

## **Latin American miners digital journey starts with Finnish ZYFRA IIoT and AI solutions developer**

Finnish digital solutions vendor ZYFRA Group has opened an arm of its subsidiary VIST. The company is an industrial leader in development and implementation of information technologies for digital mining. Together, ZYFRA Group and VIST will initiate a business tour as the primary step to fulfill the technological demand of the Region.

On January 28<sup>th</sup>, CEO of ZYFRA Group Igor Bogachev and Project Director of VIST (ZYFRA's subsidiary) Mikhail Makeev will arrive to Chile and Peru for a two week visit. They will visit numerous mining companies to offer digital cutting edge solutions and autonomous vehicles for industrial majors of the Region.

“The heart and soul of the world's copper extraction, Chile and Peru, are being shaken by the latest technology developments. Within the region, the IT and Operations departments are ready to change the status quo of the industry. The value proposition of our ZYFRA and VIST solutions will increase the levels of productivity and safety to record levels not seen in the region yet,” – **said Mario Rabines, VIST LATAM Director**

Latin America Center of the Telecommunication Studies report shows that though for the last 14 years work productivity in the LATAM region is growing, the total factor productivity is negative -0,48. It shows as well that the contribution of digitalization to GDP growth is a very significant factor of productivity. The escalation of digitalization index by 1% results in 0,32% of total factor productivity.

Chile's economy relies heavily on exports of copper (50 percent of total exports). Exports from Chile declined 5.5 percent year-on-year to USD 6537 million in December 2018, following a 3.5 percent fall in the previous month, as sales continued to be pushed down by mining products (-12.6% vs -11.4%), namely copper (-13.6% vs -12.6%) and iron (-63.1% vs -1.0%). The state of Chile has launched Transforma Industrias Inteligentes to boost industrial digitalization and so reduce costs of production. Chilean universities are deeply involved into innovations in mining investigations. There are already some digital solutions in various sectors of mining industry.

Currently the most advanced miners are already performing a number of processes involving cutting edge technology, such as drilling and transportation of raw materials with the use of robotics, while in 2019 the majority of industry players may start using new technologies on an industrial scale. Analysts of Technavio predict the growth of the robotics market in the mining industry by an average of 27.01% by 2022.

Peru in its turn has finished three long-term mining megaprojects this year. They are Quellaveco, Mina Justa and expansion of Toromocho, giving a boost to the Peruvian economy. According to El Comercio Report (<https://elcomercio.pe/economia/dia-1/digitalizacion-camino-reducir-co2-noticia-595089>) in the terms of digitalization Peru is very conservative. The Peruvian mineries are currently not running any pilot projects in AI. If world mining companies have made it to 3rd-5th level of automatization and digitalization, Peru is estimated to stay on the 1-2 level.

At the end of last year Finnish digital solutions vendor ZYFRA has reached \$30 mln revenue facilitating industrial manufacturers in Europe and Asia with AI and IoT based solutions as well as autonomous vehicles. At the end of 2018, the company announced its plans to enter the markets of Latin America as early as 2019.

On top of international expansion, the company is eager to complete its “Intelligent mine” project – a complex solution for unmanned surface mining with application of self-driving vehicles. VIST is planning to spend a material share of investment provided by ZYFRA to accelerate its R&D projects including self-driving vehicles, autonomous surface mining machines (robots) and appliances, broader IoT and AI based solutions application as well as predictive analytics.

By now ZYFRA and its subsidiary VIST offers the global market its Autonomous system for drills and Autonomous and tele-operated system for mining vehicles as well as selfdriving trucks and loaders based on BelAZ. Autonomous drilling can bring 16% of productivity increase, while autonomous guidance from hole to hole (based on the electronic design imported from planning system) brings 18% of productivity increase. Tele-operated system for mining vehicles: Autonomous trucks, Autonomous drills, Assisted smart remote control, Loaders, dozers, shovels, graders.

“The significant drop in the price of many commodities is what forcing leading mining companies to digitalize. The mining industry is already rushing into future, commonly implementing the Internet of Things in wireless mining automation and connected mines projects, in order to cut costs and speed up operations. According to PwC mining report, the overall market capitilization of mining industry in 2018 reached \$926bn, rising 30% due to a commodities price recovery. Acumen Research and Consulting (ARC) estimates that the global mining equipment market will reach \$ 285.5 billion worldwide by 2026,” said Mr. Igor Bogachev, CEO of ZYFRA Group.

ZYFRA, founded in November 2017, currently operates in Finland, China, Russia, Bulgaria, and India, and its platform connected over 7,000 CNC machines across the countries. At the end of 2018, more than 200 production facilities have been equipped with its products.