professional research firm (GlobeScan). Its central purpose was to crowdsource ideas for existing or potential policies to support sustainable entrepreneurship and citizen innovation from a diverse range of interested individuals, including sustainable entrepreneurs, academics, investors and policy-makers. This virtual conference saw 150 participants from 24 countries joining online, generating 1,696 unique comments during the six hours of virtual discussions. These formed the foundations for the policy innovation framework described in the next section.

EU-InnovatE Research Design



New knowledge and European added value

Identifying two distinct forms of sustainable innovation and entrepreneurship (SIE)

Sustainable innovation and entrepreneurship (SIE) is typically viewed through the lens of the producer-innovator, whereas end users (or citizens / consumers) are perceived to play only a peripheral role in the development of sustainable products and services. A growing literature stream, however, sharply departs from this view by suggesting that end users often play a critical role in sustainability-oriented innovation processes. The findings of our study reveal that the literature on user innovation within sustainability is both diverse and compartmentalized.

Our research also highlighted an important distinction between **independent** and **facilitated** SIE, and by extension the drivers, solutions and resources which define them. The differences are explained in the table below:

Frameworks for independent and facilitated SIE

	Independent SIE	Facilitated SIE
Framework	Individual and social-needs framework.	Market-driven framework.
Drivers	Personal projects based on interests, passions and idealism. Typically facilitated by individuals or small groups.	Typically firm-, government- or university-driven projects, facilitated by one or more institution(s).
Solutions	Localised and context specific solutions to larger issues. Dominance of system innovation.	Generalisable solutions to larger issues, built in part on end-user knowledge. Dominance of incremental innovation.
Resources	Family and friends, grant funding, voluntary input, crowdsourced competences via e.g. internet forums. Some commercial resources if successful.	Income from commercial viability of the given product or service. Larger government and university grants. Small SMEs can also seek crowd-funding

Yet, in a range of 25 in-depth interviews with policy-makers from European Member States and EU institutions, it became clear that there was a distinct lack of knowledge about the phenomenon of SIE (also as a potential accelerator of economic growth and sustainability transitions), a lack of clarity around the terminology, and a surfeit of “top down” thinking leading to silos of policy activity instead of an interconnected model of developing the field.

Defining new dynamic capabilities required for sustainability-oriented innovation with stakeholders

Innovation for environmental sustainability requires firms to engage with external stakeholders to access expertise and ideas, address complex problems, and gain social legitimacy. In this open innovation context, stakeholder engagement is construed as a dynamic capability that can harness differences between external stakeholders to augment their respective resource bases.

A systematic review of evidence from 93 academic papers found that engaging stakeholders in environmental innovation requires three levels of capabilities:

- 1) Specific operational capabilities;
- 2) Complex first-order dynamic capabilities to manage the engagement (engagement management capabilities); and
- 3) Second-order dynamic capabilities to allow organizations to co-create value (value framing), as well as to learn from their engagement (systematized learning).

These findings enhance understanding of how firms can effectively incorporate stakeholder perspectives for environmental innovation, and provide an organizing framework for further research into open innovation and co-creation approaches.

They also provide important new contributions to the dynamic capabilities literature, namely: (a) creating a departure point for further research into the relationship between first-order and second-order dynamic capabilities, (b) suggesting how distinct institutional logics can explain dynamic capability development, (c) building on evidence that inter-institutional learning is contingent on not only the similarity but also the differences between organizational value frames, and (d) suggesting that operating capabilities impact on the effectiveness of dynamic capabilities, rather than the other way around, as is usually assumed.

Exploring crowdfunding of SIE and individual investor motives

Crowdfunding (CF) has become a popular alternative source of finance for a variety of for- and non-profit ventures and projects. By enabling small incremental investments, typically through intermediary platforms like Indiegogo, CF increasingly allows non-professional investors to support new enterprise ventures. This development has been hailed by some as a form of finance that could significantly enable more sustainable innovation, contending that crowdfunders are driven by a different investment logic as compared to professional investors that focuses on the projects' core values and legitimacy.

A key related question, however, is to what degree individual motives and values shape investment decisions. Our online experiments suggest that both altruistic and biospheric values are strongly associated with increased levels of investments, while egocentric value frames have no significant affects. Strong moderators of these finding include the individual's own stated values and their respective evaluation of the proposed product, service or solution.

Wider contributions to policy literature

Our research has made important contributions to entrepreneurship policy literature, including in the domain of measuring impact and performance – where appropriate success measures are highly significant in a “triple bottom line” environment, not least for investor engagement and analytics – as well as highlighting the potential for greater open innovation in entrepreneurship policy formulation.

Our contributions to sustainability policy literature include the requirements for support mechanisms and capacity building to empower individuals to contribute as innovators and entrepreneurs and not just consumers. The sustainable entrepreneurship framework can be applied by policy-makers to develop context-specific policies: this is illustrated with a worked example of EU policy recommendations in the following section.

Key messages for policy-makers, businesses, trade unions and civil society actors

EU-InnovatE has provided robust evidence that citizen innovation and sustainable entrepreneurship have the potential to play a significant role in addressing societal and environmental challenges, and in catalyzing changes in existing systems.

However, sustainability and entrepreneurship have hitherto been addressed through separate policy regimes, and current approaches and instruments do not tend to encourage sustainable entrepreneurship specifically. Against this backdrop, the results of WP6 hold important implications for two sets of stakeholders, above all: policy-makers and sustainable entrepreneurs.

A crowdsourced framework for policy innovation and new approaches

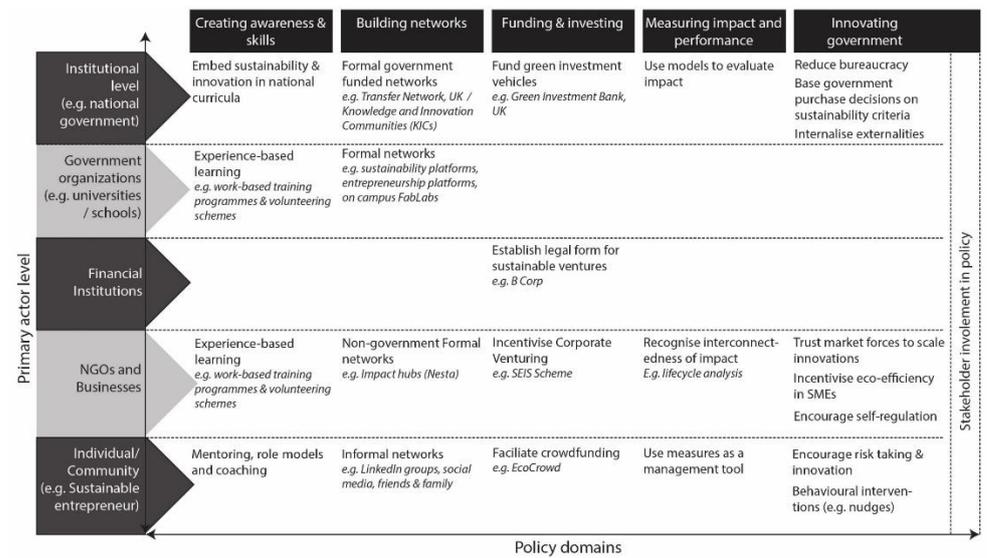
Having confirmed the central importance of users and consumers to sustainability transitions, the WP6 research team has developed a new policy framework to promote and accelerate sustainable entrepreneurship and citizen innovation across Europe.

This has been generated using an open innovation approach with policy-makers, practitioners, academics, entrepreneurs and other relevant actors, including an online crowdsourcing event with 150 participants from 24 countries.

The value of this kind of integrated framework for policy thinking is especially relevant given the lack of coherent policy to support sustainable entrepreneurship – a reality which was underlined during the policy-maker interview process. Above all, the framework highlights five policy domains which invite closer attention, and the potential involvement of stakeholders in charting new ways forward:

- 1) Creating awareness and skills;
- 2) Building networks;
- 3) Funding / investing and scaling up;
- 4) Measuring impact and performance; and
- 5) Innovating government.

These are depicted in the table below, with illustrative examples of new measures that could increase the effectiveness of policy interventions to accelerate sustainable entrepreneurship and citizen innovation for sustainable lifestyles and green economy in Europe to 2050:



The previous section also highlighted the fundamental differences between independent and facilitated SIE. We argue that policy mechanisms designed to support each type of SIE innovation process need to be tailored to the independent or facilitated framework in which the end user resides, the different actor logic and motivation involved, and their pursuit of different types of innovation.

By extension, our studies indicate that independent user innovation typically involves policy aimed at enabling users with the necessary skills and resources to innovate, whereas facilitated user innovation typically emphasizes creating platforms that effectively introduce user knowledge into an existing framework.

10 recommendations for EU policy innovation

The collective research endeavours, policy innovation workshops and online Sustainability Innovation Exchange have also generated the following list of high-level recommendations to the EU to advance SIE as part of the transition towards sustainable lifestyles and green economy in Europe:

1. Align sustainability & entrepreneurship in strategic frameworks for education & training;
2. Upscale sustainable entrepreneurship in Erasmus programmes;
3. Create a sustainable entrepreneurship Knowledge and Innovation Community (KIC);

4. Harness the Enterprise Europe Network for better education and learning resources;
5. Expand European financing for sustainability ventures;
6. Leverage crowdfunding for sustainability innovation;
7. Align European VC financing with corporate venturing for sustainable enterprise;
8. Recognise new legal enterprise forms for sustainable ventures;
9. Enhance strategic policy making through household based / scenario driven impact modelling;
10. Support new research into user and citizen roles in innovative policy making.

A full presentation outlining the rationale behind these recommendations and potential concrete actions available to EU policy-makers is available on the project website.

Confirming policy-making as a catalyst for systems change

In line with the rest of the project, the main findings and insights from WP6 have been tested against the “Multi-Level Perspective (MLP)”, a widely-used framework to examine socio-technical transitions. Our findings suggest that policy can catalyze the facilitation and aggregation of innovations coming from the niche level, thereby evolving the socio-technical regime, in addition to the role of policy described in earlier work in stabilizing the socio-technical regime.

In doing so, however, it is important that policy agencies distinguish clearly between the independent and facilitated models of SIE presented in the previous section. Supporting either therefore requires a varied policy approach given their inherent differences.

In the context of the former, the utilisation of awards and competitions, along with DIY / self-building courses and groups, represent simple and practical policy tools for supporting independent SIE. These can be employed with the wider objective of increasing end user competences, facilitating intergroup collaboration and learning, and making sustainable innovation “doable and enjoyable” for stakeholder participants.

Supporting facilitated SEI as opposed to independent SEI requires different types of policy interventions. Two methods that seem most favorable for encouraging end-user integration into facilitated sustainable innovation process is the lead user method and crowdsourcing (-funding). The lead user method seeks to identify particular active end-users, via e.g. online forums, and incorporate them into

specific innovation processes. Crowdsourcing and –funding seek to utilize the connectivity of the internet to draw upon either the aggregated power of the crowd or “hidden” experts.

Independent and facilitated innovation processes are very different in their aims and motivations – an observation that is also relevant when recounting potential policy options. Specifically, policy options to support independent SIE appear to be primarily aimed at enabling end users with the necessary skills and resources to innovate. Promising approaches include tailored DIY workshops, resources, networks and knowledge access.

Conversely, policies aimed at facilitated SIE appear to be primarily focused on creating platforms that enable the effective introduction of end user knowledge into an existing framework. This is done, for example, through the lead user method, crowdsourcing, open source and / or sustainable living labs.

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Further reading	<ul style="list-style-type: none"> • Innovating in Search of Sustainability: Citizens, Companies and Entrepreneurs • Practitioners Cookbook for Innovation with Stakeholders • Company-driven Open Sustainability Innovation (18 case studies) • Sustainable Enterprises (14 case studies) • International Webinar Series (6 presentations and audio recordings) <p>Available on the project website, plus links to all project deliverables.</p>
Related websites	<p>http://www.globescanforum.com/sustainability_innovation_exchange/ http://52.202.219.239:8080/user_guide (registration required) http://www.sustainable-lifestyles.eu</p>
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