Summary of
Virtual Forum Series
November 24

What are the Lifecycle Costs and Community Impacts of Autonomous Mining?

During the Autonomous Mining virtual forum, workshop questions focused on the full lifecycle costs for implementing autonomous systems in mining operations, the immediate, ongoing, and future community impacts, as well as potential solutions. The ideas contributed by participants will be sent to the Implementation of Autonomous Systems version 2 GMG project group to complement focus areas for the project's development.

		Immediate	Ongoing	Future
Challenges	**Lifecycle Costs**	- Communications system and server implementation - Compliance with local, national, and international regulations and codes - Effects of climate change on systems operability	- Computer maintenance infrastructure - Training and re-training - Software licensing and upgrades - Increased level of truck maintenance - Sensor repairs and cleaning	- End of life software and hardware replacement - Communications system and server upgrades - Expenditures on autonomous equipment
	Community Impact	- Perception of job losses - Different skills required from workforce - Potential of fewer available jobs - Lack of local expertise - Capacity of local educational institutions to train or retrain workforce	- Less support for local business community due to reduced workforce - Widespread job losses in other industries	- Keeping unions relevant - Relocating jobs away from regional areas - Fewer generational employment opportunities
Solutions		- Make mine standards more rigid - Design new operational procedures - Secure software delivery training - Communications network optimization - Upskilling and training programs for employees	- Planned workforce training and support - Integrate management, operational, and assignment-related software - Designing educational opportunities - Reduce CO_2 emissions in the region	- Supervisor jobs can be performed in urban areas where there is a larger talent pool - Community-based training