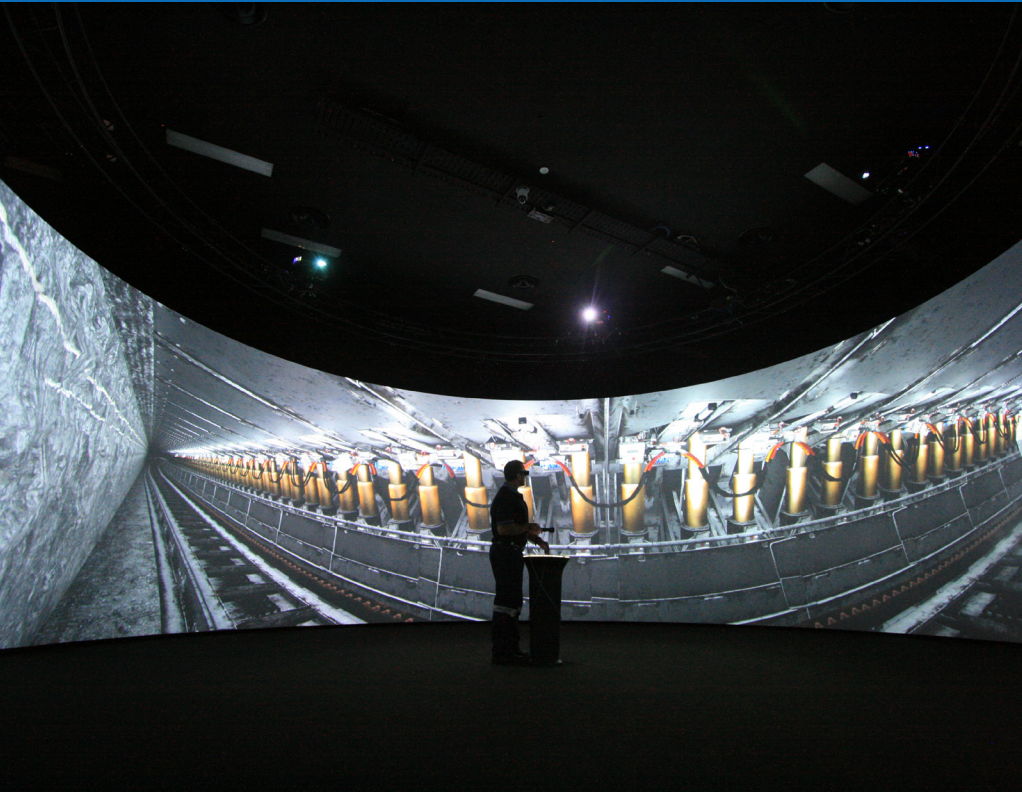


Application Story

Lights On for Mine Rescue Training



Five Christie Mirage WU12K-M WUXGA DLP projectors create a 360-degree immersive environment of mining tunnel for the intensive training of mine rescuers in New South Wales

With a rich history tracing to as early as the 1840s, mining is a significant contributor to the Australian economy. Besides the economic value of the natural resources, there also lies risks of mining underground. With an excellent record of minimal mining accidents, Australia lives up to its reputation as a country that has a strong commitment to mine rescue training.

A key witness is Mines Rescue NSW, a subsidiary of Coal Services Pty Ltd, that dedicates its resources for almost 90 years to provide underground incident response and training to ensure the highest quality standards. Incepted in 1926, Mines Rescue started off as a research center with a mock-up mine for training purpose. In 1985, it expanded to include industry training for new starters into the industry as well as refresher training, statutory official training and crack mine rescue team training.

Recognizing the importance of simulation training, Mines Rescue's Newcastle center incorporated the most advanced real world Virtual Reality (VR) facilities using state of the art VR Platforms comprising Domes, Curved Screen and 360-degree 3D Theater. Its journey in virtual reality started with just a flat screen before converting to a curved screen in 2005. In 2007, the curved screen extended to become a 360-degree theater. The Virtual Reality facilities combine with classroom activity and practical training completes the full training system.

Customer:

- Mines Rescue New South Wales (NSW)

Location:

Newcastle, Australia

Industry/Market:

Mining

Partners

- VR Solutions Pty Ltd

Requirements:

- 360-degree theater
- Immersive and life-like visual environment
- High image quality
- Vibrant colors

Summary:

Mines Rescue's Newcastle center incorporated the most advanced real world Virtual Reality (VR) facilities available, using state of the art VR Platforms comprising Domes, Curved Screen and 360-degree 3D Theater. The 360-degree theater upgraded with five [Christie Mirage WU12K-M](#) projectors aims to provide the best possible mine environment imagery which will fully immerse the industry trainees to maximise training benefits.

Products:

- [Christie Mirage WU12K-M](#) projectors

Results:

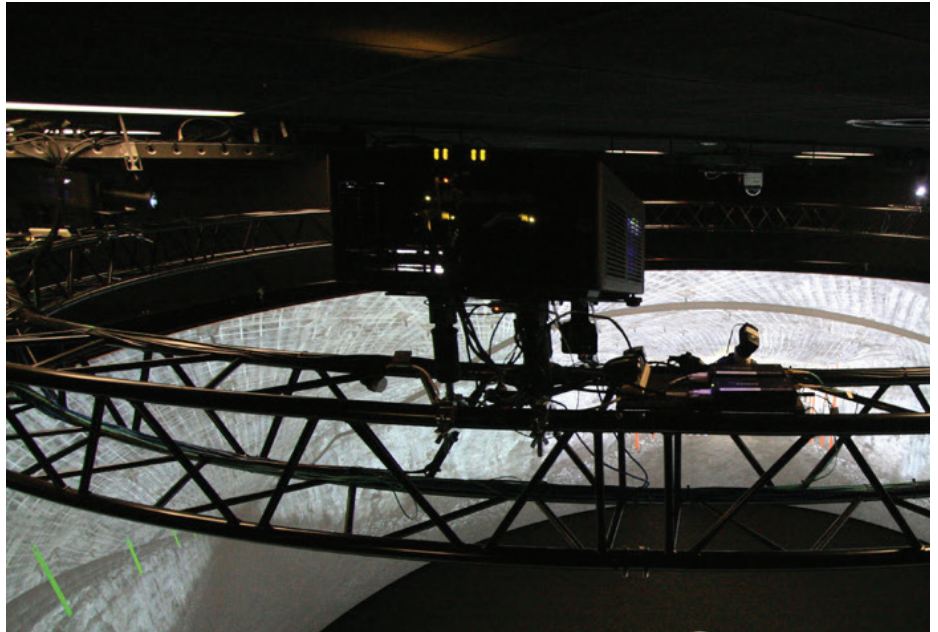
The new [Christie Mirage WU12K-M](#) projection system in the 360-degree theater created a highly immersive simulation training environment that helped expose trainees to real-life scenarios with the best possible mine imagery. The vibrant colours and high quality visuals helped deliver the highest quality training and outcomes that could be life saving.



According to Bruce Dowsett, manager, virtual reality technologies, Mines Rescue, the 360-degree theater aims to provide the best possible mine environment imagery which will fully immerse the industry trainees to maximize training benefits. It allows trainees to experience and respond to real hazards in a safe and controlled environment before actually encountering them in the workplace. It delivers the highest quality training and outcomes that could be life saving. "The importance of this facility should not be underestimated. It's critical to providing training for the coal industry. We believe in world's best practice and the theater provides an integral part to a complete training solution that is second to none."

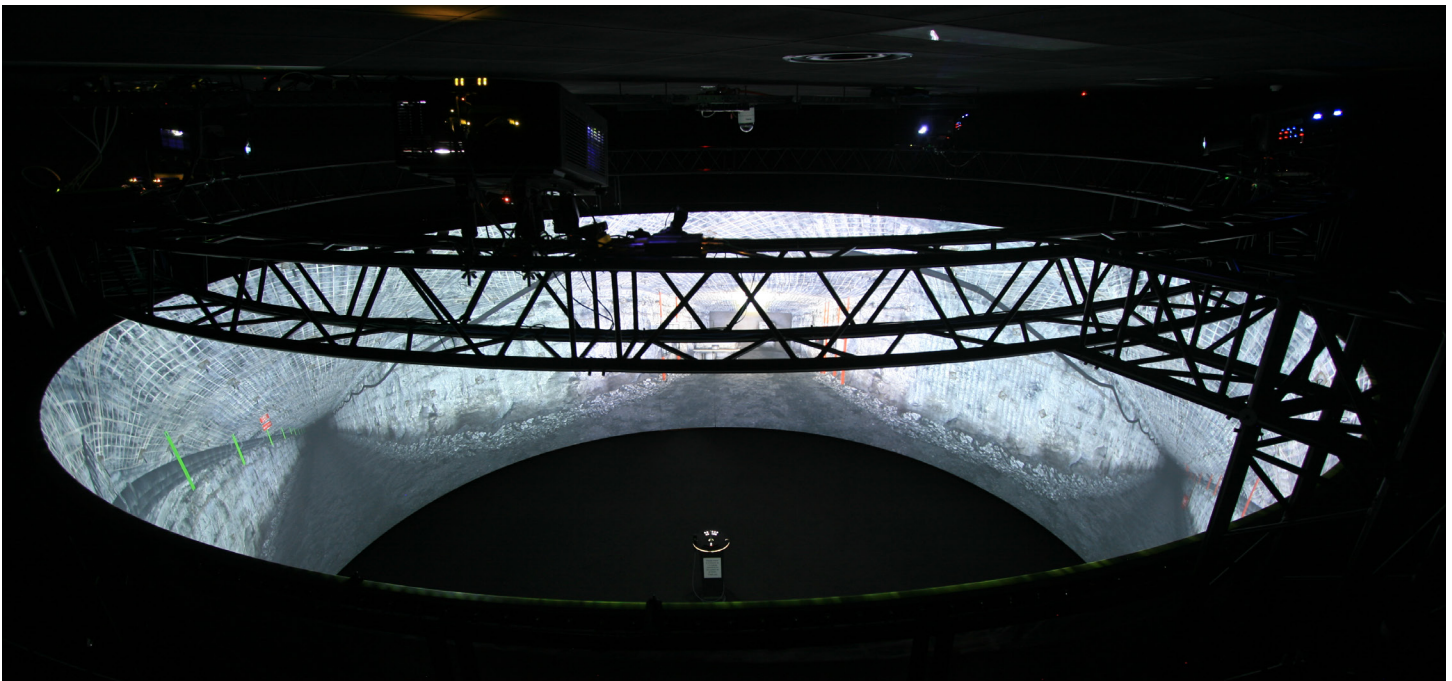
In September 2011, Mines Rescue made a smart move to replace its existing projection system in the 360-degree theater with five [Christie Mirage WU12K-M](#) projectors. Dowsett explained, "The issue we had with the previous system was that we felt it was a bit inferior in terms of vibrant color and image quality."

Through the 360-degree simulation display with the [Christie Mirage WU12K-M](#) projectors, trainees, in groups of 12 to 15, are exposed to real-life scenarios of unaided underground self-escape, underground rib and roof stability



and open cut truck and shovel operations and a range of other important skills. The training system prompts them to make decisions on how to deal with these situations through group discussions and provides feedback on correct or incorrect responses as part of the assessment process.

Mounted on the pedestal to the ceiling surrounding the circular screen, the new Christie projection system "... has provided for more viability for training purposes and it has certainly achieved a very good result for us. And that has



been proven by participants and trainees... the comments they'd made are positive. They've identified how much better color and image we've got with this system."

The recognition of the Christie projection system doesn't stop at the door of the facility. Since the installation of the Christie projectors, the 360-degree theater has been chosen as the venue for three regional mine rescue competitions within Australia.

However, the installation was accomplished not without difficulty. Dowsett elaborated, "Like any projects, there're challenges. This particular installation in our 360-degree theater was definitely time-sensitive. We had only a two-week window to remove the pre-existing system and get the installation done. Christie actually achieved the result well within the timeframe. We're very impressed that the installation hit the mark on the first go. There was no margin for error as we'd to continue our training sessions after the two-week installation."

Dowsett recounted the rewarding experience of working with Christie Australia: "This installation is unique, requiring incredible care and skill during the design phase... The technical knowledge of Christie's staff is the best in the industry. The design process was very collaborative. Christie took great details to the actual requirements needed and installed the



facility of 360-degree theater with screen and projection system prior to shipping it to the site. And I think that was an excellent step. This project was very professionally run and this instilled confidence in us which ultimately showed up in the success of the facility. And there's no one walking out of the facility... that hasn't commented on the WOW factor."

With the Christie projectors in place, Mines Rescue has a saying that goes: "When people enter the 360-degree 3D theater, the trainee lights go **ON** when the lights go **OUT**."

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