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AUTOMATION OF TECHNICAL AND ECONOMIC CALCULATIONS: FUNCTIONS, ADVANTAGES, EFFECTS

The process of technical and economic planning at an industrial enterprise occupies one of the central places in the management of the enterprise, as it determines the behavior of the management system for a certain period of time. Therefore, the complex of tasks of technical and economic calculations occupies a leading position due to the fact that the results of its solution largely determine the production and economic activities of the enterprise [1-11].

For the effective implementation of the processes of automation of technical and economic calculations, it is necessary first of all to determine the main functions of this process (*F*), which can be reduced to the following proposals.

Function F1. Automation of the collection of the necessary primary data from various sources (information measuring systems of the enterprise), the organization of manual entry of missing data (if necessary)..

Function F2. Formation of a single data warehouse, which includes primary data obtained from information measuring systems, intermediate and final results of calculations, regardless of the calculation period.

Function F3. Ensuring the reliability of settlement information.

Function F4. Automation of the calculation of actual, nominal, normative and forecast technical and economic indicators, at the pace of the process of receiving data from the information and measuring systems of the station, in accordance with the established regulatory and technical documents and methods.

Function F5. Formation, adjustment, adjustment of calculation models

Function F6. Carrying out operational calculations and calculations for an arbitrary period.

Function F7. Calculation of technical and economic indicators of equipment operation at the enterprise, taking into account planned tasks and repair schedules for the subsequent analysis of the efficiency, reliability and efficiency of the equipment.

Function F8. Automation of the formation process and prompt submission of corporate reporting to management.

The main problem in solving this set of problems is to link the need for products of this production with production capabilities and resources determined on the basis of the selected criterion of optimality. The tasks of improving and transforming production

at present are the transition to economically justified planning solutions based on the use of economic and mathematical methods and computer facilities. This can give the enterprise a set of advantages (*P*), the essence of which can be reduced to the following proposals.

Advantage of P1. High speed of calculations.

Advantage of P2. 2-level corporate system: branch – directorate.

Advantage P3. Control of data on branches from the directorate.

Advantage P4. User-friendly, intuitive interface.

Advantage P5. Arbitrary discreteness of calculation, possibility.

Advantage of P6. making calculations at the pace of the data acquisition process.

Advantage of P7. Possibility of scenario, comparative analysis.

Advantage of P8. Advanced access and security system.

Advantage of P9. Automatic updating of client applications.

The economic effect (*E*) from the introduction of automation tools can only be indirect, since the implemented automation tools are not a direct source of income, but are either an auxiliary means of organizing profit or help to minimize costs. We have identified the sources of the economic effect of automation of the tasks of technical and economic calculations, which can be reduced to the following positions.

Effect E1. Reduction of unit costs and unit losses due to a more effective management system.

Effect E2. Increasing control over the activities of the station by ensuring that the management directorate has access to primary data and calculation indicators.

Effect E3. Reduction of losses and costs by minimizing the impact of the "human factor".

Effect E4. Increase the speed and discreteness of calculations

Effect E5. Improving the efficiency of providing information: financial department, accounting, repair planning department, management, etc.

Effect E6. Reduction of costs associated with the training of new employees: the system stores a customized model for calculating the technical and economic indicators of the enterprise, provides tools that facilitate navigation within the calculation model.

Effect E7. Reducing the burden on personnel due to the digitalization of business processes.

The formation of a single information space is an urgent task for any enterprise that seriously and purposefully approaches the automation of technical and economic calculations.

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