European Internet Foundation:
"How to Strengthen EU Leadership in R&D"
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Dear honourable Minister Moerman, Members of the European Parliament, Members of EIF, and guests-

It is a great honour for me to have the opportunity to talk to you on **"how to strengthen EU leadership in R&D".** Let me first introduce myself: I am Thierry Van Landegem and responsible for research and innovation with Alcatel, and in particular, for its research site in Antwerp, Belgium.

Alcatel's Belgian subsidiary comprises 900 R&D engineers of which 100 are researchers. **Alcatel's labs in Antwerp have produced** some extraordinary company and European successes such as the world's first digital telephony exchange system 12, and the **broadband ADSL local loop technology**, which today as you all know, is the leading broadband access technology across Europe and the world. Alcatel's center is also working on fiber to the home technology and lately, innovative consumer applications which will allow broadband communication via television.

All of these home grown technologies are leading towards a better society for European citizens and favouring enhanced quality of life and increased economic growth. They are also putting European research on a world class scale, versus other major competing regions such as Asia (China) and North America.

However, centers such as the one I direct, will not be able to maintain their innovative excellence and leadership, without urgent action by European policy makers. Ladies and gentlemen, it has been repeatedly stated that **Europe is trailing with regards to R&D investment against other major regions in the world.** Europe devotes a much lower share of its wealth to R&D than the US and Japan (1.93% of GDP in the EU in 2003, versus 2.59% in US and 3.15% in Japan). Moreover, China is soon going to match the EU's research intensity levels by 2010![1]

The key question we should ask ourselves tonight then is:

- "How can we strengthen EU leadership in R&D"?
- "What can you, members of the audience tonight, do to change Europe's current downward trend in innovation?"

[1] Key Figures 2005 on Science, Technology and Innovation, Towards a European Knowledge Area, July 2005 DG Research; "Creating an Innovative Europe" Report of the Independent Expert Group on R&D appointed following the Hampton Court Summit, January 2006.

In order to answer these questions, I would like to share with you some of the success factors based on our own experience in Europe, with Alcatel's research centre in Antwerp, and why the ground seems more fertile there than in other regions of Europe.

To start off with, there are three key factors that can be identified on the current success of our research centre in Flanders:

(i) The presence of qualified engineers and a tradition of strong industry-university cooperative research

(ii) The creation of national and regional government centers of competence which are close to market demands

(iii) Strong regional, national and European funding mechanisms of up to 50%

Regarding the first factor, Alcatel has a long **tradition of cooperative research** with universities. This allows us to build projects around challenging new state of the art technologies, that are incorporated in future products. These collaborations also help bring top European researchers that fill our European talent pool. The regional and European governments support these collaborations through adequate funding, either through funded bilateral or multi-lateral cooperation.

The second source of success is the set-up of so called **centers of competence by the national and regional government.** The earliest example dates back 20 years, with the establishment of the inter university center for micro-electronics research, **IMEC.** Building further on this concept of competence pools, the Flanders region has also set-up a new research center on broadband technology, **the IBBT**. This center is composed of several university research departments and covers various disciplines, an essential asset for the complex telecommunications environment.

Both IMEC and IBBT have preferred partnerships with Alcatel. These preferred research partnerships allow us to improve our access to the world's best sources of innovation, therefore allowing us to be aware of the latest novel technologies on the one hand, and to help academic institutions to become aware of the **needs of the telecommunications industry** on the other hand. In other terms, tune their research programs towards real market demands, thus creating greater opportunities for market development and **local employment**. It also supports the mobility between academia and industry. And furthermore, it creates an excellent platform for the creation of new companies, be it spin-offs or start-ups and **eventually Small-Medium-Sized Enterprises (SMEs).**

Let me now come to a third factor behind anchoring our research activities in Flanders. We are all involved in the discussions on the **cost of research** in the European area versus the upcoming lower cost countries outside of Europe. The **support by regional / national and European governments** of multi-lateral collaborative projects are not only instrumental in bringing the different parties together, in order to create value networks, but are also extremely important in the frame of helping decrease the cost of research in our region.

In the case of Alcatel's research and innovation center in Belgium, a large part of the cost **is funded through a mix of regional, national and European** initiatives. The research funded by the Flanders region including a premium for European Eureka projects is today at about 50%.

It is clear that both the presence of the specific competencies in the frame of the knowledge clusters, and the important degree of funding, 'anchors' research activities in the Flanders region. In this area, I want to highlight as an example, the European funded integrated project MUSE "Multi-Service Access Everywhere" that groups most of the important telecom players, both industrial and academic, into a 2 year project which was recently prolonged by another 2 years. MUSE targets the development of a future, low cost, multi-service access network, suited for the ubiquitous delivery of broadband services to every European citizen. It is an excellent example of cooperative research, funded by Europe, that is enabling companies such as Alcatel to maintain their leadership in broadband technology, while bringing great benefits to European citizens in terms of affordable broadband access.

Based our experience with research in the Flanders region, I would now like to reflect on how we can use these 3 facts across Europe, to ensure we strengthen our leadership in R&D, and safeguard strategic research centers such as Antwerp. In particular, with the current discussions regarding the future of the EC's Seventh Framework Program (PF7), there are several key points that we urgently need action by European policymakers, and in particular, MEPs:

1- **ICT must remain a priority for European, Member State and regional funding**. In particular, for FP7, the ICT share must be 2 Billion Euros a year to maintain our European leadership in key ICT technologies.

2- **Cooperative research is extremely important**, in particular in conjunction with universities and centers of excellence as I have mentioned. This ensures that European research stays close to the market, especially for ICT industry.

3- **Need to extending 50% public funding for all types of industrial R&D** including prototyping, testing and field trials. This includes state aid and structural funds to ensure Europe is not at a competitive disadvantage compared to other regions of the world, such as China or the USA.

4- **Favour flexible rules of participation** that ensure more effective industry R&D participation and results. In particular, access rights for associated companies, transfer of ownership, background and financial liability are key issues.

5- **We need to act now.** It is urgent that the European Parliament and all institutions finish their current analysis on FP7 and prepare a strong research programme which allows Europe to strengthen its leadership in R&D.

On this note, and in conclusion, last week an extremely important R&D report was published by an independent expert group on R&D entitled "Creating an Innovative Europe", otherwise known as the **"Aho Report".** This excellent report sets out a bold action plan for a true **European pact for research and innovation between policy makers, business and social leaders.** I urge all of you to read

this report and especially for MEPs to put pressure on their **governments to act now**, and to create a pact on R&D, before it indeed is **too late for Europe.**

In conclusion, I hope that I have succeeded in showing you, with this testimonial, one European regional success story, which can well act as a positive example of how to strengthen R&D across other regions in Europe.

I thank you for your attention and look forward to your questions and comments.