



CASE STUDY

# Vivitek projectors illuminate the Grotte de la Pierre de Volvic

Located in Auvergne, a historic region in central France, the Grotte de la Pierre de Volvic was formed by a lava flow from the Nugère volcano in the 13th century. Since then, the site has been used by humans to extract Volvic stone, which is found in the architecture of many cities and monuments, such as the Clermont-Ferrand Cathedral.

A true flagship of Auvergne's heritage, the Grotte de la Pierre de Volvic has recently introduced a new show called Grotte des Lumières (Cave of Lights). This immersive underground journey invites visitors to explore the natural site, with both young and old diving into a magical universe. The entire cave's walls are highlighted in a 50-minute tour combining video projections, light shows, and sound narration.

BK and WB Show, responsible for the artistic creation and production of this show, selected SGroup-Equipement to meet the complex requirements, which included 360° mapping projected on all the cave walls, perfect synchronization with the soundtrack, installation challenges inherent to the cave, the use of existing audio equipment, and above all, the need for a fully autonomous and user-friendly daily solution.







Sylvain Roos, director of SGroup-Equipement, explains:

*The various phases of study, encoding, and testing were intense because the cave is located in a seismic zone. We had to precisely define the areas and methods for mounting the projectors, adjusting their power and optics based on the mapping. It was also crucial to choose durable and robust projectors to withstand the operating conditions—after all, we're talking about a cave with 90% humidity and ambient temperatures between 5 and 10°C."*

In total, about fifteen Vivitek projectors were installed to bring the Grotte des Lumières show to life, all controlled by Modulo Pi media servers. To function under ideal conditions, each projector was placed in a sealed enclosure with a humidity regulator. Sylvain Roos adds, *"After nearly a year of running the Grotte des Lumières show three days a week, and the Cave of Santa Claus show seven days a week during the holiday season, no particular maintenance has been needed for the projectors."*

Specifically designed for large spaces and applications like mapping and edge-blending, Vivitek's DU6198Z and DU8395Z projectors offer WUXGA resolution, a high contrast ratio, and brightness levels ranging from 8,500 to 15,000 lumens to ensure sharp and vibrant images on all types of surfaces. In more confined areas, short-throw projectors from the D4000Z series with 6,100 lumens were used to blend seamlessly with the cave's walls.







Vivitek DU6198z laser projector

*"In addition to the excellent performance-to-price ratio of Vivitek projectors, it was also the responsiveness of their team that made the difference in our choice. They were available when needed and trusted us by lending equipment for tests and demonstrations," notes Sylvain Roos.* From December to early January, the Grotte des Lumières show makes way for the Cave of Santa Claus. The cave walls are transformed with Christmas magic, taking visitors on an immersive journey filled with enchanting visual and sound surprises.

*"Within just a few weeks, all the contractors were able to bring this magnificent project to completion. Not one but two distinct immersive shows were developed in parallel. In addition to enhancing the heritage of the Grotte de la Pierre de Volvic, they worked together to select the best solutions to create a magical universe and delight our visitors," concludes Philippe Montel, director of the Grotte de la Pierre de Volvic.*

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