Eurasian Resources Group Develops Scalable Industrial AI Solutions in Kazakhstan

Eurasian Resources Group (ERG), a global metals and mining company headquartered in Luxembourg, continues to roll out its business digitalisation programme, strengthening IT infrastructure and connectivity and prioritizing the development of proprietary AI solutions in-house. The Group puts a strong emphasis on implementing and scaling such solutions to boost operational efficiency, strengthen industrial safety and streamline the management of core business processes.

Shukhrat Ibragimov, ERG's CEO and Chairman of the Board of Directors, said: *"In Kazakhstan, 2026 has been officially declared the Year of Digitalisation and AI. At ERG, we are actively developing AI technologies across three key areas: computer vision, robotic and autonomous equipment, and generative AI. We have already achieved tangible results: in 2025, ERG's digital tools and technologies delivered an economic impact of more than US$ 111 million. All key digital solutions are developed in-house by our BTS team. Our specialists build and implement digitalisation systems themselves. This also helps increase the share of local content."*

Business & Technology Services (BTS), ERG's dedicated IT company, implements digital tools across production sites, including automation systems and artificial intelligence (AI) solutions. BTS provides IT services for both office employees and operating personnel in several regions of Kazakhstan. It delivers 24/7 support for nine major industrial enterprises and around 60,000 users. BTS employs over 1,000 specialists and has delivered more than 30 major projects for ERG over the years.

"For ERG, the digitalisation of production and infrastructure is a comprehensive programme aimed at further improving efficiency and safety and driving process automation. AI helps us calculate unit costs more accurately, identify opportunities, and build optimal development scenarios, making mine planning more precise and effective. ERG embeds digital technologies and AI into all of its major projects. These include the 2-million-tonne-per-year HBI production plant, the construction of a new 5-million-tonne pelletising plant at SSGPO, upgrades to calcination furnaces at the aluminium smelter, the ferroalloy gas recycling power plant, and gallium production, where we aim to become the world's second largest producer after China," emphasised **Shukhrat Ibragimov.**

Yerken Shnazbayev, Deputy CEO of ERG Kazakhstan for AI and Digitalisation, said: *"We are consistently driving industrial transformation by leveraging our own digital solutions. Today, they already deliver measurable economic value for the Group. Solutions from BTS, ranging from ERG Manufacturing Execution System and digital repairs management to computer vision and ERG Rail, are already in use in production, are being scaled across the Group and together form a single digital management framework for ERG's industrial assets."*

Digital operations management

ERG MES (Manufacturing Execution System) is a digital platform that integrates production and business processes. The solution enables real-time tracking of product output, process parameters, including losses, and equipment downtime.

ERG MES has already been adopted at Aktobe and Aksu Ferroalloys Plants, Kazakhstan Aluminium Smelter and Donskoy GOK. It is currently being rolled out at SSGPO.

The system incorporates ERG's digital assistant, MES Alina, which displays the relevant reports and screens and retrieves equipment data in response to voice or text queries. This speeds up the response to any deviations in production processes and improves operator efficiency.

Digital twin of a workshop

The upgraded control centre at Aktobe Ferroalloys Plant uses a digital twin of Smelting Shop No. 4. The new system displays production processes in real time. This enables process engineers to monitor the processes on a single screen and quickly perform a virtual walkthrough inspection.

Computer vision (CV): applied AI for industry

ERG is rolling out over 10 AI-powered initiatives across its production sites, spanning production, energy, logistics, and industrial safety.

CV solutions are used to monitor conveyor utilisation and product quality, digitise geological data, improve safety in open-pit mining, and help prevent accidents. All projects are designed to deliver practical outcomes, minimising risks, reducing downtime and strengthening operational discipline.

Digitalisation of repairs: a single management loop

To improve maintenance and repair efficiency, BTS has developed two services – Operational Planning and Mobile MRO (“TORO”). The solutions comprise a single digital system covering defect reporting, equipment inspections and shift handovers.

Repairs are planned using the qollab corporate platform, where repair teams are assigned and work orders are created. Schedules and staff workload are visible in advance. Data are automatically transferred to SAP and are used by repair specialists on site.

Using a mobile app, employees can report defects on the spot with photos and a brief description. All information is captured in the system immediately, building a complete inspection and repair history. Managers gain clear, real-time visibility into equipment status and work progress.

ERG Rail: digital railcar fleet management

ERG Rail (Dispatch) is an in-house solution developed by BTS to manage railcar fleets at industrial sites. Using computer vision and built-in AI, it tracks the movement and location of railcars across a site in real time.

The system is currently in use at Aksu Ferroalloys Plant, where up to 900 railcars are on site every day. Integrated with the qollab platform, Dispatch provides employees with an interactive track map, electronic trip sheets, reports and notifications, all accessible in a single click.

The solution’s key advantage is its cost-effectiveness. Unlike conventional traffic light control systems, which require significant capital expenditure, Dispatch relies on program logic, AI and CV mechanisms. As a result, it is significantly more cost-effective and can also be scaled quicker.