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EU-RESEARCH POLICY – CHALLENGES AND LIMITS

Ladies and Gentlemen,

Let's face some good food and hard facts to get the context right:

It is now well accepted that science and technology are crucial engines of economic growth and prosperity. Worldwide.

It is true, research has always been international. Yet by international, one used to mean essentially Europe, US and Japan. Now, research is truly global and multipolar. The figures show how important this change is:

- In terms of research: The EU accounts for 25% of the global R&D expenditure, down from almost 30% ten years ago - and similarly the share of the US shrank from 38% to 34% - while the share of Asia as a whole rose from 24% to 31%.
- In terms of markets: Take China. China is about to overtake the EU in exports of high-tech products. Or take India. It is building up R&D capabilities not only through high-quality investment from multinationals such as Microsoft and Cisco, but also through its own emerging giants such as Infosys and Wipro.

Research intensity in the EU as a whole (EU27!) has slightly decreased to 1,84% in 2005. If current trends continue, it would be at 1,8% in 2010, that is at the level of the mid nineties. The New Lisbon programme has led to commitments for R&D intensity from all Member States. If Member States deliver on these targets, we would be at 2,6% in 2010.

More than 85% of the gap with Europe's main competitors is coming from business sector, which contributes only 55% of R&D investments in the EU, compared to 64% in the US, 67% in China and 75% in Japan and South Korea.

The EU scores well in traditional disciplines, but has lower impact in new, fast emerging scientific fields.

Scientific cooperation at EU level has increased, but the landscape is basically national – more than 90% of public funding happens at national level.

What are the conclusions from these hard facts – apart from "no more water in our wine"?

- (1) We can be proud of our science and technology. But in the face of world competition, we need to make sure that this lasts.
- (2) As research is global, even the EU with 480 Mio people is small – and so are the biggest Member States.
- (3) We are far from having reached the limits of European research. Rather than discussing limits, we should end limitations.

The challenge for research – wherever it takes place - is to match the challenges in the world: security, food, water, health, demographic changes, climate change, to name but a few. Research in Europe is an expression of our responsibility to the world. It also is our answer to securing sustainable growth and jobs in Europe.

At the same time, science is becoming increasingly complex and costly. It is not something which can be done alone in a laboratory without any contacts with the outside world. Today's researchers need to work together and they need access to advanced technical equipment. It therefore makes sense for the EU to create opportunities for researchers and scientists to collaborate across country borders, to create platforms where the scientific community and industry can come together and to provide financial resources for research projects that span over several countries inside and outside the EU. The development of modern research in a global context makes it necessary to coordinate and complement efforts made at national level in the member states. This is why

we have a European research policy. And this is why we have considerably strengthened it with the new Framework Programme:

- in terms of budget: 41% increased in real terms;
- in terms of cooperation: for instance through partnerships with industry in Joint Technology Initiatives;
- in terms of delivery: major simplification, for instance with a guarantee fund which makes bank guarantees superfluous; with a single registration facility; with streamlined reporting;
- in terms of new instruments: the European Research Council which is funding research at the frontier of knowledge, with no requirements about partnerships and no pre-allocation of budget according to themes.

But: It would be a big mistake to think that European research policy is just about funding.

We need – and we have developed - a "broad-based innovation strategy". This is about creating the right framework conditions, for instance with our guidelines on knowledge transfer, on R&D state aids, on public procurement and on fiscal incentives. More generally, it is about completing R&D support with promising initiatives to stimulate the demand-side of research and innovation. One such initiative is the promotion of what we call "lead markets". This means markets where new technologies are key and where governments have an important role to establish favourable conditions in terms of regulation, standard-setting, public procurement and IPR. We will launch several pilots at the end of this year.

Secondly, we need – and we are developing – the "European Research Area".

Of course, a lot has been done at the European level and equally a lot has been done by Member States individually. The problem is, very little has been done together. It is a bit like in this joke from the information and communication technology circles: 'I like standards - there are so many to choose from!'. As a result, in many respects, the European Research Area is not yet a reality.

In particular, public research policies and programmes remain highly fragmented, un-coordinated, across Europe. This bears a heavy cost for all of us in terms of dispersion of resources, excessive duplications, failure to play the global role that our R&D capability would otherwise allow, or curtailed careers for researchers.

Two examples:

1. The coordinator of an ERANET on Food safety has discovered that Member States are funding more than 100 research projects on a single bacterium – the famous *Campylobacter*. Duplication at a grand scale.
2. In the EU, 6% of human resources in science and technology are non-nationals. Half of these 6 % come from outside the EU. In other words: There is very little mobility. And: Intra-European mobility is not greater than mobility from third countries.

This is why we have launched a Green Paper on the future of European Research Area.

We want to find new ways of working together so as to overcome Europe's fragmentation in research.

We want to make existing structures stronger – it is not about replacing them.

And we want to find the optimum strategic mix between integration, coordination and competition.

In a nutshell, the vision that we propose suggests that we can pool our forces by specialising more and by letting clusters of global excellence emerge. This would be coupled with a fluid sharing of knowledge and a seamless mobility of researchers, who would be attracted by research institutions that compete and cooperate at European level and that have access to world class research infrastructures. It would also be a Europe of research that is open to the world and able to take responsible global leadership in science.

For our vision to happen, we need two central changes:

The first is a practical one: we need to break down pointless barriers to research. For example, why are researchers prevented from being completely mobile in all EU

countries and sectors due to questionable administrative requirements? Or, why not develop a process for joint European and national research programming involving all stakeholders – research institutions, business and civil society organisations? Such a process would allow European, national and regional research priorities to be based on the systematic identification of major societal challenges. Common foresight and technology assessment exercises carried out in close collaboration between national organisations and involving the participation of stakeholders and citizens could help structure and enrich such an approach. Such joint programming should finally allow to bring together funding from EU, national, regional, business and philanthropic sources. The recently launched initiative to develop a European Strategic Energy Technology Plan could be an interesting precedent in this regard.

The second change is more in attitude. We need a greater understanding that national interest coincides with European interest. We have to understand that joining forces and acting as a United States of Research will make us all better off. Working for the common European interest is the best way to sustain our national interests in the long run. A broader and bolder view of national interest will help us to spend tax-payers' money better and to overcome the sub-optimal investment that is a reality today.

We learn from scholars in Asia or Latin-America that Europe is seen over there as a strong power, economically but increasingly also politically or as a source of inspiration for regional integration. However, this strength entirely depends on our credibility, on our ability and willingness to act as a Union.

This is no different in research, where there is a strong sense of urgency.

So, if you ask me how I can, in today's Europe, make such a call for more joint action - let me answer you with a quotation, not from Konrad Adenauer, but "at least" from Walter Hallstein: "In European affairs, you are not a realist, if you don't believe in miracles".

I count on you to contribute to the debate we have launched with our Green Paper and to accompany, with constructive criticism, the concrete proposals for action I intend to put forward early next year.

Thank you.