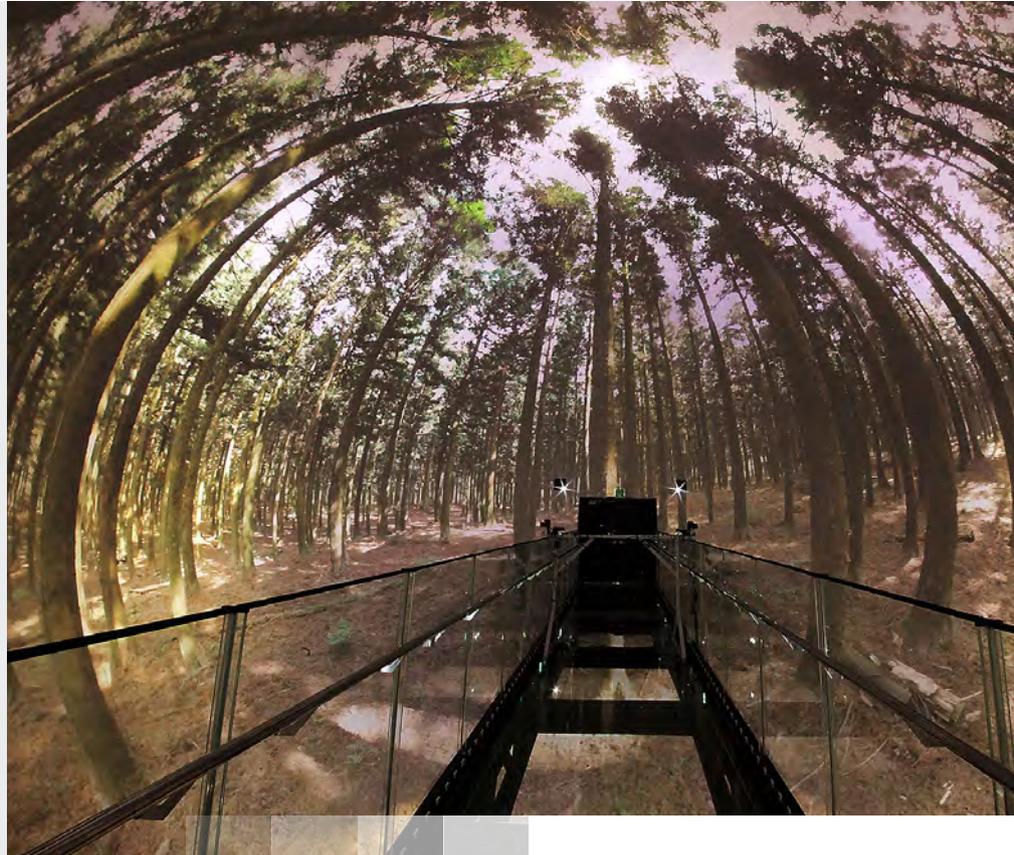


Space 360, Gwangju, South Korea

Whispering projectors to explain the big bang

Thanks to Barco technology we have taken a great leap forward in education and entertainment.

Gwangju National Science Museum



BARCO SOLUTIONS

- 12 x Barco PGWU-62L laser projectors

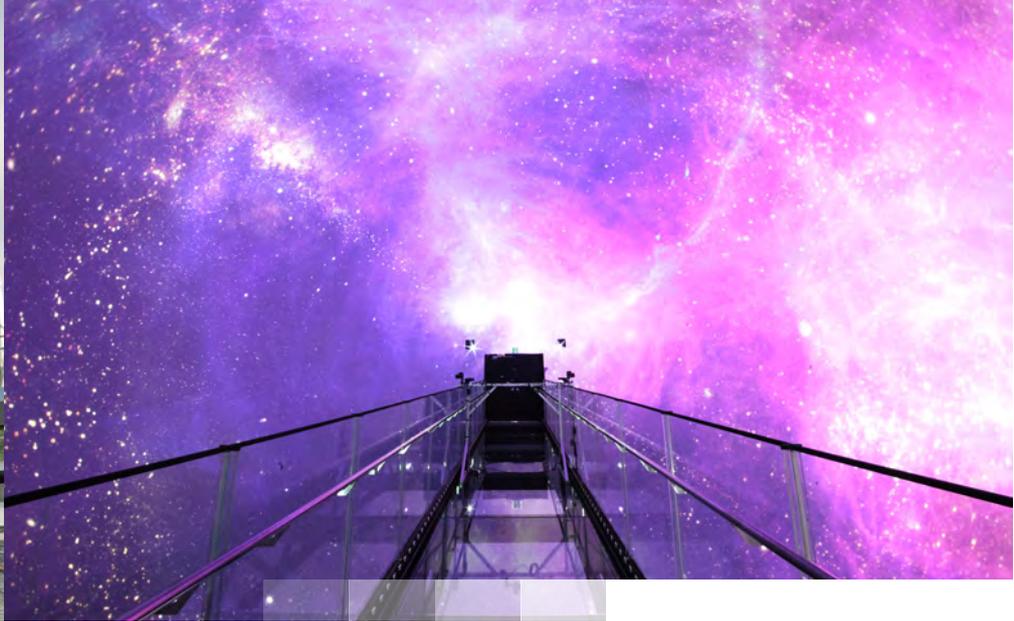
KEY BENEFITS

- Brightness
- High-quality images
- 3D capabilities

You can see it for miles. The gleaming Lucerium National Science Museum stands out from its neighboring buildings in Gwangju. The South Korean institute has a futuristic silvery shell that was designed to impress. Its vocation is to popularize science – in particular around sound and light – and foster interest among young people.

One of its most spectacular attractions, Space 360, opened in September 2017. The 360-degree spherical projection theater—the first of its kind in South Korea—is 12 meters in diameter with 12 Barco projectors providing an immersive Virtual Reality experience.

The goal is to plunge visitors in a genuine 360° environment. They enter the dome through a transparent bridge that crosses the sphere's interior and the show begins all around, above and below them. The visitors then travel from the Big Bang to the depths of space.



The Gwangju National Science Museum is a leading source of science and technology information in Honam Province. Its exhibitions offer fun, education and leisure. This entertainment-based approach promotes interest and involvement in scientific fields, enhancing future scientific technology and cultural development.

Barco projectors beat the competition

The projector system for Space 360 was designed by Front Pictures, incorporating a host of clever engineering ideas. "We had to devise a layout that would avoid shadows being cast by the observation bridge, minimize openings for the projectors, while, at the same time, maximizing the resolution and brightness of the projection," said Front Pictures CTO Vitaly Slyusarenko.

The design team considered projector models from four different vendors. They devised a dozen different possible projection layouts and used 3D models of the venue to calculate each projector position and tilt capability. When their calculations were complete, Barco PGWU-62L projectors were, hands down, the best candidates for the job.

Unique image quality on a unique screen

Thanks to the laser phosphor technology, Barco PGWU-62L projectors were the only ones able to support 360-degree rotation and meet the museum's request. The lamp-free design ensures a light-source lifetime of 20,000 hours which reduces maintenance costs considerably. Their lightweight and compact design made it a piece of cake to install them behind the spherical screen and with a noise level of only 35 dB, they were the quietest option—an important consideration in creating an immersive experience. With the high-quality images produced in 1920x1200 resolution multiplied by 12 projectors, the designers of Space 360 had enough pixel density to cover 450 m² of the spherical screen without significant geometrical distortion.

A spherical vision of the future

Thanks to Barco technology, Gwangju National Science Museum has taken a great leap forward in education and entertainment. The possibilities for future exhibitions using the spherical theater and technology are endless. Barco looks forward to providing solutions for every technological ambition they can dream up.