

Developing Long-term Strategies for the Society Based on Digitalization

Dr. Alberto Bartoli

Associate Professor of Computer Engineering & Prorector for ICT

Director Machine Learning Lab

University of Trieste, Italy

<http://bartoli.inginf.units.it>

Any strategy for pursuing development and progress for our societies must be defined by taking into account the risks and transformations that are coming. The World Economic Forum identifies Extreme weather events, Natural disasters, Cyberattacks, Data theft, Failure of climate-change mitigation as the global risks that are more likely to occur in 2018¹. This perspective is limited to the current year but it clearly certifies the degree with which ICT (Information and Communication Technology) has become an essential component of our societies. Not surprisingly the Risk Barometer by Allianz, one of the largest insurance groups worldwide, confirms this fact².

In 2013, an influential report analyzed the scientific and technological landscape with a broader temporal perspective and identified 12 technologies that may drive substantial economic impact and disruption by 2025³. Such technologies were ranked based on their estimated economic impact and the 7 highest ranked technologies, whose impact vastly exceeded those of the other technologies, have a single common denominator: the central role of ICT for all of them.

Recent developments in the broad field of the so-called “artificial intelligence” have corroborated the predictions of that analysis and are demonstrating that a number of capabilities that have always been performed by human operators may now be delegated to machines or will be potentially delegated to them not far away in the future. In December 2016, this fact has been acknowledged by a report prepared by the Executive Office of the President of the United States, which clearly stated that these new technologies have “the potential to disrupt the current livelihoods of millions” of people⁴. The same report also advocated strong investment in education and training for the jobs of the future. ICT is a fundamental technology also in this respect.

Based on all these facts, countries in the eRegion shall cooperate and coordinate concerted efforts aimed at developing and improving the role and diffusion of ICT in our societies. Indeed, the Digital Economy and Society Index that is computed every year by the EU demonstrates clearly that our societies are lagging behind in this respect⁵. Activities of this kind will become more and more fundamental not only for the welfare and development of our societies but also for the security of our countries: cybersecurity has already become a pressing need and a strategic priority for preserving the critical infrastructures of our societies.

¹ <https://www.weforum.org/reports/the-global-risks-report-2018>

² <https://www.agcs.allianz.com/insights/white-papers-and-case-studies/allianz-risk-barometer-2018/>

³ <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/disruptive-technologies>

⁴ <https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/Artificial-Intelligence-Automation-Economy.PDF>

⁵ <https://ec.europa.eu/digital-single-market/en/desi>