

**GREEN KNOWLEDGE TRIANGLE, 27-10-2010**  
**CONCLUDING REMARKS by Maria da Graça Carvalho**

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This conference has aimed at contributing to the debate on the future of research and innovation in Europe and in particular the European “Innovation Union” and its implementation in the EU regions.

Today's discussions have focussed on the necessary conditions for innovation in the European Union. Indeed, the regional case studies presented have highlighted some **key factors leading to success**:

- A shared vision by stakeholders in the knowledge triangle of their contribution to a sustainable future
- A long lasting partnership between the knowledge triangle stakeholders
- The fundamental role of the local authorities in creating tailored conditions for facilitating cooperation and supporting innovation

Nonetheless, some **challenges** remain:

- The need to manage structural and operational differences between the partners of the knowledge triangle
- The need for more flexible access to funding for the partners in the knowledge triangle
- A better recognition of the role of the knowledge triangle in the EU (and hence its higher acceptability)

As I see it, there are four conclusions to be drawn. Firstly, the role of the knowledge triangle in the balance between the bottom-up and top-down approach; the importance of the knowledge triangle in ensuring a sustainable innovation environment and thirdly the knowledge triangle for smart regional growth *and* smart specialisation. I shall discuss smart regional growth and smart specialisation, separately.

- 1. So, with regard to **top-down and bottom-up approaches**, the case studies have shown that innovation results from complex and interlinked processes. These include a “bottom up” approach, the close relationships between the stakeholders in the knowledge triangle and the role of incentives in favouring regional smart specialization.*

Over the past few years and months, we have witnessed the emergence of new approaches to European research and innovation policies. These include a number of ambitious concepts such as Joint Programming and the European Innovation Partnerships, on the one hand, the European Institute for Technology and Innovation (EIT), on the other. These will give rise to a new governance structure to the European Research Area (ERA) and could lead to more synergies between different EU policies, funding sources and research disciplines. This would certainly constitute a great leap forward towards a European Union that responds to the needs of its citizens and the society at large, one that would also be more competitive on the world market. However, the implementation of

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these concepts is still far from having been accomplished and a number of question marks still remain – especially with respect to their governance.

- Irrespective of whether or not these overarching strategic concepts are a success, it is obvious that they can only engage those stakeholders involved in research and innovation activities across Europe. However, European research **is diverse** and involves a wide variety of sizes and types of stakeholders, all contributing to research and leading the path to innovation. It is therefore crucial to ensure the most promising overall framework conditions for fostering research activities throughout Europe. It is equally necessary to emphasize **decentralised** processes and **multi-polar approaches to research** within a competitive environment based on the primacy of scientific **excellence**.

*The importance of soundly balancing “top-down” and “bottom-up” approaches is paramount for the future of the ERA. However, we need to ensure that **policies designed to foster but not to dictate the direction of research and innovation respond to societal challenges and lead to more competitive and innovative European enterprises**. In this respect, the concept of the knowledge triangle offers a promising way ahead.*

**2. Turning now to my second point, ensuring a sustainable innovation environment in Europe through the Knowledge Triangle**

- The knowledge **triangle can best be described as a model for public-private partnerships covering strategies and concrete actions in the three fields of research, innovation and education. This 3-dimensional approach to regional R&D cooperation holds out numerous** advantages:
  - o Firstly, research, innovation and the development of human resources are addressed jointly and not separately, something that corresponds better to their interconnected nature. Complementing research activities with a strong focus on innovation may contribute to channelling research activities more directly towards market needs and societal challenges
  - o Secondly, incorporating educational activities fosters the transfer of knowledge and technologies between different stakeholders and generally leads to more stable and sustainable cooperation (e.g. through jointly organised masters degrees or doctoral programmes)
  - o Thirdly, taken together , research, innovation and higher education tend to stimulate and cross-fertilise each other thus providing the ground for a virtuous cycle of knowledge based regional development
- An indispensable prerequisite for the knowledge triangle to succeed is the involvement of the three key stakeholders:
  - a) public authorities ensuring the role of a facilitator,

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b) universities and other research organisations producing knowledge, c) private enterprises providing the direct bridge to the market. In this way the knowledge triangle implicates a whole range of stakeholders in research, innovation and education.

*EU research policy has pinpointed the vast potential of the knowledge triangle by making it the core principle of the EIT. But its potential fields of application go far beyond this and should fully encompass the diversity of actors and scales.*

**3. As for the third point, this is the knowledge triangle as an accelerator for smart regional growth**

- As a concrete means of improving the impact of R&D investments, the knowledge triangle offers a huge potential for fostering innovation processes at the regional level. The European Research and Innovation Framework Programme as well as the structural funds represent two areas in which the triangle logic could contribute significantly. Let me give you three examples:
  - o Firstly, the programme “Regions for Knowledge” which operates at the intersection between research and regional development - might well be used in directly assisting in setting up regional Knowledge Triangles. Annual thematic priorities have proven sub-optimal since they tend to attract stakeholders from the same field. Such stakeholders are competitors in the first place and partners only in the second. Thematic priorities based on Grand Challenges or Lead Markets might be more suitable for stimulating complementarities.
  - o Secondly, structural funds should take on more importance as the main funding source for capacity-building measures in European regions that are still on their way towards excellence in R&D. This supposes relying on the Knowledge Triangle approach. Instead of spreading the funding resources devoted to innovation, research and education across different projects and locations, a more integrated approach based on the synergies between these three key areas would certainly be more beneficial. For the structural funds to fulfil this role, it is indispensable to allocate a greater share of their future budget to innovation targets. It is also necessary to ensure that investments in this field are not labelled innovative if it turns out that they contribute little or nothing to capacities for innovation at a regional level.
  - o Thirdly, the Knowledge Triangle concept could also serve as a criterion for the impact assessment of project proposals in collaborative research funded under the European Research Framework Programme. Among the applicants who have already successfully given proof of their scientific excellence, those who can demonstrate that they are actually embedded in a fully-developed regional knowledge triangle could and should be favoured.
- Finally, the knowledge triangle offers a number of advantages in the field of the “Green Agenda”: eco-innovations are often seen as a way of overcoming the economic crisis and are the objects of manifold legislative incentives across Europe as

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well as a priority of the “Innovation Union”. They offer considerable market potential, numerous opportunities for innovation and they tend to encourage interdisciplinary work. As such, they are particularly suitable for gathering stakeholders together along the whole innovation chain.

4. *The knowledge triangle can stimulate knowledge based on regional growth. But a major challenge lies in the fact that local innovation strategies must serve two purposes at the same time. On the one hand, they must rely on regional specificities and, on the other hand, respond to overall European strategies and objectives, in other words, this involves the delicate task of **conciliating regional innovation strategies with a coherent ERA through “Smart Specialisation”**.*
  - Smart Specialisation presupposes a bottom up approach with enterprises and research organisations, encouraged and supported by regional authorities. This involves collaborating in order to identify the most promising regional development areas and defining a regional strategy for smart growth on this basis. This includes a well defined innovation strategy and means that the most prestigious projects have to be brought to fruition alongside those projects that correspond to the regions’ real competitive edge.
  - Here, universities play a crucial role due to their engagement in transnational networks and due to the – by definition – international nature of science. Consequently, Smart Specialisation can be successful in promoting the capacities of a region with respect to the international context, thus reducing redundancies and fragmentation in the European innovation and research landscape.
  - Regions which complement Knowledge Triangle partnerships within the framework of a well elaborated Smart Specialisation strategy will therefore not only lay the ground to a sustainable regional prosperity, but also create added value in European research. When building up knowledge triangle collaborations and assessing their performance (e.g. prior to funding), it is therefore essential to emphasise the need for a forward-looking Smart Specialization strategy.

Ladies and Gentlemen, before concluding, let me add one further aspect, one that is of crucial importance for the emergence of a veritable European “Innovation Union”. The success of an EU policy designed to foster research and innovation is closely linked to its accessibility and manageability with regard to the relevant stakeholders. All these ambitious will only be possible if we give ourselves the means to attend them. This supposes radical simplification in the rules and procedures involved. This is something that we have made a determined effort to achieve in the report for which I am the rapporteur.

By way of conclusion, I should like to make one or two recommendations. This conference is a first step in the debate on the importance and the future role of the Knowledge Triangle in fostering the innovation process. It is highly desirable that the conclusions of the five case studies presented today and the many contributions of experts from various backgrounds during the day will hopefully be taken into consideration in the preparation of the next generation of the EU programmes. This should be the case, not only in the field of research &

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innovation but also in the field of regional development. The outcomes of the conference will be published and made available for further discussions.

For the moment, it is difficult to see a consensus on how we should promote innovation in the future. This is the case both inside the national and regional authorities and the EU bodies, on the one hand, or, on the other hand, between the many European stakeholders of the research and innovation community. Maybe we will never reach such a consensus. But one thing we all agree on is that the economic and social future of Europe is inevitably linked to the priority that will be accorded innovation and research in the forthcoming years. Everyone who can contribute should have the chance to do so –.In this regard the model of the Knowledge Triangle represents a promising opportunity for consolidating the whole European Research Area and strengthening the contribution of each of its stakeholders.