ROADMAP

Title of the CWP 2010 initiative:	**Research and Innovation Plan**
Lead DGs / contact : DG ENTR.D.1 and RTD	
Expected date of adoption of the initiative:	7 September 2010

A. Context

What is the political context of the initiative? How does this initiative relate to past and possible future initiatives, and to other EU policies?

- The **Europe 2020** strategy for smart, sustainable and inclusive growth announces the presentation of the **Research and Innovation Plan** in particular to implement the **flagship initiative "Innovation Union"**.
- Since the adoption of the "investing more in research and innovation" (COM(2005)488) and the "broad-based innovation strategy" (COM(2006) 502), as part of the Lisbon strategy, the policy framework for EU innovation policy over the past years, innovation has become **geographically more complex**, including larger disparities within the enlarged EU, the **forms of innovation have changed** and there is a growing need to ensure innovation policy tackles **societal challenges beyond business competitiveness.**
- Moreover, the Communication on "Reviewing Community innovation policy in a changing world" and related evaluations of EU innovation policy actions, in particular in the fields of access to finance, innovation in services and the mid-term review of the Lead Market Initiative, showed that despite the accomplishment of most of the announced actions there are still significant barriers to innovation in the EU that **require action at both EU and national level.**
- The **EU funding programme landscape** under the new financial perspective from 2014 on needs to be designed to underpin the Europe 2020 goals, including innovation as a core facilitator for smart, sustainable and inclusive growth.
- Since the 2007 Green Paper on the **European Research Area** and since the **Ljubljana Process** was launched in 2008, research policy development has entered a new phase based on a **strong partnership** between the Commission and the Member States to realise the European Research Area (ERA). A long-term vision for ERA in 2020 was adopted by Council in 2008 with the "fifth freedom" - the free circulation of researchers, scientific knowledge and technology - at its centre and a number of specific ERA initiatives were launched.
- There are a number of other factors that have taken research policy in Europe to a critical juncture: newly emerging trends such as growing internationalisation of research and research-based innovation, the urgent need to tackle a number of global challenges, the financial and economic crisis, the future Europe 2020 Strategy and the new research policy provisions in the Lisbon Treaty which gives the Commission **new competences with regard to developing the European Research Area** and 5th freedom for knowledge. Last but not least, increasing synergy and integration between research and innovation policies is one of the priorities of the new Commission.

What are the main problems identified?

- **Major challenges** to European society — such as climate change, energy supply, resource depletion, and an ageing population — are intensifying amidst attempts to recover from the financial and economic crisis. Europe can overcome them if it acts collectively. To achieve this, instruments to support research and innovation must be refocused, strengthened and better integrated in order to develop new solutions to address these challenges, and must themselves be properly connected to other relevant policies at EU, national and regional levels.
- Since 2000, Europe has made clear progress towards a European Research Area but at the same time it is clear that Europe's overall position in research has not improved, especially regarding R&D intensity, which remains too low. R&D spending on GDP in Europe is below 2%, compared to 2.6% in the US and 3.4% in Japan, mainly as a result of lower levels of private investment. Europe needs to focus on the impact and composition of research spending and to improve the conditions for private sector R&D investments.

- Largely **uncoordinated research policy making** still leads to wasteful duplication of actions, missed opportunities for synergies and untapped possibilities for economies of scale and scope. Research infrastructure requirements, for instance, have been identified by ESFRI (European Strategy Forum on Research Infrastructures) and a legal framework was prepared to set up and exploit new pan-European research infrastructures. But there is still no clear mechanism between the Member States to decide on concrete projects and how to fund them.
- Moreover, the **supply and demand of researchers** in Europe is not balanced. This is partly caused by unattractive conditions in the labour market where the **mobility of researchers** is hampered by the non portability of social security and pension rights and the lack of operability of the European research funding landscape.
- The European **underperformance in scientific excellence** is illustrated by the example that the EU produces 33% of global research papers and has 34% of the papers most often cited by other researchers. But the US is far more influential, producing 29% of papers and earning 42% of citation. The share of European research institutions in most rankings of academic research intensive universities is significantly lower than the US's share, partly caused by outdated management practices, inefficient allocation of the available resources and the absence of modern structures inside universities and other research and technology institutions.
- Although the EU is the world's largest producer of publicly funded scientific knowledge (measured by publications), it is less effective than Japan or the US at **converting new knowledge into socio-economic benefits**.
- Innovation is an increasingly **complex process** which depends not only on the quality and quantity of research inputs, but also on other factors, such as access to markets, skills, entrepreneurial spirit, risk-capital, interactions with other players, such as competing companies, customers and suppliers, research and education institutes, public authorities, etc.. Also the range of actors involved in innovation increased strongly mainly thanks to new possibilities offered by ICT and broadband, so that by now not only engineers and scientists, but citizens, consumers, designers and public sector bodies need to be involved. Innovation policy needs to reflect this. .
- Although the EU-27 has been improving its overall innovation performance over the past years, and new Member States were improving their performance relatively rapidly, the **economic crisis may threaten this progress**, particularly in those countries with more modest innovation performance.
- **There are signs that innovation performance has recently been declining in particular with regard to non-R&D innovation expenditures**, which is of particular importance to the services sectors, an increasingly important driver of economic growth. EU performance is also declining in indicators on firm renewal. This indicates that our economies do not generate enough new firms to replace those that go out of business.
- With regard to the **US and Japan**, the catching up trend of innovation performance from previous years seems to have stopped in Europe in the last years. With the US, the remaining gap is primarily explained by relative weaknesses in international patenting, public-private linkages, the number of researchers and business R&D expenditures. The EU still has a strong lead in research and innovation performance compared to each of the BRIC (**Brazil, Russia, India and China**) countries, in particular towards Brazil and India. However, China is showing a rapid rate of relative improvement, which points to a possible closing of the performance gap with the EU in the near future (10 years under a business-as-usual simple linear extrapolation).
- The **markets in Europe are not sufficiently dynamic** to have a similarly strong pull effect on innovation as in the US, for instance. This depends to a large extent on the general framework conditions for innovation, including the fragmented and expensive IPR systems, administrative burdens related to regulation, a lack of public procurement of innovative solutions, insufficient capital markets, lack of interoperable standards, etc.
- The **policy fragmentation** - at EU and national level, and between EU and national policies – leads to sub-optimal impacts of the different instruments and lack of critical mass. The articulation between the R&D Framework Programmes, the Structural Funds and the Competitiveness and Innovation Programme is still underdeveloped in terms of coordination, synergies, efficiency and simplification. This is increasingly seen as an import deficit in realising coherent policies within the framework of the knowledge triangle.

Ø Taking into account the multitude of policies and stakeholders involved and the high level of ambition, the **governance of research and innovation policies** must be made fit to fully exploit Europe's potential for research excellence, creativity and innovation. This should take also into account that the major scientific challenges of today are increasingly global in nature, which demand appropriate governance arrangements.

Is EU action justified on grounds of subsidiarity?

Ø Legal basis for research and innovation actions:

- Innovation: Art. 173 TFEU, which states that the Union and the Member States shall ensure the conditions necessary for the competitiveness of the Union, including by "fostering better exploitation of the industrial potential of policies of innovation, research and technological development".
- Research: Art 179 TFEU, which states that the Union shall have the objective of strengthening its scientific and technological bases by achieving a European Research Area, where researchers, scientific knowledge and technology circulate freely, in order for the Union "to become more competitive, including in its industry, while promoting all the research activities deemed necessary in other chapters of the Treaties". Article 180 TFEU stipulates that the EU shall also carry out a number of activities, complementing the activities carried out in the Member States, while article 181 TFEU states that the Union and the Member States shall coordinate their research and technological development activities so as to ensure that national policies and Union policy are mutually consistent.
- Both: Art 6 TFEU allows the EU to coordinate actions of the Member States in (inter alia) the field of industry (open method of coordination).

1) the need for EU action

There is need for EU level action to complement the Member States' innovation actions that aim tackling the above-mentioned problems for research and innovation, because many of those problems are related to or aggravated by the **fragmentation between the national systems** and cannot be solved in an equitable way (that does not disadvantage smaller or less innovative countries) with purely national competences and budgets, for instance:

Ø The **creative and innovative potential that the EU** has thanks to its diversity in talents, research capacities, education systems, regional specialisations, etc. does not fully materialise as it remains hampered by a fragmentation of innovation support systems, remaining obstacles on the internal market in particular in the service sector, education / career development and labour market systems, systems of protection of intellectual property, venture capital markets and clusters in the different EU Member States.

Ø Compared to the US and Japan, innovation and research investments in individual EU countries risk **not to reach the necessary critical mass** for world-class research and innovation.

Ø The strong local / regional / national orientation of innovation support that does not sufficiently encourage cooperation with innovation actors outside the territory of the individual innovation support programme / initiative does not correspond to the **new and open innovation processes** with global competition and global knowledge flows. Also regarding S&T cooperation with third countries, individual Member States still follow mainly national priorities, with little joint activity or research actions.

Ø There is **ample know-how** at national, regional and European level on how to set-up and implement innovation support measures and policies, however this knowledge is not sufficiently taken advantage of by innovation facilitators and policy makers in other Member States / regions of the EU.

Ø The **impact of national research and innovation programmes can be suboptimal** because of little competition between projects due to the geographic limitations, e.g. despite being the best within the geographical boundary, a project can be sub-standard compared to a wider area or just repeat actions that were already undertaken elsewhere.

Ø The internal market's potential to serve as a **lead market for innovations is not fully exploited** due to persisting barriers or because the fragmented support system does not sufficiently aim for internationalisation of innovative business ideas.

Ø Also the **public procurement** potential for pulling demand for innovation can be sub-optimal as the investment scales are too limited due to compartmentalisation between the Member States.

2) the added value of EU action

The added value of EU level action for research and innovation is mainly that it allows overcoming the fragmentations, including by creating platforms for partnerships between different countries, regions and actors, e.g. in order to:

Ø **Build critical mass** by pooling public and private funding, innovation support and possibly demand for new products and services across the EU. Expected benefits: better access to funding, skills and knowledge, economies of scale, higher impacts of investments (on societal challenges, technological leadership, etc.), stronger lead market effects, stronger position in the global competition, faster and more effective solutions to societal problems

Ø Increase the **excellence and overall quality of research and innovation projects** funded by public money through wider competition between research and innovation projects and **better focus** of national and regional support on specific strengths and opportunities. Expected benefits: more effective use of tax payers' money by focusing support on quality projects instead of funding sub-standard or non-innovative activities

Ø The EU level is better for **independent benchmarking and policy comparisons** and provides Member States with a valuable **evidence base** for their policy-making and knowledge source for **transfer of good practices**. Expected benefits: better national and regional innovation policies and support systems

Ø Provide innovative businesses with a **starting block towards globalisation** by opening their target and source markets from a national to a Europe wide view. Expected benefits: faster internationalisation, stronger competitive position in the global market, jobs or other economic benefits (e.g. returns on licensing) materialise in Europe

Ø Provide **leadership for a strategic approach** to innovation as an open, globalised process. Expected benefits: more impact of policies and public investments by concentration on priority issues

B. Objectives of EU initiative

What are the main policy objectives?

a. General objectives:

Ø Foster smart growth by implementing the Europe 2020 flagship "Innovation Union" and facilitate sustainable and inclusive growth through innovation in the other Europe 2020 flagship actions.

b. Specific objectives

The aim of the Research and Innovation Plan is to implement the innovation related elements of the Europe 2020 strategy, in particular the flagship action "Innovation Union", i.e. to re-focus R&D and innovation policy on the challenges facing our society, such as climate change, energy and resource efficiency, health and demographic change. Every link should be strengthened in the innovation chain, from 'blue sky' research to commercialisation.

At EU level, the Commission will work:

Ø To complete the European Research Area, to develop a strategic research agenda focused on challenges such as energy security, transport, climate change and resource efficiency, health and ageing, environmentally-friendly production methods and land management, and to enhance joint programming with Member States and regions;

Ø To improve framework conditions for business to innovate (i.e. create the single EU Patent and a specialised Patent Court, modernise the framework of copyright and trademarks, improve access of SMEs to Intellectual Property Protection, speed up setting of interoperable standards; improve access to capital and make full use of demand side policies, e.g. through public procurement and smart regulation);

- Ø To launch 'European Innovation Partnerships' between the EU and national levels to speed up the development and deployment of the technologies needed to meet the challenges identified. The first may include for example: 'building the bio-economy by 2020', 'the key enabling technologies to shape Europe's industrial future' and 'technologies to allow older people to live independently and be active in society'; Further reflection is needed on the concrete shape of these partnerships.
- Ø To strengthen and further develop the role of EU instruments to support innovation (e.g. structural funds, rural development funds, R&D framework programme, CIP, SET plan), including through closer work with the EIB (including innovative financial instruments) and streamline administrative procedures to facilitate access to funding, particularly for SMEs and to bring in innovative incentive mechanisms linked to the carbon market, namely for fast-movers;
- Ø To promote knowledge partnerships and strengthen links between education, business, research and innovation, including through the EIT, and to promote entrepreneurship by supporting Young Innovative Companies.

At national level, Member States will need:

- Ø To reform national (and regional) R&D and innovation systems to foster excellence and smart specialisation, reinforce cooperation between universities, research and business, implement joint programming and enhance cross-border co-operation in areas with EU value added and adjust national funding procedures accordingly, to ensure the diffusion of technology across the EU territory;
- Ø To ensure a sufficient supply of science, maths and engineering graduates and to focus school curricula on creativity, innovation, and entrepreneurship;
- Ø To prioritise knowledge expenditure, including by using tax incentives and other financial instruments to promote greater private R&D investments.

To ensure implementation an appropriate governance and monitoring system will be proposed in support of the Europe 2020 governance.

Does the objective imply developing EU policy in new areas or in areas of strategic importance?

No

What policy options were explored?

1. Business as usual (i.e. no new strategy on innovation

2. A new innovation plan (leaving aside core research and ERA issues)

3. An integrated Research and Innovation Plan, as decided by the Europe 2020 Communication

What legislative or 'soft law' instruments could be considered?

The Research and Innovation Plan will not contain legislative proposals.

Would any legislative initiatives go beyond routine up-date of existing legislation?

NA

Does the action proposed in the options cut across several policy areas or impact on action taken/planned by other Commission departments?

- Ø ENTR and RTD are working jointly
- Ø In addition, INFSO, EAC, REGIO, ENV, ENER, MOVE, MARKT, COMP, JRC, EMPL, CLIM and possibly other DGs will be involved.

Explain how the options respect the proportionality principle

The problem of lagging research investments, ineffective and inefficient governance of research and innovation governance and a lagging innovation performance has a major impact on the competitiveness, labour market and sustainability of the EU economy and its position in the global market. Therefore, research and innovation are at the heart of the Europe 2020 strategy. The R&I Plan will spell out in more detail the EU level actions in view of the Europe 2020 innovation activities. (The actions related to the national level upon which the Member States will need to act according to the Europe 2020 strategy will not be further specified, as they are under the MS' competences).

C. Expected impacts

What are the significant impacts likely to result from the Research and Innovation Plan?

Foster smart, sustainable and inclusive growth by implementing the Europe 2020 flagship "Innovation Union" and innovation actions in the other flagship actions. The Plan aims to address the main bottle-necks for innovation both on the supply and demand side and in particular in the fields where there is a strong EU competence (see sections on identified problems and need for EU action). An accompanying SEC document will provide more details on the current bottlenecks and indicators for them.

Could the plan have impacts on the EU-Budget (above 5 Mio €)?

- Ø Some measures may have such budgetary impacts, but these are already covered by the ex-ante evaluations of the current EU funding programmes and the validation and monitoring by the relevant programme committees.
- Ø Envisaged new actions will be subject to separate ex-ante evaluations as part of the procedure for the proposal of the new EU funding programmes for the period starting in 2014.

Could the options have significant impacts on simplification/administrative burden or on relations with third countries?

- Ø Positive impacts in terms of simplification of application procedures and management of EU funding for innovation and RTD are part of the objectives of the Plan.

Who is affected?

- Ø Research bodies (private and public), including universities
- Ø Enterprises, including SMEs
- Ø Education and training institutions
- Ø National and regional public authorities, including development research and innovation agencies and public procurers
- Ø Innovation support providers (private and public)
- Ø Consumers, citizens and society at large

D. Evaluations of previous policies and accomplished impact assessment work

Commission internal preparatory work:

- Ø The innovation related actions were prepared and discussed in close cooperation with a range of other services, both in bilateral meetings and in the meetings of the inter-service group on innovation. The group includes besides different ENTR units, the following services: BEPA, COMP, DIGIT, EAC, ECFIN, EMPL, ESTAT, ENV, INFSO, JLS, MARKT, REGIO, RTD, SG, TREN, AGRI, JRC-SEVILLA, SANCO, TRADE and MARE. The group met on: 24 March, 26 May, 9 July and 23 September 2009, and on 1 February 2010.
- Ø The research related actions have not been prepared internally yet. As inter-service steering group the ERA Interservice Group (35 in all: 1 contact per ERA Directorate and 1 per DG) will be used, which has been set up in 2008. Most Commission DGs are represented.

Consultation of stakeholders & experts

The initiatives presented as part of the Innovation Union actions build on public and expert consultations in 2009 and on reviews of previous EU innovation policy activities, evaluations and other studies, in particular:

External expertise:

- **Member States'** representatives and relevant stakeholder groups were consulted as part of their regular meetings, in particular the Enterprise Policy Group (EPG) and its sub-group on innovation (March, September and November 2009), the SBA follow-up group and the Committee for Science and Technology CREST. At ministerial level, several recent debates in the Competitiveness Council and resulting Council Conclusions are relevant for this Research and Innovation Plan.

- The activities to prepare for the 2010 **OECD** innovation strategy were taken into account for the development of the innovation plan actions, as far as relevant.

- An **impact assessment preparatory study** on an innovation plan carried out by an external contractor. The final study report was delivered in January 2010. The study was prepared and accompanied by an Impact Assessment Steering Group with the following DGs being involved: ENTR, RTD, SG, INFSO, JRC, SANCO, ENV, AGRI, REGIO, MARKT, ECFIN, EMPL, DIGIT and TREN. The group met on 22 July, 13 October, 10 November 2009 and 11 January 2010. In addition electronic consultations on the IA roadmap, terms of reference for the IA study contract and drafts of the IA study took place.

- A **panel of five independent business experts** (March – September 2009): the final report[1] recommendations were to base EU action around compelling social challenges, to finance venture and social innovation funds, to incentivise large scale community level innovations, to transform the public sector and to unlock the potential of new infrastructure and new types of partnerships.On research policy expert views and recommendations on the development of the ERA policy are sought through **three Expert Groups** dealing with *The role of Community Research Policy in the Knowledge-based Economy* (chaired by Prof Luc Soete), *A knowledge intensive future for Europe* (chaired by Dr. Bjorn von Sydow), *ERA indicators and monitoring* (chaired by Prof Remi Barré), each of which has produced its own report and which are published as a series. The preliminary outcomes of these three Expert Groups have been presented and discussed with various stakeholders at a conference "*Working together to strengthen research in Europe*" that took place in Brussels, on 21-23 October 2009.

- **Specific workshops and seminars** with public and private sector innovation stakeholders and experts were organised, in particular on Open Innovation in a Globalised World (February 2009)[2], on more effective innovation support in Europe: how to better streamline and use synergies between EU instruments supporting innovation (March 2009)[3], on Future European Innovation Policy with academic experts in June 2009[4], on Emerging Economies (BRIC Countries) and Innovation, July 2009[5], on public sector innovation to address societal challenges (October 2009) and on innovation policy governance (November 2009)[6].

- **Conferences**, in particular Swedish and Spanish Council Presidency events, e.g. the seminar on Research funding and Structural Funds (June 2009), Swedish presidency ERA conference “New Worlds-New Solutions - Research and Innovation as basis for developing Europe in a global context” (July 2009), seminar on “The Future Governance of ERA – Coordinating Research and Innovation Policies for Sustainable Growth" (July 2009), Conference on the knowledge triangle (August 2009), conference on ETPs (September 2009) and the conferences in the framework of the European Year of Creativity and Innovation provided input.

1 http://ec.europa.eu/enterprise/policies/innovation/future-policy/business-panel/index_en.htm
2 http://www.proinno-europe.eu/index.cfm?fuseaction=workshops.ws_overview&id=26
3 http://www.proinno-europe.eu/admin/uploaded_documents/ILP-Annual_Report_2008-2009.pdf
4 http://www.proinno-europe.eu/index.cfm?fuseaction=workshops.ws_overview&id=30
5 http://www.proinno-europe.eu/index.cfm?fuseaction=workshops.ws_overview&id=29
6 http://www.proinno-europe.eu/index.cfm?fuseaction=workshops.ws_overview&id=31

Public consultations, according to Commission standards:

- on **European research policy,** With the adoption of the Green Paper "The European Research Area: New Perspectives"[7], the European Commission opened in 2007 a broad debate to find out what needs to be done to create a unified and attractive European Research Area, fulfilling the needs and expectations of citizens and the scientific and business communities. The European Commission invited citizens and other stakeholders to contribute to the development of the European Research Area (ERA) by participating in an online consultation. The consultation took the form of a questionnaire, the contents of which reflect and expand upon the questions and issues raised in the Green Paper The public consultation lasted from 1 May 2007 until 31 August 2007. The results of the online consultation are still a solid evidence base to support proposals for the future development of ERA. More recently, the first large stakeholder conference on the European Research Area (ERA) since the 2007 ERA Green Paper was organised (*Working together to strengthen research in Europe*", Brussels, 21-23 October 2009). It contributed to the development of key ERA policy initiatives dealing with researchers, joint programming, knowledge transfer, infrastructures and international cooperation. It also addressed issues such as open access, S & T specialisation, funding of research institutions, progress indicators, etc. as well consider how to strengthen research and research policies in the medium to long-term[8].

- on **Community innovation policy**[9], which showed broad agreement (90% of respondents) with the Commission's assessment of policies in support of innovation in recent years as set out in the Communication "Reviewing Community Innovation Policy in a Changing World"[10]. The responses also showed a need for simplification and streamlining of EU funding programmes to make them more user-friendly and to ensure better cooperation, coordination, synchronisation and complementarities among regional, national and European innovation programmes. The consultation also showed need for stronger focus on SMEs given the major role of SMEs in the EU economy, in particular to facilitate their participation in funding programmes, giving a more pro-active role to EIB in support mechanisms, improving European venture capital markets, stimulating new and more effective innovation processes, facilitating access to innovation support schemes, and enhancing SME's participation in public procurement. Research, innovation and education policies should be better aligned around the knowledge triangle to improve synergies and better nurture the EU's knowledge base. Moreover, there is a strong support to orientate innovation policy towards addressing major societal challenges such as climate change and ageing. Education and training are also explicitly mentioned as fundamental drivers of innovation and as key elements of the knowledge economy.

- on **effectiveness of public support for innovation in the EU**: the results from this consultation suggest that there is a gap between what enterprises would expect to receive as innovation support and what they actually get.[11]

- on **design and user-driven innovation**: 96% consider that initiatives in support of design should be an integral part of innovation policy in general, and that initiatives in support of design should be taken at EU level in addition to Member State and regional level.[12]

- on the **simplification of the Research Framework Programme**, which indicated the need for simplification and showed possible avenues to achieve this.[13]

---

[7] http://ec.europa.eu/research/era/consultation-era_en.html#greenpaper

[8] http://ec.europa.eu/research/conferences/2009/era2009/documentation/conclusions/conclusions_compilation.pdf

[9] open from 18 September to 16 November 2009, report on results: http://ec.europa.eu/enterprise/policies/innovation/future-policy/consultation/index_en.htm

[10] COM(2009)442 final

[11] Making public support for innovation in the EU more effective: Lessons learned from a public consultation for action at Community level (SEC(2009)1197 final)

[12] open from 7 April to 29 June 2009, based on Commission staff working document "Design as a driver of user-centred innovation" (SEC(2009)501); see results: http://ec.europa.eu/enterprise/policies/innovation/policy/design-creativity/index_en.htm

Policy documents, impact assessments and evaluations of programmes and policy initiatives and other analysis

- COM(2009) 442, **Reviewing Community innovation policy in a changing world**, evaluated the outcome of the broad-based innovation strategy for the EU (COM(2006) 502), which has formed the basis of EU innovation policy for the past years. The 2009 COM was accompanied by more specific evaluations of past activities, namely:
  - SEC(2009) 1194, Assessing Community innovation policies in the period 2005-2009
  - SEC(2009)1195, Challenges for EU support to innovation in services – Fostering new markets and jobs through innovation
  - SEC(2009)1196, Financing Innovation and SMEs
  - SEC(2009)1197, Making public support for innovation in the EU more effective: Lessons learned from a public consultation for action at Community level
  - SEC(2009)1198, Lead Market Initiative for Europe - Mid-term progress report
- **Impact assessment for the Small Business Act**[14] which put emphasis on the need to foster research and innovation in SMEs and for the "strategy for ICT R&D and innovation in Europe: raising the game" that will ensure a stronger link between the needs and wishes of people and businesses, on the one hand, and the technological capabilities and goals of producers, on the other, channelling more investment into the digital technology sectors and increasing cooperation between industry, academia and public authorities.[15]
- **Ex-post and interim evaluations of EU funding programmes** (in particular FP6, CIP) that showed the impacts and the shortcomings of the current EU programmes and their intervention mechanisms. For the CIP for instance, the recommendations of the interim evaluation included the recommendation to introduce a strategic framework for CIP setting out programme priorities for the remaining years, to maintain the focus on administrative simplification with rules and procedures tailored to the specific characteristics of the target groups, to improve coordination between the DGs involved in implementation of CIP and DG REGIO to strengthen linkages between the programmes and to strengthen the role of the EEN Network in influencing MS policy and Structural Funds deployment, for instance through brokerage events where the public bodies which will invest Structural Funds in infrastructure receive information on the most innovative solutions identified / developed under CIP. With regard to the future programmes, the report mainly calls for stronger governance structures, institutional mechanisms and a more integrated approach, for instance through an inter-DG steering group. It also suggests a more stringent application of the subsidiarity principle and more emphasis on the dissemination of results and lessons learnt through mutual and peer learning methods.
- **Existing EU analytical tools**, studies and surveys, in particular the European Innovation Scoreboard, the Regional Innovation Scoreboard, the Innovation TrendChart, the Innobarometer surveys, the European Cluster Observatory, the Sectoral Innovation Watch[16] as well as the ERAWATCH, the Key figures on science, technology and innovation and the EU Industrial R&D Investment Scoreboard.
- **Communication on Key enabling technologies**[17]: Key Enabling Technologies such as nanotechnology, micro- and nanoelectronics (including semiconductors, advanced materials,

---

13 http://ec.europa.eu/research/consultations/fp-simplification/consultation_en.htm

14 SEC(2008) 2101

15 SEC(2009)289

16 http://ec.europa.eu/enterprise/policies/innovation/facts-figures-analysis/index_en.htm

17 http://ec.europa.eu/enterprise/sectors/ict/competitiveness/index_en.htm

biotechnology and photonics) are at the forefront of managing the shift to a low carbon, knowledge-based economy. They are the main drivers for innovative goods and services needed for addressing major societal challenges.

E. Planning of further impact assessment work

- Ø The Europe 2020 strategy embodies a **political choice by the Commission** to re-focus R&D and innovation policy on addressing challenges such as sustainable economic recovery, climate change, energy and resource efficiency, health, and demographic change. It **presented the flagship actions** of the EU in the coming decade. The Research and Innovation Plan will present a policy framework in which options for doing so can be developed and explored. No impact assessment is foreseen for this initiative. For implementing particular policy measures, the plan will be **followed up by specific initiatives**, in the form of Communications or legislative proposals and accompanied by the relevant impact assessments.
- Ø As described above, DGs ENTR and RTD **have carried out extensive public consultations, evaluations and studies** and held multilateral and bilateral consultations, conferences, workshops and seminars with national governments and other stakeholders at EU, national and regional levels, and have been monitoring the research and innovation system for a decade. Findings will be summarised in Staff Working Documents that will accompany the Research and Innovation Plan. They will present an analysis of the strengths and weaknesses of the European research and innovation system, a summary of consultation findings and present indicators to track innovation in the EU, as decided in the Europe 2020 strategy.