

Editorial

Innovation, Standardization and Technology

*Learning and innovation go hand in hand.
The arrogance of success is to think that what you did yesterday will be sufficient for tomorrow.
The Soul of the Firm, by C. William Pollard, p. 114*

The word innovation means: 1) the act of innovating; 2) a new method, idea, product, etc. The word has been used for the first time during 1540-1550 and originates from Latin and French languages. Innovation means that during the act of innovating there is a successful application of a method, idea, or product for the benefit of mankind. Innovation is different than invention. Inventions can be registered as patents and there is a vast amount of patents which have never been applied in practice. The level of innovation of different countries is given by the International Innovation Index. The developed countries have the top rankings and the latest report shows a significant reshuffle of the rankings due to the global economic crisis, see URL: <http://www.nam.org/innovationreport.pdf>. Innovations can be loosely classified as sustaining or disruptive. Sustaining innovations affect the economy on a long term, while disruptive innovations may change the economy very quickly. The term disruptive innovation has been introduced by Clayton M. Christensen in a study suggesting that the business model plays a crucial role in having the disruptive effect. Consider, for example, an emerging technology – the low intensity pulsed ultrasound (LIPUS), which is a medical technology being capable of regrowing teeth. It is to be seen whether LIPUS will rapidly revolutionize the dental services or it will be slowly implemented in the existing medical infrastructure.

Standardization is an important factor for the success of all innovations. The compatibility of different components allows the rapid prototyping and testing of devices based on emerging technologies. The perfection of the manufacturing process makes it possible to establish information-driven organizations. The collection and processing of information is a must in the highly competitive market. As a result, advances in information and communication technology (ICT) are considered as a top priority. Standardization in the ICT field is also needed. Information modules must be flexible and easy to exchange among users. As mankind is witnessing the beginning of the information era, certain aspects of ICT standardization are still chaotic but the tendency is to stabilize this process and steadily improve the ICT management.

Technology nowadays becomes an universal concept which affects most aspects of human life. The promotion of new technologies is happening on a daily basis. Technologies also merge, split and overlap so that it is difficult to follow all the advances in science and engineering. Innovations based on the most successful technologies literally reshape the way humans perceive the world and estimate future events. The digital technologies are putting to test values and traditions so that staying tuned to societal changes is a necessity. Thus, a philosophical dilemma arises, technologies solve certain major problems but in return raise difficult questions for humanity for which there are no simple answers at present.

Innovation, standardization and technology are usually evaluated on the basis of a number of tangible characteristics. However, the use of artificial creations must be considered from the point of view of human interactions which depend on something intangible but immensely important in times of change – ethics. One can ask the question as to whether the failure of the existing business model has something to do with greed, blind ambition and ignorance. The “success” of oneself should not cause harm to what society is all about – other people.

The expectation from each alumnus is to be intellectually, physically and spiritually harmonious with oneself and the society. This is a noble challenge for the education system in an increasingly complex world, which can partly be addressed by merging business-, design-, and technology-related disciplines (similarly to the anticipated establishment of Aalto Innovation University in Finland in 2010) and fostering the creativity of the young innovators.

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