

# Innovative Doctoral Training at Universities of Science and Technology –

## Responding to the diverse needs of the economy and society

- News Alert -

**Brussels, 13 October 2015. Europe's Universities of Science and Technology are constantly adapting their doctoral training programmes to address the increasingly diverse variety of research careers - in academia, industry and society. At an event in Brussels today, five European associations of universities of science and technology – CESAER, CLUSTER, EuroTech Universities Alliance, IDEA League and Nordic Five Tech – launched a joint discussion paper on Innovative Doctoral Training from the perspectives of their 53 member universities. The paper highlights some best practices and contributes to the discussion on the future of doctoral training.**

In his opening statement Karel Luyben, President of CESAER, highlighted that the institutional settings in which doctoral training is delivered should be continually adapted to reflect the increasingly complex needs of society. According to Ernst Rank, Founding Director of the International Graduate School for Science and Engineering at the Technical University of Munich, research must always be at the centre of doctoral training. However, as 90% of doctoral graduates from Universities of Science and Technology (TUs) typically pursue careers in the non-academic sector, Innovative Doctoral Training (IDT) should be offered, whereby doctoral researchers are free to design their learning pathways in accordance with their specific interests. IDT encompasses a broad range of opportunities for acquiring transferable professional competences, capabilities and skills, as well as utilizing interdisciplinary research options, exposure to industry and international networking opportunities.

Rasmus Schmidt Davidsen is currently finalizing his doctorate at the Technical University of Denmark, whilst at the same time developing his start-up, Black Silicon Solar. Co-founded on the basis of interdisciplinary collaboration with a doctoral researcher from KTH Royal Institute of Technology in Sweden, the startup idea came to life as a result of international networking opportunities offered during their doctoral training. According to Mr. Davidsen, IDT is important for all doctoral researchers regardless of whether they pursue a career in academia, in industry or as an entrepreneur. For example, learning how to pitch a new idea is an important skill for entrepreneurs vis-à-vis potential investors, but also for academics when presenting their research projects to academics, funding agencies, industry or society.

Rinske van den Berg from the European Commission acknowledged the progress made by TUs in the implementation of the seven European Principles for IDT, particularly with regards to mobility between academia and the non-academic sector. The uptake of industrial doctorates has been particularly successful among TUs in Denmark, Germany, Italy and the Netherlands. For instance, General Motors (GM) has located one of its branches on the campus of Politecnico di Torino, resulting in the co-funding of 700 doctorates over the past ten years. According to Alberto Pisoni, GM's Director of Control Systems in Turin, this co-location has been instrumental in encouraging joint academia-industry research projects, as well as ensuring the industrial relevance of the doctoral research programmes.



**CESAER**  
IDEA League



**CLUSTER**  
LEADING UNIVERSITIES OF  
SCIENCE AND TECHNOLOGY



**EuroTech Universities**  
Excellence in Science and Technology

**NORDIC FIVE TECH**

Jan Fransoo, Dean of Graduate School, Eindhoven University of Technology, editor of the joint discussion paper, called on the European Commission to take note of the TUs' best practice examples in IDT and to provide the necessary framework to scale them up on the European level. The paper formulates recommendations for policy makers, funders and universities at large. As a next step, the five TU associations will organize a workshop, with the aim of promoting further discussions about the concept of IDT and the possibilities for scaling up of the best practice examples among their partner universities and beyond.

## **ABOUT THE FIVE ASSOCIATIONS OF UNIVERSITIES OF SCIENCE AND TECHNOLOGY**

The five associations – CESAER, CLUSTER, EuroTech Universities Alliance, IDEA League and Nordic Five Tech - represent more than 50 European universities of science and technology. While each association has its own specific history, rationale and focus, they recognize the necessity to speak with a strong and coherent voice on the European landscape and to work together on issues of common interest and relevance.

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