

The breakthrough technology for digital transformation of mining business

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ABSTRACT

Within last few years, the concept of digital transformation of mining business made its way from futuristic dreams to the practical implementation. Although not too many mining companies already reorganized their way of operations towards digitalization, they mostly realize that the process of digitalization is unavoidable.

The technology and the solution suggested by **SightPower Inc.** suggests well-defined clean and smooth way of digital transformation for any mining business.

SightPower globally provides digital transformation of a mine site and integration of all mining operations under the trademark **Digital Mine™**. The concept of digital transformation assumes implementation of **Digital Twin**: dynamic data model of a mine. Digital Twin reflects in a real time any developments and changes which are being happened to a mine. The concept of **Digital Mine** assumes integration into unified informational space data provided by monitoring, IoT and fleet management systems as well as simulation and modelling systems which are being used. Digital Mine allows the client to make effective business decisions by obtaining uninterrupted access to the distributed newly collected and historical mine spatial data regardless of its volume and actual location of data servers. **Digital Mine™** concept facilitates to optimize mine-to-mill operations providing operational transparency and effective microplanning.

Implementation of **Digital Mine™** concept is based on **Mine Advisor™** platform which includes suite of instruments for geological modeling, mine design and planning, automated surveying with laser-based technologies, and informational support of mineshaft lifecycle, including ice-wall simulation models for mineshafts which are being built, and automated mineshaft inspection systems. SightPower suggests best-in-class visualization engine with practically unlimited capabilities to combine spatial data of any type and any size (geological, CAD, GIS, seismic etc.) which are enhanced by unique innovative mixed and augmented reality features developed by our partner company **Arvizio Inc.**