

BULETINUL INSTITUTULUI POLITEHNIC DIN IAȘI
Publicat de
Universitatea Tehnică „Gheorghe Asachi” din Iași
Tomul LVIII (LXII), Fasc. 4, 2012
Secția
MATEMATICĂ. MECANICĂ TEORETICĂ. FIZICĂ

PROJECTS OF PRODUCTION-TECHNICAL BASE DEVELOPMENT OF A MOTOR TRANSPORT ENTERPRISE

BY

VICTOR BILICHENKO* and SVITLANA ROMANTUK

Vinnitsya National Technical University,
Ukraine

Received: November 15, 2012

Accepted for publication: November 20, 2012

Abstract: The product and the results of development projects of an enterprise are examined. The main directions of development of industrial-technical base of a motor transport enterprise are defined.

Keywords: development project, production and technical base, motor transport enterprises.

1. Introduction

The successful development of motor transport enterprises in many respects depends on the perception of the adequacy and speed of response to changes in internal and external environment. Currently the project is considered as the most effective form of implementation of the targeted changes at the enterprise level.

Change management when creating the project of development of production system of the motor transport enterprise (MTE) is a purposeful influence presented in the planning, organization and control of implementation of actions, aimed at creating or refining a project of development of production system with account of changes in the external environment and the internal environment of the MTE. It is obvious, that the product of the project can be adjusted for all phases of the life cycle of the project of development of industrial systems, including phase of the operation or failure of the operation of the MTE and the elimination of an MTE as an existing business or at the

* Corresponding author: *e-mail*: bilichenko_v@mail.ru

liquidation value. Development projects for production-technical base, as the main material-technical component of the passive and active assets of the enterprise is a priority direction of development of the motor transport enterprise (ATP).

2. The Main Part

Life cycle of a project, as it is known, can be viewed as a set of logically related activities, in the process of completion of which one of the main results of the project is achieved. In this case, as has been observed in many studies, under conditions of the life cycle of the project it is natural to start with the life cycle of an object, which is the product of the project (a house, an information system, equipment and etc.) (Tsipes & Torb, 2009, p. 205).

Life cycles of the project are specific not only in respect of the area in which the project management is implemented (construction, pharmaceuticals, intellectual technologies, etc.), but in relation to the individual organizations. In practice the formation of the so-called corporate standard of the project takes place. Thus, as noted by W. Duncan, in the U.S. many companies consider the life cycle of their projects «practically the object of religious worship», which is not a subject of review or criticism (Grashina & Duncan, 2006, p. 24).

Let us consider the conditions of interaction of the life-cycle of a project development facility and the life cycle of the actual object, which is the product of the project, at an example of projects of construction.

So, according to P. W. Morris, a typical life cycle of the construction project consists of four phases: feasibility study, planning and designing of production, and also reception and commissioning (***_1, 2000, p.15).

However, as noted in the work (Tsipes & Torb, 2009, p. 206), the life cycle of the object (building) is not limited by the given phases. Proceeding from this, a number of contemporary approaches to the management of construction project proposes a significantly broader view of the life cycle of a construction project, including the last phase of strategic development, as well as the following the phase of putting into operation the phases " like operation proper, reconstruction, liquidation.

In work (***_2, 2003, p. 91) one of the main differences of the construction projects is indicated: «Creation of the project of construction is never the end result, after which any of the results of the project do not remain». The next step in the logical chain of reasoning is the necessity to reject the vision of the project as an activity, which is aimed at the achievement of a single goal. In contrast to the «traditional» views to a single project the author proposes to include not only the creation of the object, but also its further development in the process of exploitation.

In the project, which is viewed as an evolving, not all of the ultimate objectives are defined in advance, their appearance is often determined by external circumstances, which may result in re-profiling and / or redevelopment

of the building. And such a project is accomplished only together with the completion of the life cycle of an object (Tsipes & Torb, 2009, p. 206).

This idea finds confirmation in real modern practice of realization of the investment-construction activity, which is based on the concept of development, when the goal is not just to create the object, but to create the object, which will bring big profit and for as long as possible. And if this is so, then the traditional construction project is only a particular case of the project development. At the same time, projects development, in addition to the above-mentioned phases of construction, also include the operational phase and the elimination one (Tsipes & Torb, 2009).

This approach has been implemented in the work (Scharova, 2011, p. 5) in which, in particular, the author refers to the difference between the product and the result of investment and construction project. As the product of this project the author understands the material embodiment of the concept and the design and estimate documentation by means of use of the investment funds that are invested in the property, and the result of the project is the possibility of the technical operation of the latter (Scharova, 2011, p. 5).

In its turn, the product of a development project is the considered as the actual use of the result of the investment-construction project according to the development concept. The result of the project the author understands the satisfaction from receiving the product of the project of development and obtaining the planned project (commercial, economic, financial, social) on the stage of operation (Scharova, 2011, p. 5).

On the basis of the above mentioned considerations the project of development of the system of provision of services for the technical preparation of vehicles (TPV) of an MTE is the development of the production system of the MTE and / or supply of the services from the outside on the principles of outsourcing, which is intended, in accordance with the chosen strategy of development of MTE to ensure, on a given level of the transport process productive exchanges at minimal costs. In this case we proceed from the fact that the production system of the MTE includes production-technical base, together with repair and service personnel and engineering and technical staff, as well as with the elements of the technical organization and production management.

At the same time, production and technical base of MTE is formed by the funds, which are intended for technical support of the process of maintaining and restoring the workability of the TPV, as well as the maintenance of buildings, constructions, communications and other objects in proper condition. The structure of the funds, which form production and technical base, can also be represented as such, which consist of passive (buildings, constructions) and active (technical equipment, tools, appliances) parts. Project of development (updating) of the production and technical base of the MTE can be classified according to the existing classification of processes of reproduction of the basic

funds and directions of the investment. According to the latest classification such processes are (Kanartchiuk & Kurnikov, 1997, pp. 163-164): technical re-equipment, reconstruction, expansion, new construction.

Technical reequipment is a renewal of the active part of the production assets on the basis of: the introduction of new technology (technical equipment, fixtures, equipment for technical service and repair of TPV) and techniques; increase of the level of mechanization and automation of processes of technical service and repair of TPV; modernization of the existing equipment; improvement of production and labour organization methods.

The peculiarity of technical re-equipment is updating means of labour without increasing the production area of the enterprise and compulsory reduction of number of workers. In the process of technical re-equipment there is a need for partial reconstruction of the production, household and warehouse premises, providing or liquidation of communications, improvement of energy supply. However, the passive part of fixed assets should not exceed 10...15 %.

The main indicators of the technological modernisation of the MTE are summarizing technical-and-economic indices, which characterize the ultimate goal and the results of technical re-equipment; measures of technical re-equipment; the need for material and technical resources and equipment; construction-assembly works; the value of the investment.

Depending on the forms of updating means of labour small, medium and complex technical re-equipment are distinguished.

Small technical re-equipment provides the replacement of a small part of morally obsolete equipment, as well as modernization and improvement of existing instruments of labour.

For small technical re-equipment of the coefficient of renewal of fixed capital (K), as a rule, exceeds the disposal of (K_2), that is $K > K_2$, and their values oscillation within the following limits: $0.1 \leq K_0 \leq 0.3$ and $0.1 \leq K_2 < 0.2$.

When the middle-size technical re-equipment is fulfilled the outdated equipment is completely replaced with the same number of similar new equipment units, the use of which provides the increase of the level of mechanization and automation of production. At the same time, $K_0 > K_2$. Their values lie in the range of $0.3 \leq K_0 \leq 0.5$; $0.2 \leq K_2 \leq 0.4$.

The complex technical re-equipment, respectively, is characterized by a significant updating of the equipment park, increase of mechanization level and automation of production processes, introduction of the latest technologies. In this case $0.3 \leq K_0 \leq 0.5$, and $0.4 \leq K_2 < 0.6$.

Reconstruction, as it is known, is based on upgrading the passive and raising the technical level of the active part of basic production assets. During the reconstruction of the volume of construction-mounting works is more significant than at technical re-equipment, as, along with the dismantling and installation of technical equipment decisions concerning changes of-planning industrial premises are taken. Along with the dismantling the old buildings and

structures the restructuring and conversion of areas, shops and sites on a new technical basis is carried out. The decision is made as to mechanisation and automation of industrial processes, replacement of morally and physically obsolete equipment, introduction of the newest technologies, growth of production space and installation of auxiliary equipment. Reconstruction means defining the scope (quantity) of MTE and the level of concentration of TPV.

The need for the reconstruction due to the changes taking place in the structure of TPV parks, their design and the terms of their operation, the requirements to the quality of transport service and technical maintenance, the levels of consumption and saving fuel and energy resources, policies for the protection of the environment, etc.

Reconstruction is connected with such objective economic laws, as dominating growth of the active production funds and labor productivity, reduction the share of living labour and the increase of labour share in the process of production intensification.

Depending on the volume of works in respect of the existing production assets the following types of reconstruction are distinguished:

1. Small (partial), aimed as a rule, at replacement of morally and physically obsolete active fixed assets, i.e. $K_2=K_0$, and numerical values of these indicators correspond to the following conditions: $0.1 \leq K_0 \leq 0.2$ and $0.1 \leq K_2 \leq 0.2$. It envisages the implementation of insignificant volume of construction works, connected with re-planning of shops, offices and installation of new technological equipment.

2. Middle, which has a purpose, as a rule, of replacement of active and passive elements of the basic production assets, complex mechanization and automation of production. In this case $K_2 > K_0$, the numeric value is within the following limits: $0.21 \leq K_0 \leq 0.4$ and $0.21 \leq K_2 \leq 0.3$.

3. The complex, which has a purpose, as a rule, of a radical renewal of fixed assets, based on introduction of the newest scientific and technical achievements. In this case $K_0 > K_2$, and numerical values are in the following ranges: $0.31 \leq K_2 \leq 0.5$ and $0.41 \leq K_0 \leq 0.6$.

Reconstruction and technical re-equipment are aimed at the increase of production capacities, increase of labour productivity of maintenance workers, as well as the improvement of the values of other technical and economic indicators. So with the concept of «reconstruction» the concept of «technical re-equipment of the existing MTE is inseparably linked.

Extension presupposes the construction of separate shops, premises, production units, communications and other facilities on the territory of the existing MTE.

New construction means the erection of MTE buildings, constructions, technical equipment, TPV parks, gas stations, communication, etc. on new sites.

New construction implies the unity of the processes of creation of active and passive parts of the main funds of MTE according to the project, in which

the volume of the works of technical maintenance and repair and technical level of the production and technical base are balanced.

The modern practice concerning the development of the production-technical base, gives grounds to consider the reconstruction to be the most widespread and generalized form of realization of scientific-technological process at the MTE. During this reconstruction could cover not only the technical re-equipment of production-technical base and its expansion. Reconstruction provides the transition from individual technical maintenance and repairs in the framework of the closed technological cycle of an individual MTE to the development of specialized production and co-operative forms of relations between production units and the creation of industrial technology of technical service and repair of TPV.

Thus, one of the main directions of development of the production system of the MTE is realization of projects of updating the production and technical base of objects of the fixed production assets), the main types of which are projects (programmes) of the technical re-equipment, reconstruction, expansion and new construction.

In this case the project of updating of the production and technical base of the MTE itself can be considered as the investment activities following in the implementation the technological sequence of works to create within the established deadlines and budgetary constraints an updated object of the fixed production assets of MTE, the availability and use of which are necessary for the effective implementation of the strategic objectives of the development of an MTE.

3. Conclusion

1. The material embodiment of the concept and the design and estimate documentation of an updated object of the main production assets is considered as the product of a project of updating the production and technical base of a motor transport enterprise.

2. The result of project aimed at the upgrade of the production and technical base of a motor transport enterprise is the possibility of the technical operation of the product of the aforementioned project.

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PROIECTE PRIVIND DEZVOLTAREA BAZEI TEHNICO-PRODUCTIVE
A UNEI ÎNTREPRINDERI DE TRANSPORT AUTO

(Rezumat)

Se examinează efectele proiectelor de dezvoltare a unei întreprinderi și se definesc direcțiile principale de dezvoltare a bazei tehnico-productive a unei întreprinderi de transport auto.