# DEVELOPMENT OF INNOVATIVE PROGRAMS

The development of new types of products, the creation of more advanced functional and production systems, the use of new tools in enterprise management - all these are necessary conditions to maintain a high level of production competitiveness. Innovation is the basis for the survival and development of the modern economy. It is a process of commercialization and implementation of new ideas and developments leading to qualitative changes in technology, production, management, etc.

In terms of technology and applications, the field of information processing is a dynamic and rapidly changing field. Therefore, informatization as a branch of human activity is innovative in itself, which requires appropriate management. In addition, the use of modern IT in the enterprise management system represents an innovation in the field of general management, since managers have the opportunity to apply new methodologies, approaches, methods and tools in the preparation and adoption of managerial decisions. In order to make the opportunities that open up useful for the enterprise, the introduction and expansion of the field of informatization should be recognized as an area of innovation and, as a result, a function of particular importance for information management.

The intensive development of IT and IS, as well as the emergence of new organizations and units in the field of information processing require constant innovation in the interests of enterprise management. The willingness to innovate in this area is becoming a clear and important component of the culture of production and entrepreneurship in general.

Together with there, the introduction of new IT, especially in long-standing and successfully operating enterprises, can cause some resistance. Objectively, this is due to the fact that any system seeks self-preservation, that is, it is quite conservative and rejects any serious changes. At the subjective level, that is, at the level of an individual worker, a number of reasons explain resistance to changes. Firstly, the introduction of a new one may require the employee to increase the level of knowledge and acquire new skills, which is associated with additional efforts (usually not paid) beyond the usual amount of work performed. Secondly,

the introduction of a new one, as a rule, implies the replacement of manual labor with machine labor - hence the fear of losing one's job. Thirdly, large-scale innovations, as a rule, require large investments, which can lead to savings on other cost items (for example, to reduce the wage fund or bonus fund). In these conditions, employees quite restrained perceive often even obvious improvements, and their implementation runs into many, often-artificial barriers, which, as a result, can lead to the failure of innovation.

For the successful implementation of innovations in the field of informatization at the enterprise, it is necessary to rely on the following principles.

*Principle 1*. The management system adopted by the enterprise and the implemented IT should be conceptually consistent with each other.

*Principle 2.* The introduction of new IT and IS in the enterprise should provide additional motivation (both internal and external) for employees to efficiently and quickly master them.

*Principle 3.* Users (functional workers and personnel in the field of informatization) should actively participate in the processes of creation, implementation and development of IT and IS.

*Principle 4.* The introduction of new IT and IS requires improving the methods of structuring and supporting communications between employees of functional services of the enterprise and personnel in the field of informatization.

A key factor in the success of information management in an enterprise may be its ability to identify promising areas in all areas of information processing and transform them into innovative projects. Each such project should be built in such a way that its implementation is aimed at achieving a given goal within a specified period using the resources allocated for this.

The implementation of any projects will differ significantly from the current production activities. First of all, this is due to the fact that project activities do not involve obtaining current benefits. As a rule, the costs necessary for the development and implementation of the project pay off after some time. And, in addition, the benefits of implementing a specific project (especially if it is a large project affecting various areas of the enterprise), it is often difficult to distinguish from the overall success of the enterprise as a whole. In connection with the above importance of project management in the field of informatization, a number of concepts should be substantiated.

*A project* is the creation and / or implementation of something new, involving the implementation of a set of works to achieve a specific goal while limiting the allocated resources (material, time, etc.).

*Project management* is a combination of means and functions of planning, organization, motivation and control when performing work leading to the implementation of the project.

*The project structure* is a temporary organization created specifically to manage project work.

*Project manager* - a person (employee of this company or from the outside), directly managing the work on the project, and responsible for obtaining the desired result.

As a rule, projects in the field of informatization are research, which implies their high complexity, novelty, limited means and time in relation to a specific goal. To develop such projects, it is advisable to create special structural neoplasms in the general structure of enterprise management.

*Innovation Projects Committee (Innovation Committee).* Their main task is to maximally inform all interested parties (developers and consumer units of innovation), identify key points of inconsistency and divergence of interests, and agree on conditions for interaction. The composition of the committee is determined by the nature of the innovation project, but, as a rule, it is the head of the enterprise, the project manager, and heads of interested structural units. Decisions are made by the method of collegial seniority, in which the head of the enterprise has a casting vote.

*Target groups* are temporary creative teams consisting of specialists from various departments of the enterprise, created to plan and implement an innovative project.

*Internal innovation projects.* Their activities are determined by order of the head of the enterprise, which indicates*:*

 purpose and objectives of creating an internal innovation project;  members of the project;

 distribution of time of each of the project members between current production activities and work in an innovative project;

 deadlines for the implementation of the innovation project (minimum and maximum);

 project completion criteria and key success indicators;  incentive measures for project team members.

Internal venture projects are the allocation of a special group of specialists and line managers for the implementation of integrated innovation. In contrast to the previous form, where specialists work on a part-time investment project, in a venture project they are sent to the project manager for the duration of its implementation. The venture project is also executed by order of the head of the enterprise, where in addition to the above are determined:

 the main stages of the development and implementation of the project;  the amount of funding for the project as a whole and for individual

stages;





results.

forms and methods of reporting during the project and at its completion; forms of personal responsibility of venture project members for its

*Internal venture* capital units are an independent unit in the enterprise management structure. The creation of such a unit is formalized by orders on

the reorganization (improvement) of the enterprise management structure, which should indicate:

 the goal of creating a venture unit;  head of Venture Division

 property secured for use by the venture unit;

 the amount of working capital allocated to the venture unit.

In addition, provisions should be developed for the venture units that determine its rights and responsibilities, a motivation system for the unit’s personnel, a planning system, etc.

In all the above-mentioned organizational forms for the management of an innovative project (except for the innovation Committee) in relation to the field of Informatization, it is advisable to appoint a chief programmer as the project Manager. In addition, the innovation group may include:

 assistant project Manager-adviser on key project issues and Deputy project Manager;

 project Manager-performs all project management functions (logistics, personnel, Finance, calculations, deadlines);

 developer of tools-solves the problems of designing programs, procedures and public libraries;

 linguist-supervises the programming languages used and compilers used, designs complex code sequences and program constructs;

 tester – carries out the testing of the designed software.

In the technical task for design in the field of Informatization it is necessary to reflect the following:

 the area of knowledge and technologies in which Informatization will be

applied;



at solving;

the type of tasks (research, applied) that the innovative project is aimed

 circle and number of users of the future product;

 approaches and methods to be used in solving project tasks;

 calendar plan for all stages of the project, taking into account time limits,  accurate description of project results, completion criteria, and key success indicators;

 current state of IT and IS operating at the enterprise, availability of analogues;

 availability of licensed software and information tools from the project developers;

 the main technological characteristics of the innovative product (the required amount of RAM, hardware and operating systems, software, etc.);

 a list of technological tools that must be additionally purchased for the successful implementation of the project;

 the main functional characteristics of the innovative product (data sources, number of output forms, number of records or objects, ways of presenting documents, etc.);

 additional features (data transmission, communication channels, directions and conditions of development, etc.).

If we consider the introduction (development) of it and IP in the enterprise as an innovative process, it is fundamentally important to choose a developer.

Currently, among the leaders of Russian enterprises, there is an opinion that it is more effective to create developments in the field of Informatization on their own, rather than ordering a third-party contractor. The following arguments are given:



better;



our specialists know the specifics and traditions of a particular company

they are always there and can contact any employee of the company at

any time, whose sphere of activity is affected by this innovation;

 the process of modification and development is simplified, since it will be performed by the developers themselves;

 the cost of developing a project on your own is much lower than buying a ready-made system;

 it is possible to take into account (and, if necessary, correct) all the consequences of the implemented Informatization, both for individual jobs and for the enterprise management system as a whole.

At the same time, it should be borne in mind that developments in the field of Informatization is a special science – intensive sphere and not every enterprise is able to form a team of professional system programmers and analysts who have experience in such developments. Therefore, the choice of the project development option largely determines the effect of its implementation.

**Costs in the field of Informatization** (especially for expensive high- efficiency IS) are usually very significant investments. Nevertheless, such is-an integral part of the equipment of a competitive enterprise. Therefore, the problem of accounting and analysis of costs for the acquisition and maintenance of IT and IS occupies a significant part of the enterprise economy.

It is logical to start calculating and analyzing costs from the stage of acquiring IT or IS. This cost item is largely determined by the company's acquisition policy, as well as the opportunities of an increasingly developing market for some it, IS and individual technological elements, where various forms of payment for a very wide range of products and services have become possible. At the same time, manufacturers of Informatization tools are increasingly going to soften the terms of payment for their products in order to strengthen ties with consumers.

In these conditions, the tasks of information management include, first of all, justification of the choice between different forms of capital investment in the field

of Informatization-between the acquisition ofIT and IS, their lease or payment on the basis of a leasing agreement.

Despite the fact that depending on the chosen form of acquisition, the amount of capital investment will differ significantly, its value cannot be indicative in the field of Informatization. In some cases, the *purchase price* is incomparably small compared to the cost of operating information technology. In this regard, it is more appropriate to use such an indicator as the *cost of ownership* – the sum of the costs of operation and ensuring the efficiency of information technology. This indicator can be determined by calculating the following cost items:

 spare parts and semiproduct;

 salaries (basic and additional) of employees in the field of Informatization;

 contributions to social funds;

 depreciation of fixed assets related to the field of Informatization (technical and software tools, production areas);

 production services of third-party organizations (services of telecommunications companies; support, support, consultations of it specialists; maintenance, repair, modernization, etc.);

 energy for technological purposes;  overhead;

 other expenses (business trips, purchase of special literature, etc.).

It is clear that the given list of expenses is rather conditional and each enterprise calculates expenses in its own way (within the limits allowed by the law on accounting). The task in this case was to show the diversity and approximate amount of costs associated with the use of information technology. In particular, the amount of costs can be concluded at least from the comparison of the purchase price of a personal computer of an ordinary configuration and the average monthly salary of an employee in the field of information.

The logical conclusion of the analysis of costs in the field of Informatization is their comparison with the result obtained due to them, i.e. the calculation of performance indicators.

In general, decisions on the effectiveness of the use of Informatization tools are associated with determining the share of their participation in the value of the enterprise's products. This task is not simple in itself, but with regard to information resources and even more so. Nevertheless, at least an approximate assessment of the contribution of the sphere of Informatization to the results of the enterprise should be obtained, since the costs of information resources in many types of products and services are becoming more and more noticeable.

Due to the increasing importance of this problem and the ambiguity of methodological tools for its solution, the issues of evaluating the effectiveness of the use of information tools will be considered in a separate Chapter of this tutorial.