

Annex 3. Informatization and digitalization

Automation and digitalization of information technologies in the Fund is aimed at introducing advanced technologies to optimize manual processes and transfer information into electronic format. This contributes to a significant increase in efficiency, accuracy and productivity, which, in turn, improves the performance of employees of the Fund and the group of companies of Samruk-Kazyna JSC.

WHAT'S DONE IN 2023

The list of priority activities in the reporting period includes the following priority activities:

Modernization of the Fund's external website — SK.kz

As part of the task of modernizing the external website, a new design for the Fund's sk.kz website was developed, which is based on an innovative content management system. This represents a significant step in modernization, allowing to separate content from the way of display and provide more flexible resource management. The site is currently undergoing an internal discussion stage to gather feedback from the Fund's structural units, which is key to guaranteeing the integrity and relevance of the information published. The final stage will be the migration of the site to a productive server with an updated and more modern platform that meets current requirements and trends in web development.

Implementation of "Horizontal Monitoring Platform" software

The work on implementation of the software "Horizontal Monitoring Platform" was carried out in the Fund. The platform was introduced to ensure enhanced information interaction between the Fund and the State Revenue Committee of the Ministry of Finance of the Republic of Kazakhstan within the framework of tax control processes in the horizontal monitoring mode for corporate income tax and value added tax.

Geo-reserving

As part of the improvement of the risk management system in case of emergencies, the approach of applying the "geo-redundancy" method was chosen to ensure the protection of critical data and information systems. In 2023, the Fund approved the Fund's IT Business Continuity and Critical Resources Recovery Plan, which approved the list of critical IT services for the Company. To ensure the "geo-redundancy" procedure, the Fund entered a contract to lease cloud computing capacity in an alternative geographically remote data center (data center). In addition, the Fund carries out annual testing of this service.

Carrying out activities to improve the maturity of IT competencies of the employees of the Fund and portfolio companies

In February 2023, a training program on the use of AI (artificial intelligence) in daily work was launched for employees of the Fund and portfolio companies. The aim of the training was not only to increase work efficiency with the latest technology, but also to improve information hygiene when working with large language models and to facilitate mastering this revolutionary technology. The training was accompanied by active feedback gathering and individual face-to-face consultations, which allowed for a deeper understanding of the needs and obstacles faced by employees, as well as customization of the training process to achieve the best results.

Development of Large Language Models (LLM, AI and ML)

As part of its efforts to improve internal big data analytics, the Fund has worked to explore and implement scenarios for using large language models (LLM), such as OpenAI's GPT-4 and open-source models. This work included developing techniques to anonymize data when external models are plugged in to ensure security and compliance with privacy standards. Many open-source neural models were tested to optimize information processing, improve decision making. In 2024, it is planned to implement the selected LLM use cases within the Fund's back end on the basis of Secure Cloud Native Infrastructure, which will improve the efficiency and security of data processing.

Development of analytics based on data from information and pricing agencies, exchanges, etc.

In 2023, an information dashboard (dashboard) was developed to provide real-time data on the Fund's PC quotations through integration with the Kazakhstan Stock Exchange (KASE). In 2024, it is planned to expand the range of data available from exchange sources.

Scalable infrastructure for digitalization and collaboration across the group of companies

In 2023, the challenge to create a scalable infrastructure for digitalization and improved collaboration within the group of companies was initiated. Aiming to move from classic legacy infrastructure to Secure Cloud Native Infrastructure, selected open-source solutions to achieve the goals.

Full scaling for use by Samruk-Kazyna JSC is planned after completion of customization.

Interactive dashboards to display product date

In 2023, a comprehensive database was developed to create interactive dashboards that combine data from exchanges and other sources. These dashboards are designed to support informed decision-making, improve analysis of market information, and provide access to the latest trends. Key achievements in the reporting year:

1. Development of two pilot dashboards based on open-source technologies demonstrating data visualization capabilities.
2. Presenting the experience of dashboarding labor safety data to the Ministry of Labor and Social Protection of the Population and receiving positive feedback from the government agency.
3. Practical application of dashboard in the occupational health and safety sector for daily analysis.

Plans for 2024 include the creation of additional dashboards to support data-driven decision-making. These measures aim to strengthen decision-making by improving access to relevant information and analytics to support more responsive and informed management.