



Syllabus of Module

6. Technology Management

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Module Annotation

Technological progress is an important driver not only of economic, but also of general social changes. Prosperity and sustained economic growth are closely linked to technological advances. It is a source of knowledge that allows the conversion of production factors into goods and services.

The current era is marked by a rapid boom in information technology, medical technology and genetics, sustainable energy, automation and artificial intelligence, nanotechnology and materials sciences. This time is referred to as post-industrial and characterised by the fact that ideas and knowledge are more important than the material aspects that prevailed in previous periods.

Each of these key technologies has its own potential, which may or may not be exploited in the future. Every innovation on the road to commercialisation encounters a number of obstacles that both commercial companies and companies at the national or, for example, European Union level must be able to cope with. The introduction of new technologies in practice is always associated with risky decision-making.

The introduction of new technologies can also have negative impacts on the company and society. It can negatively affect employment, harm the environment, have unexpected side effects, etc. These risks must be able to be estimated in advance and taken into account when deciding on the implementation of new technologies.

The aim is to make such strategic decisions and take such steps that new technologies play a predominantly positive role both at the level of the company and in the wider context; to bring benefits and, of course, an acceptable rate of return on investment.

Module Objective

- Submit a brief excursion into the history of technology development in order to understand the importance of the different stages for the development of economies and the social changes caused by them.
- Characterise innovation today in terms of technology and define so-called breakthrough technologies that have (and will have) the greatest impact on world economies and society.
- Explain what obstacles stand in the way of the commercialisation of high-technology and demonstrate with concrete examples the approaches and solutions that have led to success.
- Show how you can deal with the uncertainty associated with the implementation of new technologies. The causes of this uncertainty are the difficult calculation of return on investment, unguaranteed success for customers, insufficient legislation, natural fear of new and unsafe projects, a lack of qualified workers, hostile attitudes in the team, etc.
- Draw attention to the possible dangers arising from the advent of new technologies – what has happened and how it has been resolved – based on concrete examples.
- Finally, we will tell a few stories of companies with an open end, which combines the fact that they “became involved” with new breakthrough technologies – but each approached it in its own way. This is where the debate opens up.

Literature

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