



## How could 5G adoption impact mining?

The future of mining

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The mining industry continues to face multiple complex challenges, from uncertainty across geopolitical landscape to the disruption of digital economy, resulting in increased pressure as productivity in operation needs to improve.

To capitalise on digital revolution, mining companies could benefit from **5G be the catalyst for this transformation!**



**Up to 25% increase ore production**



**Up to 40% drill rig operations**



**Up to 20% energy savings**

5G networks might have the potential to provide **opportunities to the mining industry such as automation and remote operations** due to **improved coverage, lower latency and higher reliability** at every stage of its business operations.

## Creating safer, more efficient and productive mines could be achieved through

### Automation

Provides a **consistent and efficient operation** of equipment while providing safer working conditions

### Wireless broadband

In-pit broadband mobility enables to **communicate** and access business data **from anywhere at any time**

### Data analytics

Analysing equipment conditions for **preventive maintenance**

Several 5G related use cases in the mining industry are **in trials or have been deployed** around the world, enabling mining companies to improve operations.



- Up to 60 Wi-Fi APs will be **replaceable with a single "solution"**
- Already completed **eight underground and open pit mining deployments**



- Drilling and blasting using automation shows **an annual EUR 2.5 million net saving**
- Increase of **2,000 hours** of drill rig operation
- **~10 percent saving in fuel consumption** corresponds to a **reduction of 9,400 metric tons of CO2**



- Trial on the potential of 5G as part of an **autonomous haulage system**
- Robotic dump trucks enabled an **increase in freight transport production rate up to 30%**

## How can Deloitte help?

Deloitte translate business and industry needs into technical requirements delivering value added end-to-end 5G solutions that lead to **meaningful business outcomes.**



### IDEATE AND PRIORITIZE

Select the areas to be improved with 5G use cases, ideating, identifying and prioritizing the top 5G use case opportunities



### DEVELOP THE BUSINESS CASE

Formulate the operational benefits of the 5G use case(s) defined and associated business case value proposition



### DESIGN TECH REQUIREMENTS

Define and design use case technical solution architecture and requirements, considering deployment strategies and application requirements



### BUILD AND EVALUATE

Start with a point of contact (PoC) first to monitor and evaluate the 5G use case(s) performance and then proceed with rollout



### OPERATE AND MAINTAIN

Define overall governance, operating model and procedures to ensure the sustainability in business as usual (BAU)

Sources: Deloitte TMT Predictions 2021, Huawei, IDC, Gartner, The Business Research Company

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