

### WAYS TO IMPROVE MANAGEMENT EFFICIENCY BY MODERNIZING THE OPERATION OF "UNIFIED DISPATCH CENTER" JSC "UZBEKISTAN RAILWAYS" IN THE TRANSPORT COMMUNICATIONS SYSTEM

G'oyibnazarov Xayitboy To'lqinovich Master of the Graduate School of Business and Entrepreneurship under the Ministry of Economy and Finance of the Republic of Uzbekistan

#### Abstract

In this article, the main operative department of "Uzbekistan Railways" joint-stock company providing transportation processes, the "Unit Dispatching Center", aims to further develop the railway transport network and provide the system with modern equipment and technology, to improve the quality of service and management processes to the level of world standards. Scientifically based proposals and recommendations have been developed.

**Keywords**: railway, unified dispatch center, train dispatcher, train schedule, operational department, operational management, modernization.

"Unified Dispatch Center", the main operational department of "Uzbekistan Railways" joint-stock company, which provides transportation processes, in connection with the implementation of the Decree of the President of the Republic of Uzbekistan "On Measures to De-monopoly and Equitization of Railway Transport" No. PF-2815 dated March 2, 2001, i.e. "March 3 of the Cabinet of Ministers of the Republic of Uzbekistan in order to improve the management system of the state-joint-stock company "Uzbekistan Railways", to deepen the processes of privatization of railway transport enterprises and organizations, to develop network enterprises, to attract investments, including foreign investments, for re-equipment and modernization with modern equipment. It was established on the basis of the order of the chairman of the company No. 124-N of June 19, 2001 regarding the implementation of Annex 2 of the decision No. 108 of 2001 "On improving the organization of the management of the state joint-stock company "Uzbekistan Railways".

Train dispatchers in the Unified Dispatching Center are limited in their ability to organize train movement using modern automated workflows, but currently, in the context of the rapid development of all sectors, by providing effective train management in the center with modern automated control techniques, we can achieve



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automated control of train movement in the railway system and in its future activities, the economic development of our country by further strengthening the stability and improving the quality of the provided railway services, we need to ensure that the railway system and the economy of our country serve more effectively.

"Uniform Dispatching Center" organizes operational management of all rolling stock and trains within the territory of "Uzbekistan Railways" joint-stock company, and the following are its main tasks.

• ensure safe movement of passenger and freight trains based on the set schedule;

• planning the movement of local and transit cargo and passenger trains and managing and controlling the use of railways based on the plan;

• organizing and controlling the work of all the stations on the site and the work on the implementation of the train schedule;

• it is possible to emphasize the pre-determination of special free times for railway repair, etc.;

For quality organization and management of these works, the center is equipped with modern management techniques and technologies, management programs and telecommunication equipment.

The unified dispatch center performs the following tasks and functions during its activity:

• organization, management and control of safe movement of all trains based on the set schedule;

• controlling the work of all the stations on the site, according to the execution of the train schedule;

• planning of movement of local and transit cargo and passenger trains;

• it is possible to highlight special free times for railway maintenance and security, etc.;

Today's urgent tasks are to simplify the processes of managing all moving trains and to optimize and modernize the management processes.

The coordination of the work of all participants in the transportation process, the nonstop movement of trains according to the implemented schedule depends on the professional knowledge, skills and qualifications of the train dispatcher. In this case, all participants of the transportation process are operationally subordinated to him.

The job of the dispatcher is to collect and process information for operational planning or correction of previous plans, transmit orders, carry out and control their execution.



In such conditions, practical experience, level of professional knowledge, skills of the train dispatcher, ability to quickly find a target in a situation, and determination to take optimal management actions are of great importance in increasing traffic safety. The regulatory and legal basis for the modernization of the operation of the unified dispatch center is not the legal documents listed above, but the innovative changes and the use of new technologies in each system will lead to a corresponding change in the procedure and legal regulations related to it.

As we know, no field has completely stopped developing. As an example of this idea, there are a number of devices and structures in the railway system for the organization of safe movement of trains, which have become more modern over time, and now a single dispatch center widely supports them in the process of operational management of trains from each of them.

A number of automation and signal devices are widely used to ensure the safe movement of trains in the unified dispatching center. Some of them include the following:

- □ Train movement through automatic blocking;
- □ Movement of trains through semi-automatic blocking;
- □ Movement of trains in electric railway system;
- □ Train movement through telephone means;
- □ DTs, that is, train movement based on centralized dispatch management;

Procedures for the operation of automatic and safety devices that ensure this safety in normal and malfunctioning conditions and ensuring the safe movement of trains are specified in the guidelines for train movement and shunting on the railways of Uzbekistan.



Figure 1. Interdependence sequence in automated train traffic control



On the basis of the project presented in this picture, a GPS platform system has been launched those tracks and records the movement of the high-speed passenger train "Afrosiyob" owned by JSC "Uzbekistan temir yollari" and most of the electric locomotives of the society. The programmers who developed this program note that the program is not only online monitoring, but also a program that combines the ability to reshape the database depending on the direction of the railway system, including the train dispatcher, loading and unloading, document processing, monitoring the activities of on-site monitoring staff and many other opportunities. idea is being promoted. If we implement these projects in the future, the possibility of saving financial funds paid for software purchased from foreign countries at the expense of large financial funds, and besides, it will be a great impetus for the formation of the elements of the digital economy and the practical application of information technologies in the railway system.

In the future, in the development of the signs of the digital economy in the activities of the joint-stock company "Uzbekistan Railways" and the creation of a modern interconnected telecommunication infrastructure, it is necessary to increase the number of optical fiber cables, main communication networks and special mobile transmission antenna devices, increase the speed of the Internet, and also expand the data transmission network via satellite. and should be developed.

Among the main directions of innovative development of "Uzbekistan Railways" joint stock company, the following should be listed:

- development and strategic development of the national program of the railway transport management system in the direction of intellectual digital economy;

- processes based on modern digital telecommunications, in particular satellite technologies, special information exchange and management should be expanded in the field;

- establishment of high-speed Internet service and its use in high-speed passenger trains;

- in the development of the national logistics infrastructure and transit corridors, i.e., it is necessary to implement systematic strategic marketing activities that respond to the development of international inter-sectoral transport corridors (East-West, North-South) and to develop the capacity of transport in the direction of transit capacity as a source of income for the main cargo routes;

- it is necessary to develop the container transport network, which is developing in the transportation of goods in railway wagons, and the processes of automating data exchange through modern information technologies in the complex networks related to these works.



In order to increase the role of innovative technologies in the development of the unified dispatching center in JSC "Uzbekistan Railways", we need to pay attention to its positive results and conditions that cause us to gain efficiency in the system of competition of general railway transport. We can list some of them:

- increasing competition in the transport market and its rapidly changing environment, i.e. establishing mutual trust between customers and employees and increasing the quality of provided transport services;

- taking into account the effects of internal and external factors in the management of railway transport and carrying out real work analyses;

- current monitoring of its practical implementation in developing the marketing environment of railway transport and improving the quality of its services;

- it is necessary to improve the principle of "door-to-door" delivery of goods and the directions for their safe delivery to their destination on time;

- it is necessary to automate the monitoring of railway transport from the main control points in the "Unit Dispatching Center" with the help of modern information technologies and to prevent the waiting times of freight wagons at railway stations;

- it is necessary to simplify and develop the processes of inter-network exchange in the dispatch center with the elements of the digital economy and the main database in its management;

Conclusions and suggestions

1. Learning and knowing the automation, methodology and practical knowledge skills used in the organization of train movement in modern management information technology-equipped and modernized workplaces, the experience of different foreign countries and their effective train management, which will make the work of the unified dispatching center more efficient and effective. brings

2. Based on the extensive development of modern information technologies, elements of digital economy and innovative transport management system in the railway sector, the formation of intelligent dispatching train management system and practical skills in the system, automatic support for decision-making in the process of effective train movement management and a fully automated database it is necessary to develop the development of systems

3. To increase the role of innovative technologies in the strategic development of the information and data exchange on the Internet of the joint-stock company "Uzbekistan Railways" and to formulate the information strategy of railway transport, to introduce it to the public practice of the society and to provide high-quality railway service to the customers of railway transport, in which passengers and cargo we need





to form and develop the provision of all the necessary data bases related to transportation.

4. In the development of the national railway logistics infrastructure and transit corridors, the implementation of reform works on the transit cargo throughput on the systematic strategic railway that meets the requirements of the railways of the international inter-sectoral railway transport corridors and the main transit cargo flows in the local railway transport and the source of income in these directions. to increase the share, it is necessary to develop the capacity of transit capacity.

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