

# Mining Industry Forum

## Audience Q&A



Automation Fair®

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Questions	Responses
<p>What are some concerns or experiences regarding the remote maintenance person understanding the "near machine" conditions before executing any changes from the remote location that will impact machine function? (obviously the hinted concern here is safety and understanding the remote site conditions people etc.)</p>	<p>Standard procedures must be developed to ensure that the necessary information flows both to the site and off the site and only authorized work is performed. Both onsite and remote personnel must be involved and the procedures must take into account the risk that communications can be lost at any point in time. The onsite personnel have to be able to make the plant safe in any eventuality.</p>
<p>Will all of these changes push you to rely on more outside remote services from your vendors?</p>	<p>These changes will create opportunities to get remote services from vendors. Whether these opportunities are wanted and taken depends on the site's needs.</p> <p>There's an additional dimension related to communication robustness and cybersecurity conditions. If they are not adequate remote services will be difficult to implement. Companies should aim to quickly resolve these issues in order to have safer conditions to support remote services.</p>
<p>Do you see cybersecurity as an obstacle for more innovation in mining?</p>	<p>Cybersecurity is a necessary part of our operations. We cannot have a safe, productive operation without effective security. With proper planning and implementation, improvements in cyber-security can support and enable innovation.</p> <p>Cybersecurity should be the driver to have the correct environment for innovation to be widely embraced in mining. That will generate the required trust in the industry to bring innovative solutions with no threat to the business. From a business perspective: no trust - no investment.</p>
<p>What technologies do you see in other industries that are not yet well developed in mining: drones, wearables, 3D printers?</p>	<p>There is the potential for robotic solutions to perform repetitive and risky tasks. While it is true that remote control and machinery are widely used, there are many others, especially maintenance activities, that are still carried out by humans.</p>