



# Outriders for European Competitiveness

European Innovation Partnerships (EIPs)  
as a Tool for Systemic Change

*Report of the Independent Expert Group*



Research and  
Innovation



**EUROPEAN COMMISSION**

Directorate-General for Research and Innovation  
Directorate B — Innovation Union and European Research Area  
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## European Innovation Partnerships (EIPs) as a Tool for Systemic Change

Report of the Independent Expert Group

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Luxembourg: Publications Office of the European Union, 2014

ISBN 978-92-79-35392-5

doi:10.2777/6089

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## **EXECUTIVE SUMMARY**

### ***Key Conclusion***

The economic and financial crisis that started in 2007 revealed the pre-crisis weaknesses of Europe. It highlighted the urgent need to make reforms that promote growth, increase efficiency and create new, innovative solutions to critical social challenges. The European Innovation Partnerships (EIPs) were designed as a critical tool to enable these radical improvements.

The Expert group concludes that the EIP is the right approach to help enable future European economic growth and welfare. The group recognizes that the ambition of the EIPs was rightfully set high, but concludes that current EIPs have suffered somewhat from inconsistency in execution.

The Expert group recommends improvements in the execution of the current EIPs and is calling for a second iteration of EIPs based on modified targets and approach.

### ***Purpose and objectives – mandate of the Group***

This report presents the findings of the Independent Expert Group, set up in May 2013 by the European Commission to examine the current practice and performance of the EIPs as well as their impact. Its mandate has been to provide a global assessment of what the EIPs have delivered to date. In particular, the Group was asked to assess ways to improve the functioning and potential impact of the ongoing EIPs and identify criteria for future EIPs. The Group was not asked to redefine objectives or priorities of individual ongoing EIPs. The work of the Expert Group was conducted between May and December 2013 and included extensive interviews with EIP stakeholders and representatives of the European Commission, field visits and desk research.

The report puts forward a number of recommendations on how best to deliver on the EIP promise.

### ***Core Assessment***

The EIPs have been effective in their integrative function, bringing together different stakeholders and serving as an EU-wide observatory of practice in innovation. They have deepened the dialogue between policy-maker and innovator and have established an effective mix of longer-term systemic targets and short-term operational goals. The governance structure has been effective in getting the early activities of the EIPs on their way.

At the same time, the EIP process has suffered from a complex operational model, hampered by a lack of a single dedicated structure at the Commission to deal with the EIPs and a divergence of views between the different Directorates of the Commission. While an extensive array of stakeholders has taken part in the EIPs, a stronger commitment of the Member States and clearer channels to bring in new actors, including more SMEs, would improve future EIP performance.

Given the early stage of the EIPs a thorough monitoring and evaluation process has not yet been established, but it seems that EIPs have supported the coordination

between initiatives in different countries and regions. It remains to be seen whether they can also contribute to a simplification of instruments in support of innovation.

Implementation of the EIPs promises to deliver significant outcomes, as judged by the overwhelming response to the calls for commitments and the „reverse commitment chain“ which has been created. The next stages of the process, however, - including selection of projects – are not always clear, and require a more deliberate process from the European Commission.

### **Recommendations**

This assessment concludes that there are sound reasons for the EU to continue promoting the EIP approach, provided that the EIPs target systemic innovation with a strong focus on diffusion of innovation.

In the context of this assessment, the Expert Group makes eight recommendations:

#### **1. Adopt improved criteria for launching new EIPs**

The EIP approach should only be applied to societal challenges that meet pre-defined criteria. These include the existence of a clear need or prospects for: a) breakthrough innovation and systemic solutions, b) wide-ranging partnering, c) European level action, d) new European competitive advantages.

#### **2. Provide an architecture for systemic change**

The EIPs must aim to achieve systemic change guided by a plan for how to move from the present system to the preferred one. This will help guide what kinds of interventions are needed and in what manner by showing how linkages and interdependencies between elements of the system need to be reshaped or restructured.

#### **3. Deploy a professional Design Team to guide the work of the EIPs**

A dedicated professional Design Team is needed to build and help deliver on an architecture for systemic change. This team should be nominated personally by the President of the European Commission and be answerable at a political level.

#### **4. Adopt an ecosystem approach to delivery**

An ecosystem approach to delivery should be followed focusing on mobilising demand, experimentation and diffusion. Focus should be on creating a single market for innovation through demand side actions and strengthening the diffusion of innovation.

#### **5. Build a level playing field proactively**

A level playing field needs to be ensured in a pro-active fashion including entry of new and relevant actors and guarding the EIPs against capture by vested interests.

#### **6. Adopt clear indicators for success**

Clear indicators need to be defined to monitor and evaluate success. The EIPs need to have a better sense of prioritisation where measurement of progress has to relate to systemic change, rather than the intensity of actions per se. These indicators should allow the Council to monitor the effectiveness of the Member States' commitment towards the EIPs.

## 7. Secure committed high-level leadership and adopt an effective governance model

A committed high-level leadership and an effective governance model have to be in place with the EIPs being placed at the heart of the EU innovation policy and becoming a core element of the work plan of the President of the Commission. Individual Commissioners should continue to take ownership of each EIP supported by a dedicated structure at the Commission. An active role for the Competitiveness Council has to be envisaged.

## 8. Improve the stakeholder model

Stakeholder commitment has to be ensured by creating synergy between the work of the different Action Groups within the EIPs, having Member States implement national support groups and more actors from outside of Europe being brought into the framework.

The above recommendations imply improvements that can be made to the current EIPs and significant changes to the way that future EIPs are launched and run. The Expert Group believes the implementation of these recommendations is necessary to turn the approach into what it was meant to be from the beginning – a thoroughly different way of engaging actors for breakthrough innovation and systemic change in Europe.

### KEY TERMS IN THIS REPORT

**ARCHITECTURE** refers to the structure of underlying principles that organizes many disparate parts into a coherent whole. In the context of the EIPs this refers to the principles that structure the innovations within an EIP so that they are ecosystem-driven and mutually reinforcing. The objective of the architecture is to ensure that many innovations create a positive sum and help move the challenge at hand towards a preferred state. This shift, from current to preferred state is what the Review refers to as *systemic change*. Without a clear architecture to guide the planning and delivery of EIP actions, it is likely that many good initiatives will not create large scale change.

**SYSTEMIC CHANGE** is about a fundamental change that is achieved by engaging across aspects of a system. Systemic change is rarely, if ever, the result of a single innovative action. Rather it is generally the result of many innovation actions coordinated across a broad range of dimensions, which combined create change at scale. Understanding the mix and range of innovations necessary requires an *architecture*, or a structure, that guides intent. Commonly the range of innovations might include technological, social, and process innovations.

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The following document is organised in five parts: **CONTEXT** describes the impetus and the need for the EIPs; **ANALYSIS** captures the Expert Group's feedback and reflection of the current status of the EIPs; **FINDINGS AND ASSESSMENT** explores the lessons learnt from the execution of the EIPs with the original intentions in mind; **RECOMMENDATIONS** define what changes are necessary in the conceptual design and functioning of the EIPs for them to meet their great potential; concluding with **ANNEX** which gives background to the Group and its work.

## **1. CONTEXT**

### **1.1. WHY? Addressing the EIP promise**

#### *Innovation as a path to higher productivity and growth*

The objective of the EIP model is to create the conditions for future economic growth and social welfare in Europe. The continent's socio-economic model is increasingly showing strain, particularly in today's budgetary austerity. While Europe needs to create new comparative advantages its future growth cannot be achieved merely by extending past models. Future growth relies on the active design and development of new ecosystems of delivery. The EIP is an instrument to actively design and develop these ecosystems of future growth.

#### *Towards a European model of innovation*

Europe's promise lies in many factors including the size of its market, an educated labour force, and strong research and SME (small and medium-sized enterprises) communities, within a social welfare context. However, a certain entrenchment of current market models and a general risk adverse culture impede innovation. The EIPs have been created to allow greater risk-taking and to challenge established market models in order to bridge the gap between invention promise and innovation delivery, by better leveraging European assets.

#### *Meeting major societal challenges*

While Europe has benefitted from a technology-driven idea of innovation in the past, today's frontiers are increasingly on a systemic level, encompassing social, technological and market challenges. The viability of the European economy will increasingly depend on its ability to drive the uptake of innovation for the purpose of addressing large scale societal challenges such as ageing, climate change and the provision of education. Given the structure of the European economy, innovation is likely to emerge at the points of intersection between different sectors and actors. In this context, the European culture of private and public sector interaction, and the emerging third sector, are significant assets.

### **1.2. WHAT? A new strategic tool to address European socio-economic challenges**

The intention of the EIPs is to install a new logic of innovation. Their objective is to integrate, harness and exploit Europe's potential in a way that creates a new ecosystem of innovation. Their original objective is to break down "silos" and bring together stakeholders across policies, sectors and borders, as well as capture new cross-sectoral value chains. The EIPs should therefore be focused on areas where new markets can be created or existing ones fundamentally transformed.

The EIPs' role is to operate across demand and supply. This means helping to shape new markets including through new public procurement policies. A key second step after fostering innovation is to diffuse innovation through better framework conditions for up-take of solutions and the support for their commercialisation. The EIPs need to operate by developing a high risk – high reward culture which has been lacking in Europe. They should provide freedom to experiment. Venturing into

the unknown must be part-and-parcel of the EIPs' operating procedure as the only way to unleash and harness innovation.

### **1.3. HOW? A new model of cooperation**

The EIPs are about fast-tracking innovation and accelerating breakthroughs to markets. This means that EIPs have to adopt ambitious targets and gain unequivocal commitment of a wide range of stakeholders. Ensuring that demonstration projects and pilots are transformed into real innovations is critical. For this to materialise, public and private actions need to be better coordinated, and the regulatory framework must be more open for the adoption of innovation.

The EIP must be used as a new collaboration platform for public, private, and third sector co-development. The objective of the EIP is not only to bring people closer together, but to shorten the gap between policy-maker and public authority and between end-user and innovator. It is to go beyond simple integration of resources and matching of demand and supply to drive systemic change. The EIPs bring no new funding arrangements but they must drive the aligning of priorities, leveraging investments and forming future partnerships.

### **1.4. EIPs as 'outriders' or first movers**

The EIP model has been designed to address large-scale social challenges.

In essence, they are about opening frontiers of innovations where new markets can be created or existing ones fundamentally transformed. With the backing of the policy makers at European and national level, EIPs should be leveraged as „outriders“, or first movers, able to test ideas, generate feedback, and scale opportunities to address societal challenges. It is therefore their capacity to drive large scale change that will be their key success indicator, rather than the number of EIP actions adopted, or the intensity of their activity.

## **2. ANALYSIS**

### **ASSESSING THE EXISTING EUROPEAN INNOVATION PARTNERSHIPS**

*In its evaluation of the existing EIPs, the Expert Group has focused on the value-added of the EIPs, their high-level objectives and targets, leadership and governance, participation, simplification and added-value vis-à-vis existing approaches, implementation as well as monitoring and evaluation. Annex IV shows the questions which were used in interviews with stakeholders.*

#### **2.1. The value-added of the EIPs**

##### Strengths of the current system

A key strength of the EIPs is that they have linked the innovation and research agendas in a more comprehensive fashion than previous EU initiatives. In addition, they have helped to integrate the different portfolios in complex organisations such as cities and facilitated new collaborations between the public and the corporate sectors.

A further significant value-added dimension lies in sharing knowledge to identify new synergies. The EIPs have fostered the diffusion of good practices and allowed cross-fertilisation between sectors, and they have leveraged capacity to map markets in order to identify new opportunities for innovation diffusion. A further important value generated by the EIPs has been the opportunity to shape policy on removal of barriers to market access. As one interviewee put it, „the EIP is about shortening the gap between the policy-maker and the innovator and ensuring good two-way communication “. For this process to work, the key issue is to make sure that ideas that EIPs generate are taken up at the political level.

Finally, the fact that the EIPs bring no new funding arrangements has been generally seen as positive. One stakeholder was of the opinion that „When you put money in it, you create barriers“. Creating a neutral vehicle to bring partners together with a view to aligning priorities, leveraging existing investments and forming future partnerships is a key asset of EIPs.

##### Weaknesses of the current system

The EIPs have created complex systems of Steering Groups, Sherpas, Operational Groups and Action Groups, which have discouraged many stakeholders from remaining actively engaged as EIP have progressed. „There is such a thing as the maximum size of the team“, one of the stakeholders has felt. „It is simplistic to think that you can only scale up a project by adding more people“. In addition, the process itself has also been seen by some as primarily discursive, rather than focused on specific realisations. This has again led to some original stakeholders withdrawing active participation.

In the perception of a number of stakeholders, many EIPs have lacked a clear strategy of prioritisation. They have attempted to cover too much ground. In addition, they have sometimes been used for purposes which are not directly related to innovation, but have been seen as a device for influencing other areas of European policy.

## **2.2. High-level objectives and targets**

### Strengths of the current system

The engagement of key stakeholder in the Steering Groups to set the objective and targets has generally been perceived positively. The process has aimed at bringing a degree of hierarchy to the envisaged actions and achieving an effective mix of longer-term systemic targets with short-term operational ones.

The linking of objectives and targets to current policy initiatives in the related areas has also been seen as positive and as a key tool in keeping the EIPs relevant to Member States.

### Weaknesses of the current system

In a number of cases, the high level objectives have attempted to be all-encompassing. In the Water EIP, for example, the objectives have been particularly broad – to „identify, test, scale up, disseminate and stimulate the uptake of innovative solutions by the market and society for ten major water-related challenges“. The latter covers practically all aspects of the water supply industry and the water-related ecosystem issues while an overarching societal headline objective has been lacking.

There has also been a criticism that the named objective the Active and Healthy Aging EIP - to add two healthy life years - is an aspiration or a political slogan rather than an objectively measurable target.

The very process of working out objectives has often not been sufficiently transparent, and there has been some concern that some partners have been successful in having their niche interests reflected in the targets of the EIPs. As a result, some stakeholders have made the observation that it would have helped to have an independent examination of the targets and opportunities which arise from them.

## **2.3. Leadership and governance**

### Strengths of the current system

The governance structure of the EIPs has generally been seen as effective and sufficiently flexible. The risk of creating overlaps with existing structures such as technology platforms and Joint Technology Initiatives has largely been avoided, notably by including their representatives in the governance structures.

The bottom-up dynamic has been a valuable aspect of the EIP and should be preserved. Engagement of the Commission, both at the political and supportive level, has been crucial for the effective launch of the EIPs. The most sought-after role of the Commission has been that of providing overall guidance. Some working groups have been extremely pro-active with excellent leadership and commitment of members. Their success has tended to be a function of a strong chain-of-command, with a clear division of responsibility.

### Weaknesses of the current system

While the support of the Commission was seen as key to the success of the launch phase of the EIPs, the Commission has at times been seen as having an overbearing influence in drafting the Strategic Implementation Plans. The general plea from stakeholders has been for the Commission to listen more attentively to

the partners and to learn about the barriers it puts in place, such as bureaucracy, lack of regulation or excessive regulation. It has been pointed out in the interviews that there is no single dedicated structure at the Commission to deal with the EIPs, but rather a selection of key players from the lead DGs. An integrated policy, which becomes a key element of the Europe 2020 strategy, requires its own structure in order for key ideas to be fed more forcefully into the policy community. The divergences of views at the Commission as to what the partnerships should focus on have also weakened the idea of the EIPs.

Finally, the transparency of the selection of the members of the Steering Groups has sometimes been questioned. This has affected the ability of the Groups to carry authority in their recommendations.

## **2.4. Participation**

### Strengths of the current system

The existing EIPs have generally been good in ensuring extensive participation of all relevant stakeholders. The prerequisite of maintaining a balance between the different types of actors involved has been observed. The EIPs have attracted strong interest from the side of individuals in positions of influence.

There have been effective channels to become active in the EIPs, including through the mechanism of invitations to commitments. Strong effort has been made to involve the existing European initiatives such as Joint Programming Initiatives who are represented in the EIP governance structure, including in the Steering Boards.

### Weaknesses of the current system

It has been felt that actors who know the European system well have a relative advantage, although they do not necessarily make a significant contribution. Gaps in the participation in the EIPs have tended to be specific to each of the partnerships.

The Review has found that insufficient understanding of their role within the EIPs has hampered industry's representation. The policy side has been underrepresented with relatively limited and falling participation of the Member States at national level. New Member States in particular have been poorly represented. The participation of SMEs has suffered from their limited experience of being engaged in the EU process and fear of complexity. For some of them, it has been difficult to take part in the partnerships given the lack of travel reimbursement.

## **2.5. Added value to existing approaches**

### Strengths of the current system

The EIPs have made some progress in coordinating initiatives across the Commission as well as in different countries and regions, whilst at the same time avoiding significant overlap of initiatives across different policy sectors. EIPs have signalled the opportunity of providing novel regulatory solutions, new financing instruments and new approaches to public procurement. While this has not materialized yet, the fact that the opportunity is evident is a positive aspect.

### Weaknesses of the current system

The interface with other initiatives is still an open question. At the same time, it is difficult to state that the EIPs have contributed to the simplification of the way in

which innovative actions are implemented in Europe. While the lack of funding was seen as a positive in driving the initial engagement, it was also noted that a lack of funds to support demo projects in the later stages of EIPs created problems. Bridging the different funding streams would be necessary to make the whole greater than the sum of the parts.

## **2.6. Implementation**

### Strengths of the current system

There are strong indications of a substantial implementation potential of the EIPs, as shown by the overwhelming response to some of the calls for commitments. The AHA EIP, for example, envisages future successful roll-out of home technology services as well as a European passport for vaccination. The EIP process where stakeholders are involved from the beginning of an engagement in the EIP is a positive example of a „reverse commitment chain“. This is starkly opposed to the traditional procedure whereby the Commission makes a proposal, offers funds and thereafter the stakeholders apply and enter into commitments to do a specific task.

### Weaknesses of the current system

However, the Strategic Implementation Plans (SIP) do not cover sufficiently the „how“ of implementation. They tend to be focused more on the strategy rather than the implementation aspects, giving little clear guidance for the next steps in the process. Stakeholders are not certain what role will be played by groupings such as the Sherpas in the calls and the selection of projects. Further on, the voluntary nature and soft legal structure of EIPs are not always conducive to tangible and traceable commitments of the Member States.

The decisions on the adoption of priorities in the SIPs have been seen as lacking clarity. Stakeholders have sometimes been surprised as to why some commitments have been accepted while others have not. It has also not been communicated very explicitly when invitations for commitments would stop, whether new ones would open and what is the final capacity of the EIP. In general there is a perceived lack of transparency on future implementation of EIPs.

## **2.7. Monitoring and evaluation**

### Strengths of the current system

Assessing innovation impact is a challenging task. All EIPs are convinced that a comprehensive set of indicators is necessary in order to measure progress. Some of the EIPs have begun well on this endeavour. The AHA EIP, which started work first, has made an effort to establish a clear set of indicators, both for the overall target and for the overarching objectives. In the Agricultural EIP, the Commission has done some preparatory work and will soon start discussions with the Member States about the indicators to be used.

The involvement of the Joint Research Centre (JRC) of the Commission, with its expertise in evaluation and monitoring, in all EIPs is seen as a strong positive for the future monitoring of EIP outputs.

### Weaknesses of the current system

A monitoring and evaluation process has not yet been established for most of the EIPs. A number of stakeholders have felt that the Commission has not been sufficiently open to developing a really robust evaluation system.

### **3. FINDINGS AND ASSESSMENT**

#### **3.1. Key Findings**

When the EIPs were conceived, they were not meant to be yet another instrument in the plethora of the EU's efforts at spearheading innovation. The EIP approach was about changing the logic of innovation policy in Europe. The 2010 Commission Communication on the Innovation Union spoke unequivocally of the EIPs in terms of "pooling forces to achieve breakthroughs".

In spite of the best efforts of all stakeholders involved, this outcome has not yet been achieved, and the Expert Group would argue that the current method of implementing the EIPs will not necessarily ensure this result. Despite the unique opportunities presented by the partnership approach, the specificity of the European innovation scene and the relative weakness of the culture of cooperation across sectors and categories of actors require a refinement of the EIP method in order to achieve the required breakthroughs.

It is accepted that Europe requires a strategic tool to address its pressing socio-economic challenges and the EIP approach could be a key tool in achieving that objective. However, it is clear that the initial intentions have not been sufficiently reflected in the actual practice of the EIPs in order to reach their best potential. Continuing with the current method of execution would yield disappointing results. The solution to closing this gap should not be to lower the level of ambition of the approach but rather to raise the level of execution.

The original vision of the EIPs was very clearly tailored towards achieving breakthroughs and meeting ambitious European targets. Three years on there has been preparatory progress but none of the EIPs have advanced far in meeting their initial objectives. The task of preserving the high level of ambition clearly rests with the EIPs' governance structure and requires a new type of leadership, combined with more ownership on the part of stakeholders.

A strong demand-side orientation along the entire innovation chain is also a critical condition for the EIPs' success. This requires a strong supporting regulatory framework that is more suited fostering rapid uptake of innovations. This should include pro-active efforts to ensure that procurement can be leveraged in a ways to better mobilise demand.

A culture of experimentation was clearly embedded in the very idea of the EIPs. The current practice of the EIPs is however insufficiently flexible to allow changes in direction when early indicators show that a change of directions could yield better results. The EIP governance structure must therefore be in the position to ensure freedom to experiment, discontinue activities that do not bring convincing outcomes and take up new ones.

#### **3.2. Areas where improvements and structural changes are needed to meet the original EIP targets and characteristics**

When analysing the performance of the current EIPs, the Expert Group did not, in line with its mandate, attempt to redefine their objectives or priorities. However, it has concluded that improvements and changes are needed to ensure that execution better mobilises demand, allows for more wide-spread experimentation, and reaches a higher level of impact. The Expert Group recommends launching further

EIPs, to address other societal challenges, on the assumption that the level of execution will be commensurate with the ambition of the approach.

The Expert Group has identified four areas where corrections and improvements are called for with respect to the way the EIPs aim to address their original objectives. They address the selection criteria, indicators of success, governance model and stakeholder partnerships. These four general areas of correction have been further elaborated into eight concrete recommendations.

### **3.2.1. Selection criteria**

A list of criteria for the successful implementation of European Innovation Partnerships was defined in 2010 and remains valid<sup>1</sup>. They stretch from combining strong research and innovation with demand-side measures to removing duplication and overlap. Nevertheless, they need to be guided by a set of overarching, first-level criteria that connect more closely to the strategic objectives of the European Union.

Given that the European model is increasingly showing strain and that breakthrough solutions will not be generated by extending past systems, the EIPs must focus on creating new systemic solutions and markets and/or on transforming existing ones fundamentally. As the new frontier of innovation lies in challenges that cut across sectors or domains of knowledge, EIPs must create cross-cutting platforms and cross-sectoral value chains throughout Europe. Improving the ecosystem of innovation is a crucial precondition in the process of getting solutions to market.

These essential features of an EIP must be reflected in a first level set of criteria so as to ensure that EIPs are set up only for challenges where they are likely to make a significant difference.

### **3.2.2. Governance model**

The existing EIP governance structure is a respectable attempt to combine top-down leadership and bottom-up engagement. It has enabled the EIPs to define a range of objectives and initiate a process of stakeholder interaction. A strong engagement of the Commission, both at the political and supportive level is crucial for the further success of the EIPs.

It is clear at the same time that the roots of the current EIPs' underperformance can also be found in the way their governance model has evolved. There are imperfections to be addressed both at the level of overall guidance and leadership and stakeholder engagement. The Commission has been actively present in the EIPs but it lacks a dedicated structure to oversee its involvement, provide strategic orientation and ensure coherence. This can be remedied by equipping each EIP with a "front person" who is personally committed to its success and enjoys the credibility, visibility and mandate necessary to drive change across policy areas. This role requires taking direct ownership in the strategic conversations and decisions within the EIP, maintaining leadership throughout the process at multiple levels.

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<sup>1</sup> See: "Innovation Union. Frequently Asked Questions regarding European Innovation Partnerships under Europe 2020", European Commission, 6 December 2010, [http://ec.europa.eu/research/innovation-union/pdf/eip\\_faqs.pdf](http://ec.europa.eu/research/innovation-union/pdf/eip_faqs.pdf)

### **3.2.3. Clear targets and indicators to monitor and evaluate success**

All existing EIPs aim to respond to major societal challenges. Their effectiveness in doing so rests, however, in the clarity of the initial targets and the way they are translated into specific objectives. Some of the current EIPs are characterised by sufficient clarity of their high-level targets with a good mix of longer-term strategic goals and short-term operational ones. In the case of others (for example Water EIP), targets aim to address too many aspects of the challenge at the same time. This imperfection should be remedied in the future. Targets have to be set at a level of ambition that requires the EIPs to achieve systemic change. They also need to be sufficiently focused to drive action and results.

The monitoring and evaluation frameworks for the current EIPs are still being developed. This makes it, for the time being, impossible to assess their strengths and weaknesses. But there is no doubt that the completion of this task in an ambitious, yet realistic, time-frame is essential for the EIPs to live up to their expectations. Indicators have to measure outcomes rather than the intensity of the process. They have to be able to demonstrate the degree of systemic change achieved, rather than simply quantitative aspects of the various initiatives. As far as possible, indicators should also make it possible to assess the contribution of the Member States to the implementation of these common endeavours.

### **3.2.4. Stakeholder partnerships**

The current EIPs have been useful vehicles in bringing partners together with a view to align priorities, leverage investments and form future partnerships. They have generally been good in ensuring extensive participation of all relevant stakeholders, and they have also created effective channels for the interested actors to become engaged in the EIPs, including through invitations for commitments.

Building a stakeholder model that serves the prerogative of systemic change will not happen by itself. Some stakeholders with a high potential for disruptive innovation may not have the resources, incentives, or awareness to join an EIP. Therefore, the partnership needs to be built in a proactive and deliberate manner to ensure relevance for the future. Its guiding characteristic should be a high level of ambition and commitment to the changes needed to achieve lasting systemic change.

## **4. RECOMMENDATIONS**

The current Review concludes that there are sound reasons for the European Union to continue developing the partnership approach in the framework of the EIPs. EIPs have the potential to be a powerful method for enhancing strategic innovation within the EU. There is no doubt that the existing EIPs are still in their early phase and should continue building up their strength and impact. Nevertheless, for their potential to be fully realised, the implementation of the current EIPs needs to be aligned with the original level of ambition. As for future EIPs, they have to meet an extended set of criteria, formulated in the light of the lessons learned since 2011.

Taking into account the assessment of the original objectives of EIPs and the four areas of correction discussed above, the Expert Group makes the following recommendations:

### **4.1. Adopt improved criteria for launching new EIPs**

The EIPs should focus exclusively on system level transformations in areas where there is great innovation potential, societal need, business opportunity and need for partnering across Europe. As such, the EIPs should help increase the impact of actions undertaken with existing European, national and regional research and innovation instruments by linking them to a broader framework.

In order to be successful, **the EIPs must meet all of the following criteria:**

- a. Existence of a clear need for breakthrough systemic innovation on challenges that pose significant risks to the economic and social texture of European societies and /or to strategic new opportunities;
- b. Existence of a clear need for partnering: the challenge cannot be solved by any single means, organization, sector, or domain knowledge;
- c. Existence of a clear need for European level action: where local, regional or national action alone is not sufficient;
- d. Existence of clear prospects for European competitive advantage.

### **4.2. Provide an architecture for systemic change**

For an EIP to deliver systemic change it needs to describe the preferred system and have a plan for how to move from the present system to the preferred one. This will help guide what kinds of interventions are needed and in what manner by showing how linkages and interdependencies between elements of the system need to be reshaped or restructured.

Given that EIPs tackle issues where there is no pre-existing solution to copy or adopt, delivering an architecture cannot happen in isolation from experimentation and capacity building. As such EIPs should combine 'top-down' planning with 'bottom-up' emergence in a manner that can deliver new insights and opportunities while building capacity to scale.

Systemic change will not happen as a sum of partners' interests, but rather through a coordinated effort to understand what kinds of actions are needed and in what manner to create change at scale.

### **4.3. Provide a professional Design Team to guide the work of the EIPs**

The President of the Commission should nominate the team personally. It has to be anchored at the Commission to ensure ability to impact on the policy process and on implementation tools.

Members of the Team should be drawn from among the most experienced European innovators, with a specific experience in systemic redesign challenges. They should lead by coordinating and synthesising efforts around the principles that govern systemic change.

Although integrated at the Commission, the Team needs to have the freedom to base its operations on new models - as such it needs to have a large degree of autonomy to meet its mandate.

Given their focus on addressing major societal challenges, the EIPs need to work in a cross-section of policy areas in order to be effective. This allows the EIPs to cross-fertilise thematic ideas and opportunities as well as help disseminate successful EIP delivery models. The Team should stimulate such cross-fertilisation between EIPs.

### **4.4. Adopt an ecosystem approach to delivery**

Functioning markets and a clear articulation of demand are vital prerequisites for driving the development of innovative products and services, and for ensuring that knowledge is turned into useful solutions.

Focus should be on creating single markets for innovation through demand side actions such as revision of regulation, standard-setting, public procurement, incentives for adoption etc. In this way the public sector as regulator, customer and facilitator should stimulate high-growth potential markets for innovative products and services in which the private sector can develop competitive advantage.

Diffusion of innovation shall be strengthened to move from pilots to wider scale implementation and uptake. Space shall be made for experimentation, mutual learning, building partnerships with new actors, and replicating and up-scaling innovative solutions and practices. This requires more collaboration and closer links between stages and actors.

The EIPs should lead to changes in the EU regulatory framework and/or induce changes in national or regional settings, should structural adjustments there be necessary.

### **4.5. Build a level playing field proactively**

Openness of the EIPs to different types of stakeholders is a pre-condition for the emergence of innovation. But by itself, open access is not sufficient to ensure a level playing field for all actors who can drive innovation. The EIPs must adopt a pro-active approach, searching for new actors who might have significant relevance for the development of future ecosystems and markets, and help translate innovation into practice leading to the desired future state.

Being open also means ensuring that incumbent interests do not dominate excessively. The EIPs will by definition challenge existing markets, vested interests, and current organisational and knowledge boundaries. Therefore, the EIPs need to

be equipped with internal mechanisms to guard against capture by individual interests to the detriment of a level playing field.

#### **4.6. Adopt clear indicators for success**

Success needs to be defined at the outset in a robust and clear manner to both help guide the ambitions of the EIP but also ascertain progress along the way. Clear indicators need to be in place pertaining to an EIP's execution, commitment, and results.

Given that EIPs will be pushing new frontiers of innovation, monitoring cannot be static but must relate to the context of progress. However an EIP's primary impact has to be measurable. The EIPs need indicators that can track the overall development as well as insights on the success of structural changes, including in the Member States.

Links to European and national statistical data will be needed. National Reform Plans as well as research and innovation strategies for smart specialisation offer appropriate frameworks where intended objectives may be measured and structural changes assessed. Outcomes cannot be measured by the number of projects but rather by the project's contribution to growth and jobs.

#### **4.7. Secure committed high-level leadership and adopt an effective governance model**

The success of EIPs is dependent on committed high-level leadership, a robust governance system and partnerships with a high degree of trust and confidence. Attention needs to re-focus to ensure that these conditions are met.

- In order for this to materialise, the EIPs need to be effectively placed at the heart of the EU's innovation policy, for the whole lifespan of the initiatives. They should also be firmly anchored in the broader EU policy-process.
- The President of the European Commission should make the EIPs a core element of the future work plan for the EU, and should stay involved to oversee their progress and impact.
- Individual Commissioners shall continue to take ownership of each EIP supported by a dedicated structure at the Commission.
- An active role for the Competitiveness Council should be envisaged. It should organise annual debates about the progress of the EIPs inviting representatives from other/sectoral Council formations, preferably in the framework of the European Semester, allowing for the Member States' representatives to inform on the progress of the EIPs deployment in the respective countries.

#### **4.8. Improve the stakeholder engagement model**

Although the existing EIPs have generated a high level of participation and interest, more needs to be done to ensure stakeholder commitment. Emphasis needs to be placed on active partners who will provide real value for the EIPs.

- Action Groups are an excellent way to capture and implement innovation and more use should be made of the combination of their outcomes. Synergy between different EIP Action Groups needs to be improved. One possibility would be to establish hubs of action groups, some of which could be national while others transnational.

- Member States should complement EIPs with appropriate policy measures. They should also implement national support groups bringing together public authorities with stakeholders from industry, especially SMEs, whose involvement in the EIP process should be assisted with tailor-made tools. Clusters or associations of SMEs should be encouraged with view of facilitating their participation in the EIPs.
- EIPs should be more open to actors from outside of Europe whose input would be invaluable with respect to solutions to the grand societal challenges and the international opportunities for European firms.

## **ANNEXES**

### **I. Review Method**

At the time of launching the four latest EIPs, the European Commission committed itself to launch an evaluation of the overall performance of all the EIPs. The Competitiveness Council welcomed this decision in May 2012.

The current independent expert evaluation was tasked to deliver an objective and reasoned assessment of the EIP concept and approach. It was asked to provide a global assessment of the actions that have taken place within each EIP and the emerging outcomes. Its mandate has been to both analyse the working methods of the current EIPs, review provisional and actual results and lessons learnt as well as to assess any measures to improve the functioning of the current EIPs. The review was not meant to redefine objectives or priorities of the individual EIPs. In order to carry out the review, an independent expert group was created under the chairmanship of Esko Aho, the former Prime Minister of Finland. A diversity of backgrounds and approaches was brought together in the group which has included as well: Sylvia Schwaag Serger, Walter Mönig, Petra Wilson, Cristina Garmendia, Marco Steinberg and Paweł Świeboda.

The review is meant to feed into the mid-term evaluation of the Innovation Union. It has been asked to provide answers to the questions concerning the high level objectives and targets, leadership and governance, participation, simplification and added value vis-à-vis existing approaches, implementation as well as monitoring and evaluation. On this basis, the review was asked to provide recommendations on the improvements in the current EIPs and conditions for further EIPs.

The expert group has organised targeted interviews with a group of over 50 key EIP stakeholders (see Annex III). It also analysed available reports and data. The interviewees ranged from EIP Steering Group and Sherpa Group members to independent experts and action group leaders. For its work, the group used a set of common questions for stakeholder interviews (see Annex IV).

The Expert Group wishes to thank representatives of the European Commission, especially Peter Dröll, Michael Arentoft and Diana Ivanova-van Beers for their invaluable assistance in conducting the Review.

### **II. Expert Group Members**

#### **Esko Aho (Chairman)**

Lecturer at Harvard Kennedy School

Former Prime Minister of Finland

Former President of SITRA, the Finnish National Fund for Research and Development

Chair of the 2006 group on 'Creating an Innovative Europe'

#### **Sylvia Schwaag Serger**

Executive Director International Strategy & Networks; Swedish Agency for Innovation Systems (VINNOVA)

Adjunct Professor, School of Economics, University of Lund

**Walter Mönig**

Former Deputy Director General for European and International Cooperation at the Federal Ministry of Education and Research, Germany

Ex-Science Counsellor at the Permanent Representation of Germany to the European Union

**Petra Wilson**

Chief Executive Officer, International Diabetes Federation

Honorary Fellow, Centre for Health Informatics & Multiprofessional Education, University College London

Former Director for Public Sector Healthcare, Cisco Inc.

**Cristina Garmendia**

Chairwoman of Genetrix and SYGNIS AG

General Partner at Ysios Capital Partners

Former Minister for Science and Innovation of Spain

**Marco Steinberg**

Founder, Snowcone & Haystack

Former Director of Strategic Design, Finnish Innovation Fund (Sitra)

Former Associate Professor of Architecture, Harvard Graduate School of Design

**Paweł Świeboda (Rapporteur)**

President of demosEUROPA – Centre for European Strategy

Former Head of the European Department at the Polish Ministry of Foreign Affairs and Advisor to the President of Poland

**III. Interviewees**

Pallas Agterberg, Alliander

Salla Ahonen, Director, Sustainability & Environmental Policy at Nokia

Charbel Aoun, Senior Vice-President, Schneider Electric

Göran Backblom, Vice-President Public Affairs, LKAB

John Beard, Director, Department of Ageing and Life Course at the World Health Organization, Geneva

Nicola Beddington, Executive Director, European Patients Forum

Ruud van de Bilt, Action Group Member, University Medical Center Groningen NL

Prof. Jean Bousquet, Professor of Pulmonary Medicine at the University of Montpellier

Michael Browne, European Research Office Director, University College London

Jennifer Craig and Triona McCormack, University College Dublin, University Research Office

Prof. George Crooks, NHS Scotland

Harry van Dorenmalen, IBM Chairman Europe

Jeanette Edblad, Sherpa to Lena Ek, Ministry of Enterprise, Head of Section

James Ede, Kellogg, EIP AGR; Kellogg Public Affairs [Senior manager for Europe]

Dr. Hanns-Christoph Eigen, President Federal Office for Agriculture and Food (Bundesanstalt für Landwirtschaft und Ernährung (BLE))

Nick Fahy, Queen Mary University, London

Professor Alain Franco, Secretary General and Vice-President, International Association of Gerontology and Geriatrics

Hugh Goldsmith - Water EIP – DG Regio/ EIB

Maria Iglesias Gomes, DC SANCO  
 William Green, Director for Public Affairs, Nutricia/Danone  
 Prof Trish Greenhalgh – Queen Mary University, London  
 Menno Hinkema, Action Group Member, TNO NL  
 Mikael Gröning (project leader for Sweden’s Material strategy), Ministry of Enterprise, Raw Material EIP  
 Dr. Corina Hebestreit, SG Member EIP Raw Materials, Director EUROMINES Association (European Association of Mining Industries)  
 Dr. Peer Hoth, Sherpa Group Member EIP Raw Materials, MS representative, Federal Ministry of Economy and Technology, Berlin  
 Christian Huyge, Deputy Director Scientific Agriculture, Institut National de la Recherche Agronomique  
 Zbigniew Kamieński, Deputy Director for Innovation and Industry, Ministry of Economy, Poland  
 Tom Kelly, Teagasc Irish Agricultural Development Agency, Director of Knowledge Transfer  
 Genrot Klotz, Member of the Task Force & Member of the Sherpa Group of Smart Cities EIP  
 Carlos Martinez-Riera, MS representative, EIP AHA  
 Prof. Dr. Frieder Meyer-Krahmer, Chairman of the Task Force EIP Water  
 Paul Mijlemans, Member of the Executive Committee Chief Technology Officer Umicore  
 Ann Murray- AHA EIP – Falls Manager, NHS Scotland, NHS 24 UK  
 Chris North, Deputy Head (EU), International Knowledge and Innovation, Department for Business, Innovation & Skills, UK  
 Michał Olszewski, Deputy Mayor of Warsaw  
 Constantijn van Oranje-Nassau, Head of Cabinet of Vice-President Neelie Kroes  
 Anne-Sophie Parent, Secretary General, AGE Platform Europe  
 Emina Pasic, Senior Advisor, Swedish Energy Agency (Stakeholder EIP Smart Cities)  
 Claus Perderson & Christian Wansher - Region Southern Denmark  
 Richard Tuffs ERIN  
 Krijn Poppe, MS representative, Wageningen University and Research Center, Agricultural Economics Research Institute (LEI), Netherlands  
 Janez Potočnik, European Commissioner for the Environment  
 Ewa Rabinowicz, Professor, Research Director, Agrifood Economics Center, Swedish Agricultural University (SLU)  
 Lieven De Raedt, Attaché, Belgian Federal Ministry of Health  
 Dr Jean-Marie Robine, Research Director at the French National Institute of Health and Medical Research and Head of the Health and Demography team at the Department of Biostatistics, University of Montpellier  
 Tania Runge, Sherpa, Copa-Cogeca, Agricultural and Water EIP  
 Ingolf Schädler, SG Member EIP Smart Cities, MS representative, Federal Ministry for Transport, Innovation and Technology Wien  
 Martin Scheele, DG AGRI/H1  
 Martin Seychell, Deputy Director General, DG Sanco, EC  
 Carol Sinclair – AHA EIP, Scottish Centre for Telehealth and Telecare  
 Wolfgang Steiger, SG Member EIP Smart Cities, Executive Group Chairman European Road Transport Research Council (ERTRAC), Director Future Technologies, Volkswagen, Brussels / Wolfsburg

Paul Timmers, DG Connect

Ronan Toomey, Assistant Principal Officers Strategy Development Unit, Office for Older People, Department of Health, Ireland

Mark Ülar, Architect/CEO Urban Mark LLC

Zeger Vercauteren, Senior Director Gov't Affairs J&J

Paul Verhoef, Head of Unit, DG Research and Innovation, European Commission, DG MOVE

Prof Wim van Vierssen, CEO of KWR Watercycle Research Institute

Lee Vousden Head of EU Innovation Policy and Allan Mayo Head of the Services Policy Unit; Department for Business, Innovation & Skills, UK

#### **IV. EIP Stakeholder interview questions**

##### **1. Added value for the participants and for Europe:**

What benefits and opportunities do the EIPs create for the partners?  
- And for the European economy and society?

##### **2. High level objectives and targets:**

How are objectives and targets set? How far and by which means has the approach taken to high level objectives and targets been effective in providing a focus for the EIPs? To which degree were stakeholders involved in objective and target setting? Have the targets been defined at the right level of granularity?

##### **3. Leadership and governance:**

What governance structures are used to steer the EIPs? How far have the establishment and operation of high level groups and other structures been effective in decision-making and in engaging the necessary partners and identifying the main obstacles to be overcome and actions to overcome them?

##### **4. Participation:**

Are the right people involved? Is anybody missing? Are any of the partners, or any other issues (e.g. IPR, privacy), blocking innovation/progress?

##### **5. Simplification and added value vis-à-vis existing approaches:**

To which degree and by which means do the EIPs pursue to accelerate innovation beyond what would be possible through other initiatives at EU or national levels (notably through traditional collaborative approaches)? How can this added value be increased? How far have the EIPs been oriented towards a streamlining and better coordination with other initiatives?

##### **6. Implementation:**

How far have the EIPs and their strategic implementation plans identified pertinent actions covering supply side and demand side policies? How do they define responsibilities, timelines and commitments to ensure implementation? On the demand side, in particular, to which degree of clarity and detail are actions identified? On what criteria do the EIPs select partners for action? What are the mechanisms for businesses and other stakeholders to become active in the EIPs?

##### **7. Monitoring and evaluation:**

Which arrangements been put in place to monitor progress towards the targets, ensure feedback, and take any corrective actions? How robust are these arrangements to serve their purpose?

## **8. Top challenges and success factors:**

Based on your experience, what are the top-five challenges for this area? – And what are the top-five issues for success in this area?

### **V. Fact Sheets on the existing EIPs**

The EIP pilot on Active & Healthy Ageing (AHA) was launched in May 2011 and six months later its Steering Group presented its Strategic Implementation Plan (SIP). In February 2012 the EC endorsed the AHA SIP and put forward proposals for new EIPs, drawing lessons from the pilot. In February 2012, the Commission proposed EIPs on 'Agricultural Productivity and Sustainability' and on 'Raw Materials'. In May 2012 it added a proposal for an EIP on 'Water' and in July it proposed a 'Smart Cities and Communities' EIP.

Since then, each EIP has reached the following major milestones:

- Endorsement by Council
- Delivery of Strategic Implementation Plan
- Start of implementation, including 'Invitations/Calls for Commitments and Reference Sites', setting up of 'Action/Operational Groups' and execution of priority actions, Web-based 'Marketplaces', annual EIP conferences etc.

### **Active & Healthy Ageing EIP**

Objectives and headline targets: The Active & Healthy Ageing EIP (AHA) aims to increase by 2 the average number of healthy life years in the EU by 2020, by securing a triple win for Europe: (1) improving the health status and quality of life of European citizens, with a particular focus on older people; (2) supporting the long-term sustainability and efficiency of health and social care systems; and (3) enhancing the competitiveness of EU industry through an improved business environment providing the foundations for growth and expansion of new markets.

Priority areas and actions: The work is structured in three pillars reflecting the life stages of the older individual in relation to care processes: (1) Prevention, screening and early diagnosis; (2) Care and cure; and (3) Active ageing and independent living. In addition, horizontal actions have been identified that address framework conditions, promote connections between the different priority areas of work, and are enablers for all other actions, including regulatory and funding schemes.

Within the different key areas, actions have been identified where stakeholders have demonstrated significant readiness and commitment to engage, and six Action Groups were launched in 2012 expecting first results in 2013-2015: (1) Prescription and adherence action at regional level; (2) Falls Prevention; (3) Prevention of functional decline and frailty; (4) Integrated care; (5) Independent living; and (6) Age-friendly environments.

Governance and implementation: AHA has been led by a Steering Group (SG) with 29 high-level stakeholders spanning both the demand and supply sides. The SG is chaired by the two European Commissioners for Health and for the Digital Agenda. The Group has been supported by a group of Sherpas who have assisted in drawing up agendas and documents.

AHA issues periodic 'Invitations for Commitment' open to all stakeholders for the submission of initiatives that support the specific actions identified in the SIP. Candidates are then invited to join 'Action Groups' dedicated to work on each of the six specific actions. The EIP has also issued an 'Invitation for Reference Sites' for stakeholders to illustrate and exchange best practices on implementing substantial parts of the six specific actions in an integrated way.

AHA also features a web-based marketplace that allows stakeholders to exchange innovative ideas, find partners, share emerging initiatives and disseminate evidence. Finally, the EIP organises annually a Conference of Partners.

State of Play: AHA was launched in May 2011 and six months later its Steering Group presented its Strategic Implementation Plan (SIP) with priority areas, including specific actions for immediate implementation. In February 2012 the EC endorsed the AHA SIP and set out EU level actions in support. Since spring 2012, almost 600 commitments have been submitted by groups of stakeholders bringing together public authorities, technology companies, health providers, industry and non-governmental organisations. The six Action Groups have made further detailed action plans, and implementation of projects and initiatives has started, gathering 1,000 regions, 3,000 engaged partners and 300 leading organisations with over 1b€ of commitments. They are expected to have an impact on over 2 million patients and 30 million citizens by 2015.

AHA has selected 32 Reference Sites from 12 Member States. These sites provide the EIP with examples of comprehensive, innovation-based approaches to active and healthy ageing. Candidates are coalitions of regions, cities, integrated hospitals or care organisations that are able to show their impact and show particular innovative practices which could be transferred to other European contexts.

So far, close to 1000 partners have signed up to the marketplace and almost 300 ideas and/or initiatives have been posted. A first AHA Conference of Partners took place in November 2012, and a second such conference was held in November 2013.

## **Water EIP**

Objectives and headline targets: The Water EIP aims to achieve the following headline target by 2020: identify, test, scale up, disseminate and stimulate the uptake of innovative solutions by the market and society for 10 major water related challenges. This aim has been further elaborated through four general targets: (1) Resolving water challenges with sustainable innovations; (2) Creating market opportunities and removing barriers for global water solutions; (3) Increasing competitiveness of the European water sector through fostering partnerships; and (4) Supporting the green economy through blue innovation.

Priority areas and actions: The Water EIP has identified the following priority areas: (1) Water reuse and recycling (target: wastewater as a fully accepted and safe resource); (2) Water and wastewater treatment, including recovery of resources (target: wide establishment of smart and innovative water and wastewater treatment); (3) Water-energy nexus (target: realisation of the full sustainable water-energy synergy); (4) Flood and drought risk management (target: increased resilience reduces loss and damage from floods and droughts); and (5) Ecosystem

services (target: recognition of eco-system services as an essential tool to solve water challenges).

In addition, cross-cutting priorities have been identified that address framework conditions, promote connections between the different priority areas of work, and are enablers for all other actions: (6) Water governance (target: efficient, effective and legitimate governance for sustainable water management); (7) Decision support systems and monitoring (target: decision support systems and monitoring facilitate transparent and cost effective water management); and (8) Financing for innovation (target: support from effective finance mechanisms for water innovations and export of technologies and services). Furthermore, "smart technology" has been identified to be of key relevance as an enabling factor within all other priorities.

Governance and implementation: The EIP Water is led by a Steering Group (SG) with 27 high-level representatives of relevant stakeholder groups and spanning both the demand and supply sides of the water sector. The SG is chaired by the European Commissioner for Environment. The Group is supported by a Task Force of stakeholder representatives.

The Water EIP issues periodic 'Calls for Expression of Commitments to form Action Groups'. Action Groups are then committing to work on one or more of the actions as described under the EIP Water priorities in the Strategic Implementation Plan.

The Water EIP has also developed a web-based market place - an online collaboration platform for information exchange, matchmaking and teaming-up of public and private sector experts, organisations and resources - and the EIP is organising annual conferences for the EIP stakeholders.

State of Play: Following the endorsement from the Council in June 2012, the Water EIP delivered its SIP in December 2012. At the same time, a first 'Invitation for Commitments' for Action Groups was issued, resulting in 64 commitments and the setting up of nine Action Groups. A second 'Invitation for Commitments' was launched in November 2013. The Water EIP's marketplace went live in August 2013. A first EIP Water Conference took place in November 2013.

## **Agricultural Productivity & Sustainability EIP**

Objectives and headline targets: Two headline targets have been identified for the Agriculture EIP: (1) To reverse the recent trend of diminishing productivity gains by 2020 (indicator for productivity and efficiency); and (2) To secure soil functionality in Europe at a satisfactory level by 2020 (indicator for sustainability of agriculture).

Priority areas and actions: Four challenges are addressed as priority: (1) Resource efficiency, including action areas of Climate change adaptation and mitigation, Resilient and healthy plants/animals, Sustainable and more efficient input use, Optimising and diversifying agricultural and forestry output and cascading use of biomass, Using self-regulating capacities, Increased productivity along the protein chain, and Nutrition and quality issues; (2) Provision of societal and environmental goods and ecosystem services; (3) Establishing of a sustainable consumption and supply chain, including action areas of Interaction between the economic, social and environment aspects of sustainability; Sustainable consumption; Food production

and processing, Short supply chains and rural urban partnerships, Non-food (demand), Waste management, and Public health; and (4) Innovation culture, including action areas of Innovation culture as an overarching concept, Stimulating holistic approaches, Stimulating bottom-up and interactive/participatory approaches, Wide stakeholder involvement and rural-urban partnership, and Exchange, transfer and access to knowledge and experience.

Governance and implementation: The Agriculture EIP is led by a Steering Group (SG) with 42 key stakeholders from across the agricultural research and innovation landscape. The SG is chaired by the two European Commissioners for Agriculture and for Research and Innovation. The Group is supported by Sherpas who help to ensure efficiency and continuity at technical level.

Operational Groups, established under the rural development regulation, involve actors such as farmers, researchers, advisors, businesses, NGOs, etc. who together design and implement projects and test new ideas.

An EIP Service Point is set up at EU level to collect and disseminate the results of the work and to provide help to find partners and information, facilitate exchange of knowledge and experience and liaise with other existing networks and initiatives. The service point animates discussion on innovation in certain areas via Focus Groups. In these Groups, experts discuss potential ways forward on how to address specific challenges in specific areas of action. The results of these Groups are also disseminated via workshops and seminars.

State of Play: The Agriculture EIP was endorsed by Council in June 2012 and its Steering Group reached an agreement on its Strategic Implementation Plan in July 2013. The EIP Service Point was set up in April 2013. Three focus groups have started, and another three are in the pipeline.

## **Raw Materials EIP**

Objectives and headline targets: The overall objective of the Raw Materials EIP is to ensure the sustainable supply of raw materials to the European economy whilst increasing benefits for society as a whole. This will be achieved by: (1) Reducing import dependency and promoting production and exports by improving supply conditions from EU, diversifying raw materials sourcing and improving resource efficiency, including recycling, and finding alternative raw materials; and (2) Putting Europe at the forefront in raw materials sectors and mitigating the related negative environmental, social and health impacts.

Priority areas and actions: (1) A technology pillar focuses on actions in the following priority areas: Raw materials research and innovation coordination; Technologies for primary and secondary raw materials production; Substitution of raw materials. (2) A non-technology pillar focuses on: Improving Europe's raw materials framework conditions; Improving Europe's waste management framework conditions and excellence; Knowledge, skills and raw materials flows. (3) An international collaboration pillar will promote synergies with countries such as the US, Japan, Australia, Canada, Latin America and African Union across the different priority areas.

A number of concrete targets should be achieved by 2020: (1) Up to ten innovative pilot actions on exploration, mining, processing, and recycling for innovative production of raw materials; (2) Substitutes for at least three applications of critical and scarce raw materials; (3) Framework conditions for primary raw materials that would provide a stable and competitive supply from EU sources and facilitate its public acceptance; (4) Framework conditions for enhanced efficiency in material use and in waste prevention, re-use and recycling, and raw materials efficient product design; (5) European raw materials knowledge base with information, flows and dynamic modelling system for primary and secondary raw materials; (6) Network of Research, Education and Training Centres on sustainable raw materials management organized as a Knowledge and Innovation Community; (7) Pro-active international co-operation strategy of the EU at bilateral and multilateral level promoting synergies with other countries across the different areas covered by the EIP.

Governance and implementation: The Raw Materials EIP is led by a Steering Group (SG) with 36 key stakeholders that provide strategic direction for the EIP. The SG is chaired by the three European Commissioners for Industry, for Environment and for Research and Innovation. A Sherpa Group acts as the link between the SG and the Operational Groups by following up the decisions of the SG and ensuring the smooth running of the EIP.

The Operational Groups convert the SIP into tasks and actions, and a 'Call for Commitments' has been launched to further mobilise the community. A web-based marketplace for exchange between stakeholders is under development, and a Raw Materials EIP Conference is being organised.

State of Play: The Raw Materials EIP was endorsed by Council in October 2012, and its Steering Group met for the first time in February 2013. The SIP was adopted by the Group in September 2013. The Commission launched a 'Call for Commitments' in October 2013, and the web-based marketplace should open by the end of 2013. A Raw Materials EIP Conference was held in December 2013.

## **Smart Cities and Communities EIP**

Objectives and headline targets: The Smart Cities and Communities EIP strives at a triple bottom line gain for Europe: a significant improvement of citizens' quality of life, an increased competitiveness of Europe's industry and innovative SMEs together with a strong contribution to sustainability and the EU's 20/20/20 energy and climate targets. This will be achieved through the wide-reaching roll out of integrated, scalable, sustainable Smart City solutions – specifically in areas where energy production, distribution and use; mobility and transport; and information and communication technologies are intimately linked.

Priority areas and actions: The EIP concentrates on three specific, vertical areas: (1) Sustainable Urban Mobility - Alternative energies, public transport, efficient logistics, planning; (2) Sustainable Districts and Built Environment - improving the energy efficiency of buildings and districts, increasing the share of renewable energy sources used and the liveability of our communities; and (3) Integrated Infrastructures and processes across Energy, ICT and Transport - connecting infrastructure assets to improve the efficiency and sustainability of cities. The Plan

puts forward key horizontal enablers on the themes of Decisions (citizen focus, policy and regulation, integrated planning), Insight (knowledge sharing, metrics and indicators, open data, standards), and Financing (business models, procurement and funding).

Priority actions for these areas and enablers notably include: (1) 'Lighthouse Initiatives' that bring together groups of cities with industry and innovative SMEs to deliver common Smart City solutions, support wider implementation, showcasing. (2) The application of new business and financial models, public-private partnerships that combine industry with public investments at European, national, regional and local level, and European procurement schemes. (3) Advancement in Smart City open standards. (4) Development of infrastructure platforms and common architectures for smart city information. (5) Making widely available relevant data in the urban domain through "open data by default". (6) Developing tools for scalable integrated design, simulation and multi-criteria optimisation. (7) Creating a common framework to develop citizen insight and share rapidly amongst EU cities. (8) Developing a Smart City Strategy allowing for 'innovation zones' that free up cities or areas from the constraints of regulation in selected domains and for limited duration. (9) Staff exchanges between cities, industries and relevant NGOs to crowd-source the best ideas. (10) Implementing collaborative, integrated smart city planning and operation. (11) A common Smart City indicator framework to help cities self-evaluate, monitor progress, and compare with others and to provide certainty for long-term industry investments in innovation.

Governance and implementation: The Smart Cities and Communities EIP is led by a Steering Group (SG) with 24 key stakeholders that provide strategic direction for the EIP. The SG is chaired by the three European Commissioners for Energy, for Transport and for Digital Agenda. A Sherpa Group assists the SG, following up on decisions and ensuring the smooth running of the EIP.

The EIP has a stakeholder platform. It is holding Smart Cities and Communities EIP Conferences, and 'Invitations for Commitments' are planned.

State of Play: The Smart Cities and Communities EIP was endorsed by Council in March 2013. The first meeting of its Steering Group took place in May 2013, and the Group adopted the Strategic Implementation Plan in October 2013. A stakeholder platform already exists, a Smart Cities and Communities EIP Conference was held in November 2013, and 'Invitations for Commitments' are planned for spring 2014.

European Commission

**Outriders for European Competitiveness - European Innovation Partnerships (EIPs) as a Tool for Systemic Change – Report of the Independent Expert Group**

Luxembourg: Publications Office of the European Union

2014 — 32 pp — 21 x 29,7 cm

ISBN 978-92-79-35392-5

doi:10.2777/6089

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Innovation is at the heart of the Europe 2020 Strategy. Under this strategy and its Innovation Union flagship initiative, European Innovation Partnerships were launched as a new approach to EU research and innovation by being challenge driven, acting across the whole research and innovation chain, and by streamlining, simplifying and better coordinating existing instruments and initiatives.

Since 2011, five EIPs have been launched to accelerate research, development and market deployment of innovations to tackle major societal challenges, pool expertise and resources and boost the competitiveness of EU industry.

The EIPs address 'Active and Healthy Ageing', 'Water', 'Agricultural Productivity and Sustainability', 'Raw Materials', and 'Smart Cities and Communities'.

This report presents the results of the review carried out by an independent expert group during 2013 to assess progress and evaluate the overall performance of the EIPs. It does not assess the results of individual EIPs which will be the subject of specific arrangements under each EIP.

*Studies and reports*

