

Challenging the norm: technologies, organisations and inclusive innovation

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Abstract

A shift in the global business environment is ongoing. Industrialized countries are launching different strategic initiatives to support the development of smart factories build around the numerous innovation technologies available. This huge phenomenon is labeled in different manners: “Industrie 4.0” in Germany, “Industrial Internet” in USA, “Internet +” in China. Notwithstanding the labels, the underlying phenomenon is rooted in the same technological innovation, the emerging of cyber-physical systems, i.e. computer systems able to continuously interact with the physical system. These systems are composed of physical elements and they are able to merge computational capacity with communication and control capabilities.

Even if the focus is often on “factory”, such radical technological innovations are affecting not only the manufacturing process. Business models are deeply interested and accordingly the occupational structures and required skills will change. The development of smart factories will strongly influence work and employability. As a consequence, women’ share of “smart workers” in careers such as technology & management engineering, ICT and digitalization, product and industrial design shall increase quantitatively and qualitatively; moreover, numerous jobs will change configuration with a growth of employment in highly cognitive and creative jobs and low manual occupations. In fact, to achieve the full potential of Industry 4.0, the importance of differences shall be exploited and organizational structures shall evolve.

Empirical analysis of practical cases from Hungary, Italy, Spain, Sweden and United Kingdom within the Erasmus+ project “SMART JUMP - Smart entrepreneurial skills for Creative Industries: an inclusive perspective” provides knowledge on current and potential inclusion and how to address gendered structures in joint processes for growth and innovation – with focus on women and young entrepreneurs in the creative industries and Industry 4.0. The analysis employs previous research on inclusive innovation, including the Quadruple Helix model.