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## CASE STUDY: LESSONS LEARNED WHEN WORKFORCE REDUCTION WAS A FACTOR IN MIGRATING TRUCK DRIVERS TO AUTONOMOUS FLEETS

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**Stakeholder group:** Consultant

**About the mining operation(s) discussed**:
- Large surface mining operation in North America migrating truck drivers to autonomous fleets.

## Roles and Transitions

While transitioning to autonomous fleets, the mining company was having a difficult time transferring truck driver roles and was hoping that natural attrition would help. However, this approach is not working as fast or efficiently as expected.

This transition added redundancy to the current workforce, which meant sending workers to other mines that needed drivers for different types of equipment. With salaries being based on the type of equipment being operated, for some this meant taking a reduced salary or pay cut. For others, the company had to respect the base salaries of the workers and absorb extra costs in wages until natural attrition took place.

## Key Stakeholders

The transition was self-performed by the mining team. Their priority was Proof of Concept (POC) and the eventual deployment of their fleet. They are now realizing that employees are more reluctant to depart willingly and are waiting to see what the next opportunities are.

## Communications and Options

When initial plans were announced to deploy autonomous trucks, early communication set an expectation that automation would not have a significant impact to workforce and would not cost workers jobs.

This messaging was communicated in townhall meetings and through public messaging systems. Since this is a union environment and the fleet has not been fully transitioned, no layoffs have been made. However, moving forward there may be no other option (than to start doing layoffs) given the difficulty to identify enough open positions that can be made available for drivers.

The mining company realized that as autonomous fleets increase, there will not be enough open positions to host all of those who were previously in truck-driving roles. Options are being considered to reduce the workforce that include:
- Acceptance of employees and handling union demands
- Reskilling: Train truck drivers to do other jobs
- Early retirement: Available for a more mature workforce with many years of experience
- Natural attrition: Open positions not backfilled
- Layoffs: This is a last option considered and everything possible will be done to avoid this

## Lessons Learned

- Moving forward, do not promise employment
- Stay ahead of strategy by planning at least one to two years ahead of changes
- Have a strategy for a unionized workforce

## Not an Isolated Challenge

Based on current numbers, the consultancy is seeing that there is a 7:1 ratio; for every seven workers, only one position will be needed in an autonomous environment. This number is based on industry-wide research and is not specific to one operation. In most remote locations and developing countries, the main workforce comes from local workers who may not have completed primary education. This is a big challenge if the intent is to re-train them into technical roles. The problem is that without education, it is difficult for the mining companies to pay employees what they used to make in heavy equipment operation and the difference is significant.

**About the GMG Autonomous Mining Skills Migration Case Study Project**

To achieve the desired operating efficiency and productivity benefits of an autonomous operation, companies require resources with a different skillset from those which are required from the typical mining equipment operator. This project aims to develop case studies from organizations that have successfully implemented autonomous systems to help companies create a workforce that will enable autonomous mining.

Do you have a case study you would like to share? Contact us.

**About GMG**

The Global Mining Guidelines Group (GMG) is a network of representatives from mining companies, original equipment manufacturers (OEMs), original technology manufacturers (OTMs), research organizations, academia, regulatory agencies, consultancies, and industry associations who collaborate to tackle the challenges facing our industry. GMG aims to accelerate the improvement of mining performance, safety, and sustainability by creating guidelines and white papers that address common industry challenges, facilitating collaboration and expanding the industry's knowledge base. GMG also hosts and supports events that bring mining stakeholders together along with external industries to address the industry's challenges, successes, and innovations. Learn more about GMG at https://gmggroup.org/