Good morning,

Ladies and gentlemen,

I should like to begin by thanking the organisers for their kind invitation. This morning, my main purpose is to give you a brief overview of the Horizon2020 programme and how best to further European research with regard to the ICT domain.

Whilst the question of the funding of research is, of course, crucial, another question that is no less critical is that of how best to actually structure and organise research at a European level. In this respect, I believe that the EU research and innovation in information and communication technologies (ICTs) brings unique responses to address Europe's societal challenges.

Against this background, I should like to speak briefly about two main areas.

~ Firstly, I shall sketch in the major guidelines for Horizon 2020.

~ Secondly, I shall emphasise, the role of the Information and Communications Technologies in Horizon 2020

## *1) The Horizon 2020 research programme*

So with regard to the state of play in the Horizon 2020 programme, the European Commission has presented yesterday the new programme "Horizon 2020".

I am extremely pleased to see that the proposals I have been fighting for are all incorporated in the documents, namely:

- a **substantial increase of the budget** for research and innovation: €80 billion;
- A **dedicated financial contribution to the EIT** (from 300 million to 3 billion Euros);
- A **balance between the three pillars**:
  - a science driven pillar - **'Excellent science'**
  - an industry driven pillar - **'Industrial leadership'**
  - a policy driven pillar - **'Societal challenges'**
- An **adequate allocation of funding within the three pillars:**
  - **'Excellent science'** with €24.6 billion, including:
    - €13.2 billion for the highly successful **European Research Council** (ERC),
    - Investment of €3.1 billion in **future and emerging technologies** (FET) to open up new fields of research and innovation.

- A budget of €5.75 billion for the **Marie Curie Actions** to develop research and innovation skills through the training, mobility and career development of researchers.
- Funding of €2.4 billion will also be available for supporting access to and networking of priority **research infrastructures** across Europe.

- '**Industrial leadership**', with a budget of €17.9 billion will include major investments in key industrial technologies such as **Information and Communication Technologies** (ICT), nanotechnologies, biotechnology and space (total of €13.7 billion). Access to **risk finance** with a dedicated budget of €3.5 billion);
- '**Societal challenges**', with a budget of €31.7 billion will be allocated to tackling the major focusing on six key areas;

So by way of partial conclusion to this section of my talk, I would say that Horizon 2020 is very much in line with the recommendations of the European Parliament. In particular, I should refer to the increase of funding, the balance between the three pillars, the synergies with the structural funds and the simplification of the programme.

It is time to look at the way ahead by analysing and discussing the details within the rules for participation and to "make everything as simple as possible, but not simpler" (Einstein)

## 2*) Information and Communications Technologies in Horizon 2020*

As a whole, the information and communication technologies (ICT) sector represents 4.8% of the EU economy. It generates 25% of total business expenditure in

Research and Development (R&D), and investments in ICT account for 50% of all European productivity growth.

ICT is essential to address Europe's societal challenges. It brings unique responses e.g. to the growing needs for sustainable healthcare and ageing well, for better security and privacy, for a lower carbon economy and for intelligent transport.

The EU investment will support the ICT research and innovation that can best deliver new business breakthroughs, often on the basis of emerging technologies.

In particular, ICT in Horizon 2020 will support the development of:

**ICT in Science**

- FET Open fostering novel ideas: Collaborative research for embryonic, high risk visionary science and technology

- FET Proactive: Nurturing emerging themes and communities
- FET Flagships: projects on a global scale tackling grand interdisciplinary science and technology challenges
- E-Infrastructures: Integration and access to national research infrastructures; development, deployment and operation of e-Infrastructures

**ICT in industrial leadership**

- Developing new generation of components and systems including smart embedded components and systems, micro-nano-bio systems, organic electronics and complex systems engineering.
- Next generation computing, Advanced computing systems and technologies.
- Network infrastructures, technologies and services for the future Internet,
- Content technologies and information management, including ICT for digital content and creativity. Advanced

interfaces and robots. Service robotics, cognitive systems, advanced interfaces and smart spaces.

- Key Enabling Technologies: Micro- nano-electronics and photonics. Development of these technologies requires a multi-disciplinary, knowledge and capital-intensive approach.

**ICT in societal challenges**

- Health, demographic change & wellbeing; e-health, self management of health, improved diagnostics, improved surveillance, health data collection, active ageing, assisted living;
- Secure, clean and efficient energy; Smart cities; Energy efficient buildings; smart electricity grids; smart metering;
- Smart, green and integrated transport; Smart transport equipment, infrastructures and services; innovative transport management systems; safety aspects
- Climate action, resource efficiency and raw materials; ICT for increased resource efficiency; earth observation and monitoring

- Inclusive, innovative and secure societies; Digital inclusion; social innovation platforms; e-government services; e-skills and e-learning; e-culture; cyber security; ensuring privacy and protection of human rights on-line

## 2*) Conclusion*

1) The goal of Horizon 2020 will be more than ever to bring excellent research results to market. This will deliver direct benefits to citizens, such as affordable health-care and ageing well, protection against cyber-crime, and the transition to a resource-efficient, low-carbon economy and for intelligent transport.

2) ICT is essential to address Europe's societal challenges. It brings unique responses to European growing needs. The EU investment will support the ICT research

and innovation that can best deliver new business breakthroughs, often on the basis of emerging technologies.

Thank you very much for your kind attention.