

# SDVoE Technology Empowers Centralized Control Room Operations for Black Rock Mine Operations

Nestled in Northern Cape Province, Black Rock Mine Operations (BRMO) is a prominent manganese and iron ore mine. BRMO encompasses three separate shafts, which excavate and produce 3.6 million tons of iron and manganese ore per year. BRMO's Khumani and Beeshoek Mines, which are located in the Northern Cape Province, excavate primarily iron ore, and the Black Rock Mining Complex, situated northwest of Kuruman in the Kalahari, focuses its efforts on highly sought manganese ore. Each mine is monitored at various control operations centers, which filter large amounts of data. As a result, BRMO's operations centers are mission-critical environments requiring the latest and most reliable technology.

## Challenge

BRMO operated highly decentralized, with each shaft independently managing its operations. This approach posed challenges in overseeing and coordinating activities across the entire value chain using their various SCADA, OMI, CCTV and historian data sources. To enhance operational efficiency and gain a comprehensive view of its mining operations, BRMO needed a centralized control room solution.

Organizers worked with Jaco van Heerden and Oculus Operational Innovations, a company that specializes in designing complete control room and visualization solutions for mission-critical environments, to create a solution that would allow it to monitor and control all aspects of mining activities from one central location and with a high degree of flexibility.

## Solution

Oculus designed and facilitated a solution proposed by van Heerden, known as the Integrated Remote Operations Centre (iRoc). iRoc is designed not only to replace and upgrade BRMO's existing infrastructure with a centralized monitoring and control system but also to accommodate future needs.

At the heart of the iRoc is a horseshoe-shaped video wall consisting of 21 operator stations. The video wall incorporates 84 49-inch Prospectre screens for the main display and an additional 84 24-inch screens for the operators' displays. This setup provides operators with an expansive surface for viewing and managing all the pertinent information related to the mining operation. Driving the video wall and stations is VuWall's video wall control room solution, TRx centralized video wall management platform. TRx is a platform that combines AV-over-IP distribution, multi-video wall control and KVM management.



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The implementation of the iRoc solution, leveraging VuWall's TRx central management system and VuStream 510 appliances, is said to have brought about significant improvements for BRMO. By centralizing operations, BRMO gained a holistic view of its entire value chain, enabling proactive decision-making instead of reactive responses. This offered BRMO the flexibility to extend, switch and composite real-time signals. This further enhanced the operational efficiency and productivity of the mining operation. The large video wall surface and individual operator displays empowered operators to monitor and control all relevant information related to the mining operations from a single central point.

SDVoE technology, as implemented through VuWall, allowed for high-quality, expandable video distribution across all displays throughout BRMO's operations centers to create a reliable, high-performance visual experience for operators. In addition, the iRoc solution earned many notable distinctions: It is said to be the longest continuous TBC SmartTrac operator console built to date and the largest SDVoE AV-over-IP video wall installation in an industrial environment.

## Benefits of SDVoE Technology

SDVoE reaches beyond existing standards to provide benefits no other technology can claim:

- A complete ecosystem – SDVoE Alliance members are manufacturers with expertise in signal distribution, display manufacture, IT infrastructure, chip design, and AV software. The integrator has dozens of partners to align with and products to choose from.
- A flexible yet simple software platform – the SDVoE API allows rapid development of highly specialized software, custom-tailored to the needs of a vast array of end users.
- A full OSI stack solution – only SDVoE offers the simplicity of a complete top to bottom solution, fully encompassing infrastructure, transport, processing, and a simple control layer.

For more information on the SDVoE Alliance, please visit [www.sdvoe.org](http://www.sdvoe.org).  
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