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Nanotechnology the next decade: A Key Enabler for Disruptive Innovations.

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The digital economy will transform the science and innovation landscape allowing participatory rapid diffusion of knowledge, competencies and capabilities paving the way for effective and meaningful deployment of knowledge never before being witnessed. Nanotechnology is a Key Enabling Technology with promises for making solid contributions to the grand challenges of today, such as sufficient sustainable energy supply on demand, clean water to everyone, novel e-health solutions with impact on the growing ageing population multi-sickness panorama and life-styles diseases etc. Solutions to these challenges demands increased transversal interdisciplinary participation. Not only transversal within the Sciences but also transversal in all kind of societal dimensions including an increased empowered participation of people.

The explosion of IoT-products, massive data and sharing economy services are mega-trends of today's society and the immense interconnectivity change modern society in a pace never before being witnessed. These major societal developments challenge society. But the needed changes also foster disruptive innovations. A key for such changes is the increased and participatory dialogue in society. This trend is clearly seen in the European funding policies becoming more aligned to mission driven perspectives. In order to fully tap all possibilities offered within the Key Enabling Technologies there is a continued need to put emphasis on transversal funding support schemes. If not, there is a risk that the enabling character of inventions will either disappear or take very long time to diffuse into other verticals, effectively hampering the innovation capital to be fully exploited.

The Higher Educational Systems are key for addressing large societal challenges. Hence, these societal changes will in turn challenge present higher education systems. Systems that still to large extents are "analogue" although several novel concepts have lately been introduced in the discussions, e.g. massive on-line courses. But there are needs for novel solutions and incentives in order to recruit needed trans-disciplinary engagements.

Nanotechnology, being a major key enabling technology, in combination with AI, VR and Quantum Computation, will in the next decade be a major driver for disruptive innovations in various verticals as well as an effective tool for fostering the meaningful utilization of knowledge for a meaningful and sustainable global development.

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