

# Inavate

EUROPE  
MIDDLE EAST  
& AFRICA



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The events company keeping audiences in the dark for immersive audio encounters

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Translation tech adapts to support interpreters, while AI looms on the horizon

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## A STAGE FOR ART

National Gallery of Denmark adds digital canvas for video installations





**T**he National Gallery of Denmark, known as Statens Museum for Kunst (SMK) in Denmark, presents its extensive art collection, exhibitions and installations throughout large, interconnected halls that link its original 19th century building with a modern extension.

The 1998 extension for the largest art museum in Denmark makes extensive use of glass to create light-flooded, high ceilinged spaces that give a sense of openness.

But that aesthetic comes with lots of hard surfaces and high ambient light conditions; a far from perfect setting in which to create an auditorium. SMK could have opted to build its new presentation space in another part of the gallery or shut it off from the striking floor to ceiling windows but thankfully it didn't.

Instead the gallery took the braver move of taking advantage of state-of-the-art AV technologies and drafted in expert consultancy and integrator Stouenborg to navigate the tough conditions.

The Auditorium was built

with support from the Maersk Foundation and no expense was spared to create the 137-seat presentation space. SMK is increasingly investing in digital art works and approached the foundation with a request for funding to create a space that would allow it present these pieces. In particular it wanted to effectively show work from Danish artists Jesper Just and Amalie Smith after it purchased Just's 2010 film 'Sirens of Chrome' and commissioned Smith to create the video piece 'Enter'.

Anders Jørgensen, manager and consultant at Stouenborg, said the requirement to show artworks drove the technology selection with a focus on quality of audio and video so the pieces could be properly enjoyed by audiences.

"We looked at the brands that could offer 4K projection in the 35-40k lumen bracket and Digital Projection offered the right product and were really on board with the project," Jørgensen says.

Tiered seating faces a huge window with the audience looking out over Copenhagen's Østre Anlæg park. The bright conditions were another reason that powerful

display capabilities were required and Stouenborg installed a Digital Projection Titan Laser 37,000 lumen projector.

Jørgensen says the support from Digital Projection confirmed that he had chosen the right manufacturer for a key part of the installation. "During the shipping process a fault developed on the projector," he explains. "Digital Projection promptly resolved the situation with a new unit and we were back up and running quickly."

The projector fires on to a custom made Projecta Extensa screen measuring 443 x 600cm that descends in front of the window. An HD Progressive surface with 1.1 gain was chosen. Jørgensen notes a higher gain was wanted to increase brightness and therefore contrast the projected image with the window behind, but that had to be balanced with ensuring the same viewing experience for every seat.

No blinds are required for presentations but can be brought into play when the auditorium is used as a cinema.

On the visual output side, the final piece of the installation was a

## AUDIENCE FOR ART

A small yet highly specified auditorium is added to the heart of the National Gallery of Denmark. **Anna Mitchell** visits the Copenhagen institution to learn more.

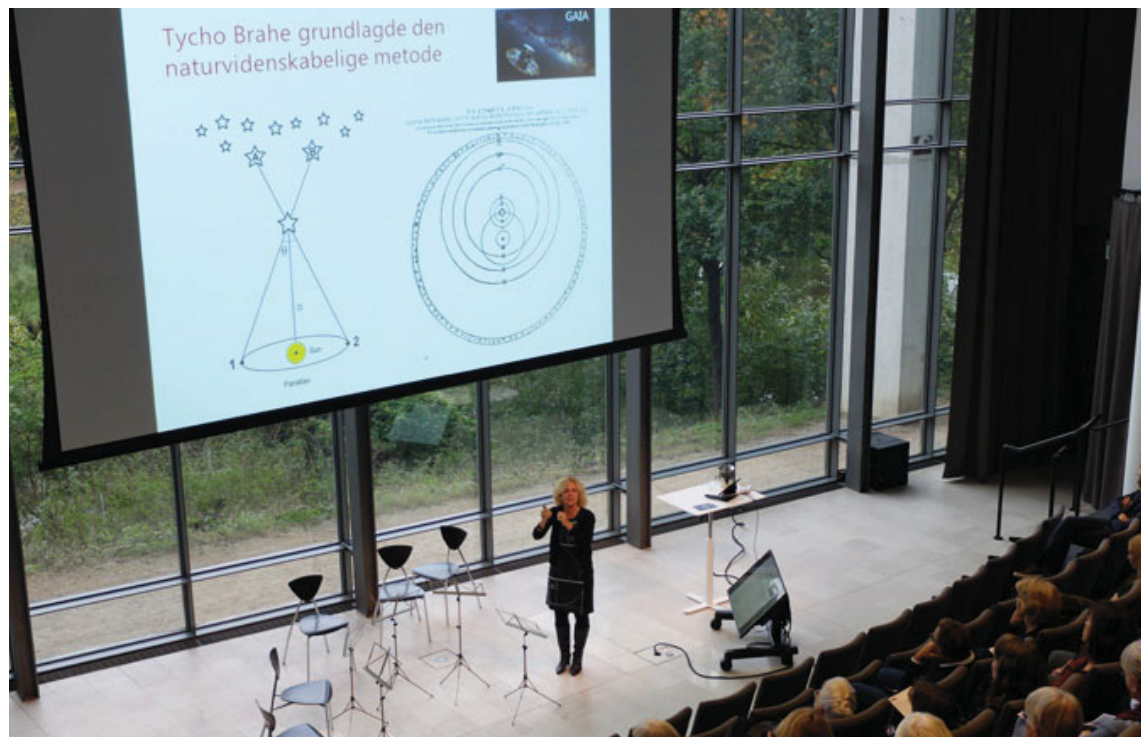


**Tech-Spec**

<b>Audio</b>	Crestron TSW 1060 touch screens, DM NVX system, control system and Cameo keypads
Allen & Heath SQ-5 digital mixer	Digital Projection Titan Laser 37000 projector
Meyer Sound CALs, loudspeakers, subwoofers and intelligent power supply	Martin Lighting
Sennheiser wireless microphone system	Neets Switching Relay-2
Yamaha MRX7-D processor	Panasonic 32-in TH032EFIE LCD
<b>Video &amp; Lighting</b>	Projecta Extensa projection screen
Cisco SG300-28 managed gigabit PoE+ switch	

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Anders Jørgensen, Stouenborg



Panasonic 32-in LCD provided for the speaker's view and two floor boxes offer connections for flexible speaking positions.

Good quality audio was also important for showing artworks and a Meyer Sound system was installed. Two CAL column array loudspeakers are supported by six MM-4XP miniature self-powered loudspeakers, a UPJ-1P compact Vario loudspeaker and two 750-LFC subwoofers. A Meyer Sound MPS-488HP intelligent DC power supply delivers clean power to the units.

Jørgensen explains that the idea with the sound system was to create a L+R image. "The only placement of the CAL column array speakers was wide apart and therefore there was a need for the UPJ-1P centre speaker," he says. "With those speakers and the MM-4XP as surround speakers the system performs with a +/- 1 dB coverage between front to back of the audience area."

A Sennheiser wireless microphone system is provided for speakers, with two active antenna splitter ASA 214 units feeding eight Sennheiser Evolution Wireless handheld microphones. DSP and audio control are provided with a Yamaha MRX7-D processor with EXi8 input and Exo8 expander kit that converts analogue audio inputs to a digital output. Stouenborg installed an Allen & Heath SQ-5 digital mixer for managing audio during live events in the auditorium.

Crestron DM NVX is used for AV over IP signal distribution with DMX NVX encoder/decoder pairs deployed and signals routed through a Cisco SG300-28 managed gigabit PoE+ switch. On the control side, Stouenborg installed a Crestron 3-Series control system and a Neets Switching Relay - 2. Operators can access control functions via two Crestron TSW-1060 control panels; one for the presenter and one in

the control room. More limited functions can be handled by one of four Crestron Cameo keypads installed within the space.

Nine Martin ELP LED ellipsoid fixtures were installed, with six warm white and three full colour units hung on rigging above the presentation area.

"The idea is that you can mix the white with colours to create a more interesting light experience for presentations," explains Jørgensen.

The Auditorium is a valuable addition to the gallery's output. Talks and presentations from artists, academics and experts expand SMK's offerings. Thanks to the high-quality display technology artworks can be presented effectively and, when in cinema mode, audiences can be immersed in video art. It also provides another revenue stream for the gallery with The Auditorium available for private hire. 🌐

