

# BUSINESS CASE

*Optimising safety, efficiency and working conditions in the mining sector through remote operation*

efa  
Industrial Parts & Equipment



*"With a latency of 65ms, our teleoperation solution improves remote control with exceptional responsiveness and accuracy. We aim to demonstrate its potential and collaborate to tailor it to the specific needs of each sector."*

## ◆ The Customer

Our client operates a large materials quarry, managing a varied fleet of heavy machinery: excavators, loaders and dumpers.

## ◆ The Problem

The materials quarrying industry faces major challenges in terms of safety, efficiency and worker well-being. Difficult working conditions, such as exposure to dust, noise and extreme temperatures, increase safety risks and reduce productivity.

## ◆ The Challenge

- **Safety risks:** Operators working in the quarry face potential hazards such as equipment failure, rough terrain and collisions.
- **Difficult working conditions:** Extreme weather conditions, dust and noise can have an impact on operators' health and morale.
- **Operational inefficiencies:** Fatigue and discomfort can lead to slower response times and reduced productivity.
- **Recruitment and retention:** The demanding nature of the work makes it difficult to attract and retain skilled operators.



**Technical expertise**, with a team of 25 engineers



Development of **customised configurations and solutions**



**Specialist in control stations and joysticks** for mobile vehicles and industrial installations



## Advantages of teleoperation

- ◆ Increased efficiency
- ◆ Durability
- ◆ Cost reduction
- ◆ Improving working conditions and safety

### ◆ The Solution

Our teleoperation solution allows operators to control quarry vehicles remotely from an ergonomic and comfortable workstation located in an air-conditioned office. Key features include:

- **Full control station:** Operators can seamlessly control any vehicle in the fleet using joysticks, pedals and advanced multifunction displays.
- **Real-time feedback:** High-definition cameras and sensors provide real-time visual and operational data, ensuring accuracy and safety.
- **Ergonomic workstation:** Operators work from a comfortable chair in a safe, quiet, air-conditioned environment.
- **Scalability:** The system can be adapted to control multiple vehicle types, ensuring flexibility across the fleet.

### ◆ The Result

For material quarries, the adoption of teleoperation technology represents a transformative step towards safer, more efficient and more sustainable operations. By enabling operators to control heavy machinery from a remote and convenient location, our solution addresses key challenges while delivering measurable benefits. This business case demonstrates how our teleoperation solution can help quarry operators like our customer to achieve their goals of improving safety, working conditions and operational efficiency.

