

## Chapter 40

# Flexible Educational Program for Managerial Engineering Personnel in Innovation

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### ABSTRACT

*This chapter raises the issues of development of continuous education of managerial engineering personnel in industrial companies. The case of designing implementation of the additional education program for the course “Innovation Management” with flexible learning paths was considered. This case was created on the basis of the Foresight study’s results of current and future development challenges facing LLC Lihoslavl Factory “Svetotechnika.” The results of the survey of the audience—heads of structural enterprise’s subdivisions—were shown. They demonstrated the need for organizational learning, as well as the most appropriate forms and instruments of its implementation.*

### INTRODUCTION

Currently further training and retraining are very topical forms of human capital development which is the growth driver of companies’ competitiveness (Avraamova, 2015, 2016; Florman, 1997; Collins, Berivudes, Youngblood & Pazos, 2004). The introduction of new technologies and equipment makes it necessary for the new staff to obtain competencies. At the same time ensuring a stable position on the market, achieving the highest possible financial results are currently accomplishable on condition of introduction of new management methods and organization of work. The dynamics of the external environment, the exponential growth of knowledge and technologies are the key motivations for the company’s management team to organize conditions for continuous education of the staff, exchange of relevant information, professional and personal growth.

In the theory of modern management the term “learning organization” is actively used. This term was introduced into scientific circulation by Senge (2003) and it characterizes a company that creates, acquires, transmits and stores the knowledge. A learning organization is a structure in which every em-

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ployee is involved in the process of identifying and solving problems which allows the entire organization to develop, to experiment, to find the most productive ways of working (Skvortsova, 2014).

In modern conditions the organization of the internal environment of the company as a learning organization is a driver of its growth and development, and the system of additional education of engineering personnel who are in leadership positions should be sufficiently flexible to allow the creation of competency in accordance with the trajectory of the company's development (Chan, Cooper & Tzortzopoulos, 2005; King, 2009; Sun, 2003; Kumpikaite, 2008)

The paper describes the case of educational module in the field of innovation management which was developed and implemented within the framework of additional education program for the managerial personnel of LLC Lihoslavl Factory "Svetotechnika" in 2015. The company is currently a dynamically developing industrial enterprise and it is the part of the largest Russian Lighting holding BL GROUP. This leads to the structural features of the company by virtue of which LLC Lihoslavl Factory "Svetotechnika" realizes full cycle of production of lighting products, and the distribution is carried out by the parent company («Svetotekhnika», 2014; Kol'tsova, 2012).

The management team of LLC Lihoslavl Factory "Svetotechnika" actively introduces into practice of their own activities the principles of a learning organization and therefore educational activities, training programs for different groups of employees, re-training are regularly held. The company's management team are interested in innovation management firstly due to the fact that the team carrying out a flexible policy to meet the customer's interests faces with the problems of improvement of various types of products, as well as introduction of new technologies into production. Wherein senior positions are mostly occupied by specialists with higher technical education, and in order to implement new management principles different knowledge and competences are required.

## **MAIN FOCUS OF THE CHAPTER**

The mentioned above structural features of LLC Lihoslavl Factory "Svetotechnika" as well as special management team's requirements have not allowed to realize the classical scheme of the program "Innovation Management", herewith its flexible trajectory was created, the specific thematic areas, necessary for this organization were marked. Foresight study, which was carried out previously and in which current and strategic issues both for individual groups of employees and for the company as a whole were identified, became a toolkit of creation of the thematic program plan.

The first introductory tutorial was organized in the training format, during which on the basis of collective discussion, working in small groups and voting the company's key problems that require additional knowledge to solve them have been identified:

1. Lack of clear planning of innovation implementation, of improvement of individual products, which ultimately reduces the efficiency of these activities;
2. Lack of coherence of structural subdivisions in solving enterprise's common problems, including the execution of orders for new or improved products;
3. Lack of competence in the field of teamwork organization while introduction of new products and equipment as separate projects;
4. Low inventive competence of most engineers and technical workers, lack of creative approach to executing tasks and initiatives to improve certain content aspects of their own professional activity;

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