THE FUTURE OF WORK AND ROBOTICS

SUMMARY

New technologies are promising us many upsides like enhanced health, convenience, productivity, safety, and more useful data, information and knowledge for people and organizations. The potential downsides are challenges to personal privacy, over-hyped expectations and increasing technological complexity that boggles us.

As presented in this article, robotics and AI with ongoing ubiquitous r/evolution will have impacts on safety and health issues. Robotics is not problem-free from this angle of human welfare. In this article a list of key challenges of robotics and AI were presented. An underlined issue was the demand European co-operation in meeting these big challenges.

The challenges of robotics and AI revolution require scientific discussion from the viewpoint of management, leadership and organizations – that is, it is time to discuss the meaning of these challenges seriously also in terms of existing traditions of management and safety sciences, bearing in mind their importance already today. Digitalization, robotics, AI, IoT and Big Data are most definitely key factors affecting societal development in the future.

Private and public organizations have begun to gain critical insights from Big Data, robotics and ubiquitous technology through various management systems. Basically, the issue at stake here is that it is not just a question of how to manage and control the technological possibilities. The development also concern leadership functions. A robotized and automated society needs new kinds of management and leadership styles and organizational culture. Education and training need to be developed to meet these big challenges.

Taking the Internet of Things, robotics and ubiquitous technology seriously may lead towards a revolution of digitalization which affects management processes in organizations. The deployment of on-going key processes call for strong leadership in the field of safety and health. Both the utilization and the development of technologies as well as eliminating negative side effects of new robot applications are the key challenges in ongoing technological transition period.

If the consequences of robotics and AI are taken seriously and professionally, special attention must be paid to (1) technology management, (2) user interfaces and experiences and (3) regulation and good governance. These three critical themes will require many European joint actions and development of good governance (see Safety and health triangle in Fig. 1).

When we adopt new technologies, the elements of safety and health triangle need more attention. There will be new technologies and applications of robotics and AI. New technologies provide new benefits, new costs, new possibilities and novel threats as history has shown. The widely held notion is that change is speeding up and the future will become weirder at a faster pace that we can easily track. It does seem harder to keep up with new developments, especially in the field of robotics and AI where new inventions and innovations are introduced almost every week.

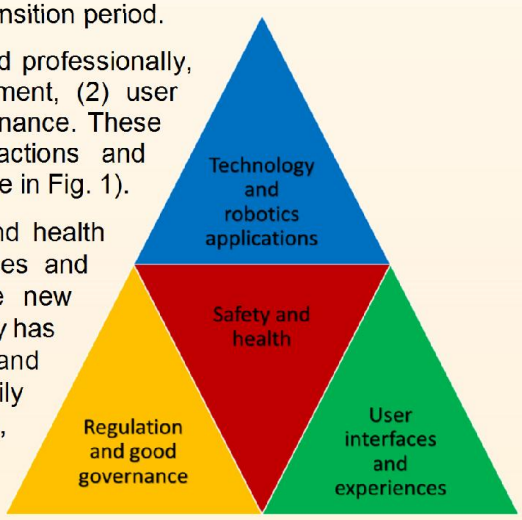

Figure 1. Safety and health triangle.

One key question is to what extent European citizens can trust themselves in managing big technological transformations and how much support they can expect from public institutions and governments. If governments take a very minimal role in the management of big technology transformations this approach leads to minimal state policy. If we adopt public-private partnership, the other approach, as European Union has done in the European robotics strategy, citizens can expect more from governments and other agencies.