	EUROPEAN COMMISSION RESEARCH AND INNOVATION DG	Final Report

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Project Acronym: ECO-INNOVERA

Project Full Name: ERA-NET ON ECO-INNOVATION - Boosting eco-innovation through joint cooperation in research and dissemination

Final Report

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Final Report

PROJECT FINAL REPORT

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Final Report

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Please see attached PDF
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Please see attached PDF
Address of project public website and relevant contact details
Please see attached PDF

4.1 Final publishable summary report

- **Executive summary**

The ERA-Net ECO-INNOVERA is a network of policy makers and programme owners that aim to boost eco-innovation through cooperation in research and development. The network started in 2010 under the EU FP7 programme with 25 partners from different Member States and Regions. Since then, the partners have been working to identify common ground in policy development and research needs, and experiment with combinations of research funds. The project as such expired October 1, 2014 but a majority of the partners will continue to cooperate as a network for systemic eco innovation.

Key results of the project after finalization:
i. Strategy and network
ii. 12 transnational projects that reflect European eco-innovation capacities are being implemented as a result of 2 joint calls. The total budget coming from the funding organizations came up with 25M EUR. These projects provide a backbone to the continued cooperation future exchange of knowledge and views among the ECO-INNOVERA partners.
iii. A solid basis for follow-up joint activities, described in the ECO-INNOVERA work-plan 2015 – 2016
iv. Ongoing exchange with networks on specific areas or sectors, such as sustainable urban development, resource efficiency, climate change and bio-diversity.
v. Further development of common policies and research through an ongoing dialogue with the European Commission and regular contacts with countries outside Europe
vi. best practices beyond and withing Europe, analysis of eco-innovation parls, university curricula
The ERA-Net ECO-INNOVERA addresses and boost eco-innovation by combination of research funds and systematic communication of results. The outcome of the activities would have to provide a basis for further alignment of national efforts beyond the duration of the project.
Specific objectives of the network were:
1) Join forces by development of an ongoing network and a common research strategy
2) Learn from best practices by comparison and analysis of national and regional programmes and university curricula, examples of eco-innovation in- and outside the European Union, including the role of ICT, industrial parks and methods for monitoring and evaluation
3) Enable transnational, state-of-the-art projects by combining research funds
4) Disseminate the eco-innovation concept by systematic communication with related sector–based networks and communities.

Research Agenda

The first task of the network has been to improve the common understanding and cohesion between the partners. From the start it has been clear that substantial, eco-innovations are needed in order to reach the overall aim of a competitive position for European sustainable industry. Eco Innovation is a cross-cutting subject, that touches upon all sectors in society. Based on an extension of the definition of innovation in the OECD Oslo Manual and on the existing literature, eco-innovation can be understood and analysed according to its targets (the main focus), its mechanisms (methods for introducing changes in the target) and its impacts (the effects on environmental conditions). Eco-innovation at a systemic level is even more complicated, especially related to policy development and research needs. In conjunction with consortium and strategic board meetings, ECO-INNOVERA has created opportunities for debates, workshops with experts and networks outside the Consortium to enhance the understanding and development of the systemic eco-innovation. The ECO-INNOVERA network is now a considerable partner with a central position between networks and communities gathered around individual sectors, themes and disciplines – a sparring partner of the Commission when it comes to enable systemic eco-innovations trough-out complex systems and chains.

The R&I strategy strived to identify and prioritise value-adding activities for eco-innovation having faster and more significant impact in society. Moreover, it was the start of a process by which the ERA-Net moved beyond a project into pro-active network for the European eco-innovation community. With the systemic eco-innovation approach, ECO-INNOVERA reflects the increasing orientation of policy towards improving an eco-innovation agenda, that will generate more jobs, green growth and offer opportunities of the development of new business models. This agenda had a focus on life-cycle of products (LCA), implementing new innovations from design to consumption and end users change of behaviour.
To find common ground in 25 programmes that range from stimulating relatively simple, incremental sustainable technologies to research on systemic innovation in complex systems, such as future cities and resource efficiency, was a challenge but worthwhile exercise. Specific attention was payed to the development of common metrics, the role of eco Innovation parks, university curricula and ICT.

Joint funding and trans-national projects

ECO-INNOVERA has launched two calls for tender expecting to obtain collaborative R&D projects which include social, environmental, market and technological issues and have a strong focus on future markets and societal needs as well as a strong capability to deliver to the market (systemic eco- innovation). Through the Communication Plan, ECO-INNOVERA has approached a high level of dissemination, both in their Website as well as on LinkedIn and has participated in different event and workshops to promote its research agenda.

The project has built an essential European common knowledge-base to support decision-making and policy elaboration processes, in order to address common European challenges for sustainable eco-innovation.

Systematic Communication

A communication and dissemination plan was developed in the early stages of the project to ensure a clear and systemic approach. Backbone for the communication on ECO-INNOVERA efforts and results, and key tool for knowledge management is the project website. Other tools used for the communication within and outside of the network were: Thee Linkedin group for news, recognisable brand (logo), newsletters, ongoing liaison with networks, personal communication, different presentations, Communication with the Commission – acting as sparring partner. Consortium meetings were organised in conjunction with workshops and seminars open to representatives of enterprises and research institutions outside the consortium. This has contributed largely to a better understanding of systemic eco-innovations and a grown commitment to the Network. The Final conference which settled up the implementation of a Future networking Greater cooperation between partners have resulted in smart targeting of key issues confronting different types of approaches. Enhanced coordination between national research programmes has identified critical knowledge gaps and foster the development of transdisciplinary and systemic eco-innovation approaches that are fundamental if the multi-dimensional challenges of sustainable development are to be successfully overcome.

ECO-INNOVERA Partner Organizations
The ECO-INNOVERA project had brought together different ministries and organisations responsible for funding research in eco-innovation across 17 different European countries and regions. At the beginning of the project, EPA the Environmental Protection Agency from Ireland was also partner on the project. It withdrew from the project in 2011. The partners of ECO-INNOVERA are:
-Forschungszentrum Jülich GmbH (JUELICH) (Coordinator), Germany
-Federal Ministry of Education and Research, Germany
-French Agency for Environment and Energy Management, France
-National Agency for Research, France
-Federal Office for the Environment, Switzerland
-German Aerospace Research Center, Germany
-Environmental Protection Agency, Ireland (TERMINATED)

-National Research Fund, Luxemburg
-Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning, -Sweden
-Environmental Performance Agency of Basque Government, Basque Country-Spain
-Agency for Innovation by Science and Technology, Flanders-Belgium
-Kommunalkredit Public Consulting, Austria
-Israeli Industry Center for Research and Development, Israel
-Ministry of Science and Innovation, Spain
-Ministry of Education, Youth and Science, Bulgaria
-Danish Ministry of Environment, Denmark
-Ministry of Higher Education, Science and Technology, Slovenia
-National Centre for Research and Development, Poland
-Regione Piemonte, Italy
-Netherlands Agency for the Environment and Habitat, the Netherlands
-Finnish Funding Agency for Technology and Innovation, Finland
-Technology Strategy Board, United Kingdom
-Scientific and Technological Research Council of Turkey, Turkey
-Ministry of Infrastructure and Environment, the Netherlands

Please find more information on the ECO-INNOVERA project homepage:
http://www.eco-innovera.eu/

Coordinator Contact Details
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- **Summary description of project context and objectives**

Political context and objectives

ECO-INNOVERA addresses the urgent need for a better understanding of eco-innovation and follows a Systemic eco-innovation approach, in order to reach sustainable development, green jobs and a change in consumer behavior. ECO-INNOVERA calls for integration of efforts through synchronization and cooperation between regional, national and European policy-makers, researchers and frontrunner economic actors and funders of research for further joint development of concept and implementation of systemic eco-innovation. This European approach will largely benefit from understanding the institutional and governance approaches necessary for an uptake in national and European research and innovation funding.

The development and understanding of eco-innovation in the last past years, has reached different sectors in Europe. Especially the European Commission, has commited to develop a Systemic eco-innovation agenda, that will cover the needs for growth, sustainable development and the creation of jobs under the Motto: "A New Start for Europe : An agenda for Jobs, Growth, Fairness and Democratic Change". ECO-INNOVERA's strategy begann on 2012 with the objective identifying key characteristics of systemic eco-innovation based on solid academic foundations into a language and an approach which can be used by a broader, non-academic audience to help identify practical measures to support system innovation for sustainability. Supporting systemic eco-innovation for sustainability has been identified as an area where ECO-INNOVERA could make a valuable contribution to policy, research and innovation support in Europe, and one that would be distinctive among the landscape of ERANets.
Typically innovation is triggered by an external event: the distinctive feature of systemic eco-innovation is the response by the broader system to that trigger. Profound change is created by a complex interplay of factors including technology, markets, public policy, cultural beliefs and consumer behaviour. Depending on the dimensions and nature of the system being considered, the range of non-technological innovations will vary, but it is generally true that system innovation requires more than just technological innovation to occur.
Systems thinking is a means of thinking about complex problems to identify how to make substantive progress and ultimately resolve them. For example, tackling problems such as climate change or vulnerable ecosystems through small or isolated initiatives won't deliver change at the speed or scale required. By taking the approach of viewing of "problems" being parts of an overall system, rather than formulating a response to a specific part of that system. By doing this, the risk of unintended consequences of an intervention on that system is reduced.
The implication is that the correct mix of policy interventions and research support - tailored to intervene at the tipping points and levers of a given system – has the potential to achieve a deeper level of innovation faster than through a traditional, non-system approach. Furthermore, if the system is correctly defined and its potential interactions with other systems are well understood, the possibility of unintended consequences is reduced.
ECO-INNOVERA has implemented also two calls for tender paying especial attention to this topic.
The aim, objectives and approach developed by ECO-INNOVERA is framed by and is contributing to the Europe 2020 strategy and also the new programming of Horizon2020, which goals are to achieve the smart, green and inclusive growth.
On the further development of the project, expected outputs and planning of activities, circulated among interested parties, workshops around major events, different meetings as well as newsletters and papers will inform policy makers about the development of systemic eco-innovation in Europe and abroad.

Horizon 2020 emphasizes the role of partnerships in the EU innovation system. ECO-INNOVERA is an instance of public to public partnership (P2P). Public Private Partnerships (PPPs) aim at strengthening the cooperation between public and private organisations. In a thematic regional cluster B2B partnerships associated with technology transfer are also key points. In all cases, partnerships include formal and temporary agreements and community capacity building at longer horizon.

Research context: scientific and methodological objectives

The ERA-NET ECO-INNOVERA was established with the objective of supporting of research and development (R&D) on eco-innovation by coordinating national and regional programmes and joint transnational funding of research projects on eco-innovation. In addition, ECO-INNOVERA planned to boost the implementation of eco-innovation and systemic eco-innovation in Europe.
European member states (from a national and regional context) and associated countries have set up this ERA-Net in order to develop a lasting focused network that identify and open new research fields by following the ambitions of the European Commission of incrementing growth, sustainable development and green sustainable jobs.

ECO-INNOVERA acts as a Europe-wide advocate for systemic eco-innovation for sustainability, influencing and leveraging funding from national and EU programmes. It aims to boost eco-innovation through cooperation in research across the EU; promote an EU-wide approach for innovation with significant impact for sustainability; and identify and disseminate information on 'game changer' projects. Over the past years, ECO-INNOVERA promoted the understanding of systemic eco-innovation through funding projects and the development of a research agenda.

The ECO-INNOVERA network has several strengths that place it in a unique position to support systemic eco-innovation for sustainability. The network members have a diverse set of experiences, both in terms of programming (research funding, innovation support, policymaking) and national / regional context. As a cross-cutting network with a remit to support eco-innovation, it can reasonably expect to have influence in shaping EU-wide policy and has the opportunity to occupy a distinctive space of high policy significance. At a national/regional level, network members provide links to national funding opportunities which can translate into practice.

ECO-INNOVERA had brought together 24 partners from ministries and organisations responsible for funding research in eco-innovation across 17 different European countries and regions. The partners in ECO-INNOVERA consider that there is a unique opportunity to build a larger programme of activities, based on the intersection of interests; involving also other eco-innovation networks and platforms. The R&I strategy seeks to identify and prioritise value-adding activities for eco-innovation having faster and more significant impact in society. Moreover, it may be the start of a process by which the ERA-Net moves beyond a project into pro-active network for the European eco-innovation community.

With the systemic eco-innovation approach, ECO-INNOVERA reflects the increasing orientation of policy towards improving an eco-innovation agenda, that will generate more jobs, green growth and offer opportunities of the development of new business models. This agenda will trigger the focus on life cycle of products (LCA), implementing new innovations from design to consumption and end users change of behavior.

ECO-INNOVERA has launched two calls for tender expecting to obtain collaborative R&D projects which include social, environmental, market and technological issues and have a strong focus on future markets and societal needs as well as a strong capability to deliver to the market (systemic eco-innovation).Throught the Communication Plan, ECO-INNOVERA has approached a hight level of dissemination, both in their Website as well as on LinkedIn and has participated in different event and workshops to promote its research agenda.
The project has built an essential European common knowledge-base to support decision-making and policy elaboration processes, in order to address common European challenges for sustainable eco-innovation.

By identifying strengths, weaknesses, opportunities with regard to ERA-Net partners' existing research programs, working towards a common research agenda, implementing joint activities and coordinating European countries' research funding, ECO-INNOVERA wanted to be a crucial instrument of coordination of transnational research.
It intended to contribute to generate and support the process of developing shared visions, approaches and concepts with regard to an eco and systemic eco-innovation approach. The project was to build an essential European common knowledge-base to support decision-making and policy elaboration processes, in order to address common European challenges for the development of eco-innovation.

In order to implemet the common vision of a self-sustaining network on eco-innovation, ECO-INNOVERA has developed during 2010 until 2014 a research agenda, focusing on dissemination of results and examples of national and regional programmes supporting eco-innovation and highlighting a strategy on systemic eco-innovation that will contribute with future programmes of the European Commission such as Horizon2020.

The following figure shows the vision and development during 4 years of the strategy of ECO-INNOVERA focusing on a self-sustaining network as well as on a research agenda on systemic eco-innovation.

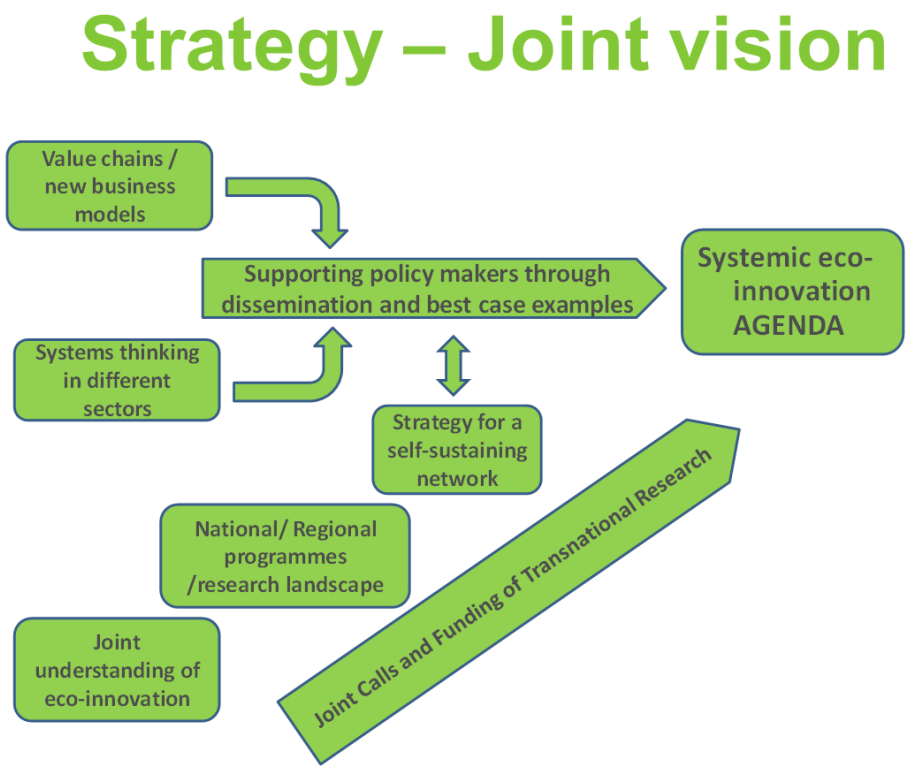

FIGURE 1: Vision and development during 4 years of the strategy of ECO-INNOVERA focusing on a self-sustaining network as well as on a research agenda on systemic eco-innovation.

- **Summary description of S&T Results and Foregrounds**

ECO-INNOVERA started on the 1st October 2010. It was created thanks to the major influence and support different Member States and the European Commission DG-Research & Innovation. Three main objectives contributed to the implementation of the project:

1. Establishing the basis for a four-year project that will promote the systematic exchange of information and best practices among Member States and regions in Europe concerning the inclusion of eco-innovation in national and regional research programmes
2. Developing a networking platform for information exchange on ERA-Net activities and on activities related to research on eco-innovation in Europe and for inviting partners from additional new countries, especially from OECD and emerging countries, to join the network
3. Creating and establishing a common research and funding platform for long-lasting cooperation by intensifying and broadening the joint activities of the national and regional funding organisations to cover the whole innovation chain from science to business by launching joint calls, reinforcing industry involvement and developing management of a transnational programme

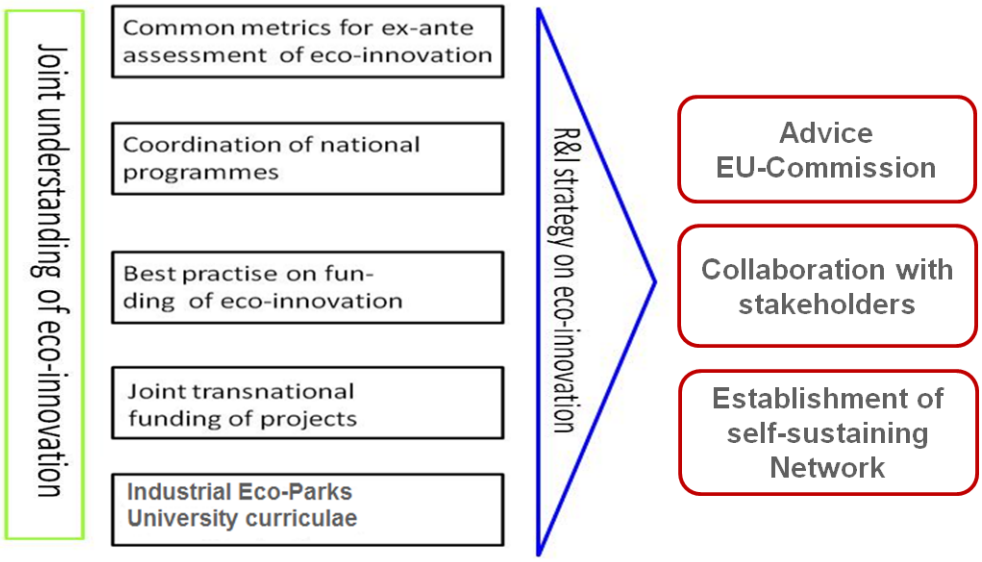

FIGURE 2: Main objectives of ECO-INNOVERA

The ECO-INNOVERA consortium is integrated by 24 partners from 19 countries and regions all over Europe, including Israel and Turkey. The consortium is made out of ministries and of national and regional agencies. Most of them are research and innovation agencies, others are environmental or sustainability agencies. First group agencies are represented by the departments dedicated to environmental innovation including clean technologies. Second group agencies are represented by the departments managing research and/or innovation programmes. One of the main priorities of the project was to launch 2 calls during the 4 years period as well as systematic exchange of information and best practice, definition and preparation of joint activities and implementation of joint activities. It was built on four work packages:

- WP1 - Strategy and network development, WP leaders P21, Agentschap NL (The Netherlands) and P23 TSB (United Kingdom)
- WP2 - Expertise and skills for eco-innovation: practices and instruments, WP leaders P14, MATIMOP-ISERD (Israel) and P3, ADEME (France)
- WP3 - Preparation of joint calls and funding of joint transnational research, WP leader P4, ANR (France) and P24, TUBITAK (Turkey)
- WP4 - Dissemination, WP leader P25, MINIENM (The Netherlands) and P1, JUELICH (Germany)
- WP5 – Management, WP leader P1, JUELICH (Germany) and P18, MVZT (Slovenia)

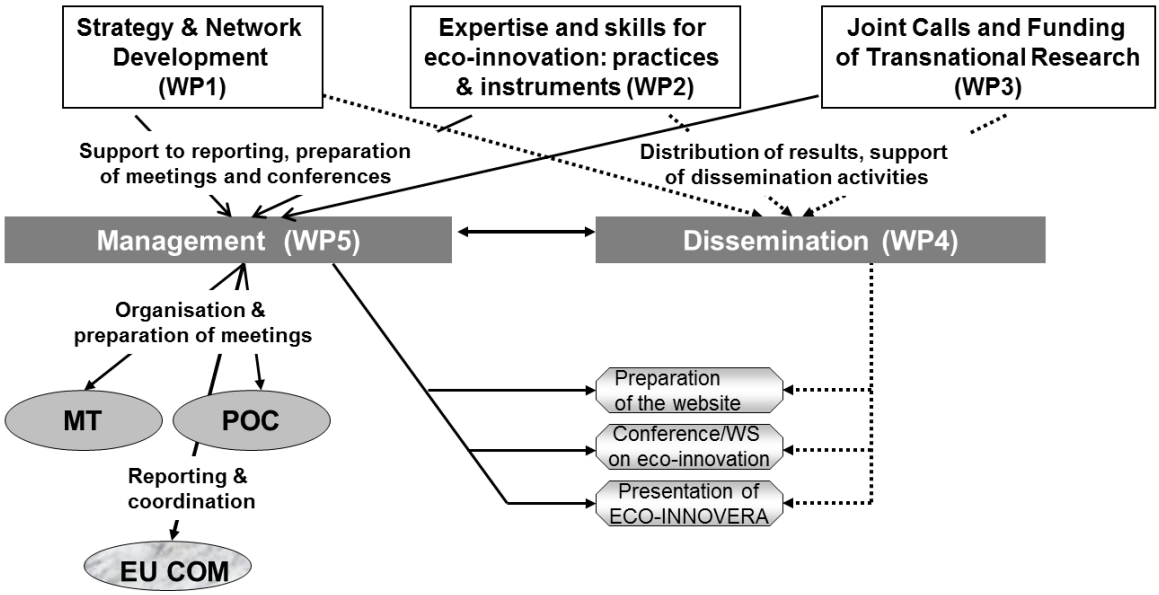

FIGURE 3: Workpackages of ECO-INNOVERA

A. WP1 Development of the strategy and network of ECO-INNOVERA

Work Package 1 deals with the strategic guidance of the project. It collates the most relevant research issues to set up the framework for a long-term research agenda for ERA-Net. It also aims to develop an extended network of actors, organisations, networks and projects in Europe and abroad to support the issue of eco-innovation. The collaboration on regional, national and European level will be fostered by also considering the situation outside of Europe.
It aimed at a better common understanding of what is eco-innovation and on the specific added value of the ECO-INNOVERA partnership. It concluded in stressing the role of systemic innovation driven by ecological issues. A well-known example is the climate change challenge and systemic innovation for the energy sector. Therefore a strategic agenda on Systemic eco-innovation has been created as well a close cooperation with different networks dealing with eco-innovation and the development of a self-sustaining network has been started with a core group of partners.

Between the activities that characterized this work package are the report of examples on key countries beyond Europe dealing with eco-innovation (D1.1). The most remarkable activity under the network has been the development of the systemich eco-innovation strategy. This topic has been reinforced by organizing different workshops, being present at several conferences and events and by advising the European Commission about the possibilities on implementing a systemic eco-innovation Agenda in Europe. Two workshops on systemic eco-innovation were organized focusing on future cities and resource efficiency. Different stakeholders (funding organizations, policy makers, public institutions and researchers) participated on these workshops that underlined the need for the implementation of an eco-innovation agenda, for funding systemic eco-innovation projects that will lead to a change of consumer's behaviour and the society (D2.1). Extensive interaction with other networks active in the field of eco-innovation (for example ERA-Nets, ETPs and CIP networks) were essential to avoid duplication of activity, and best practice and learning from other programs has been incorporated into the ECO-INNOVERA project. The interaction has been reciprocal; that is ECO-INNOVERA has regularly communicated its latest activities to support peer networks and informed itself about the development of their programs. On different rounds of contacts with the partner networks have taken place on networks such as Eureka, EcoAP – Eco Innovation Action Plan, Eco - Innovation Observatory, Eco Innovation seeds/GreenXpo, JPI Urban Europe, Prepare, Recreate and Eco water. The networks/initiatives actively participated in ECO-INNOVERA's final conference. During session 3 the invited networks moderated round tables and presented their networks and activities. Furthermore ECO-INNOVERA discussed with the networks/initiatives the opportunities of a future cooperation with ECO-INNOVERA in case the network will be continued (D1.3).

Key Research and Innovation Needs

The ECO-INNOVERA partners and other stakeholders we have consulted suggest that there are two clear needs for ongoing work to develop and embed eco-innovation:

1. Continue to develop a community of practice and a knowledge exchange facility for the incremental deployment of eco-innovation in suitable sectors.
2. Focus on systemic innovation to achieve much greater impact and scope for eco-innovation, targeting fundamental transformation of industry sectors

Actions

The proposed actions are:

1. Continue to develop the ECO-INNOVERA website as a resource for eco-innovation practitioners covering theory, tools, methodologies and examples.
2. Develop the map of eco-innovation projects to become a resource for all stakeholders.
3. Build links to other national and EU groups and projects with an interest in eco-innovation to encourage widespread adoption of eco-innovation thinking.
4. Build the community of practitioners into a self-organising network for mutual support and study, using the website and workshops to link them together around shared topics.

NB. Experience to date suggests that to be sustainable a community of practice must serve the needs of the practitioners so that it is self-organising and self-maintaining. If it fails to offer regular and on-going value to the target group of practitioners it will not survive.

5. Use the community of expert practitioners to provide evidence on the value and importance of eco-innovation to policy makers, research funders, business and academics.

The opportunities for systemic eco-innovation and the role of eco-innovation in systemic change were explored in two ECO-INNOVERA workshops; one on Systemic Innovation for Sustainable Cities held in Amsterdam in March 2014, and one on Systemic Innovation for Resource Efficiency held in March 2014 in Berlin. The outputs from these workshops are available from the ECO-INNOVERA website (www.eco-innovera.eu/publications).

The results of these workshops were presented and discussed with a wider group at the ECOAP Forum in Hanover in June 2014.

These inputs framed the conclusions of the partners on how best to tackle eco-innovation and systemic eco-innovation.

In order to embed eco-innovation as part of the solution to systemic transformation challenges it will be necessary to:

1. Develop an understanding of how eco-innovation fits into large system transformation programmes, and a shared language to work with those programmes.
2. Align programmes so that eco-innovation can become part of the solution for major societal challenges.
3. Provide practical evidence of the contribution of eco-innovation to solving system transformation challenges.

The proposed actions are:

1. Use the community of practice and its knowledge exchange capabilities to build understanding amongst stakeholders of how to tackle system level eco-innovation.
2. Identify a limited number of major challenges requiring systemic transformation where long range policy and innovation plans are already in place at the EU level.
3. Work with the relevant programme leaders to demonstrate how eco-innovation can help with effective and sustainable systemic transformation, and to integrate it into their programmes.
4. Seek opportunities within these challenge areas for demonstrator projects that will showcase the contribution of eco-innovation to practical solutions.
5. Drive evidence from early projects back into strategic discussions on approaches to major societal challenges.

The key recommendation is to work closely with the leaders of innovation programmes for the major societal challenges that have already been identified at an EU level to incorporate eco-innovation issues and opportunities into their strategies. Discussions at the ECO-INNOVERA Final Conference in Copenhagen in September 2014 supported these proposed actions, and plans are now being made to carry forward to develop the network as a self-sustaining community of practice.

B. WP2 Expertise and skills for eco-innovation: practices and instruments

WP2 focused on instruments fostering eco-innovation through practices and instruments. Collecting and analyzing information on existing regional, national and European programmes funding eco-innovation as well as of some other key eco-innovation activities. Supporting staff exchanges aiming at analysing the funding mechanisms for R&D programmes in eco-innovation and describing best practices as well as making use of recognised best practices in eco-innovation and eco-design funding programmes applied by partners of the consortium especially in practice. Building up knowledge about "yardsticks" or metrics to evaluate the environmental improvement potential of an innovation project. Translating of policy goals from the macro-level to the micro-level. Applicating best practice yardstick in the second common call. Better understanding of the role of socially based instruments (e.g. virtual community networks, green science & technology parks, exchange of PhDs) in promoting business opportunities and sustainability.

ECO-INNOVERA was present and contributed with the organization of the 13th EcoAP forum in Lisbon on November of 2012. The Conference co-convened in cooperation with European Commission DG-Env. (EcoAP-unit) and EcoPol. A brokerage event was also organized in cooperation with the ENV-NCP-Together (NCP-network). ECO-INNOVERA partners presented in different workshops, activities focusing on metrics, system innovation and the recommendations of the conference (D2.5).

The final report on programmes and key activities on eco-innovation has been elaborated and drafted as a joint work of several project partners (Regione Piemonte as Task leader, Juelich, Agentschap, MINIENM, DLR, BAFU). The Report has been conceived to target three main objectives:

- to provide an overview of existing programmes in ECO-INNOVERA partner countries
- to identify examples of effective programmes (good practices) in terms of management and funding
- to enhance the implementation of eco-innovation in Europe by providing information material to specific target groups (funding programmes owners and policy makers).

The Report contains an examination of the information gathered, a reflection on the concept of best practice used for the purposes of the Report and an analysis of key elements observed in the programmes of the Catalogue (D2.1).

The key elements used for categorizing the programmes are: - System Innovation, - Dissemination and transfer to practice, - SME's.

ECO-INNOVERA has payed especial attention to the integration of Eco-innovation into University Masters Covering all the perspectives focusing on the integration of sustainability into Universities and on previous initiatives in community capacity building. Presenting the ECO-INNOVERA perspective on integration of eco-innovation into universities and explaining what are the best way for the selection of masters and the tools and methodology used for mapping (D2.10).

ECO-INNOVERA has conducted several surveys regarding national programs, trying to identify eco-ICT dedicated programs. On the final report the partners assume that in time, close-to-market solutions will become much more essential, not only in European but also in national perspective. ECO-INNOVERA expects to see much more eco-ICT solutions that will be developed within national funding. This includes more general ICT tools in the use of eco-services, but also more eco-dedicated solutions, to create a smarter and greener environment (D2.6). The final study regarding the spatial dimension of eco-innovation (eco-innovation parks) was published in March 2014: International survey on eco-innovation parks, Bern 2014. It describes European and non-European industrial parks implementing eco-innovation (technologies, processes and services) or industrial symbioses. More than 160 eco-innovation parks in 27 countries are detailed following a set of eco-criteria. Success factors are identified, lessons learned from best practices are summarized and recommendations are made to support park developers and operators to design and manage industrial parks or urban/industrial mixed areas towards eco-innovation (D2.8).

C. WP3 Preparation of joint calls and funding of transnational research

The management and organization of two transanational calls for tender, has been a key instrument under the ECO-INNOVERA project, which has funded and governed the preparation, implementation and administration of two transnational and multidisciplinary calls focusing on R&D projects considering social, environmental, market and technological issues but also focusing on either paradigm change or sytem innovation in order to support eco-innovation.

The 1st call was launched in 2012 with a budget of up to 15M Euro. It focused on resource efficiency as a main driver of eco-innovation including new business models and systemic approaches, addressing the topics: •Paradigm change: Eco-innovation aims at the emergence of new types of sustainable production/consumption value chains using systemic approaches (life cycle thinking). Paradigm changes can e.g. be embedded in new business models. •Sustainable industrial processes and products: ECO-INNOVERA intends to support research for environmental improvements in industrial sectors with high impact on greenhouse gas emission, resource and energy efficiency, waste production or environmental pollution (water, air, soils). and •Recycling and waste re-use: The general outline of this topic is "Making more and better with waste: new products and better products with waste materials". Within its 2nd call, launched in January 2014 and with a budget up to 10M EUR, ECO-INNOVERA supports eco-innovation as a contribution to a Green Economy. The fundamental role of Innovation in a Green Economy is recognised by European policy through the Eco-Innovation Action Plan (EcoAP), which refers to eco-innovation as “any form of innovation resulting in or aiming at significant and demonstrable progress towards the goal of sustainable development, through reducing impacts on the environment, enhancing resilience to environmental pressures, or achieving a more efficient and responsible use of natural resources”. ECO-INNOVERA is looking for collaborative R&D projects which include social, environmental, market and technological issues and have a strong focus on future markets and societal needs as well as a strong capability to deliver to the market. The 2nd Joint Call is open to public and private research organisations, non-profit organisations as well as to industry; especially SMEs are highly welcome to apply for funding in transnational consortia. Projects should well describe the expected economic and environmental impact of the related eco-innovations as well as investigating potential societal changes. Clear and realistic recommendations for policy makers should be developed on measures to support the implementation of eco-innovation along the whole value chain and its diffusion in the society.

The second call of the ECO-INNOVERA Network aimed to boost Green Growth and industrial driven R&D by addressing market-oriented projects in the fields of: 1: System innovation, 2: Sustainable processes and products, 3: Recycling; re-use of waste and water.

SMEs particularly are crucial in the eco-innovation system, therefore they have played an important role for the selection of the projects of the calls. Especially in fields dominated by rapid technological change, SMEs can dynamically adapt to ever changing conditions. Moreover SMEs embedded in specific networks of the eco-innovation system can be instrumental in the diffusion of eco-innovation practices. However most of the SMEs are facing financial constraints while engaging with eco-innovation activities. This issue has been acknowledged in the call, and SMEs already active in the eco-innovation system were strongly encouraged to participate in the projects.

The results of the selected projects selected under the two calls are published on the (https://www.eco-innovera.eu/). Twelve projects were selected for funding with a budget of 7,8M EUR.

Projects funded under the 1st and 2nd Call of ECO-INNOVERA

1. SHIFT

Support Systems for Sustainable Entrepreneurship and Transformation - A paradigm change in support systems for entrepreneurship to effectively stimulate eco-innovation

Topic 1

36 months

Leader and partners

- Borderstep Institut für Innovation und Nachhaltigkeit gemeinnützige GmbH
- Linköping University Department Management and Engineering
- Aalto University School of Art and Design

Funding organisations

GERMANY Bundesministerium für Bildung und Forschung (BMBF)
SWEDEN Forskningsradet for Miljö, Areella Naringar och Samhallsbyggande (FORMAS)
FINLAND Teknologian ja Innovaatioiden Kehittaemiskeskus (TEKES)

Summary

Eco-innovation is increasingly considered to be the key to Europe's future competitiveness within the framework of sustainable development. For innovation that both creates business opportunities as well as benefitting the environment by preventing or reducing their impact, or by optimising the use of resources, sustainable entrepreneurship and green start-ups are a driving force.

Against this background and based on the state of the art in research, the project "SHIFT" will focus on public and intermediary support systems for sustainable entrepreneurship. The project will study the support of sustainable entrepreneurship over the course of the entrepreneurial life cycle and with regard to different sector contexts (emerging, growing and mature industries). SHIFT will focus on support systems for start-ups and innovative SMEs in order to boost the development and implementation of eco-innovation.

2. ECOBIM

ECOBIM, Value driven life cycle based sustainable business models

Topic 1

30 months

Leader and partners

- VTT Technical Research Centre of Finland
- CSTB, Centre Scientifique et Technique du Bâtiment
- Arkkitehtitoimisto Ulpu Tiuri Oy SME
- Ingenieurbüro Trinius GmbH SME
- LASCOM SME

Funding organisations

FINLAND Teknologian ja Innovaatioiden Kehittaemiskeskus (TEKES)
FRANCE Agence Nationale de la Recherche (ANR)
GERMANY Bundesministerium für Bildung und Forschung (BMBF)

Summary

The paradigm change to eco-innovation within the construction sector means more than technological innovation. Systemic approaches including LCA and ICTs are needed to cover social, environmental and economic aspects. Novel business models are needed to create clear advantages for all actors (particularly SMEs) in the value chain. Effective and easy-to-use tools are needed for the implementation of the developed model.

3. EASY
Energy-Aware feeding SYstems
Topic 2
36 months
Leader and partners
- LAAS-CNRS
- University of Navarra / Department School of Economics & Business Administration
- FAGOR
- University of Skövde Department Virtual Systems Research Centre, Automation Group

Funding organisations
FRANCE Agence Nationale de la Recherche (ANR)
SPAIN Ministerio de Ciencia e Innovacion (MICINN)
SPAIN, Basque Region Sociedad Publica Gestion Ambiental Ihobe S.A (IHOBE)
SWEDEN Forskningsradet for Miljö, Areella Naringar och Samhallsbyggande (FORMAS)

Summary
The EASY project aims at promoting energy-aware practices for internal supply operations management, so enhancing the environmental performances of factories. One objective is to analyze the raw-material flows across the factory, from the warehouses to the assembly lines, focusing on energy consumption aspects. The feeding system of the assembly line of FAGOR Electrodomesticos, Mondragon, Spain, will particularly be studied under this viewpoint. Then, on the basis of a better modelling of the relationships between energy costs and tactical/operational decisions, aided-decision tools will be designed and implemented. These tools will involve simulation and optimization techniques intending to highlight best minimum energy-costing decisions and, beside, to favour energy awareness of decision makers.

4. SuWAS
Sustainable Waste Management Strategy for Green Printing Industry Business
Topic 3
36 months
Leader and partners
- Kist-Europe Policy and Cooperation Center Non-profit Private Organisation
- University of Alicante
- Federal Institute of Technology in Lausanne Department STI/IGM/LICP

Funding organisations
GERMANY Bundesministerium für Bildung und Forschung (BMBF)
SPAIN Ministerio de Ciencia e Innovacion (MICINN)
SWITZERLAND Bundesamt für Umwelt (BAFU)

Summary
Evaluation and suggestions for environmental, socio-ecologic and economic impact of the technology implementation in the relevant industry by optimum methodologies for Environmental Impact Assessment (EIA) and Life Cycle Assessment (LCA), which will address the systemic aspects of the adaptation of the new process to the relevant value chains which will result in systemic innovations for the recovery of resources. Consequently, a new green business model for the relevant industry by employing the new recycling technology could be established depending on the systemic implementation strategy resulting from the integrated evaluation through EIA and LCA. For commitment support at government level, policy recommendation to promote the new green business model in the relevant industry for an innovative management strategy to achieve sustainable waste management in EU.

5. IPTOSS

Innovations for optimal use of organic side streams and waste

Topic 3

30 months

Leader and partners

- VTT Technical Research Centre of Finland
- University of Applied Sciences Northwestern Switzerland Department School of Lifes Sciences
- Mzymes Oy Department R&D SME
- Bionactis SME

Funding organisations

SWITZERLAND	Bundesamt für Umwelt (BAFU)
FINLAND	Teknologian ja Innovaatioiden Kehittaemiskeskus (TEKES)

Summary

Ecoefficient management of organic waste is a worldwide growing issue. Great attention is raising toward the exploitation of sidestreams and bio-wastes as raw material sources for novel bio-based products. Side streams from the beverage industry are here used as feedstock resources to produce fuel and valuable bio-molecules.

The aim of the project is to develop a process concept based on suitable fractionation and by which the biochemical content of the material flow is utilised for the production of new, valuable molecules. In close cooperation with the industry the sustainability of the innovation is shown and brought to the market.

6. VALUXTRACT

New green processes to enhance valuable compounds extraction from European vine and wine production solid wastes – technological, economical and social issues

Topic 3

36 months

Leader and partners

- Université Victor Segalen Department ISVV - Laboratoire d'oenologie – USC INRA 1219
- Université de Technologie de Compiègne Department Génie des Procédés
- Ecole d'Ingénieurs de Changins
- Geisenheim Research Center Departments a) Enology and Wine Technology b) Economics and Mar-ket research
- SOFRALAB SME
- Ecole Supérieure de Chimie Organique et Minérale Department Génie des Procédés

Funding organisations

FRANCE	Agence Nationale de la Recherche (ANR)
GERMANY	Bundesministerium für Bildung und Forschung (BMBF)
SWITZERLAND	Bundesamt für Umwelt (BAFU)

Summary

Grapes are the world’s second largest fruit crop, with an annual production of 68 million tons in 2008. Europe, including Italy, France and Spain, are the most important producers, essentially for winemaking. Solid wastes from wineries have three sources: viticulture, vinification and aging. In viticulture, the most important waste is grape cane (1 ton/ha/year). In vinification, the waste concerns pomaces and lees. During ageing, barrels and more recently oak chips and staves are used. After two or three years, barrels are eliminated. Chips are small oak fragments macerating in the wine during a shorter time to obtain similar effects to the barrels. The chips and staves are also eliminated as solid wastes.

For the second call:

1. ECO LEAN COMPASS

Low cost production process improvement for sustainable resource usage

36 months

Coordinator and partners

- Lean Enterprise Institute Polska Sp. z o.o.
- GawełZakładProdukcjiŚrub S. A.
- TeknotelKromEvUrunleri, Ltd.
- Fraunhofer Institut fuer Produktionstechnik und Automatisierung
- Horvath GmbH

Funding Organizations

POLAND	Narodowe Centrum BadańiRozwoju(NCBiR)
TURKEY	TurkiyeBilimselveTeknolojikAraştırmaKurumu (TUBITAK)
GERMANY	Bundesministerium für Bildung und Forschung (BMBF)

Summary

The ECO LEAN COMPASS aims at reduction of environmental impact of manufacturing industry. It is oriented on the development of organizational eco-innovations that enable costs savings parallel with energy and material consumption decrease as well as reduction of emissions. It takes advantage of the synergy between Lean Management (a commonly utilized approach to improve manufacturing processes in order to gain financial benefits) and various environmental approaches that are being widely used to achieve greater sustainability of production. Originality of proposed approach bases on its low-cost and holistic perspective that meets market needs, i.e. looking for potentials of costs reduction through reducing materials and energy usage without significant investments in production and logistics processes. The holistic perspective of the ECO LEAN COMPASS project is present in impacting several groups of stakeholders related to the manufacturing industry. End users of the project include following groups: manufacturing companies, their customers, supply chain partners, business support organizations and programs, policy makers and manufacturing equipment design companies.

2. SMC-EXCEL

Enhancing Sustainability by Mass Customization for European Consumer Electronics

36 months

Coordinator and partners

- RWTH Aachen University
- e-hoch-3 Hora-Hermenau-Tazir GbR
- VestelElektronikSanayiveTicaret AS
- University of Applied Sciences of Southern Switzerland
- Gavia SA

Funding Organizations

GERMANY	Bundesministerium für Bildung und Forschung (BMBF)
TURKEY	Turkiye Bilimsel ve Teknolojik Araştırma Kurumu (TUBITAK)
SWITZERLAND	Bundesamt für Umwelt (BAFU)

Summary

The project strives to develop, evaluate, and pilot a system innovation enhancing the ecological sustainability in the field of consumer electronics (CE), focusing on television sets (TVs). The project will provide guidelines and policy recommendations, tested in two industry pilots

(demonstrators), to enhance the eco-sustainability of TVs by shifting its value chain from the current mass production of products with short technology cycles ("gadgetization") towards a mass customization (MC) of TV sets meeting individual users' demands. MC has been regarded by the European Commission as one of the main value drivers of a sustainable European economy. Still, in sharp contrast to other consumer industries, manufacturers of consumer electronics and TVs in particular have not yet followed this business paradigm.

3. BIOSCREEN

Sunscreens and blinds from bio-based materials for indoor and outdoor use

24 months

Coordinator and partners

- Calcutta n.v.
- OrganoClick AB
- Swerea IVF AB
- Centexbel

Funding Organizations

BELGIUM, Flanders	Agentschap voor Innovatie door Wetenschap en Technologie (IWT)
SWEDEN	Forskningsradet for Miljö, AreellaNaringaroch Samhallsbyggande (FORMAS)

Summary

BIOSCREEN will offer ORGANOCLICK (Swedish SME) an excellent opportunity to further develop their bio-based coatings. The developments here will be relevant for other application domains, e.g. floor covers, filtration fabrics and coated (non-woven) textiles for applications like medical textiles or outdoor furniture upholstery. For ORGANOCLICK the project has the potential to hire up to 20 (high skilled) persons extra provided the novel bio-based coatings can be used also for other applications than sunscreens. As this is very likely, BIOSCREEN has to potential to sustain the growth of this young SME company.

4. ECOpanel

Natural fibre/furan based composite materials for construction applications

24 months

Coordinator and partners

- TransFurans Chemicals
- La Zéloise
- Centexbel
- Ecotechnilin

Funding Organizations

BELGIUM, Flanders	Agentschap voor Innovatie door Wetenschap en Technologie (IWT)
UNITED-KINGDOM	Technology Strategy Board (TSB)

Summary
ECOpanel aims to develop sustainable, bio-based alternatives to current construction panels for application in (i) exterior façade cladding and (ii) interior partitions. ECOpanel aims to have a significant contribution in creating a greener economy, thanks to its targeted development of sustainable materials for high-volume applications. ECOpanel has the potential to serve as an example for policy makers that close international collaborations between SMEs, large companies and R&D institutes are of key importance to creating a green economy driven by innovation.

5. EDF-HVC
ElectroDynamic Fragmentation of High Value Compound & Bulk Material with Potentially Recoverable Substances
30 months
Coordinator and partners
- University of Applied Sciences and Arts Northwestern Switzerland (FHNW)
- SELFRAG AG
- Mineral Processing and Recycling University of Liege
- Immark AG
- Reprocover S.A.

Funding Organizations

SWITZERLAND	Bundesamt für Umwelt (BAFU)
BELGIUM, Wallonia	Service public de Wallonie (SPW), Direction générale opérationnelle Economie, Emploi et Recherche (DG06)

Summary
The main focus of the research project is to upscale the proven liberation and separation capabilities of the EDF technology for waste materials towards an industrially viable waste treatment technology which produces tradable secondary resources (Roux et al. 2013; Euguémann et al. 2012; Wunderlich and Heim 2013). The establishment of EDF technology as an additional treatment step for several waste streams is foreseen, fitting in and being aligned with existing waste treatment technologies. A clear advantage of integrating EDF in this manner would be that target materials would be better liberated, allowing a higher recovery rate and thus a replacement of primary produced materials. For sulphide ore minerals EDF fragmentation has achieved relative enrichment of chalcopyrite and pyrite from 50 to 200 percent in the size fraction below 0.3 mm (Wang et al, 2012). Therefore it is conceivable to achieve recovery increase alsofor the fine grained components of the compound wastes envisaged in the project. The relatively high upfront costs will eventually be balanced out or even create a positive return of investment.

6. SPROUT
Safe Protein from Unused Waste
36 months
Coordinator and partners
- Swedish University of Agricultural Sciences
- Eawag
- Pacovis AG

Funding Organizations

SWEDEN	Forskningsradet for Miljö, AreellaNaringaroch Samhallsbyggande (FORMAS)
SWITZERLAND	Bundesamt für Umwelt (BAFU)

Summary

The SPROUT waste-to-value programme represents a waste revolution whereby a short, simple treatment process converts waste into value using a system of low technical complexity and with less environmental impact than the conventional systems of today.

The overall objective is to develop a turn-key solution for waste-to-value treatment where the larvae of the Black Soldier Fly (BSF) convert waste into valuable animal feed and fertiliser. Within the project,design specifications and a market-ready prototype of a modular unit for converting organic waste into insect-based animal feed will be developed. The underlying aim is to produce SPROUT waste-to-value treatment units and post-market support for small- to medium-scale organic waste treatment.

Process and Kick-Off

These projects were presented in two Kick-Off meetings organized by the call secretariats. The Kick-Off meeting of the first call took place in Brussels in September 2012. The Kick-Off meeting of the second call took place in Copenhagen in September 2014. The objectives and research questions of the project proposals are given below, ECO-INNOVERA payed special attention to the evaluation of the projects, focusing on impacts, as main objective of the Task regarding ex-ante evaluation of proposals. Progress of the projects can be followed via their individual websites:

- http://www.shift-project.eu/
- http://www.agence-nationale-recherche.fr/en/anr-funded-project/?tx_lwmsuivibilan_pi2%5BCODE%5D=ANR-12-INOV-0002
- http://www.vtt.fi/sites/ecobim/ecobim_background.jsp?lang=en
- http://www.suwas.eu/
- http://www.vtt.fi/sites/iptoss/?lang=en
- http://www.agence-nationale-recherche.fr/en/anr-funded-project/?tx_lwmsuivibilan_pi2%5BCODE%5D=ANR-12-INOV-0001

In its first joint competition ECO-INNOVERA called for multidisciplinary research projects which included social, environmental, market and technological issues; in the second call the Eco Innovera Network was looking for collaborative R&D projects which address similar issues but additionally have a strong focus on future markets and societal needs and have a strong capability to deliver to the market.

- Proposals therefore were driven by entrepreneurial initiative. The participation of SMEs - as project leaders or consortium partners- were strongly encouraged in this competition. Funded research activities differed between funding organizations. However, all proposals were clearly focused on applied research or proofs of concepts.
- All proposals were stated clearly what added benefits they hope to provide to the ECO-INNOVERA network. This could include policy recommendations to support the broader take-up of eco-innovation, e.g. innovative proliferation and dissemination, contributions to standards and norms, provision of case studies for dissemination to the broader network.
- Intellectual property: no right to IP was asserted by the funding partners for this call. Proposals described the principles by which intellectual property will be managed by the consortium in a manner that recognises the contribution of all partners and supports the eventual commercialisation of the project results.
- Proposals described and quantify the environmental impact of the project, which of course will also depend on the success of the innovation. Therefore, proposals should also describe and quantify the potential impact on the market in detail. They should deliver an ex-ante environmental assessment of the innovation and describe convincing metrics for evaluating the improvement of the environmental performance of the innovation (process, product or service) compared to the actual market situation. Metrics should take a holistic point of view and thus life cycle thinking into account and should also discuss possible draw backs of the innovation. A whole range of environmental metrics is possible, also depending on the topic of the project. A specific work package on the follow up of these metrics in order to steer the project into the most environmentally beneficial direction could be an option and is recommended.

D. WP4 Dissemination

Work package 4 has merged the dissemination activities within the ERA-Net ECO-INNOVERA. A strategy for exchange and dissemination of results and good practice was developed in the early stages of the project under task 4.1. The strategy aims at stimulating and encouraging key-players in the eco-innovation value chain to take up and valorise outcomes from relevant R&D and to participate in national and international R&D programmes. The ambition was to integrate them, including the regional and national decision-makers, and to stimulate and encourage their participation, especially from industry, users and other stakeholders in the topic of systemic eco-innovation.
The dissemination strategy should also support the advantages of coordinated and cooperative approaches in planning and implementation of R&D for eco-innovation, and of eco-innovation activities in Europe and abroad in general, in view of a self-sustaining network for R&D programming on eco-innovation beyond the expected term of the ERA-Net, also on a vision for a future network. In order to ensure the maximum uptake of knowledge within and outside of the consortium, a close cooperation with WP1, WP2, WP3 and WP5 was established to incorporate the results from the work performed in the different WPs and tasks.

To reach the objectives the following elements were included in the work process:
•Identification of target groups and of dissemination instruments tailored to their needs
•Identification of relevant information per target group
•Guidance to WP/Task leaders for the provision of policy relevant synthesis of results
•Guidance to WP/Task leaders on activities for dissemination of best practices and op-portunities
•Promote consortium members to actively contribute to outreach of the project and its outcome to Europe and abroad

The Dissemination Plan comprises a strategy addressing the various target groups through dedicated communication and dissemination instruments and tools, and implementation ac-tivities. It makes use of the strategy developed under task 4.1 and presents the results delivered by work package 1 on strategic and networking issues, by work package 2 on the diverse mutual activities and by work package 3 on preparation and publishing of joint transnational calls. Furthermore, the activities under this Dissemination plan were aimed at showing the added value and positive impact of Eco-Innovera. Thereby the plan had to contribute to the devel-opment of a possible future self-sustaining network.
The process started in an early phase of the project for providing a first draft of the strategy in Mn6 and is updated by considering the activities in and feedbacks from other work packages in later phases of the project. This second version was delivered in Mn 25 after having had some more discussions with project partners. The final version within the duration phase of ECO-INNOVERA has been delivered with this document in Mn 48, leading to an useful input, with regard to a self-sustaining network
In general, the target groups for ECO-INNOVERA can be found in the eco-innovation value chains (including the regional and national policy decision-makers). The dissemination activi-ties should ultimately inform, stimulate and encourage the participation of the key players, in particular from industry, end-users and other stakeholders. The main target groups are (at least):

- 1.Programme managers and administrators in governmental institutions
- 2.Policy makers (EU, national, regional)
- 3.Research infrastructure (universities, research institutes)
- 4.Industry, including SMEs
- 5.Other relevant organizations (NGOs, end-user groups)
- 6.Society, end-users/ consumers

The dissemination strategy aimed to promote the exchange and dissemination of results and good practice in order to ensure the maximum uptake of knowledge within and outside the consortium. A close collaboration with WP1, WP2, WP3, and WP5 was established to incor-porate the results from the work performed in the different WP's and tasks. The dissemination strategy has contributed to the dissemination of Eco Innovera results on systemic eco-innovation knowledge, and to the involvement of key-players in the eco-innovation value chain, in na-tional and international R&D programmes.
It has also shown the added value of coordinated and cooperative approaches in planning and implementation of R&D for eco-innovation activities in Europe and abroad in general, in view of a self sustaining network for R&D programming on eco innovation beyond the expected term of the present ERA-Net.
The dissemination activities undertaken in the project period, encouraged the participation of these key players, especially the participation of industry, users and stakeholders. The communication documents, experiences and lessons learnt in the Eco Innovera project period, are valuable for all members of a future network on systemic eco-innovations. Since ECO-INNOVERA is triggering a dissemination strategy is directed for members of a future network, a separate paragraph with recommendations for the communication of such a network is included below.
It is strongly intended to further maintain the ECO-INNOVERA homepage www.eco-innovera.eu This will guarantee that the results achieved by the ERA-Net will be accessible to the public. Furthermore, the website will offer relevant information about the progress of the projects. The website will serve as a single entry point to direct interested parties to the individual websites of the twelve ECO-INNOVERA funded projects.

The summary reports of the collaborative projects are available in English. The reports will provide an overview of the progress and contribute to the dissemination of the results of the jointly funded projects. It is also intended to announce public events, workshops or conferences of the funded projects and future network on the website. These communication initiatives will ensure that relevant information is easily accessible to the public, the scientific community and policy stakeholders at EU, national and regional levels.

- **The potential impact (including the socio-economic impact and the wider societal implications of the project so far) and the main dissemination activities and exploitation of results**

ECO-INNOVERA is a European network (ERA-Net) funded by the European Commission with the objective to promote the research, development and implementation of eco-innovation. The network comprises 24 partners, with a diverse membership taken from policymakers, research funders and innovation agencies. At this level, the ERA-Net functions as a project, intended to form a solid foundation for the better co-ordination of eco-innovation in Europe. The ambition of the consortium partners, however, goes beyond the project described in the agreement. We believe there is a unique opportunity to build a larger programme of activities, based on the intersection of interests of 24 partners. The Research and Innovation strategy identifies and prioritises value-adding activities for the partners, individually and jointly or at European level. It is the start of the process by which the ERA-Net moves beyond a project into pro-active network. Our ultimate objective is that the network becomes self-sustaining. Previous work has been described in the Position Paper (ECO-INNOVERA 2011), and in the Interim Strategy (ECO-INNOVERA 2012). In this document the outputs of two workshops are incorporated with the earlier work to identify discrete activities that the network partners can take forward, either directly or through influencing others to act, to accelerate and increase the impact of eco-innovation at national scales and at an European scale.

Europe, as an industrialized economy, is an intensive user of resources with consumption averaging around 14.5 tonnes per person. While there have been relative improvements in material efficiency, material consumption increased by 7.8% in absolute terms between 2000 and 2007 at the same time as the economy grew by 35%, as yet the efficiency gains have not been sufficient to bring about a reduction in the overall use of natural resources. European policy, as articulated in the European Commission's Roadmap to a Resource Efficient Europe and the Eco-Innovaton Action Plan, implies an absolute decoupling between economic success and the use of natural resources. The current trajectory for eco-innovation improvements, even if the small proportion of companies achieving near Factor 2 improvements could be massively expanded, cannot achieve this objective.
Different studies have identified the "Eco-Innovation Challenge" which has two components. The first component is to further improve the resource efficiency performance of the EU by promoting eco-innovation and ensuring that the benefits of new solutions are widely disseminated. This is covered in the recommendation of building a Community of Practice and Knowledge Exchange. The second, and more demanding component is to ensure that the efficiency gains are not offset by growth in the total consumption of natural resources.

The EIO estimates that targets for absolute reduction of material consumption ranging from Factor 2 (i.e. 50%) to Factor 5 (80%) will be necessary by 2050 if absolute decoupling of economic growth from material consumption is to be achieved and European policy objectives are to be met. (EIO, 2012).
This objective cannot be met by the kind of incremental improvements being already implemented by businesses across Europe. It requires transformation of entire sectors of the economy. It cannot be delivered by deployment of technological solutions alone; it requires re-evaluation and transformation of entire socio-technical systems. This is clearly a complex challenge involving many stakeholders. It is not possible for the community of eco-innovation practitioners to drive these changes, no matter how much evidence of successful incremental change is assembled. Fortunately, there are many sectors where business as usual will not be possible in the future. Major trends and drivers such as shifting demographics, climate and environmental change, and resource constraints, are challenging the existing models. Senior politicians, policy makers and business leaders are responding to these challenges by calling for transformational change.

The opportunities for systemic eco-innovation and the role of eco-innovation in systemic change has been explored in two ECO-INNOVERA workshops; one on Systemic Innovation for Sustainable Cities held in Amsterdam in March 2014, and one on Systemic Innovation for Resource Efficiency held in March as well in Berlin.
The ECO-INNOVERA partners and other stakeholders we have consulted suggest that there are two clear needs for ongoing work to develop and embed eco-innovation:
1. Continue to develop a community of practice and a knowledge exchange facility for the incremental deployment of eco-innovation in suitable sectors.
2. Focus on systemic innovation to achieve much greater impact and scope for eco-innovation, targeting fundamental transformation of industry sectors.

Future Network
There was strong consensus from Strategic Board members that activities carried out by ECO-INNOVERA should be taken forward in some shape or form. However, there was a great diversity of opinion in terms of which specific activities or themes individual consortium partners wished to take forward, and the nature of the network(s) that would be best suited to do this.

In general terms 3 network structures were identified as being of interest to the members of the Strategic Board:
1. ERA-Net (this would require the availability of external funding)
2. National programme work focusing on the cooperation with international partners for funding projects.
3. Flexible network, with different activities (i.e. joint funding, collaboration with other networks); focused on a strategy and advisory (influencing) through system innovation. This was described as a “variable geometry model” or VGM.
The conclusion of the discussion was that no single network would meet the requirements of all participants. A possible model would be for a “network of networks” whereby the respective elements could focus on different themes, activities and levels of participation as appropriate. Further work was necessary to identify the most promising network options.

Consortium members were consulted further over the period December 2013-January 2014. Members were asked to indicate their potential interest in a range of thematic areas with six possible responses describing the level and form of engagement most appropriate to their requirements.
The main idea, after the analysis of the discussion ist that the contact with those partners expressing interest in informal networks in these areas will be maintained so that they can be involved in future activities. It is noted for areas (1) and (3) above, that there was significant interest in participation in an externally-funded formal network. Partners who did not showed a clear position, will be informed in case alternative funding opportunities for a future network appear.

There remain several thematic areas for which there was significant interest in participation as part of an informal network:
•New business models
•Eco-innovation (general)
•Eco-innovation parks and clusters
•Systemic eco-innovation (general)
•Manufacturing
•Joint dissemination
Following areas have been identified to engage partners for a future network:
1) Association with one of the below joint programming / variable geometry networks e.g. Eco-innovation (general) as an associated activity for network 2, or 2) Through existing networks (e.g. Manunet for manufacturing), or 3) Social media such as the LinkedIn groups established by ECO-INNOVERA

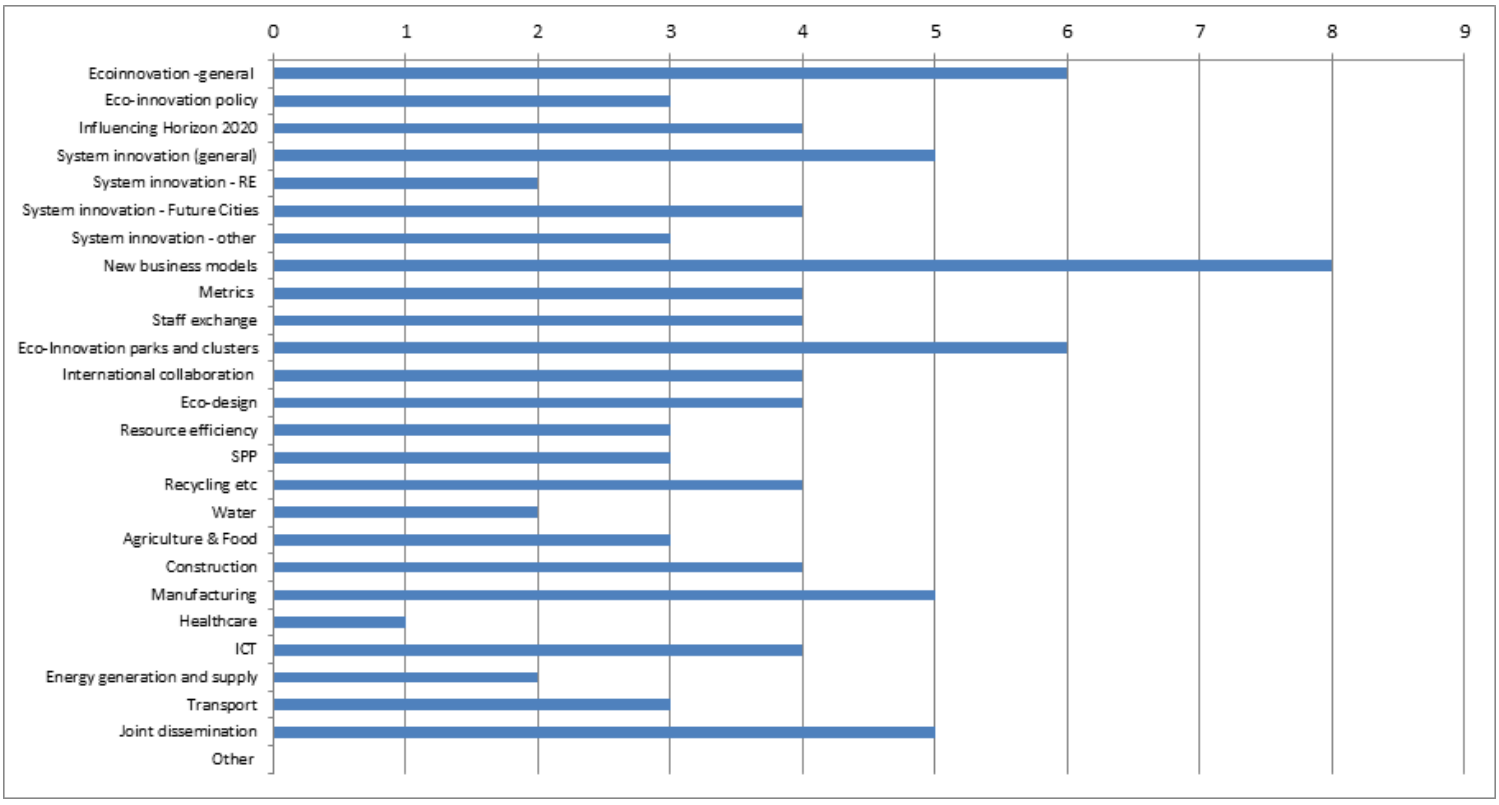

FIGURE 4: Expressions of interest for a future eco-innovation network

A majority of the consortium partners preferred a future network on systemic eco innovation, with a flexible, informal structure. In order to reach at least 2 formal commitments for future cooperation, the approach had to be based on these preferences.

Different activities were carried out towards the end of the project with the purpose to secure continuation of the network. By that time the ECO-INNOVERA network had gained focus and commitment as a result of successful events in Bilbao, London, Amsterdam and Berlin. The strategy workshops had strengthened the relationships with other networks and the grand finale in Copenhagen was designed to gather new ideas and achieve concrete commitments for future activities.

9 Areas were identified for cooperation (not prioritised):

-Virtual call for tenders
-Systemic Innovation Think Tank
-Education and training for systemic approaches
-Platform for MS coordination of research and market uptake
-Linking sustainable business models to systemic change
-Create attractive best cases
-European roadmap and investments for systemic eco-innovation
-New ways of monitoring impact of systemic eco-innovation policies
-Accelerate innovation through more industry engagement

Interested parties and concrete follow up are described in the proceedings of the final conference.

Commitments towards a future network are:

1) The partners in Germany and The Netherlands will develop a work plan to continue the knowledge network on systemic eco innovation in 2015-2016. This plan will comprise at least 1 Resource Efficiency workshop in The Netherlands and 1 workshop on Priorities and Opportunities van systemic eco-innovation in 2015. It will also continue to provide input to the ECO AP as well as continue to liaise with networks such as RECREATE and URBAN EUROPE

2) Partner 21 will organise a virtual call on eco innovation and circular economy in the EUREKA programme

3) INNOVATE UK will organise a meeting for the think tank group (TBC)

4) ADEME will will expand the "master to KIC" analysis to post-doctoral periods with specific focus on transnational post docs. It will be based on the ADEME PhDs association then open to other alumni

The address of the project public website, if applicable as well as relevant contact details

Project Public Website: https://www.eco-innovera.eu/

Relevant contact details:

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4.2 Use and dissemination of foreground

Section A (public)

Publications

LIST OF SCIENTIFIC PUBLICATIONS, STARTING WITH THE MOST IMPORTANT ONES										
No.	Title / DOI	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Date of publication	Relevant pages	Is open access provided to this publication ?	Type
	ECO-INNOVERA Systems Innovation Strategy	Robbert Droop, Evelyn Echeverria, Richard Miller	European Roundtable on Sustainable Consumption and Production (ERSCP)		Independant		01/10/2014	3-7		Conference
	Development of a Research and Innovation Strategy - Position Paper	John Whittall	Strategy ECO-INNOVERA		ECO-INNOVERA	London	31/10/2012	6-8	Yes	Conference

LIST OF DISSEMINATION ACTIVITIES								
No.	Type of activities	Main Leader	Title	Date	Place	Type of audience	Size of audience	Countries addressed
1	Flyers	MINISTERIE VAN INFRASTRUCTUUR EN MILIEU	Infoflyer on EC O-INNOVERA	21/03/2011	ETAP Forum, Birmingham, UK	Scientific community (higher education, Research) - Industry - Policy makers	200	Europe
2	Web sites/Applications	FORSCHUNGSZENTRUM JUELICH GMBH	website ECO-INNOVERA	04/04/2011	Internet	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	5000	Europe
3	Organisation of Workshops	DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV	Eco-innovation programmes and activities...	02/12/2010	Bonn	Scientific community (higher education, Research)	20	Europe
4	Organisation of Workshops	The Technology Strategy Board	R&I Strategy Workshop	23/03/2011	Birmingham	Scientific community (higher education, Research) - Industry - Policy makers	20	Europe
5	Organisation of Workshops	AGENCE NATIONALE DE LA RECHERCHE	Strategic WS for 1. Joint Call	07/02/2011	Paris	Scientific community (higher education, Research) - Policy makers	30	Europe
6	Presentations	FORSCHUNGSZENTRUM JUELICH GMBH	ERA-Nete ECO-INNOVERA...	26/10/2010	Delft, ERSCP conference	Scientific community (higher education, Research)	50	Europe
7	Presentations	FORSCHUNGSZENTRUM JUELICH GMBH	Research priorities for eco-innovation...	25/11/2010	Poznan	Scientific community (higher education, Research) - Policy makers	150	DE, PL
8	Presentations	FORSCHUNGSZENTRUM JUELICH GMBH	ERA-Net ECO-INNOVERA	04/02/2011	Lahti, FI (ECOPOL-Meeting)	Scientific community (higher education, Research) - Policy makers	20	Europe
9	Presentations	The Technology Strategy Board	ERA-Net ECO-INNOVERA...	25/05/2011	Brussels (Green Week)	Scientific community (higher educat	500	Europe

						ion, Research) - Industry - Civil society - Policy makers - Medias		
10	Flyers	MINISTERIE VAN INFRASTRUCTUUR EN MILIEU	Info-Flyer ECO-INNOVERA	25/05/2011	Green Week, Brussels, Belgium	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias	500	Europe
11	Flyers	AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE	1. Joint Call	11/07/2011	Website	Scientific community (higher education, Research)	5000	Call partner countries/Europe
12	Presentations	MINISTERIE VAN INFRASTRUCTUUR EN MILIEU	Introduction and aims of ECO-INNOVERA...	12/07/2011	Tel Aviv, Israel (UNECE-conference: Promoting Eco-Innovation: Policies and Opportunities)	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	200	Europe, International
13	Web sites/Applications	FORSCHUNGSZENTRUM JULICH GMBH	Publication 1.Joint Call	24/06/2011	Internet	Scientific community (higher education, Research)	5000	Call Participating Countries/Europe
14	Organisation of Conference	FORSCHUNGSZENTRUM JULICH GMBH	Environmental (Bio) Technology	05/09/2011	Gdansk, Poland	Scientific community (higher education, Research) - Policy makers	150	Poland, EU, International
15	Organisation of Workshops	MATIMOP, ISRAELI INDUSTRY CENTER FOR RESEARCH & DEVELOPMENT	Workshop on Eco-Innovation Parks	20/09/2012	Bern - Switzerland	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	50	European and USA
16	Flyers	FORSCHUNGSZENTRUM JULICH GMBH	ECO-INNOVERA information Final Conference	26/03/2014	ECOAP Forum	Scientific community (higher education, Research) - Civil society - Policy makers	50	European
17	Organisation of Workshops	AGENTSCHAP VOOR INNOVATIE DOOR	Systemic eco-innovation in Future Cities	05/03/2014	Amsterdam	Scientific community (higher education, Research) - Ind	20	Europe

		WETENSCHAP EN TECHNOLOGIE				ustry - Civil society - Policy makers - Medias		
18	Organisation of Workshops	FORSCHUNGS ZENTRUM JU ELICH GMBH	Systemic eco-in novation in Res ource Efficiency	13/03/2014	Berlin	Scientific comm unity (higher educat ion, Research) - Ind ustry - Civil society - Policy makers - Medias	40	Europe
19	Organisation of Conference	FORSCHUNGS ZENTRUM JU ELICH GMBH	International Confer ence on Education for Sustainable D evelopment	29/09/2012	Berlin	Scientific comm unity (higher educat ion, Research) - Ind ustry - Policy makers	50	Europe
20	Organisation of Conference	FORSCHUNGS ZENTRUM JU ELICH GMBH	European Resources Forum	13/11/2012	Berlin	Scientific comm unity (higher educat ion, Research) - Civ il society - Policy makers	400	Worldwide
21	Organisation of Workshops	FORSKNINGS RÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGG ANDE	First VISION RD 4SD Roadmaps and Strategies Workshop	15/10/2012	Berlin	Scientific comm unity (higher educat ion, Research) - Ind ustry - Civil society	40	Europe
22	Organisation of Conference	MINISTERIE VAN INFRASTRUC TUUR EN MILIEU	ERRIN Conferece	12/12/2012	Brussels	Scientific comm unity (higher educat ion, Research) - Ind ustry - Policy makers	100	Europe
23	Organisation of Workshops	NARODOWE C ENTRUM BADAN I ROZWOJU	Info Day of the The me Environment	27/06/2012	Katowice	Scientific comm unity (higher educat ion, Research)	40	Poland
24	Oral presentation to a wider public	FORSCHUNGS ZENTRUM JU ELICH GMBH	at ECOPOL	11/06/2013	Lahti	Scientific comm unity (higher educat ion, Research)	30	Europe
25	Organisation of Conference	FORSCHUNGS ZENTRUM JU ELICH GMBH	13th ECOAP Forum 2012	26/11/2012	Lisabon	Scientific comm unity (higher educat ion, Research) - Ind ustry - Civil society - Policy makers	150	World

26	Organisation of Workshops	SOCIEDAD PUBLICA GESTION AMBIENTAL IHOBE S.A.	Workshop on best cases on eco-innovation	21/05/2013	Bilbao	Scientific community (higher education, Research)	40	Europe
27	Organisation of Workshops	AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE	Workshop on university training programmes on eco-innovation	21/05/2013	Bilbao	Scientific community (higher education, Research) - Policy makers	30	Europe
28	Oral presentation to a wider public	FORSCHUNGSZENTRUM JULICH GMBH	Training on eco-innovation aspects	22/08/2013	Berlin	Scientific community (higher education, Research)	25	Europe
29	Oral presentation to a wider public	MINISTERIE VAN INFRASTRUCTUUR EN MILIEU	Textile Plattform	01/02/2013	Brussels	Scientific community (higher education, Research) - Industry - Policy makers	60	Europe
30	Oral presentation to a wider public	FORSCHUNGSZENTRUM JULICH GMBH	ERA-Nets Worksh op	28/02/2013	Dublin	Scientific community (higher education, Research) - Policy makers	10	Europe
31	Oral presentation to a wider public	MINISTERIE VAN INFRASTRUCTUUR EN MILIEU	ECOPOL Final Conference	22/10/2013	Athen	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	60	Europe
32	Web sites/Applications	FORSCHUNGSZENTRUM JULICH GMBH	Analysing National Programmes on eco-innovation	27/06/2013	Berlin	Scientific community (higher education, Research)	7	Europe
33	Oral presentation to a scientific event	FORSCHUNGSZENTRUM JULICH GMBH	High Level Working Group European Commission	19/03/2014	Brussels	Policy makers	50	Europe
34	Oral presentation to a wider public	FORSCHUNGSZENTRUM JULICH GMBH	17th ECOAP Forum	07/04/2014	Hannover	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	100	Europe
35	Organisation of Conference	FORSCHUNGSZENTRUM JULICH GMBH	Hanover Industry Fair	07/04/2014	Hannover	Scientific community (higher education, Research) - Industry - Policy	50	Europe

						makers		
36	Organisation of Workshops	AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE	Mid Term meeting 1st Call	16/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Policy makers	30	Europe, Turkey
37	Organisation of Workshops	TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU	Kick-Off meeting 2nd Call	17/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Policy makers	30	Europe, Turkey
38	Organisation of Conference	FORSCHUNGSZENTRUM JULICH GMBH	ECO-INNOVERA Final Conference	17/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Policy makers	100	Europe
39	Oral presentation to a scientific event	FORSCHUNGSZENTRUM JULICH GMBH	Lets support systemic eco-innovation	01/10/2014	Brussels	Scientific community (higher education, Research) - Policy makers	30	Europe
40	Films	FORSCHUNGSZENTRUM JULICH GMBH	System Innovation answers for the Final Conference ECO-INNOVERA	18/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Civil society - Policy makers - Medias	100	World
41	Flyers	FORSCHUNGSZENTRUM JULICH GMBH	ECO-INNOVERA Final Conference leaflet	30/08/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	100	Europe
42	Posters	MATIMOP, ISRAELI INDUSTRY CENTER FOR RESEARCH & DEVELOPMENT	Posters of ECO-INNOVERA 1st and 2nd Calls	17/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Policy makers	100	Europe
43	Posters	MATIMOP, ISRAELI INDUSTRY CENTER FOR RESEARCH & DEVELOP	Posters of invited networks to ECO-INNOVERA Final Conference	17/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Policy makers	100	Europe

		MENT						
44	Interviews	FORSCHUNGSZENTRUM JULICH GMBH	System eco-innovation answers from Achim Steiner (UNEP)	18/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	100	World
45	Interviews	FORSCHUNGSZENTRUM JULICH GMBH	System eco-innovation answers from Kurt Vandenbergue (EU-Commission)	17/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	100	Europe
46	Interviews	FORSCHUNGSZENTRUM JULICH GMBH	System eco-innovation answers from Gunter Pauli (Club of Rome)	18/09/2014	Copenhagen	Scientific community (higher education, Research) - Industry - Civil society - Policy makers	100	World
47	Posters	DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV	ECO-INNOVERA best cases on key countries beyond Europe	19/10/2012	Berlin	Scientific community (higher education, Research) - Industry - Policy makers	1000	World

Section B (Confidential or public: confidential information marked clearly)

LIST OF APPLICATIONS FOR PATENTS, TRADEMARKS, REGISTERED DESIGNS,UTILITY MODELS, ETC.					
Type of IP Rights	Confidential	Foreseen embargo date dd/mm/yyyy	Application reference(s) (e.g. EP123456)	Subject or title of application	Applicant(s) (as on the application)

OVERVIEW TABLE WITH EXPLOITABLE FOREGROUND								
Type of Exploitable Foreground	Description of Exploitable Foreground	Confidential	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable for commercial use or any other use	Patents or other IPR exploitation (licences)	Owner and Other Beneficiary(s) involved
General advancement of knowledge	TNO Report Systemic eco-innovation for eco-policies	No	23/10/2014	Report	policy, developers, programme owners	2015-2016	none	Netherlands - Ministry of Environment
General advancement of knowledge	ECO-INNOVERA Research Strategy	No	23/09/2014	Report	policy, developers, programme owners	2014-2016	none	TSB and network
General advancement of knowledge	Eco-Innovation activities in key countries beyond Europe	No	04/02/2013	report	policy, developers, programme owners	204-2016	none	network
General advancement of knowledge	CML Framework Eco-Innovera	No	07/02/2012	report	policy, developers, programme owners	2012-2016	none	European network
General advancement of knowledge	Learning from experiences on the spatial dimension of eco-innovation	No	25/03/2014	report	policy, developers, programme owners	2014-2016	none	BAFU, ECO-INNOVERA network
General advancement of knowledge	Workplan for the Future ECO-INNOVERA	Yes	29/11/2014	Workplan	policy, developers, programme owners	2014-2017	none	eco-innovation network
General advancement of knowledge	Practical considerations for public funding programmes to support research for eco-innovation	No	30/09/2014	report	policy, developers, programme owners	2012-2014	none	network

ADDITIONAL TEMPLATE B2: OVERVIEW TABLE WITH EXPLOITABLE FOREGROUND	
Description of Exploitable Foreground	Explain of the Exploitable Foreground
TNO Report Systemic eco-innovation for eco-policies	The Dutch ministry of Infrastructure and Environment has asked TNO to provide an overview of concepts, examples and tools for promoting a so-called systemic approach in research and innovation that may guide policy-makers in programming ambitious and effective research.
ECO-INNOVERA Research Strategy	Development of a Research and Innovation (R&I) Strategic agenda was a key task in the ECO-INNOVERA project. The R&I strategy should be regarded as living document, bringing together the expertise and knowledge of the network, analysed in the light of the most recent policy and research developments at different points of time. The main output of this task was a series of strategy documents, each presenting a progressively broader and more detailed ana

	lysis. Previous strategy documents were a Position paper, an Interim strategy and a Synthesis Report on Systemic Eco-Innovation by the Dutch Research Institution TNO. These can be downloaded at https://www.eco-innovera.eu.
Eco-Innovation activities in key countries beyond Europe	This report investigates public Research and Development (R&D) programmes of relevance for eco-innovation and other activities to foster eco-innovation in five key countries outside Europe: the US, Japan, Republic of Korea, China, and India. The report includes information on market-based policy instruments to support eco-innovation, programmes and activities to mobilise the financing of eco-innovation, environmental regulation and standards, demand-side oriented initiatives to raise awareness with regard to eco-innovation and international initiatives to promote eco-innovation. The aim of the report is to contribute to an ECO-INNOVERA knowledge base, which provides the best possible background for the strategic development of the project as a whole.
CML Framework Eco-Innovera	The report is meant to be an easy-to-use narrative on what eco-innovation is, what are drivers, what factors are of importance when assessing the impacts of programs and projects, and suggests considerations how to improve on the effectiveness of support programs. Also it contains a number of examples illustrating how these considerations apply in specific cases. Thus, this Framework-based Perspective may be used by national and regional policy-makers and program-owners as a self-assessment guide to reflect on their programs and the chosen support-structures and priorities. It may help to effectively mobilise stakeholders within the entire chain of innovation as well as the chain of materials, taking into account the major environmental and economic challenges and the policy-instruments in force. Furthermore, the narrative provides elements for further development with a view to application at the European level, in policy development, and gives first focus on financial instruments in support of eco-innovation and sustainable development.
Learning from experiences on the spatial dimension of eco-innovation	Within the framework of ECO-INNOVERA, FOEN initiated an international survey on eco-innovation parks. The study describes European and non-European industrial parks implementing eco-innovation (technologies, processes and services) or industrial symbioses. Eco-innovation parks are eco-industrial parks and eco-cities containing combined zones for habitation and economic activities, optimized from an environmental point of view and open for continuous improvement through collaboration with science. More than 160 experiences are detailed in this survey following a set of twelve eco-criteria. The identification and relative importance of eight success factors of ecoinnovation parks provides an important basis for the development of a future Swiss Eco-innovation Park and further initiatives worldwide.
Workplan for the Future ECO-IN NOVERA	starting points and priorities for the future Network for Eco Innovation and Systemic eco-innovation, including joint projects and activities
Practical considerations for public funding programmes to support research for eco-innovation	The ERA-Net ECO-INNOVERA, the European Research Area Network on Eco-innovation, was launched in October 2010 and is supported by the European Commission through the 7th Framework Programme for Research and Technological Development. A key focus of the project is the support of research and development (R&D) on eco-innovation by (i) coordinating the national programmes and (ii) joint transnational funding of research projects on eco-innovation. In addition, ECO-INNOVERA aims to boost the implementation of eco-innovation in Europe by the establishment of a networking plattform for researchers, enterprises, policy and society and the provision of target group specific information material. The consortium is made up of 24 European countries and regions.

4.3 Report on societal implications

B. Ethics

1. Did your project undergo an Ethics Review (and/or Screening)?	No
If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final reports?	

2. Please indicate whether your project involved any of the following issues :

RESEARCH ON HUMANS

Did the project involve children?	No
Did the project involve patients?	No
Did the project involve persons not able to consent?	No
Did the project involve adult healthy volunteers?	No
Did the project involve Human genetic material?	No
Did the project involve Human biological samples?	No
Did the project involve Human data collection?	No

RESEARCH ON HUMAN EMBRYO/FOETUS

Did the project involve Human Embryos?	No
Did the project involve Human Foetal Tissue / Cells?	No
Did the project involve Human Embryonic Stem Cells (hESCs)?	No
Did the project on human Embryonic Stem Cells involve cells in culture?	No
Did the project on human Embryonic Stem Cells involve the derivation of cells from Embryos?	No

PRIVACY

Did the project involve processing of genetic information or personal data (eg. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?	No
Did the project involve tracking the location or observation of people?	No

RESEARCH ON ANIMALS

Did the project involve research on animals?	No
Were those animals transgenic small laboratory animals?	No
Were those animals transgenic farm animals?	No
Were those animals cloned farm animals?	No
Were those animals non-human primates?	No

RESEARCH INVOLVING DEVELOPING COUNTRIES

Did the project involve the use of local resources (genetic, animal, plant etc)?	No
Was the project of benefit to local community (capacity building, access to healthcare, education etc)?	Yes

DUAL USE

Research having direct military use	No
Research having potential for terrorist abuse	No

C. Workforce Statistics

3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis).

Type of Position	Number of Women	Number of Men
Scientific Coordinator	1	0
Work package leaders	4	1
Experienced researchers (i.e. PhD holders)	2	0
PhD student	0	0
Other	0	0

4. How many additional researchers (in companies and universities) were recruited specifically for this project?	1
Of which, indicate the number of men:	0

D. Gender Aspects

5. Did you carry out specific Gender Equality Actions under the project ?	No

6. Which of the following actions did you carry out and how effective were they?	
Design and implement an equal opportunity policy	Not Applicable
Set targets to achieve a gender balance in the workforce	Not Applicable
Organise conferences and workshops on gender	Not Applicable
Actions to improve work-life balance	Not Applicable
Other:	

7. Was there a gender dimension associated with the research content - i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?	No
If yes, please specify:	

E. Synergies with Science Education

8. Did your project involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint projects)?	No
If yes, please specify:	

9. Did the project generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?	No

F. Interdisciplinarity

10. Which disciplines (see list below) are involved in your project?	
Main discipline:	
Associated discipline:	
Associated discipline:	

G. Engaging with Civil society and policy makers

11a. Did your project engage with societal actors beyond the research community? (if 'No', go to Question 14)	Yes

11b. If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)?	No
11c. In doing so, did your project involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?	
12. Did you engage with government / public bodies or policy makers (including international organisations)	No
13a. Will the project generate outputs (expertise or scientific advice) which could be used by policy makers?	Yes - as a primary objective (please indicate areas below multiple answers possible)
13b. If Yes, in which fields?	
Agriculture	No
Audiovisual and Media	No
Budget	No
Competition	No
Consumers	No
Culture	No
Customs	No
Development Economic and Monetary Affairs	No
Education, Training, Youth	No
Employment and Social Affairs	No
Energy	No
Enlargement	No
Enterprise	No
Environment	No
External Relations	No
External Trade	No
Fisheries and Maritime Affairs	No
Food Safety	No
Foreign and Security Policy	No
Fraud	No
Humanitarian aid	No
Human rightsd	No
Information Society	No
Institutional affairs	No

Internal Market	No
Justice, freedom and security	No
Public Health	No
Regional Policy	Yes
Research and Innovation	Yes
Space	No
Taxation	No
Transport	No
13c. If Yes, at which level?	European level

H. Use and dissemination

14. How many Articles were published/accepted for publication in peer-reviewed journals?	2
To how many of these is open access provided?	1
How many of these are published in open access journals?	1
How many of these are published in open repositories?	1
To how many of these is open access not provided?	0
Please check all applicable reasons for not providing open access:	
publisher's licensing agreement would not permit publishing in a repository	No
no suitable repository available	No
no suitable open access journal available	No
no funds available to publish in an open access journal	No
lack of time and resources	No
lack of information on open access	No
If other - please specify	
15. How many new patent applications ('priority filings') have been made? ("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).	0

16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).	
Trademark	0
Registered design	0

Other	0

17. How many spin-off companies were created / are planned as a direct result of the project?	0
Indicate the approximate number of additional jobs in these companies:	0

18. Please indicate whether your project has a potential impact on employment, in comparison with the situation before your project:	Difficult to estimate / not possible to quantify, In small and medium-sized enterprises

19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (FTE = one person working fulltime for a year) jobs:	0

I. Media and Communication to the general public

20. As part of the project, were any of the beneficiaries professionals in communication or media relations?	No

21. As part of the project, have any beneficiaries received professional media / communication training / advice to improve communication with the general public?	No

22. Which of the following have been used to communicate information about your project to the general public, or have resulted from your project?	
Press Release	Yes
Media briefing	No
TV coverage / report	No
Radio coverage / report	No
Brochures /posters / flyers	Yes
DVD /Film /Multimedia	No
Coverage in specialist press	No
Coverage in general (non-specialist) press	No
Coverage in national press	No
Coverage in international press	Yes
Website for the general public / internet	Yes
Event targeting general public (festival, conference, exhibition, science café)	Yes

23. In which languages are the information products for the general public produced?	
Language of the coordinator	No

Other language(s)	Yes
English	Yes

Attachments	Anaylisis of Regional and National Programmes on eco-innovation.pdf, TNO SI for eco-policies.pdf, ECO-INNOVERA_Research Strategy-docx.pdf, Eco-Innovera - Systemic Innovation full paper October2014.pdf, ECO-INNOVERA Finalreport PDF Final Version - 2014-September-last.pdf, Pictures of the Final Conference-Final Bericht ECO-INNOVERA.pdf, CML Framework Eco-Innovera Final.pdf, D1_1_eco-innovation Key countries beyond Europe.pdf
Grant Agreement number:	266538
Project acronym:	ECO-INNOVERA
Project title:	ERA-NET ON ECO-INNOVATION - Boosting eco-innovation through joint cooperation in research and dissemination
Funding Scheme:	FP7-CSA-CA
Project starting date:	01/10/2010
Project end date:	30/09/2014
Name of the scientific representative of the project's coordinator and organisation:	Ms. Evelyn Echeverría FORSCHUNGSZENTRUM JUELICH GMBH
Name	
Date	03/12/2014

This declaration was visaed electronically by Björn BÜCHTER (ECAS user name nkozioce) on 03/12/2014