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COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

State of the Innovation Union 2012 - Accelerating change

(Text with EEA relevance)

{SWD(2013) 75 final}

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1. INTRODUCTION

The Europe 2020 strategy and its 'flagship' initiatives focus on investments in education, research and innovation as the key to achieving smart, sustainable and inclusive growth. In this context, the Innovation Union flagship initiative, together with the Digital Agenda, Industrial Policy and Resource Efficient Europe flagships, and the Single Market Act, aim to create the best conditions for Europe's researchers and entrepreneurs to innovate.

The Innovation Union flagship in particular is about creating a vibrant, innovation-based economy fuelled by ideas and creativity, capable of linking into global value chains, seizing opportunities, capturing new markets and creating high-quality jobs. Overall, progress towards setting up the policy framework for an Innovation Union has been very positive: more than 80% of the initiatives are on track. The call by the Heads of State and Government to deepen the European Research Area is being turned into concrete actions. The Commission's 'Horizon 2020' proposal for a future European research and innovation programme marks a clear break with the past by covering the entire value creation chain in one single programme. The principle of 'smart consolidation' — i.e. protecting or, if possible, increasing growth-friendly expenditures, such as R&D — is now widely accepted and is embedded in the European Semester. The business environment in Europe will become more innovation-friendly thanks to Single Market measures such as the unitary patent, faster standard setting, modernised EU procurement rules and a European passport for venture capital funds. European Innovation Partnerships are pooling resources and concentrating demand and supply-side measures on key societal challenges. While these measures still need to be implemented to start bringing results, they represent a fundamental shift in the right direction.

The global position of Europe is still relatively strong. The EU is one of the world's best-performers when it comes to producing high-quality science and innovative products. It still captures the largest and a stable share (28%) of income generated in global manufacturing value chains while the US and Japan saw their shares shrinking. Since 2008, the EU has improved its innovation performance and it closed almost half of the innovation gap with the US and Japan[1]. The EU is also keeping its strong innovation lead over Brazil, India, Russia, and China, although the latter is most markedly catching up. In addition, South Korea has almost tripled its innovation lead over the EU since 2008 and joined the US as an innovation leader.

Furthermore, while public R&D spending in the EU grew throughout the crisis as governments strived to keep up their R&D investments and thus incentivise businesses to do likewise, recent data point to a potential reversal of this trend. In 2011, for the very first time since the beginning of the crisis, the total public R&D budget of the 27 EU Member States decreased slightly.

[1] Innovation Union Scoreboard 2013

The on-going economic crisis has also exposed structural weaknesses in Europe's innovation performance. The 2013 Innovation Union Scoreboard shows that the process of convergence in the innovation performance of Member States has come to a halt. As convergence was the dominant pattern since the introduction of the Scoreboard in 2001, this signals a clear risk of an increasing innovation divide[2]. As the crisis gets longer and deeper, growth disparities between some European regions are increasing, there is an even stronger need to implement the Innovation Union swiftly and deepen it in the areas crucial to innovation, such as higher education, innovation-based entrepreneurship and demand-side measures. Momentum in fields like social innovation will also need to be maintained.

Europe therefore needs fresh dynamism in its economy. Existing, traditional industries in which Europe excels need to develop new applications and new business models in order to grow and maintain their competitive advantage. Furthermore, in dynamic fields such as ICT-based businesses and in emerging sectors Europe needs more high-growth firms. This calls for an innovation-driven structural change, but Europe is at present missing out on the more radical innovations which drive and lead such structural change. Consequently, what Europe needs most in the next decade is to attract top talent and reward innovative entrepreneurs, to offer them much better opportunities to start and grow new businesses

Against this background, this communication:

- summarises progress at Member State and European levels towards achieving an Innovation Union in 2012, and
- concludes by outlining areas where the Innovation Union can be deepened, including by drawing on the Innovation Union stress test carried out by the European Research and Innovation Area Board[3].

2. THE STATE OF NATIONAL RESEARCH AND INNOVATION SYSTEMS

2.1. Investing for the future

Europe needs more and better investment in research and innovation to support the competitiveness of its industry and to upgrade its research and innovation system. Public and private investment in R&D is crucial to enable Europe to take advantage of any rebound in the economy. The recovery in 2010 was substantially stronger in countries which had previously invested the most in R&D and innovation (e.g. Germany, Finland and Sweden)[4].

Public and private investment in R&D was growing up to the economic crisis. Following the outbreak of the crisis, a majority of Member States maintained or increased their R&D investments, despite fiscal constraints, and overall R&D spending over GDP increased from 1.85% in 2007 to 2.03% in 2011. However, in eleven Member States[5] it has grown less than GDP since the beginning of the crisis (Figure 1).

Figure 1: Protecting public R&D spending

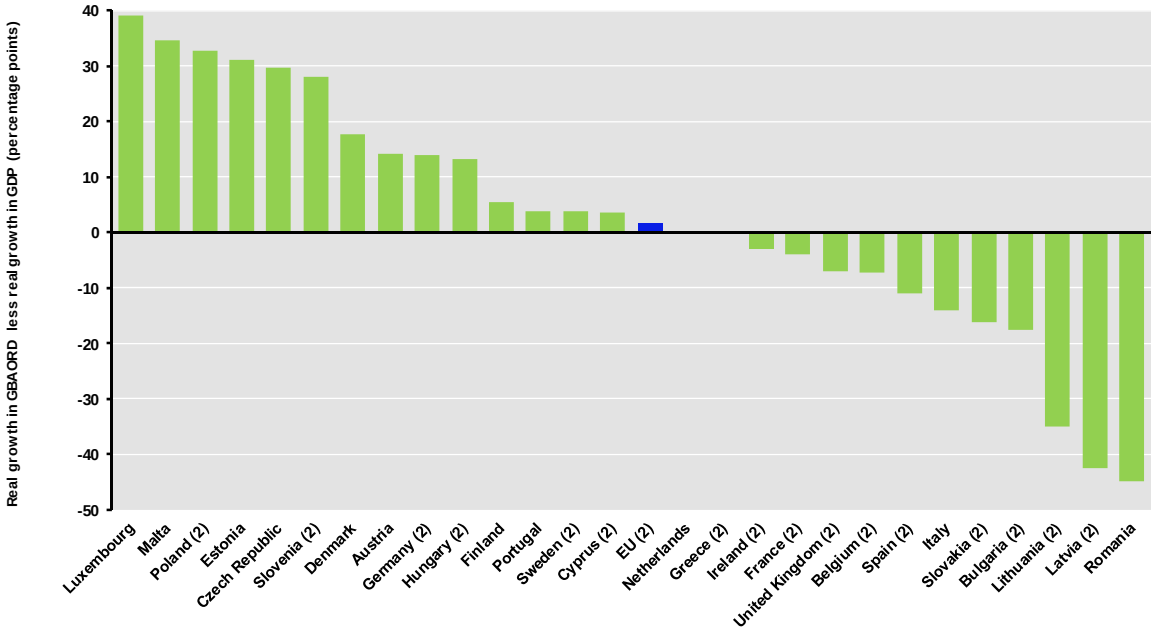
2 Idem.

3 1st Position paper of the European Research Area and Innovation Board (ERIAB): "Stress-test" of the Innovation Union; November 2012, forthcoming at http://ec.europa.eu/research/era/partnership/expert/eriab_en.htm

4 State of the Innovation Union 2011, COM (2011) 849

5 For some of these Member States, the difference can be partly compensated by foregone tax revenues due to the use of fiscal incentives for R&D investment.

Government investment in the future
The difference in percentage points between real growth (1) in Government budgets for R&D (GBAORD(2)) and real growth (1) in GDP, 2008-2012 (3)



Source: DG Research and Innovation - Economic Analysis Unit
Data: Eurostat
Notes: (1) Real growth was calculated from values in PPS€ at constant 2000 prices and exchange rates.
(2) Foregone tax revenues resulting from R&D tax incentives are not included.
(3) EL: 2007-2008; PL: 2009-2011; BE, BG, DE, IE, ES, FR, CY, LV, LT, HU, SI, SK, SE, UK, EU: 2008-2011;
(4) Data for 2012 are provisional.

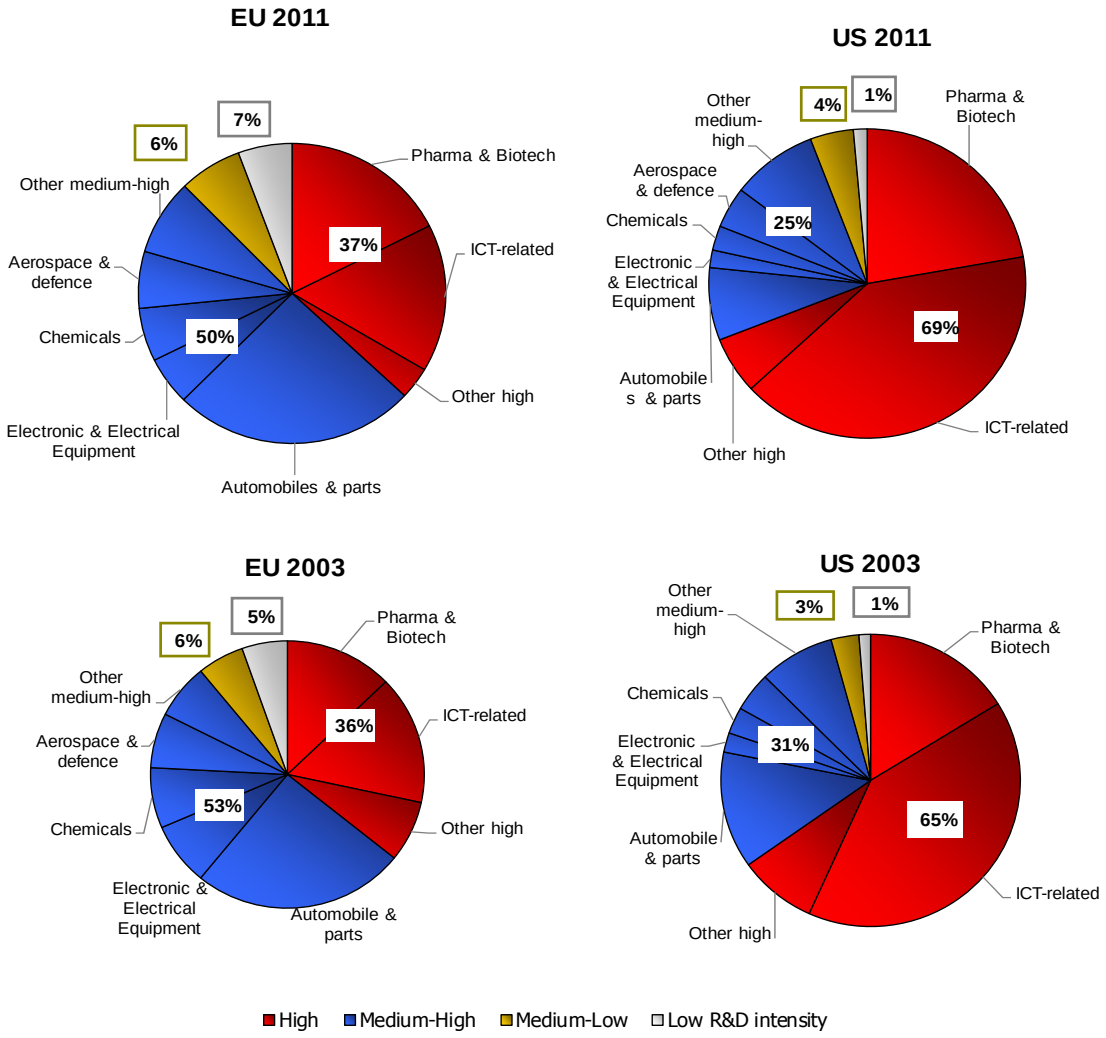
Overall, businesses in the EU also increased their expenditure on R&D as a share of GDP from 2007 (1.18 %) to 2011 (1.27 %). This is in part due to sustained R&D investment by European firms which expect their worldwide investments in R&D to grow further by an average of 4 % annually over the period 2012 – 2014[6]. Europe is also an attractive place for foreign firms to invest in R&D and they have done so heavily. US firms account for two-thirds of internationally mobile R&D investments and their annual R&D spending in Europe is 10 times greater than the amount they invest in China and India combined[7].

However, there are large differences between Member States and between industrial sectors and actors. Some countries are seeing a fall in R&D investment in the business sector, in particular by SMEs. This is mostly due to low business confidence in the future prospects of the European economy, despite cash reserves piling up in many companies' balance-sheets[8]. From a sectoral perspective, many countries have seen an increase in R&D intensity in the more traditional medium-tech industries (e.g. metals, rubber and plastics, food products) as well as in growing markets driven by societal challenges such as waste treatment, clean energy and water. Overall, the EU remains specialised in medium-high R&D-intensity sectors which account for half of European companies' R&D investment. By contrast, more than two-thirds of US companies' R&D investment is clustered in high R&D-intensity sectors (such as health and ICT)[9].

6 The 2012 EU Survey on R&D Investment Business Trends , European Commission, 2012
7 'Internationalisation of business investments in R&D and analysis of their economic impact', European Commission, 2012, http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=other-studies.
8 'Dead money', The Economist, 3 November 2012
9 The 2012 EU Industrial R&D investment scoreboard, European Commission, 2012, http://iri.jrc.ec.europa.eu/research/scoreboard_2012.htm

Figure 2: R&D investment by US and EU companies by sector group

Source: 2012 EU Industrial R&D investment scoreboard



Furthermore, in Member States where the business sector is knowledge-intensive and internationally competitive, the governments' strategy to protect R&D spending helped maintain the level of private investment[10]. However, this proved more difficult for countries suffering from sovereign debt crisis. In these countries, liquidity constraints combined with an insufficiently innovation–friendly environment and a lower level of business demand for knowledge undermined the effectiveness of the counter-cyclic efforts to stimulate business investment. This shows that investing in knowledge must go hand in hand with reforms in the research and innovation system including innovation-friendly framework conditions for innovative businesses.

While most Member States have applied a policy of smart fiscal consolidation to their public investments in R&D and innovation, there is a risk now that the exceptional length and harshness of the current crisis is beginning to undermine the policy consensus that such investments need to be protected. In 2011, public R&D budgets[11] decreased for the first time

10 When asked about effects of policies and external factors on their innovation activities, top EU companies highlight the strong positive effects of fiscal incentives, national grants, EU financial support and public-private partnership both at national and EU level (source: see footnote 4).

11 Government budget appropriations or outlays for R&D (GBAORD).

since the beginning of the crisis, though this is being partly compensated by an increase in foregone tax revenues due to fiscal incentives[12]. Comparing Member States' public budgets for R&D 2011 and 2012, the number of countries which maintained or increased their public spending is also shrinking. This presents a clear threat of hollowing out Europe's innovation performance and endangering future competitiveness.

When looking at the entire knowledge triangle (education, research and innovation), we see a similar pattern. In 2009, all but two Member States maintained or increased their public spending on education[13]. Since then, the continued pressure on public finances has led many governments to cut investments in education[14].

2.2. Reforming to raise efficiency and effectiveness

At times of fiscal constraint, it is even more important to reform, to get the most out of the money invested. There are still considerable differences between Member States in terms of their research and innovation efficiency. For a given amount of public investment, some countries achieve more excellence than others in science and technology (Figure 3).

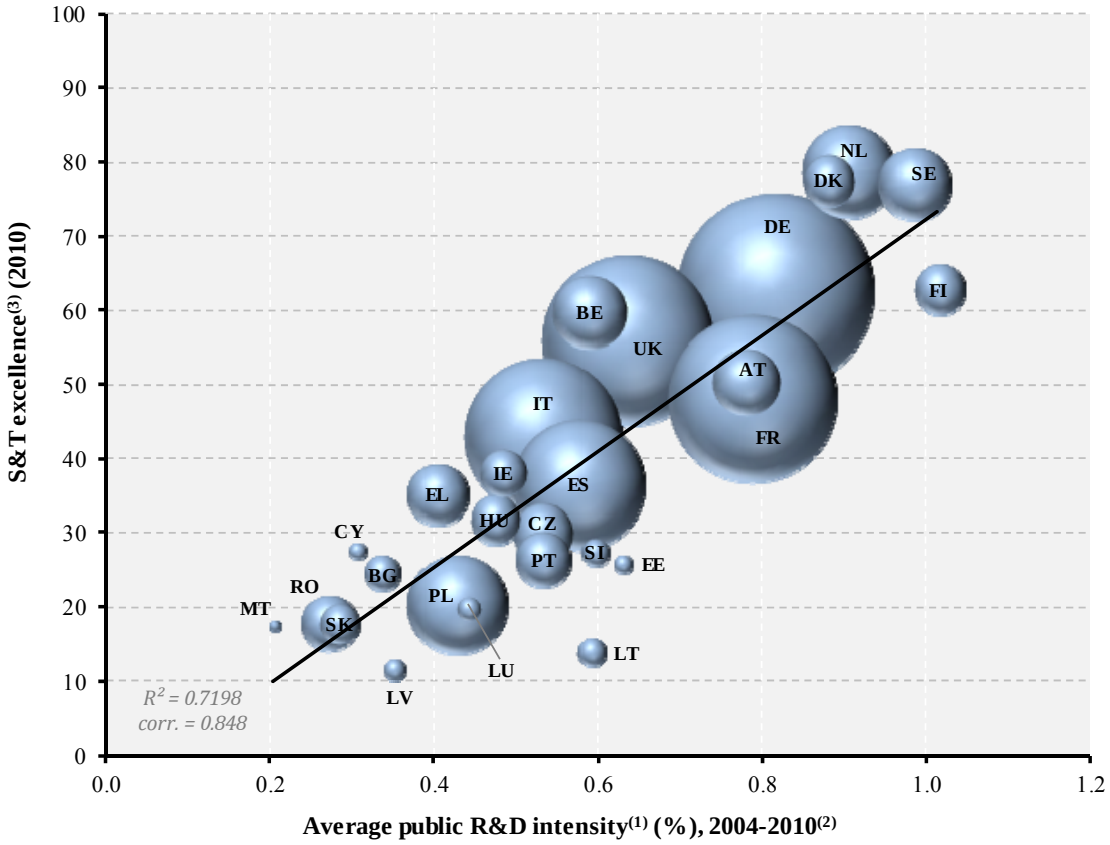
Clearly therefore, although each national context calls for specific solutions, a full deployment of the European Research Area would trigger substantial efficiency gains in knowledge and technology capacities. The most successful Member States have managed to increase the scientific quality and economic impact of their science base, while others still face efficiency problems or make little impact with their public investments.

12 Science, Technology and Industry Scoreboard 2011, OECD .

13 European Commission Staff Working Document ' Education and Training Monitor 2012'

14 European Commission COM(2012) 669/3 'Rethinking Education: Investing in skills for better socio-economic outcomes'

Figure 3. Investment and research excellence[15]



Source: DG Research and Innovation - Economic Analysis unit

Data: Eurostat

Notes: (1) Average public R&D intensity (public Gross Domestic Expenditure on R&D as % of GDP).

(2) EL: 2004-2007; SE, IT: 2005-2010; DK: 2007-2010, LU: 2009-2010.

(3) Composite indicator on Research excellence (feasibility study of JRC)

Many EU Member States have launched **ambitious policy reforms** in order to make their research and innovation system more efficient, in line with the objectives of the European Research Area[16]. Several of these reforms were initiated before the crisis, but they have since been extended or deepened. Also, the economic crisis has led to a stronger integration of research and innovation in the broader national industrial and macro-economic policies. New innovation bills and national strategies for research and innovation are being drawn up or implemented in several countries, and many governments are linking innovation to broader reform packages on entrepreneurship, the business environment and the labour market, with a strong focus on better commercialisation of research results.

Member States and Associated Countries have reported a range of National Action Plans, programmes, strategies and legislative acts aimed at ensuring that they train enough researchers to meet their national R&D targets[17]. In many cases, it is too early to measure the

15 The linear interpolation indicates the correlation between the two variables in Figures 3 and 5. The size of the bubble reflects the size of the economy (as a share of EU GDP).

16 'Country profiles : description of the performance and key features of Member States' research and innovation systems' , Staff Working Document accompanying the communication

17 ´Researchers' Report 2012, commissioned by DG Research and Innovation, http://ec.europa.eu/euraxess/pdf/research_policies/121003_The_Researchers_Report_2012_FINAL_REPORT.pdf

direct or indirect impact of these measures. However, the tendency at present is to have issue-based policies and action plans, which do not necessarily form a coherent whole. A key step will be to move towards a single integrated strategy addressing **human resources** issues in the research profession.

Most Member States have also designed or implemented legislative changes increasing the **autonomy of universities**. Some have introduced new employment conditions for public sector researchers that allow them to work with the private sector and commercialise their scientific findings and technological inventions.

Measures are being put in place to support the **internationalisation of public and private research actors**, and in particular their integration in European-wide networks of knowledge flows. Member States are increasingly considering the benefits of integrating their national research and innovation systems into global and European systems in order to tap into global value chains and address innovation demand from new international markets. To this end, programmes promoting R&D have to open up to international partners and cross-border collaboration, which will strengthen complementarity of value chains across countries. Public-private collaborations and the internationalisation of firms are at the core of the **strong cluster policies** that have been developed in many Member States in recent years.

Cross-border mobility is still relatively low. Researchers who do move tend to do so from the public sector to the private sector, but the flow in the other direction is marginal, as is any flow back and forth. Despite progress in student mobility, too few universities and public research organisations recruit foreign professors or recognise the importance of gaining international experience for their staff[18]. There are scarce promotion prospects for innovative researchers collaborating with the business sector and effective knowledge transfer is only visible in the most dynamic Member States. Funding under most national and regional research programmes is still largely closed to participants based in another Member State, and Europe thus misses opportunities for excellence and cross-border knowledge flows.

Getting the most out of public research funding requires a **sound level of competition.** This can be achieved through project funding (open calls for proposals) and performance-based institutional funding linked to scientific excellence, internationalisation, and collaboration with business. More Member States, however, need to embrace a move towards more competitive funding: so far, only a handful of countries have set in place an effective funding allocation mechanism providing incentives for excellence. Too often, institutional funding is allocated to universities and public research organisations without any performance criteria or real evidence-based monitoring. When allocation is de-coupled from performance, individual researchers and institutions have few incentives to engage in European-wide networking or competition, to strive for excellence or to cooperate with the private sector.

Member States are increasingly focusing on creating an **innovation-friendly business environment**. The most widely-used measures are fiscal incentives for R&D investments or innovation vouchers for companies wishing to buy services from R&D, technology and innovation services providers. Some Member States are also reducing tax rates on profits from patents and other types of intellectual property. There is strong support for providing easier access to risk capital for companies at their seed, start-up and early-growth stages, and for innovative projects.

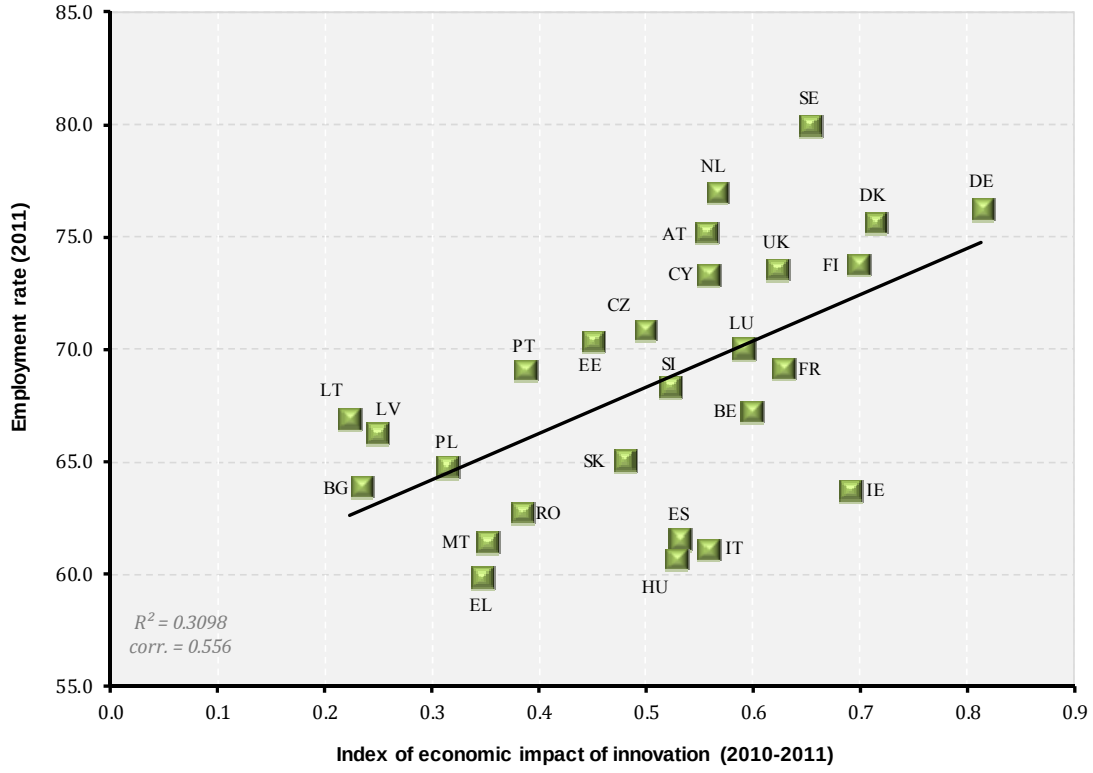
[18] See annex Country profiles: description of the performance and key features of Member States' research and innovation systems'. Information can also be found in the Impact Assessment annexed to the EC communication "A Reinforced European research Partnership for excellence and growth", 17.07.2012 (COM 2012 392 final)

In national policy mixes, however, there are still imbalances between supply push and demand pull. Supply-side instruments such as grants, subsidised loans and tax incentives, constitute over 90 % of the measures used[19]. Only a few countries are actively using demand-side measures (e.g. through public procurement, standards or regulation) to help develop markets for innovative solutions. Nevertheless, many other Member States have begun discussing or piloting such measures and are expected to start implementing them soon. The development of new markets is mostly supported in the areas of sustainability, energy efficiency and e-government applications.

2.3. Leading change Towards More Innovation in Europe

The crisis and increasing globalisation have changed the rules of the game. Strategies based on investing in knowledge and getting the most out of the existing national research and innovation systems are very important, but not enough. The European economy needs a radical shift in business dynamics towards high-growth and knowledge-intensive global markets with potential for creating more and better jobs. This assessment is supported by the data illustrated in Figure 4, showing that economies where the economic impact of innovation is the largest, have a higher employment rate.

Figure 4: Economic impact of innovation is positively correlated to employment



Source: DG Research and Innovation - Economic Analysis unit (2013)
Data: Eurostat, Innovation Union Scoreboard 2013

It is widely recognised that Europe needs its economic fabric to be renewed and oriented towards sectors which are tomorrow's markets and where it can build sustainable competitive advantages, based on its highly educated workforce. Such structural change is not yet taking place at the required pace. In order to hasten the renewal of Europe's economic fabric, policy-makers urgently need to focus policy efforts on one of the main channels for such renewal:

[19] ERAC's Opinion on the Commission's Annual Growth Survey, February 2012

the growth of innovative firms. By doing so, they will address a key bottleneck to Europe's economic performance.

Studies have indeed shown that, while there are fewer high-growth innovative firms in Europe than in the US, overall employment growth depends critically upon them: the number and share of high-growth firms may be small but the number and share of the jobs they generate directly or indirectly is disproportionately large. Moreover, high-growth innovative firms are essential for productivity growth, as the main channel for such growth is the re-allocation of jobs from firms with low productivity to more productive ones: it has been estimated that differences in firm growth dynamics between the US and the EU account for over two thirds of the EU's underperformance *vis-à-vis* the US in productivity growth in recent decades.

National policy-makers would benefit from reviewing all the aspects of their 'national entrepreneurship and innovation system' that may constitute bottlenecks to the growth of innovative firms. Based on existing empirical evidence, policy actions should focus on the following key aspects in particular:

- Several aspects of the regulatory framework are very important for firm growth dynamics: Member States need to address any disincentives to growth present in their regulations. This may concern for instance a modernised standard-setting and well-performing labour markets. Also bankruptcy regimes that severely penalise 'failed entrepreneurs' have been found to discourage high-growth entrepreneurship. More high-growth firms may also mean more cases of failure. Beyond legislation, there is a need for change in social attitudes towards entrepreneurs who have failed.
- Access to debt and equity finance is of course essential for enabling high-growth entrepreneurship. While many Member States have already developed policies to address this issue, this might still be an important bottleneck, particularly in Member States with less developed financial markets. In that respect, the EU Regulation creating a European Venture Capital Fund adopted in 2012 is a major step forward as it will make it easier for venture capitalists to raise funds across Europe for the benefit of start-ups and SMEs[20].
- The specific target of fostering the development of young innovative firms needs to be fully integrated in the design of research and innovation policy tools. While many Member States have developed tax incentives to support R&D activities in all types of companies, there is a need to offer specific, more favourable tax treatment for young innovative companies.
- There is a close link between growth, innovation and internationalisation. Exporting and innovation are mutually reinforcing strategies that result in higher export shares, turnover and employment growth at the firm level. Policies supporting innovation and internationalisation should link up. In that respect, cluster policies can be a critical tool, not least to support the internationalisation of young innovative firms.
- Young radical innovators also face problems in protecting their intellectual property. Targeted or more general policies increasing both the supply of (public) capital and the access to such capital and policies both improving the IPR system and making it less costly will be beneficial to all enterprises that grow and that want to innovate but in particular to high-growth innovative enterprises. Sharing and professionalising

[20] In addition, the Commission will publish in the coming weeks a green paper on long-term financing of the European economy where the drivers and constraints to long term financing as well as ideas for action and possible new instruments/initiatives will be presented.

access to IPR portfolios, e.g. through patent pools within clusters, can also be instrumental in developing innovation on a larger scale in Europe.

- Gearing the R&D system towards knowledge transfer, and in particular improving the linkages between the science base and the business sector, is of primary importance for the creation and growth of technology-based innovative companies. Many Member States have already developed policies to boost the commercial exploitation of R&D; these policies need to be further implemented, enhanced, evaluated and renewed accordingly.
- It is essential to foster the specific development of an innovation and entrepreneurship culture and attitude, not least through the education system. Stimulating growth ambitions in new and existing innovative businesses and supporting the provision of training, skills upgrading opportunities and qualified coaching in young and small enterprises, e.g. in relation to the management of innovation and rapid growth, has received less attention in policies aimed at fostering firms' growth.[21]

The above considerations are central to achieving the Europe 2020 objectives and focusing on horizontal policies that seek to provide a fertile breeding ground for the emergence of high-growth innovative enterprises.

In addition to efforts at regional and national level, these priorities should be supported by concerted efforts at EU level in order to create an innovation friendly business environment across Europe. Measures of this kind are outlined in the next section.

3. PROGRESS IN BUILDING AN INNOVATION UNION

In 2012, good progress was made in implementing the Innovation Union. More than 80% of commitments are on track with on-going initiatives. In a few areas efforts need to be stepped up. These include a more strategic use of innovation procurement, adoption of the Single Market Act I proposals and rolling out the initiatives on the intellectual property valorisation. This section focuses on key policy actions of 2012. A short overview on the state of play of all 34 commitments of the Innovation Union is provided in the annex.

3.1. Strengthening the knowledge base and reducing fragmentation

Promoting excellence in education and skills development

Current skills mismatches and shortages of scientists and engineers present a threat to Europe's innovation capacity, precisely at a time of increasing technological needs. In 2012, the Commission presented the Rethinking Education Communication[22]. It focuses on the need to develop transversal skills such as critical thinking, problem solving, team-working and entrepreneurial skills and to enhance academia-business partnerships.

The first Knowledge Alliances projects are under way. Their aim is to set up cross-sector partnerships between employers and educational bodies to address skills mismatches, e.g. in the audio-visual industry (CIAKL project), in manufacturing by integrating factory and classroom environments (KNOW-FACT project) and by fostering an entrepreneurial spirit in students and staff (EUEN project). Further projects will follow in 2013, and from 2014 onwards Knowledge Alliances will be part of the new Erasmus for All programme.

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21 European Commission (2011), *Policies in support of high-growth innovative SMEs*, INNO-Grips Policy Brief No 2.

22 COM(2012)669

In addition, a multi-dimensional and international ranking of higher education institutions has started implementation in 2012 following the conclusions of a feasibility study.

Delivering the European Research Area

The conditions are not yet in place for achieving the European Research Area (ERA) – by 2014. ERA is a unified research areas based on the Internal Market. ERA is part of the Innovation Union and Horizon 2020 supports its implementation in many ways. It is one of the key structural reforms to drive growth in Europe – and is increasingly recognised as such. While progress to date has been slow, the Commission proposed a reinforced European Research Area Partnership for Excellence and Growth[23]. Its focus and a clear set of actions were endorsed by the Competitiveness Council at its meeting on 11 December 2012. Under the reinforced partnership, the Member States, stakeholder organisations and the Commission will work together to enhance the effectiveness and efficiency of the European public research system. They will do so by encouraging more openness and competition, greater mobility for researchers, more cross-border cooperation and an optimal circulation of knowledge. Progress towards achieving the ERA will have to be monitored in close connection with the European Semester. It will also need top-level steering by the Council, informed by regular dialogue with all stakeholders. The Commission will develop a robust ERA monitoring mechanism in close cooperation with the Member States.

The combined effect of the EU reaching the 3% target of GDP dedicated to research, Horizon 2020, and an increased share of transnational funding (currently 0.8%) thanks to achieving the ERA, could generate as much as €445 billion of additional GDP and 7.2 million extra jobs by 2030[24].

The Commission's proposal for Horizon 2020 contributes to the establishment and functioning of ERA, for example by making open access to scientific publications a general principle of Horizon 2020. The Commission has also recommended that Member States take a similar approach to the results of research funded under their own national programmes[25].

Excellent research does not happen in a vacuum. It requires the best research infrastructures as platforms for collaboration to address research issues that cannot be addressed by individual Member States or regions acting alone. The Commission and the Member States are together making progress on building the 48 priority research infrastructures identified in 2010 by the European Strategy Forum on Research Infrastructures (ESFRI). About 27 of them are expected to be under implementation during 2013.

Extreme Light Infrastructure is a distributed infrastructure hosted in the Czech Republic, Hungary and Romania. It forms a pan-European Laser facility which is expected to hold the world's most intense lasers. It involves nearly 40 research and academic institutions from 13 EU Member States. The three sites should be operational in 2015. ELI will be the first infrastructure identified by ESFRI to be located in new Member States. It is largely being co-financed by the EU's structural funds. The project is a very good example of how research infrastructures can meet the objectives not only of scientific excellence, but also of regional development and European cohesion.

Focusing EU funding on Innovation Union priorities

Horizon 2020 – the new EU instrument for research and innovation funding from 2014 - will bring together all European-level support for research and innovation under one umbrella. In

[23] COM(2012)392final.

[24] SWD(2012)212, Commission Staff Working Document – Impact Assessment accompanying Communication (2012)392 final

[25] COM (2012) 401 final and COM (2012) 417 final

line with the ambition set out in the Innovation Union, Horizon 2020 marks an important break from the past, with funding having a more challenged-based approach, simpler rules for participants, and more effective delivery of results.

A key feature of Horizon 2020's new approach is the emphasis given to innovation. Concretely, this means more funding for: testing, prototyping, demonstration and pilot type activities; business-driven R&D, promoting entrepreneurship and risk-taking; shaping demand for innovative products and services through standard-setting and public procurement; and encouraging innovation in non-technological areas such as design, service innovation and creativity, new business models and social innovation, thereby reflecting a broad approach to innovation. There will also be a revamped approach to SMEs that includes a dedicated instrument for supporting companies that show a strong ambition to develop, grow and internationalise[26]. Also in Horizon 2020, the Marie Skłodowska-Curie Actions (MSCA) will contribute to the Innovation Union target of one million more researchers.

The current Seventh Framework Programme for Research (FP7) takes on board Horizon's 2020 new emphasis on innovation. The 2013 FP7 Work Programmes embrace a much larger part of the innovation cycle than ever before and provide the biggest ever calls for proposals, totalling € 8.1 billion. The aim is to better ensure that the fruits of research can be exploited, and to help place new products and services on the market.

Boosting talent and new business creation: the European Institute of Innovation and Technology

The European Institute of Innovation and Technology (EIT) puts the concept of the 'knowledge triangle' (education, research and business) into action through new types of partnership – Knowledge and Innovation Communities (KICs). There are currently three KICs - on climate change, sustainable energy and the future information and communication society. EIT's KICs education programmes focus on entrepreneurship and innovation skills to give students and business innovators the knowledge and attitudes they need to turn ideas into business opportunities. The EIT has defined the criteria for awarding an EIT label for Masters courses and PhD programmes.

Europe is facing a considerable shortage of engineers and ICT practitioners with the right combination of skills. The EIT ICT Labs Master School is one of the largest joint European ventures in higher education trying to remedy this problem. It involves 21 KICs universities and business schools. The institutions involved are delivering seven technical majors and a fully standardised minor in Innovation and Entrepreneurship. Students will also benefit from a mentoring scheme and an internship at one of the industry partners. Approximately 200 students were admitted to the 2012 programme.

Entrepreneurial education is combined with a range of business support services and several innovation schemes to accelerate the delivery of innovation to the market such as the InnoEnergy Highway and the Climate-KIC Market Accelerator. The impact is already being seen, with research results and new ideas getting to the market faster and attracting first customers.

Thanks to a funding from the EIT Climate-KIC, Naked Energy, a design and innovation start-up, was able to deliver a real-world pilot of their solar technology at a meaningful scale. This new piece of technology sparked interest and led to an agreement with Sainsbury's, the major supermarket chain.

[26] This new scheme, inspired by the SBIR scheme in the United States, is also a response to the request made by the European Council in 2011 to explore how best to meet the needs of fast-growing innovative companies through a market-based approach.

"Climate-KICs role has been to identify opportunities, to match make and to open doors for us. It's like 'sheltered innovation'. Quite simply, our relationship with Climate-KIC allows us to sit at the table with the big players." Christophe Williams Managing Director, Naked Energy

"We know the UK. But there must be brilliant ideas out there we don't know about and Climate-KIC can bring these to us. We want to get involved at the embryonic stage in order to help shape the technology in a commercially meaningful way." David Penfold Sainsbury's Supermarkets Ltd

The proposal for the EIT's 'Strategic Innovation Agenda' outlines the consolidation and further development of the three existing KICs and the creation of six new ones: innovation for healthy living and active ageing; food4future; raw materials, added value manufacturing; smart secure societies; urban mobility. The EIT will strongly contribute to the objectives set out in Horizon 2020.

3.2. Getting good ideas to market

The Innovation Union aims to remove obstacles that prevent innovators from translating ideas into new products and services that can be sold on world markets. Europe needs to unleash its innovative potential by faster standard-setting, cheaper obtention of patent protection, smarter public procurement of innovative products and services, and better access to finance for innovators and SMEs. The proposals on these four innovation drivers were fast-tracked through the Single Market Act I (2011). They should start bringing a new impetus to European innovation from 2013, as two proposals were adopted in 2012 and the other two are expected to be adopted in 2013.

Financing innovation

Europe has no shortage of innovative ideas waiting to be converted into successful business models. The first obstacle is often access to finance, further exacerbated by the on-going crisis. Europe has experienced a 45% drop in venture capital fundraising following the crisis. Moreover, Business Angel investment is currently some five times greater in the US than in Europe[27].

In its 2012 report, the Expert Group on cross border matching of innovative firms with suitable investors recommended to support venture capital funds with real potential, professionalise the business angel community, monitor and encourage crowd funding, and provide investor-readiness training for innovative entrepreneurs. In 2013, the Commission will also present a green paper on long-term financing of the European economy.

To remove obstacles to cross-border investment, two legislative proposals on 'Social Entrepreneurship Funds' and 'Venture Capital Funds'[28] were agreed in 2012 with official adoption expected in early 2013. In addition, the Commission completed its examination of potential tax obstacles to cross-border venture capital investment, on the basis of which it will consider next steps with a view to presenting solutions in 2013.

The Programme for the Competitiveness of Enterprises and SMEs (COSME) and Horizon 2020 will jointly support an equity and a debt financial instrument from 2014 onwards. On the equity side, both programmes will jointly make seed, early-stage and growth-stage

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[27] Report of the Chairman of the expert group on the cross border matching of innovative firms with suitable investors; European Commission 2012; http://ec.europa.eu/transparency/regexpert/index.cfm?do=groupDetail.groupDetailDoc&id=6008&no=1

[28] COM(2011) 860 final and COM(2011) 862 final .

investments in support of a seamless, EU-wide venture capital scheme. Horizon 2020 will focus on the early stage, and COSME on the growth stage. On the debt side, both programmes will provide loans, guarantees and counter-guarantees.

With the aim to increase lending to research- and innovation-driven SMEs, the Risk-Sharing Instrument (RSI) was launched as part of the RSFF in early 2012 in the form of a guarantee scheme to encourage banks to provide more loans to innovative SMEs and small midcaps.

During 2012, the Risk-Sharing Finance Facility (RSFF) focused additional resources on research infrastructures, with a substantial loan of up to €300 million extended to ESO (European Southern Observatory) to support the construction of the European Extremely Large Telescope (E-ELT). This revolutionary ground-based telescope will have a 39-metre main mirror and will be the largest optical/near-infrared telescope in the world: "Europe's window on the universe".

In 2013, the European Investment Bank will start channelling an additional €10-15 billion to innovation and skills via a new Growth & Employment facility, thus generating up to €65 billion of additional investment.

Shaping demand for innovative products and services

Innovative companies can only be successful if there is a market for their goods and services, and consumers willing to buy them. The new standardisation package, effective from 1 January 2013, and the proposal for the modernisation of the EU public procurement law, are key milestones towards helping innovative products and services reach the market faster. As a result of the former, a European standard should be developed twice as fast by 2020 and the latter will enable public procurers to use a special procedure for buying innovative goods and services, buy jointly with procurers from other Member States to share risks and costs, and include the innovative character in the award criteria. However, the proposals on procurement still need to be adopted by the European Parliament and the Council.

Innovation procurement[29] is slowly picking up across Europe. In 2012, Italy assigned more than €300 million[30] to pre-commercial procurement (PCP)[31]. PCP will be deployed in Southern Italy with the support of structural funds, as has been done in other Italian regions. Moreover, the higher risk related to these purchases can be covered by a special risk-sharing facility established in cooperation with the European Investment Bank. Cross-border collaboration is also developing. The Nordic Ministers of Industry launched a 'lighthouse project' in health care to strengthen the collaboration between Norway, Finland, Sweden, Denmark and Iceland on innovation procurement.

Transnational cooperation on innovation procurement is currently supported in a few areas with EU research and innovation funding. In 2012, 16 projects were launched to drive innovation procurement involving procurers from the majority of Member States. The projects will encourage public procurers to deploy more innovative solutions in the areas of lighting systems, energy efficient buildings, supercomputing technology, and better care for elderly, smart transport systems, intelligent border security control, and intelligent textiles for fire brigades. In 2013, such EU-level support is likely to more than double, approaching €100 million.

*Under the FP7 project **SILVER,** public procurers from five countries - UK, Denmark, Sweden, Finland and the Netherlands - will together launch the first cross-border pre-*

[29] Innovation procurement includes pre-commercial procurement (PCP) and public procurement of innovative solutions (PPI).

[30] €170 Mio Italian national funding, combined with additional EU Structural funds and EIB support.

[31] PCP is a method for procuring R&D services with the purpose of developing a new product or solution.

commercial procurement call for tender in early 2013. The call will aim at developing new robotics solutions for assisting elderly people with physical disabilities. By making a PCP call the consortium anticipates having access to new technological solutions which when implemented in elderly care, will make it possible by 2020 to care for 10% more people using the same number of carers.

Better integration of standardisation issues early in research and innovation projects is crucial for knowledge dissemination, interoperability between products and services, and eventually opening up new markets. Standardisation deliverables are being developed within FP7 projects. New projects were launched in 2012 to speed the delivery of standards inspired by FP-funded research results, for example for bio-based products, 3D printing, smart textiles and the use of wood in construction. Further uptake is expected in 2013 with around 75 calls for proposals mentioning standards.

Each company has to manage multiple and dynamic relationships within several networks. Setting up bilateral electronic data exchange with every single business partner is very cumbersome, especially for non-hierarchical manufacturing networks, and delays and errors can easily occur. The key objective of the ***inTime*** *project is to improve delivery and reliability in customer-supplier relationships, balancing production in the overall network. Based on the project results, a standardisation deliverable was published in September 2012. The multilateral communication platform described in the deliverable enables participating companies, especially SMEs, to simplify and streamline their business relations, as only one channel is needed to establish communication with all business partners on the platform.*

Innovative products and services are also at the heart of the Eco-Innovation Action Plan (EcoAP) adopted in December 2011[32]. The EcoAP aims to create growth and jobs with products, services, and business solutions with a positive environmental impact. It comprises seven actions: (1) environmental policy and regulation review; (2) demonstration and market replication projects; (3) standards and performance targets; (4) finance and support service to SMEs; (5) new skill and jobs; (6) international cooperation; and, (7) European Innovation Partnerships[33].

Eco-innovation market replication projects, managed by the Executive Agency for Competitiveness and Innovation, turn innovations into marketable green products and services. Success stories include GLASSPLUS, and SATURN.[34] GLASSPLUS offers a means to reuse the glass from old TV sets. 60 000 sets already found a new life as tiles. SATURN recovers non-ferrous metals from municipal waste, with unmatched separation and purity rates, above, respectively, 98 and 90%.

Capitalising on intellectual property and creativity

Intellectual Property Rights regimes have a crucial impact on how new knowledge and creations are owned, shared and used. Therefore they constitute a key component of the framework conditions for research and innovation.

The historic agreement on the unitary patent was reached in December 2012[35]. This should allow the first European patent with unitary effect to be granted and registered in spring 2014.

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32 COM(2011) 899 final.

33 http://ec.europa.eu/environment/ecoap/index_en.htm

34 http://www.glassplus.eu/home.aspx, http://www.saturn.rwth-aachen.de/

35 Adoption of the two regulations implementing enhanced cooperation in the area of the creation of unitary patent protection http://ec.europa.eu/internal_market/indprop/patent/index_en.htm

Member States will however need to swiftly ratify the Unified Patent Court Agreement in order to comply with the 2014 Innovation Union deadline.

Patent Translate, a machine translation service, went live in March 2012[36]. The tool is being developed by the European Patent Office in cooperation with Google. It already offers translations from, and into, English for fourteen languages, and will gradually extend coverage to 32 languages by 2014. Patent Translate, a service free of charge, will make the content of patents and patent-related documents published anywhere in the world easily accessible for everyone.

In 2012, the Commission presented an analysis of the major obstacles that European companies, especially SMEs, face in valorising existing patents. It also outlined some possible steps that could be taken to breathe new life into neglected intellectual property[37]. The Commission also launched a strategy for promoting cultural and creative sectors, with a focus on their innovation potential[38].

The European Creative Industries Alliance launched a policy dialogue and eight concrete actions on innovation vouchers, better access to finance and cluster excellence & cooperation for the further development of creative industries and better use of all forms of knowledge and creativity by other industries. The European Design Leadership Board delivered 21 recommendations based on which the Commission will implement an action plan for promoting the take-up and understanding of the role of design in innovation policy.

3.3. European Innovation Partnerships

The European Innovation Partnership (EIP) approach to accelerate the development and uptake of innovations for societal challenges has entered a new phase during 2012 with the pilot on 'Active and Healthy Ageing' (AHA) moving from planning to implementation, and with the approach being proposed for four more areas.

In February the Commission endorsed the Strategic Implementation Plan (SIP) presented by the AHA Steering Group and set out EU level actions in support. This included an invitation for stakeholders to commit in writing to concrete actions and/or to become a reference site, and the setting up a marketplace for innovative ideas helping stakeholders find partners, share emerging initiatives and disseminate evidence.

There was an encouraging response with 261 commitments to six specific actions submitted by groups of stakeholders bringing together public authorities, technology companies, health providers, industry and non-governmental organisations. In addition, 54 regions expressed their interest to become a reference site, serving as illustrations of good practice and to engage in scaling up and replication of innovative solutions. Close to 500 partners have signed up to the web-based marketplace[39].

Commitments have come from all EU Member States mobilising over 1000 regions and municipalities in the EU, as well as from other countries. Altogether the submissions show that over 4 million European citizens could directly benefit from the Partnership which is intended to have the critical mass to bring about real reform in the way we receive and provide care in Europe. The six stakeholder groups published their Action Plans in November 2012 outlining key deliverables and outcomes for the next 2-3 years.

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36 http://www.epo.org/searching/free/patent-translate.html

37 SWD (2012) 458 final,

38 COM(2012)537 final.

39 http://webgate.ec.europa.eu/eipaha

"The EIP on Active and Healthy Ageing is a great example of how cooperation can be put in practice; not just between companies but between stakeholders across the value chain. In the case of AHA the risk is not in the technology, as most technologies are already there. It is a matter of fusion of technologies (data communication, data handling, sensor networks…) in real-life settings, and as a result it is much more about social innovation: new ways of doing things and new business models. When people start doing things in new ways, investment opportunities will arise. We go for these. We will invest in innovation for active and healthy ageing, because you at the Commission have committed yourselves to lowering the investment risk by creating awareness and a receptive community, and obviously because there is a huge market emerging for ageing related services, which is very attractive to move into." Dr. Jos B. Peeters, Capricorn Venture Capital

Following the endorsement of the AHA SIP, the Commission put forward proposals for new EIPs drawing lessons from the pilot, such as the need for light governance and clarifying that EIPs do not replace formal decision making processes for funding programmes or legislation.

In February, the Commission proposed EIPs on 'Agricultural Productivity and Sustainability' and on 'Raw Materials'. In May it added a proposal for an EIP on 'Water' and in July it proposed an EIP on 'Smart Cities and Communities''. Following endorsements from the Council, the 'Water' EIP delivered its SIP in December 2012, and expectations are that the 'Agriculture', the 'Raw Materials' and 'Smart Cities and Communities' SIPs will be issued during 2013 so that implementation can start as early as possible.

A progress evaluation of AHA and a broader independent expert evaluation of the EIP approach are planned for 2013 to assess if there are any additional measures or amendments needed to improve the impacts of the current EIPs and to set the conditions for further EIPs.

3.4. Maximising social and territorial cohesion

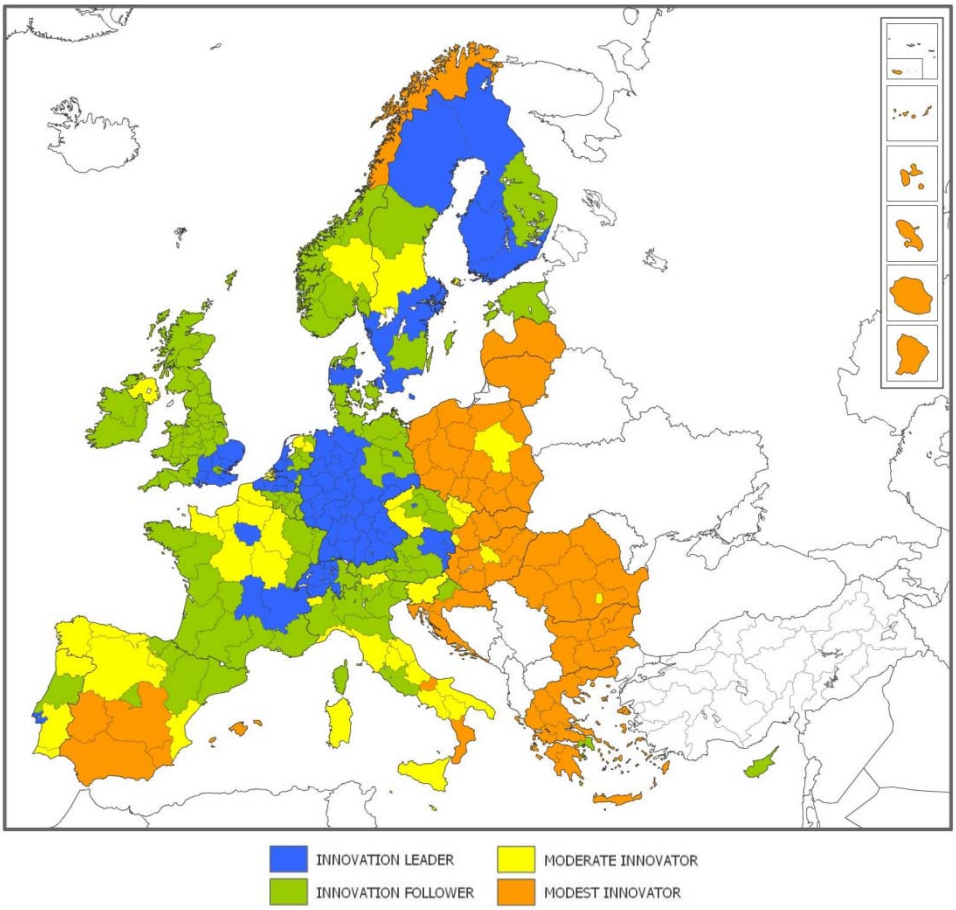
Closing innovation divide

The country performance analysis[40] and the Regional Innovation Scoreboard 2012[41] (Figure 4) show that regional innovation divergences persist and risk growing with the crisis. Strong and innovative regions drive performance in the most innovative countries, and such drivers are less prevalent in other Member States. While regional innovation performance remained relatively stable over 2007-2011, it showed a much higher degree of variation than the country level performance. This regional diversity calls for a better tailoring of innovation policies to the relative strengths of individual regions. This will be encouraged under the future Cohesion Policy 2014-2020[42]. Member States will have to develop research and innovation strategies for smart specialisation focused on a limited number of priorities. The Smart Specialisation Platform[43] is helping public authorities design such strategies through peer-reviews, guidelines, and workshops across Europe. Currently, three EU Member States and 103 regions from 19 other Member States are registered with the platform. To help regions climb the 'stairway to excellence', synergies between Horizon 2020 and Cohesion funding will be maximised, twinning/teaming between existing and emerging centres of excellence will be supported, a policy-learning facility set up and European Research Area chairs established.

40 See annex on Member State's performance accompanying the communication
41 http://ec.europa.eu/enterprise/policies/innovation/files/ris-2012_en.pdf
42 See http://ec.europa.eu/regional_policy/what/future/proposals_2014_2020_en.cfm
43 http://s3platform.jrc.ec.europa.eu

Figure 5: Innovation performance by regions

Source: Regional Innovation Scoreboard 2012



Supporting social innovation

Social innovation is gaining momentum in Europe. Social Innovation Europe[44], a virtual hub for building and streamlining social innovation, attracted nearly 50000 people in its first 18 months. With unemployment soaring, in October 2012 the Commission launched a competition calling for new ideas to help people move towards work or into new types of work. In parallel, as a follow-up to the Single Market Act I, the Social Business Initiative[45] is addressing the obstacles that hamper the development of the social enterprise sector such as legislation, funding and the visibility and recognition of the social added value of this sector.

Social innovation and social policy experimentation in the fields of employment and social policies have continued to be supported during 2012 through PROGRESS[46] and the European Social Fund (ESF). The future 2014-2020 programming period of the ESF, European Regional Development Fund (ERDF) and the new Programme for Social Change and Innovation (PSCI) will reinforce such support.

Since 2011, through FP7, the EU has supported about €30 million worth research projects on social innovation and it is funding two networks of incubators to nurture and scale up successful social innovations. Social innovation will be further supported under Horizon

44 http://www.socialinnovationeurope.eu/

45 COM(2011) 682 final of 25th October 2011

46 The PROGRESS programme is an EU financial instrument http://ec.europa.eu/research/infrastructures/index_en.cfm?pg=success9

2020. This will be supported by the Commission's commitment in the Single Market Act II[47] to develop a methodology to measure the socio-economic benefits created by social enterprises.

Finding innovative ways of financing social innovation and supporting the modernisation of social protection policies are part of the 'Social Investment Package' presented in February 2013. It focuses on increasing the sustainability and adequacy of budget and social policies: activating social policies and services; investing in children and youth; and streamlining EU governance for social policies, monitoring and communicating with citizens.

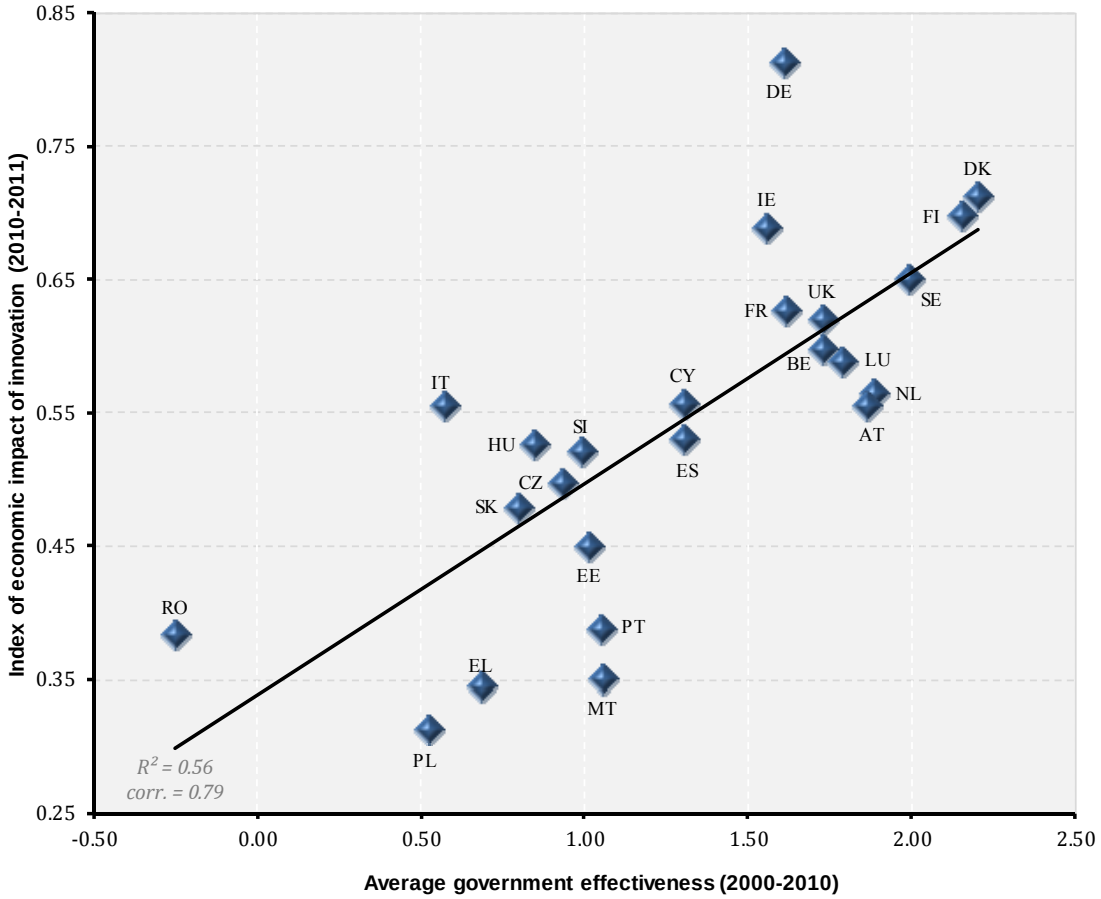
Experience underlines the importance of citizens as key actors of social innovation and the need for broad partnerships for promoting innovation in social policy mechanisms, including third sector non-profit and civil society organisations. Innovation in the corporate social responsibility area (CSR) contributes to a holistic, future-oriented approach to public-private partnership in addressing social challenges.

Mobilising public sector innovation

Given the large weight of the sector and the current financial and political situation, Europe must mobilise innovation in its public sector if it is to excel and remain internationally competitive. In addition, the modernisation of public administration is one of the five priorities set out in the Commission's 2013 Annual Growth Survey. The pilot European Public Sector Innovation Scoreboard[48] is the first EU-wide attempt to better understand and analyse innovation in the public sector. The analysis clearly shows that improved public services make it much more likely that companies will innovate and experience an increase in sales. Also, countries that perform well on the quality of public services tend to perform better on innovation (Figure 6). High-quality, innovative administrations are therefore a key asset for spurring Europe's innovation performance. **Figure 6. Government effectiveness and the economic impact of innovation**

47 COM(2012) 573 final of 3rd October 2012

48 Pilot European Public Sector Innovation Scoreboard 2013



Source: DG Research and Innovation - Economic Analysis unit (2013)
Data: EUROSTAT, World Bank (The Worldwide Governance Indicators (WGI) project), Innovation Union Scoreboard 2013

3.5. Leveraging our policies externally

Europe should maximise the excellence of its science base and spur the growth of innovative companies through active international cooperation and by creating the right conditions to attract top talent. The Commission has therefore set out a new strategy for developing international cooperation in research and innovation[49]. The strategy proposes to further focus cooperation on EU strategic priorities while maintaining the tradition of openness to third country participation in EU research. This includes addressing global challenges, but also making Europe a more attractive location for research and innovation. At the same time, it is essential that the innovation dialogues with third countries take into account the need to promote a level playing field for European players present in their territories and to strengthen legal certainty for investors, notably on intellectual property rights - this is particularly relevant in the framework of the up-coming negotiations of investment agreements with third countries such as China.

The new strategy will be mainly implemented through Horizon 2020, as well as through joint initiatives with EU Member States. A central element is the development of multi-annual roadmaps with key third country partners to enhance and focus international cooperation. These roadmaps will connect to the work of the Strategic Forum for International Science and Technology Cooperation (SFIC) to ensure consistency and complementarity between actions taken by the EU and the Member States. The SFIC is currently engaged in three targeted

[49] COM(2012)497

initiatives with India, the USA, and China, and in October 2012 agreed to launch an initiative on Brazil.

The Group of Senior Officials (GSO)[50] set out recommendations for a Framework for international cooperation on global research infrastructures. The report has been broadly endorsed by the science ministers of the CARNEGIE group[51].

Nearly all Member States have taken some action to attract more talent from overseas[52], but it is too early to judge the success of these measures. The Commission intends in 2013 to table a new proposal for a single Directive to make EU migration rules simpler for certain groups, including researchers, ensuring that admission schemes and rights are uniform and transparent across the EU.

4. CONCLUSIONS AND NEXT STEPS

The economic situation in Europe remains fragile. The short-term outlook is still precarious. Nevertheless, positive trends are visible and recent in-depth reforms should bear fruit in the medium to long term.

Europe's answer to the uncertainty fuelled by the crisis must be to rigorously pursue and rapidly implement the Innovation Union strategy set out in 2010. Good progress has already been made in many areas. Results of this should start being reflected in the real economy. Innovation Union will help create a climate of confidence in the European Union for businesses and citizens. It will do so through sustained investment in research and innovation, further sweeping reforms to create a true European Research Area, setting better framework conditions for innovative businesses and better matching supply- and demand-side measures.

However, Europe needs to do more to make the Innovation Union a reality. In light of the on-going crisis, decreasing public confidence and the risk of an innovation divide, the EU and its Member States must speed up their joint efforts and deepen the Innovation Union.

The immediate challenge is the extent to which the Innovation Union will foster the emergence of truly 'specialised' regional innovation profiles embracing the increasing fragmentation of value chains and the increasing heterogeneity of required knowledge inputs. More attention to the role of regional innovation policy is the only viable way to compensate and possibly off-set the talent brain drain from Europe's less-favoured regions towards Europe's research excellence hotspots[53].

To help address the reflection on new sources of growth, the Commission will, in addition to pursuing the implementation of the agreed Innovation Union measures, prepare next steps for deepening the Innovation Union. These are based on emerging trends, expert advice and views of stakeholders. They will focus on:

– accelerating structural change within existing sectors and by diversifying into new emerging sectors, and supporting the development of high-growth innovative enterprises through EU policies and coordinated additional initiatives;

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50 The GSO is composed by representatives from Brazil, Canada, China, the European Commission, France, Germany, India, Italy, Japan, Mexico, Russia, South Africa, UK, and USA. Australia obtained the status of observer country since November 2011

51 The Carnegie Group is composed of Science ministers/ advisors of the G8 + European Commission + Outreach 5 (Canada, France, Germany, Italy, Japan, Russia, UK, US + Brazil, China, India, Mexico, South Africa)

52 Researchers' report 2012

53 1st Position paper of the European Research Area and Innovation Board (ERIAB): "Stress-test" of the Innovation Union; November 2012

– closing the innovation divide between European regions through smart specialisation and synergies between Horizon 2020 and the structural funds;

– working on innovation-friendly framework conditions for innovative businesses, including innovation clusters;

– identifying concrete ways of boosting innovation in and through the public sector;

– developing a coherent policy approach for open innovation and knowledge transfer;

– accounting for the value of intellectual property, facilitating patent valorisation and ensuring the sound and effective protection of know-how and confidential business information in order to facilitate knowledge transfer;

– driving retail innovation as a key action of the European Retail Action Plan, helping smooth the path from idea to market for innovative products and services by tapping the potential of the retail sector with its economic weight (4.3% of EU GDP and 8.3 % of EU employment) and direct contact with consumers;

– combining new technologies and services with innovation in business models.

To bring about real change, Europe has to step up its commitment to deliver innovation-based growth. Innovation Union objectives should drive the future agenda for European integration. No country alone can deliver an innovative EU economy. It is time for European institutions, Member States, regions and all stakeholders to pitch in.

ANNEX

Annex: 2012 progress on 34 commitments set out in the Innovation Union flagship initiative COM (2010) 546 final

In green = commitments that are on track and for which initiatives are on-going and progressing well;

In orange = commitments with delayed/partially implemented measures;

In red = comitments for which no initiatives have been taken up.

More information on each commitment available at: http://i3s.ec.europa.eu/home.html

	Innovation Union commitment	**Deadline**	**Progress**
1	Put in place national strategies to train enough researchers	2011	
2	Test the feasibility of independent university ranking	2011	
	Create business-academia "Knowledge Alliances"		
3	Propose an integrated framework for e-skills	2011	
4	Propose an ERA framework and supporting measures	2012	
5	Construct the priority European Research Infrastructures	2015 – 60%	
6	Simplify and focus future EU research and innovation programmes on the Innovation Union	2011	
7	Ensure stronger involvement of SMEs in future EU R&I programmes		
8	Strengthen the science base for policy making through the JRC; Set up a Forum on Forward-Looking Activities		
9	Set out the EIT strategic agenda	Mid 2011	
10	Put in place EU-level financial instruments to attract private finance	2014	
11	Ensure the cross border operation of venture capital funds; taxation	2012	
12	Strengthen the cross border matching of innovative firms with investors		
13	Review the State Aid Framework for R&D&I	2011	
14	Deliver the EU Patent	2014	
15	Screen the regulatory framework in key areas	Start in 2011	
16	Speed up and modernise standard-setting	Early 2011	
17	Set aside dedicated national procurement budgets for innovation	Start in 2011	
	Set up an EU-level support mechanism and facilitate joint procurement		

18	Present an eco-innovation action plan	Early 2011	
19	Set up a European Design Leadership Board	2011	
	Establish a European Creative Industries Alliance		
20	Promote open access; support smart research information services		
21	Facilitate collaborative research and knowledge transfer		
22	Develop a European knowledge market for patents and licensing	2011	
23	Safeguard against the use of IPRs for anti-competitive purposes		
24/ 25	Improve the use of Structural Funds for research and innovation	Start in 2010 Platform by 2012	
26	Launch a Social Innovation pilot; promote social innovation in the European Social Fund		
27	Support a research programme on public sector and social innovation	Start in 2011	
	Pilot a European Public Sector Innovation Scoreboard		
28	Consult social partners on interaction between the knowledge economy and market		
29	Pilot and present proposals for European Innovation Partnerships	2011	
30	Put in place integrated policies to attract global talent	2012	
31	Propose common EU/MS priorities and approaches for scientific cooperation with third countries	2012	
32	Roll-out global research infrastructures	2012	
33	Self-assess national research and innovation systems and identify challenges and reforms;		
34	Develop an innovation headline indicator		
	Monitor progress using the Innovation Union Scoreboard		