



## CASE STUDY

# A world awash with technology

PT-DZ870 and PT-DZ680 bring science to life at Hydropolis in Wrocław, Poland.

Location: Poland

Product(s) supplied: **PT-DZ870**

Hydropolis' Ecological Education Centre combines education with modern forms of exhibition. Uniquely located in the historic 1893 building of the Municipal Waterworks and Drainage Company in Wrocław, the facility used to be the heart of the municipal waterworks system before it became a unique Poland attraction. The exhibition uses a narrative structure to guide visitors through eight different zones, where there are multimedia shows, art installations and replicas which explore the meaning of water in human life.

Exhibition design and construction faced a considerable number of challenges. The brief was to create an exhibition in a space which had never been specifically designed to serve such a purpose, using audio visual technology only. In doing so the work had to consider not only the historical importance of the building which remains under a listed and preserved status, but also specific humidity and temperature parameters. One of the major criteria for equipment selection was reliability, so that maintenance activities could be minimised as much as possible to avoid disruption. The Centre is open to visitors seven days a week, excluding some holidays, so it was important that the AV equipment would be up to the task of prolonged, intensive operation.

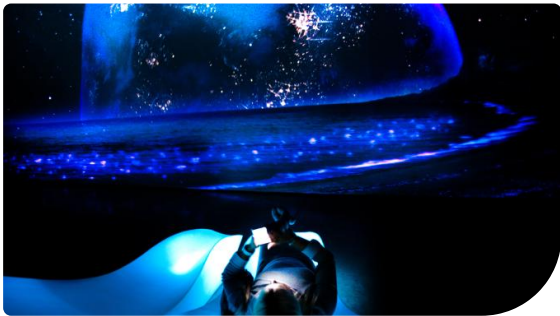
### **360° mapping**

At the heart of the exhibition is the Water Planet-an oval room with a 360 degree screen which displays a video about the Earth and the origins of water. There is also an Earth-like projection sphere which is 6.6 feet in diameter. Initially, because of the size of the room and the interior pillars it was impossible to install the projectors at a suitable distance from the projection surface itself. To solve the problem, Panasonic PT-DZ870 DLP projectors were used because of their ultra-short focal length lens. This is a compact model which provides 8,500 lumens of brightness and a high contrast ratio of 10,000:1. Its reliability is guaranteed by the Dual Lamp System that eliminates the interruption if a lamp should fail, and allows the projector to operate 24 hours a day. Meanwhile a specially designed cooling system and dust-resistant optical block also enables resilient operation, as well as ensuring a high image quality. Additionally, the projector's long-life lamp has a 3,000 hours replacement cycle, enabling the PT-DZ870 DLP projectors to offer a lower cost of ownership and maintenance.

A total of 14 of the projectors have been used for the 360-degree mapping, with replaceable ET-DLE030 lenses. Using the projector's built-in Geometric Adjustment functionality, it was possible to install the projectors on the internal, oval walls of the reservoir, taking into account the arched ceiling, massive pillars and curved walls. The projector's ability for 360-degree mounting makes integration within the often tight and constrained spaces of a museum or attraction possible. Thanks to the short throw lenses, visitors can now watch the exhibition from a very short distance.

### **Bas-relief projection**

Elsewhere, two Panasonic PT-DZ870 projectors have also been used in a projection mapping onto a diorama of the Nile River. The units project a digital image of the river on a bas-relief, which presents the mouth of the Nile. Considering the size of the bas-relief, two projectors were selected to ensure complete coverage of the model. The two images are linked using the projectors' built-in edge blending, making for a single, unified image that is precisely aligned.



### **Touch interaction**

The 'Living Ocean' zone of Hydropolis was an opportunity to incorporate further interactivity for visitors, with motion tracking projection displayed on two round tables. The diameter of each table was over 47 inches, and two Panasonic PT-DZ680 projectors with mirrors were used to cover such a big projection surface. They were located under the screen, projecting behind onto the surface. Motion tracking is provided by two cameras with wide-angle lenses, which are also placed under the screen to accurately map and locate visitors as they interact with the installation.

The entire exhibition includes a total of 29 PT-DZ680 projectors. They were chosen out because they met the two primary pre-requisites—they are equipped with a backup system, and ensure extremely high performance. Another advantage is the original Eco Filter, which does not need to be replaced for as long as 12,000 hours. The liquid cooling system ensures increased performance, while delivering quiet operation in all conditions.

"A few years ago, we could only enjoy such modern exhibitions like this one abroad. Fortunately, Polish museums are recognising the potential of AV to change how visitors learn and experience their exhibitions, and are increasingly looking to integrate them into the visitor experience they are creating. Hydropolis is an excellent example of the extraordinary effect you can achieve using multimedia solutions. With the success of the work here we hope the number of installations will increase in Poland. Not just because they let us create interesting exhibitions, but also because they give us the chance to present the full potential of Panasonic equipment," says Magdalena Przasnyska, Senior Sales and Marketing Manager, Panasonic.