

A DIGITALEUROPE VIEW FOR THE RESEARCH AND INNOVATION STRATEGY

Research and innovation in ICT are critical for the development of industry in the EU and for European competitiveness

DIGITALEUROPE welcomes the European Commission's initiative to create a strategy for research and innovation in Europe and its ambition to raise the quality and standards. The EU should aim to be the most attractive location globally for the Knowledge Triangle – education, research and innovation. Achieving this will require a coordinated and ambitious approach, but Europe can succeed if it acts collectively.

ICT is today an essential cornerstone in addressing Europe's Grand Challenges and it brings unique responses to the growing need for sustainable development, at the same time as it is an important engine of overall innovation in Europe. Investments into research and innovation are crucial for Europe to lead in radically new technological paradigms and in new multi-disciplinary fields. Europe has recognised strongholds in ICT fields such as telecoms systems, equipment and services, enterprise software, robotics, security technologies and photonics. It also has strong leadership in ICT application markets such as telemedicine (eHealth) and medical equipment, in automotive and aerospace electronics, and in embedded ICT which underpins innovation in all products and services. These give Europe an advantageous position to shape the evolution of key technologies and seize the opportunities ahead.

Europe 2020 – A strategy for smart, sustainable and inclusive growth, and its flagships initiatives are now critical elements in regaining competitiveness and putting the EU on an upward path of sustainable growth. The rapid development of the ICT sector, with sophisticated ICT architectures, supporting tools and intelligent devices, will enable the creation of a new and innovative market and competitive Service Economy in Europe.

In support to the European Commission's work on a strategy for research and innovation in Europe, DIGITALEUROPE here would like to put forward a set of areas that DIGITALEUROPE believe are important to be included in such a strategy.

Spanning the economy

ICT provides essential infrastructures in society. It boosts the innovation capacity of all sectors and leverages innovation in key economy sectors, where about 80% of innovations come from or are enabled by ICT, making a significant positive impact on the growth of European national economies and societies. The worldwide ICT market has reached € 2000 billion and the sector represents 4.5% of European GDP¹. In the EU, the US, and Japan, the ICT sector is by far the largest R&D-investing sector of the economy. In 2007 it accounted for 25% of overall business expenditure in R&D (BERD) and employed 32.4% of all business sector researchers².

¹ European Commission communication COM(2009)116, March 13, 2009 A Strategy for ICT R&D and Innovation in Europe: Raising the Game.

² European Commission's Joint Research Centre - Institute for Prospective Technological Studies (IPTS) – “The 2010 report on R&D in ICT in the European Union”, JRC57808, ISBN 978-92-79-15542-0.

The grand challenges that our society is facing today are complex and global by their nature and they can only be successfully addressed through concerted actions spanning across traditional sectors in our society, i.e. addressed by actions that are multi-disciplinary, holistic and having a sustainable approach that is customer oriented and accepted by our society. DIGITALEUROPE is of the opinion that a strategy for research and innovation in Europe should identify:

- **Cross-sector programs:** Instruments and programs should enable cross-sector initiatives in order to not only support R&D and innovation meeting Europe's grand challenges, but also to enable the birth of potentially new successful industries in Europe. It is crucial to address the grand challenges in a systemic way, without being constrained by the internal organisational structures of the European Commission. Cross-directorate involvement is necessary and the establishment of a subgroup of European commissioners with a stake in research and innovation policy is a step in the right direction.
- **Knowledge for impact:** R&D innovation policies and funding instruments should aim to have a high impact on productivity, sustainable economic growth and job creation to raise the national GDP's and thus the wealth of the European states. Europe can't afford to have instruments that are not well connected and synchronized with an overall European R&D and innovation agenda. Focus should be given to efficiency and speed of promoting transfer of knowledge between the different stages of the innovation chain resulting in a shorter go-to-market strategy.

Efficient and responsive initiatives

Investment in research and innovation is crucial for Europe, but to strengthen the European innovation capacity and contribute to the objectives set out in the Europe-2020 strategy DIGITALEUROPE sees a need for simplification of EU-level instruments, such as the research Framework Programs (FP). Simplifications should not only ensure their attractiveness and accessibility, but also guarantee effective and efficient use of public funding by not expending resources on complex procedures, administrative burdens and disproportionate controls. The recent Communication "Simplifying the implementation of the Research Framework Programmes", April 29th, 2010, indicates new directions for achieving a more efficient framework and DIGITALEUROPE will comment on this communication in a separate paper.

In drawing up a European strategy for research and innovation DIGITALEUROPE would like to propose some key topics to be taken into account:

- **Stability and legal certainty:** Consistent interpretation and implementation of rules should be ensured throughout the instruments. Legal certainty will increase the speed of the overall process – from proposal submission cycle through execution phase. At the same time, legal and intellectual property guidelines should accommodate the variety of beneficiaries' legal structures and their normal globally applied policies. By ensuring the clarity and consistent implementation of rules, the European Commission can also improve the efficiency and transparency of negotiations between consortium members, which today can be a time-consuming and uncertain process.
- **Trust-based approach:** To increase the effectiveness of the Framework Programs by increasing speed and reducing transaction costs, trust is a crucial element. Financial guidelines should be flexible to adapt to beneficiaries' generally accepted accounting practices, avoiding the need for duplicating accounting systems, and should not be subject to monitoring and control beyond the minimum necessary to safeguard public funds. A change to a more trust-based and risk-tolerant approach is needed in order to stimulate the creation of knowledge. DIGITALEUROPE asks the European Commission to implement the most urgent proposed simplifications (like the usual accounting principles) as soon as possible in the current Framework Program, or at least provide a temporary solution, to solve the actual acceptance problems with accountancy methodologies.
- **Level of funding:** The current intended level of reimbursement for actual costs should be maintained at 50% for large firms as this is seen as reasonable compensation for the extra effort spent by beneficiaries to carry out the work. If this were to fall below the level of 50%, which currently applies to large industry, industrial participation in e.g. Framework Programs would only decrease further³.
- **Speed and flexibility:** During the last 10-15 years technologies as well as markets have changed dramatically and Europe's industry has successfully adapted to the change in pace and maintained its competitive position. However, the operation of the European ICT programs has not changed significantly since their inception. Europe needs faster and more responsive instruments that reflect the speed of technological developments today.

³ Industry participation in European research framework programs: 39% in FP4, 34% in FP5, 31 % in FP6 to 25% so far in FP7.

Go-to-market strategy

Innovation and knowledge transfer is about turning good ideas into economic, social or cultural benefits by combining stakeholders' contributions in the entire innovation chain. Europe needs an environment that stimulates the creation of knowledge and its transfer into research and innovation – faster and better than anywhere else – and in order to achieve this Europe needs to plan and implement a focused research and innovation strategy in order to successfully position itself globally. Focus should be on areas where Europe is or can be a world leading player. In order to meet these challenges DIGITALEUROPE highlights the need for:

- **Partnering for business:** The creation of long-term partnerships, such as e.g. public-private partnerships with participation of innovative multi-national companies, SMEs, academia, government research agencies and government sectors, is a step in the right direction. These are formed on a permanent basis with governing bylaws where partners carry innovative technology development projects with long-term objectives. In contrast with today's traditional Framework Program projects these partnerships are formed with a clear "go-to-market" strategy and hence Europe needs to address the availability of funding for the commercialization stage after research and development. Investment in pre-commercial procurement, for adoption of innovation and utilization of structural funds where possible are suitable tools that should be further deployed.

Foster rapid commercialisation: Develop clear linkages between different instruments with the purpose of making use of gained knowledge is one important step towards more rapid innovation in Europe. In addition, the European Commission could make every effort for achieving a more efficient complement to member states' R&D and innovation programs which would lower the amount of duplication of efforts and better coordinate between regional, national and European level R&D and innovation activities.

The international dimension

Being naturally global, ICT demands international efforts in R&D and innovation. Global issues cannot be effectively investigated by European researchers alone without international cooperation in topics like energy, climate change, transportation, security etc. Drivers to participate in international programs are: (i) access to international R&D networks, (ii) possibilities to influence pre-standardization work, market opportunities and partnering.

The EU's existing programs have done much to promote collaboration among industry and academia in Europe, but could do more to promote global collaboration, for example leveraging global companies that already have a significant research presence in Europe and vice versa.

- **Reciprocity:** International cooperation should be promoted based upon reciprocity schemes. Europe can then attract world-leading partners to its programs at the same time as it creates opportunities for European partners to participate in international programs, which can help European businesses developing markets.
 - **Building future markets:** Creating robust research ICT capacities in emerging economies is one important step towards establishing future growth markets for European businesses, which is crucial for Europe to grow and sustain its competitive position as a global player. Participation of emerging countries in European R&D programs should be encouraged as it will help to build needed ICT capabilities as well as facilitate early cooperation in areas of mutual interest.
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