EUROPEAN POLICYBRIEF

EUINNOVATE

Understanding Company-Driven Innovation for Sustainability and the Integration of Users

Finalised project

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	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 investigate user integration in company-driven open sustainability innovation (COSI) systems and processes.
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 case studies, interviews, laboratory experiments, an online survey, and systematic comparison of multiple cases.
New knowledge and/or European added value	Companies rarely have in-house capabilities to involve users and stakeholders in COSI systems. Yet "secondary" stakeholders, such as NGOs, municipalities and academic institutions, have a far more important role to play in their development than previously understood. Eight distinct dimensions have been identified for companies to consider in designing their sustainability-oriented innovation processes.
Key messages for policy-makers, businesses, trade unions and civil society actors	Users and stakeholders have vitally important – and previously unidentified – roles to play as stimulators, concept refiners, context enablers and impact extenders of sustainability-oriented innovations. Our findings highlight three explicit strategies for stakeholder integration that lead to improved COSI outcomes, as well as eight key considerations for companies taking their first steps in this domain.

Objectives of the research	In the third of our six empirical work packages (WP3), the central objective was to deepen the understanding of user integration in company-driven open sustainability innovation (COSI) systems, and in parallel to identify what types of organizational forms, culture, structures, management styles promote (or alternatively hinder) the process of user integration.
	To achieve this goal, the WP3 research team collected and analyzed large volumes of both qualitative and quantitative data from established companies across four European regions. Their work involved the following main steps:
	1. The creation of a reference pool of 127 European enterprises across 12 Member States that integrate users in the open innovation process of sustainable products, services or business models;
	2. The identification of key elements, phases and the extent of user integration in 18 selected "best practice" cases;
	3. The identification of so-called "organizational" enablers of user integration in open sustainability innovation processes.
	Aspects of "intrapreneurship" were also given special attention during the investigation – both as a potentially prominent factor in facilitating the shift between employee participation in company-driven innovations to user entrepreneurship, and as a key conceptual bridge to the work undertaken in WP4 (see also below). In this regard, intrapreneurship was broadly defined as the practice of entrepreneurship in an established firm, or applying the 'start up' style of management (characterized by flexibility, innovation, and risk taking), to take advantage of new sustainability-linked opportunities or to assess feasibility of new sustainable products, services and solutions.
Scientific approach / methodology	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.
	In WP3, case data was collected from multiple perspectives to strengthen comprehensive theory development and policy advice. These included: interviews with company representatives (e.g. project managers, R&D managers); interviews with integrated end users or end user "customers" who had experience with a given innovation; and other third parties involved in the innovation process (e.g. NGOs, research institutions, municipalities). Additional data was collected from company reports, newspapers, blog writings and online sources. Each case relied on 3-7 semi-structured interviews, with final case reports ranging from 30-50 pages.

The research team also conducted an online survey with customers (n=579) of COSI products and services, assessing whether customer participation in COSI processes and the adoption of COSI products/services induced behavioral changes for the adoption of more sustainable lifestyles. A separate analytical report addressed innovation types, user and stakeholder integration methods and organizational enablers of such innovation has been delivered.

A large-scale quantitative study of European firms was also conducted (n=128). Based on a multi-method quantitative approach, this study contributed to a better understanding of how firms co-create sustainable value with customers to achieve superior innovation and sustainability performance.

Last, but not least, the WP3 team undertook laboratory experiments in two countries to explore the influence of leadership style on the participation of end users in online ideas contests. The study was based on 4 experiments of 429 participants including students and working adults of different nationalities.
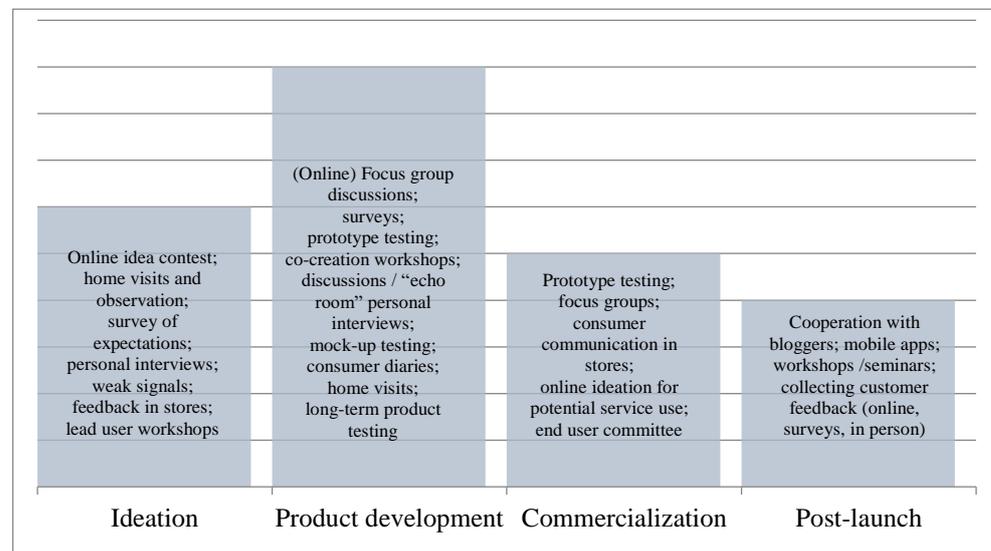
EU-InnovatE Research Design
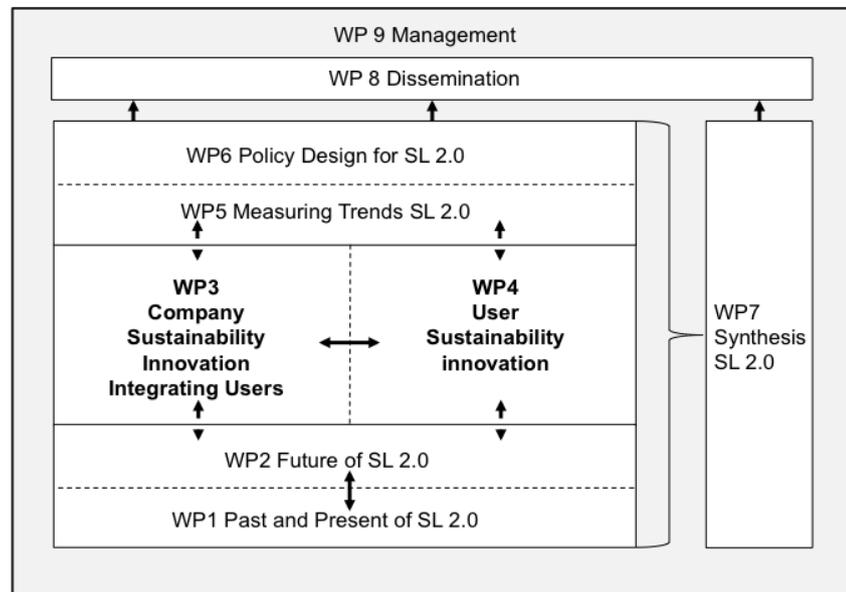
New knowledge and European added value	**Headline findings** Perhaps surprisingly, our results indicate that established companies **rarely have in-house expertise on end user integration** as part of their innovation development. Rather, they rely on the services of professional innovation / consumer agencies, or on mediation provided by secondary stakeholders, such as universities, public bodies, or NGOs. Companies are often still unconvinced of end user integration benefits. This might be related to the lack of experience and expertise of how to handle the insights from end users. Our findings show that companies might require an external push or motivation to start working with end users, such as public funding calls with explicit focus on end user cooperation. That said, traditional end user integration methods are still strong, such as focus group interviewing, pilot testing, and various types of field trials. The figure below portrays distribution of end user integration methods across innovation stages (ideation, product development, commercialization, and post-launch):

Distribution of End User Integration Method

Ideation	Product development	Commercialization	Post-launch
Online idea contest; home visits and observation; survey of expectations; personal interviews; weak signals; feedback in stores; lead user workshops	(Online) Focus group discussions; surveys; prototype testing; co-creation workshops; discussions / "echo room" personal interviews; mock-up testing; consumer diaries; home visits; long-term product testing	Prototype testing; focus groups; consumer communication in stores; online ideation for potential service use; end user committee	Cooperation with bloggers; mobile apps; workshops /seminars; collecting customer feedback (online, surveys, in person)

At the same time, new methods enabled by Web 2.0 technology make end user integration more convenient and allow companies to gather insights from larger and more diverse user groups (e.g. online idea competitions), as well as enable more balanced discussions (e.g. online focus groups) and facilitate real-time access to consumer data over long-term (e.g. online consumer diaries).

End user integration methods may vary in terms of length, but our cases suggest that what really matters is the extent of organizational involvement in the process. It matters whether the company simply outsources user integration activity to a professional agency to get a ready-made summary of results and interpretations, or whether some of the company management and employees are personally involved and present during the user integration process. Our cases show that extensive organizational involvement with integrated users (and other stakeholders) is needed for more radical innovation, such as system innovations.

Assessing the related impacts of COSI on user behaviour

Our research found evidence that end users who participate in company-driven sustainability innovation processes show a more environmentally friendly behavior when compared to non-participants. Our findings suggest that end user integration to sustainability innovation can activate environmental goals among participants, thereby strengthening their environmental self-identity, which, in turn, leads to further environmentally friendly actions. The degree of interaction and its timeframe have a notable effect on the activation of environmental identity.

The integration of users into companies' open sustainability innovation processes is crucial not only for company success but also for establishing a sustainable lifestyle. Leadership and participative decision-making are identified as enablers of the subsequent absorption of ideas created in idea contests, which contribute to sustainability-oriented innovation in companies.

Sustainability innovation calls for novel ideas or capabilities beyond the usual partners

The vital role of other stakeholders in open sustainability innovations was strongly evident in all identified cases. The groups that are typically labelled as "secondary" stakeholders – such as special interest groups, NGOs, grass-root organizations, research institutions, and municipalities – turned out to have important roles in the development of sustainability innovations.

It is the holistic nature of sustainability issues that assumes a wider network of interconnected issues and stakeholder interests, and therefore requires wider collaboration for successful results. Compared to businesses, secondary stakeholders, such as municipalities or NGOs, have citizen well-being and environmental sustainability as their primary concern. Thanks to this divergent thinking, they are often able to expand firm's boundaries in the innovation process. Our findings indicate that groups on the periphery of the firm's stakeholder network are often more relevant for sustainability-oriented innovation.

Defining ways in which companies can harness stakeholder potential

Based on our systematic comparison of "best practice" case studies, we have identified eight different stakeholder roles which have helped to make collaborative innovation for sustainability a success for established companies. These are presented below, along with simple indicators of how companies in general can find new channels to advance COSI as part of their wider innovation ecosystem:

1/ STIMULATORS. Look out for policy initiatives stimulated by public authorities. City greening projects, calls for proposals and offers of funding can be a great stimulation for innovative solutions to develop with stakeholders.

2/ INITIATORS. Inspiring ideas can come from all over the place, such as online ideas contests or internal platforms to engage employees in creative thinking.

3/ BROKERS / MEDIATORS. Stakeholders such as public authorities, universities, foundations and other non-profit or civil society organizations can help to mediate between multiple actors which may be included in a project. They can help the company to navigate the complex multi-stakeholder environment and facilitate in gathering inputs and feedback from these different stakeholder groups.

4/ CONCEPT REFINERS. Collaborative innovation provides an opportunity to try out new concepts of products and services with different audiences, particularly end users. New technologies such as online focus groups or ideas contests can assist in getting end user feedback. It also offers the chance to draw on technical expertise and specialist knowledge which may reside in other organizations.

5/ LEGITIMATORS. NGOs, academic institutions and public authorities can help to build credibility and trust around sustainability solutions and encourage the acceptance of product and service innovations among end users.

6/ EDUCATORS. When innovations reflect broader changes in lifestyles towards greater sustainability, stakeholders such as universities, NGOs and public authorities can be valuable in sensitizing and informing the public of the broader sustainable behaviour changes.

7/ CONTEXT ENABLERS. Public authorities can be highly valuable in supporting changes in the regulatory context for innovative new products and services, and are often open to company insights early in engagement processes.

8/ IMPACT EXTENDERS. Stakeholders specialized in different aspects of sustainability, either social or environmental, can help to promote the product or service and can also extend the sustainability impact in different areas to provide a more holistic sustainable lifestyle solution.

Key messages for policy-makers, businesses, trade unions and civil society actors	**Identifying new stakeholder roles in sustainability-oriented innovation** Some of the roles mentioned above – such as legitimator, educator, initiator and broker/mediator – have been previously identified in the innovation literature. Our data confirms that these roles are relevant for sustainability-oriented innovation. Public bodies, for instance, often serve as legitimators for sustainability innovations. Academic institutions have the authority and means to educate about sustainability issues. NGOs have experience and networks to mediate end user integration for companies. Nonetheless, our research has defined four new roles – **stimulator, concept refiner, context enabler and impact extender** – which are highly relevant for the development and establishment of sustainability-oriented innovations. The stimulator role is essential for public bodies that can inspire more collaborative sustainability innovating with specific funding calls. The concept refiner role often assigned to end users helps to ensure that the emerging innovation is user shaped before entering the market. **Stakeholders can have a highly proactive role in the innovation process** The roles of stimulator, initiator and impact extender show that sustainability innovations are not purely company-driven. It is possible, for instance, that NGOs approach companies as initiators: i.e., with ideas for potential sustainability solutions. NGOs also often take on the role of impact extender to help promote increased use of the sustainable product/service, and potentially extend the impacts to other areas of sustainable lifestyles. These proactive roles demonstrate that in the future innovating for sustainability innovation will be a collaborative effort of different partners, shifting the focus away from companies as central innovation actors. **Stakeholder integration strategies behind groundbreaking sustainability innovations** Our findings suggest that there are at least three explicit strategies for stakeholder integration that lead to higher sustainability outcome of the innovation: 1) To make use of very early stakeholder inputs, with strong ties to stakeholders; 2) To collaborate at the late stages of innovation, but with a very limited number of stakeholders (1-3); 3) To begin collaboration with a broad array of actors, but with the actual product or service development being conducted by the focal innovator-firm.

However, one condition is true for all three strategies: building close ties to integrated stakeholders is essential for developing a high outcome successful sustainability innovation. The ties are considered strong when multiple members or top management of the focal firm have participated in direct collaboration with different types of stakeholders.

Top enabling factors for medium and large companies

Our investigative work into the 18 leading case companies has also identified eight key enablers that helped them to succeed in their collaborative innovation activities. We reformulate these here as recommendations for any medium- to large-sized company looking to take its first steps towards COSI:

1) Seek top management support
2) Support a company culture of learning, trial and error
3) Create cross functional teams to work on innovations
4) Try out ideas early on with end users
5) Make resources available for experimentation
6) Enable staff and managers to work directly with stakeholders
7) Engage a limited number of well-chosen stakeholders
8) Be open to collaborating beyond the usual business partners to access new ideas and capabilities

Wider implications for business, policy, NGOs and other stakeholders

The findings from WP3 underline the potential value to companies of re-considering stakeholder engagement in innovation processes to achieve more sustainable outcomes and impacts. For these purposes, the scientific findings have been re-formulated into a set of practitioner-oriented guidelines for collaborative sustainability innovation (available at http://eu-innovate.com/business/). In addition, a short film has been made from the interviews with companies studied that currently engage in collaborative sustainability innovation. The video is also available on EU-Innovate website (www.eu-innovate.com), and is intended to be accessible and relevant to a wide variety of audiences.

The stakeholder roles identified in WP3 are also of great potential interest to policy makers, NGOs and other stakeholders interested in the advancement of sustainability. These roles concretely define how different organizations could participate in innovation for sustainability, and how public bodies could stimulate and promote such activities among company clusters in different domains.

SOCIO-ECONOMIC
SCIENCES
AND HUMANITIES
RESEARCH

SEVENTH FRAMEWORK
PROGRAMME

Coordinator	**Technische Universität München (TUM)** School of Management Freising, Germany
Consortium	**Aalto University** School of Business Aalto, Finland **Aarhus University** Department of Management Aarhus, Denmark **ABIS – The Academy of Business in Society** Brussels, Belgium **Copenhagen Business School** Department of Intercultural Communication and Management Copenhagen, Denmark **Cranfield University** School of Management Cranfield, United Kingdom **ESADE** Business & Law School Barcelona, Spain **Forum for the Future** London, United Kingdom **Katholische Universität Eichstätt-Ingolstadt** Faculty of Business Administration Ingolstadt, Germany **Kozminski University** Business Ethics & Social Innovation Centre Warsaw, Poland **Politenico di Milano** Department of Management Engineering Milan, Italy

	Technische Universiteit Eindhoven School of Innovation Sciences Eindhoven, Netherlands **Università Cattolica del Sacre Cuore** ALTIS Postgraduate School of Business & Society Milan, Italy **Universiteit van Amsterdam** Amsterdam Business School Amsterdam, The Netherlands
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Further reading	• 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) Available on the project website, plus links to all project deliverables.
Related websites	http://www.globescanforum.com/sustainability_innovation_exchange/ http://52.202.219.239:8080/user_guide (registration required) http://www.sustainable-lifestyles.eu
For more information	**Contact:** Professor Minna Halme, Work Package 3 Coordinator minna.halme@aalto.fi