

RAPENBURG PLAZA

lighting design & show control

Press Release

Rapenburg Plaza reveals technical production plans as the new Canon of The Netherlands opens its doors!

Since first opening its gates in 1912, the Netherlands Open Air Museum in Arnhem has given visitors a unique and quirky view of the country's history. Its slightly whimsical collection of more than 80 actual buildings transported to the Museum park, together with living examples of workplaces and lifestyles drawn from all periods and all places in Dutch history, has long made it a favourite place to visit.

Opened on September 23, the Museum's latest, and most adventurous exhibition to date, is the 'Canon of The Netherlands'. (FYI, that's canon as in a collected list, not cannon as in artillery piece.) Billed as covering the highlights and low lights of Dutch history from the Stone Age to Today, the exhibits combine historical objects on loan from collections throughout the Netherlands with innovative deployments of the latest audiovisual and display technologies.

Working in intimate collaboration with exhibition architects Kossmann.dejong and a multi-disciplinary team of film, animation and interactive designers, Rapenburg Plaza of Amsterdam were engaged to implement the lighting, show control and audiovisual technologies for the exhibition.

"We work in parallel with Rapenburg Plaza in most of our projects and they help bring our ideas to life. They have an expert, specialist team who work to bring all exhibition elements together in a holistic and creative way. At the Canon of The Netherlands, there is something for everyone. It's designed to be as interactive and proactive as possible for visitors to discover so much about Dutch history and the Netherlands as an ever changing and evolving country," said Robert van der Linde, project leader and spatial designer at Kossmann.dejong.

Unlike some of the museum's outdoor exhibits which work best in mild weather, Canon of The Netherlands is entirely located away from the weather: in buildings, in a partially-subterranean dome, and in an underground tunnel. Divided into four sections, the exhibition consists of 50 'windows' into Dutch history arranged in ten broad periods.

According to Art Director, Pieter van der Heijden, the Canon of The Netherlands promises to be the "Most engaging and best Dutch experience for local and international visitors yet. The common theme is innovation, creativity and learning and Rapenburg Plaza has presented us with lots of cool ways to achieve that. Do yourself a favor and put The Canon of The Netherlands in your diary this Autumn!"

Stijn van Bruggen, project manager at Rapenburg Plaza enthused: "After 18 months of engineering, consulting, technical design and brainstorming, the Canon of The Netherlands is finally ready. Our team of experts have applied a design-thinking approach which is actually a very disciplined way of knowing what technologies to integrate into an exhibit and to meet all client and stakeholder expectations."

On tour with Rapenburg Plaza

The first, pre-show section, consists of an entry tunnel adorned with enormous, abstract-shaped, suspended screens, that take the audience travelling backwards into the distant past, seeing people busy at their daily routines like preparing food, lighting fires, and children at play. Next, located inside a giant partially-underground dome structure, is a series of ten 'movie set' exhibits that mix historic objects and interactive learning through gaming, using every possible surface and space as a multimedia canvas.

This is followed by a panoramic presentation area with surrounding interactives that provide a cinematic and learning experience. Finally, an interactive learning room, with vast walls of touch

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screens enables visitors to participate in a learning game whilst finding out more about the history of The Netherlands.

In the semi-subterranean dome, originally built in 1999 for an attraction named HollandRama and renovated for the Canon, the structure was designed to flex in response to changing weather loadings. This presented some interesting problems for the accuracy and stability of lighting and projection rigs that are focussed on exhibit elements that are attached to the building structure. Rapenburg Plaza's solution was to use rigid glass rear projection screens to prevent distortion and to fix the projection equipment onto rigid floor mounts that are isolated from the walls of the dome. The building may move with the wind but the projections are literally rock-solid. Whilst the projectors do not move, the eight horizontal 'cloud' screens that hang from the dome's ceiling are suspended thus move together as the building flexes.

In the subterranean cinema, 'A Bird's Eye View of Holland', features different topics (climate, population, borders, land, water and traffic) on its impressive 3m (10ft) x 15.3m (50ft) panoramic screen. Each movie is about 4 minutes long. The projected image is covered by three Canon XEED WUX6010 6000 lumen WUXGA (1920 x 1200) projectors blended through Showlogix software and replayed from a Showlogix media server. There was 5,760 by 1,200 pixels to reproduce the content at 25fps and constant bit rate. The huge panoramic images are accompanied by custom made sound. The film soundscape was created by composer Eric Hense and audio and sound design in cooperation with IJsfontein and Redrum.

"To give the effect of audio being behind the audience, here we used six different multitrack channels sent out to 8 speakers Xilica DSPs and 7.1 surround sound," explained audio and show control engineer Wilfred de Zoete at Rapenburg Plaza.

The interactive learning room is completely dominated by a monolithic 36 square meter wall of touch screen panels which provide visitors with in-depth coverage of the 50 topics featured throughout the exhibition. By using the unique RFID tag supplied to each visitor, their enquiries and additional reference material is emailed to the visitor at the conclusion of their visit. This is facilitated by 50 KissBox Networked RFID Readers, five for each screen. Each treasure hunt consoles utilised a further 3 KissBox RFID Readers. The Canon tabletop 32-inch browsers used a website overlay with Google maps and points of interest where subjects are displayed ensuring that visitors can zoom in, type in their own area code.

IJsfontein Interactive Media was the company who designed all interactive playful learning and gaming elements at the Canon. Raimond Reijmers, strategist and designer of interactive spaces at IJsfontein Interactive Media said: "We recognise Rapenburg Plaza in their unique approach in using technology not for making things novelty but to make the visitor experience better. They integrate light, projection, screens, real objects and décor into one living element. The Canon is made for everyone!"

To give a sense of the scale of Rapenburg Plaza's contribution to this project, it has specified, installed, configured and commissioned, 67 projectors, 66 touch screens, 46 video players, 103 loudspeakers and 59 audiovisual computers, using some 177 data and video extenders and 33 network switches, over 45km of power and data cables and a capacity of 80,000KWH. Rapenburg Plaza's created all computers, media players and processors in housed dedicated machine rooms to preserve valuable exhibition floor space and to provide central access for maintenance.

The Rapenburg Plaza technical team and client can control every aspect the system using a custom-made app incorporating Alcorn McBride technology. "Remote monitoring and maintenance will be integrated into the entire park through a centralised system in the future," said de Zoete.

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Project Planning

For Rapenburg Plaza, planning was key to the success of the project. “All technology was meticulously planned and pre-built as much as possible off-site before bringing it in the museum, reducing the time needed on site. The project is one we’re extremely proud of in terms of scale, size and technical complexity,” enthused Hein Scheffer, Business Development at Rapenburg Plaza.

Rapenburg Plaza was deeply involved in every aspect of the technical execution of this massive project, from the selection of the projectors, projection surfaces, video display panels, exhibit control technology, and lighting fixtures, all the way through to the cabling, installation, programming, and commissioning.

Rapenburg Plaza’s expert project team was led by Stijn van Bruggen, project manager alongside Jan Paul Coenraad, network and ICT designer, Wilfred de Zoete, audio and show control engineer and Martijn Hoogland, AV engineer. System design was achieved by Jeffrey Steenbergen, in cooperation with lighting designer Marc Heinz, who coincidentally was one of the co-founders of Rapenburg Plaza and is proud to have worked with Rapenburg Plaza on this project.

“We work closely with Rapenburg Plaza who constantly break new boundaries in technology as well as to develop immersive experiences that tell the story of the Netherlands. The Canon of The Netherlands will inspire, entertain and inform audiences long after they leave the museum,” said Willem Bijleveld, Director at the Open Air Museum, Arnhem.

Museum-wide technology

Rapenburg Plaza enjoyed a strong working relationship with the following manufacturer brands that were utilized throughout the Canon of The Netherlands:

- Amplifiers – Meyer Sound
- Audio Speakers – Meyer Sound, KEF, Yamaha
- Cameras – Logitech
- Computers – Ikbenstil, HPS
- Showcontrol - Alcorn McBride
- DMX Control – Pharos and PLS
- Extenders - Lightware, Wirestorm
- Transceivers and RFID – Kissbox
- Lighting Fixtures - CLS LED, Controllux, Pharos and Rolight
- Media server software – Showlogix
- Projection – Canon XEED
- Screens – LG, Philips and Samsung
- Signal Processors – Xilica
- Switches - Netgear and HP
- Touchscreens – Iiyama, Elo and Samsung
- Video Playback – Brightsign

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Project Credits

Client:	The Open Air Museum, Arnhem, the Netherlands
Project Manager:	Joep Schellekens
Exhibition Architect:	Kossmann.dejong
Concept and Art Direction:	XPEX
Interactive Design & Production:	IJsfontein Interactive Media
Video Design & Production:	Redrum
Lighting Designer:	Marc Heinz
Set-build:	Heijmerink Wagemakers and Brandwacht & Meijer
AV, lighting, system integration & supply:	Rapenburg Plaza
Canon of the Netherlands Network:	The Rijksmuseum, Amsterdam Museum, Hunebedcentrum, Museum Catharijneconvent, Museum Prinsenhof Delft, National Military Museum, National Museum of World Cultures, Dutch Institute of Audio and Video, National Museum of Antiquities, the Maritime Museum, Allard Pierson Museum, and the website www.entoen.nu .

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About Rapenburg Plaza

With grass roots in theatrical production, Rapenburg Plaza is an independent multimedia design studio offering the full range of production expertise under one roof. Its expert team combines specialisations in video, show control, interactives, lighting, architecture, sound and special effects to create memorable experiences in immersive environments.

www.rapenburgplaza.com

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Photography

High-res imagery can be found at: bit.ly/RapenburgPlaza

Behind the Scenes, Installation photography © Rapenburg Plaza



Caption: The Rapenburg Plaza Dream Team put the final touches on tech at the Canon of The Netherlands prior to its opening.

From left: Martijn Hoogland, AV engineer; Jan Paul Coenraad, network and ICT designer; Wilfred de Zoete, show control and sound engineer; Stijn van Bruggen, project manager; Hein Sheffer, business director and Pelle Herfst, partner and lighting designer.

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Installation pictures © Canon of The Netherlands



**Canon van Nederland | Zaal 4,
Canonwand**



**Canon van Nederland | Zaal 4, spel
Oud, Nieuw, Nog Niet**



**Canon van Nederland | Zaal 3,
Nederland in Vogelvlucht**



**Canon van Nederland | Zaal 4,
Canonwand**



**Canon van Nederland | Zaal 2, Het
Verhaal van Nederland**



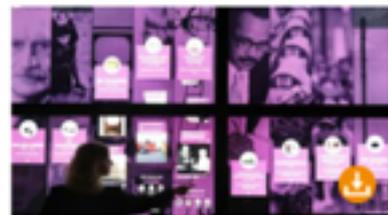
**Canon van Nederland | Herenfiets vóór
1940**



Canon van Nederland | Impressie



Canon van Nederland | Impressie



Canon van Nederland | Impressie

The official Opening Ceremony, 22 September 2017 © Canon of The Netherlands

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Canon van Nederland | Officiële opening met v.l.n.r. Ahmed Marcouch, Willem Bijleveld en Clemens Cornielje



Canon van Nederland | Bezoek aan de Canon van Nederland, Zaal 2 'Het verhaal van Nederland', met v.l.n.r. Willem Bijleveld, Ahmed Marcouch, Clemens Cornielje en Jan Marijnissen



Canon van Nederland | Bezoek aan de Canon van Nederland, Zaal 1 'Het leven in een dag' met v.l.n.r. Jan Marijnissen, Ahmed Marcouch, Clemens Cornielje en Willem Bijleveld



Canon van Nederland | Bezoek aan de Canon van Nederland, met v.l.n.r. Clemens Cornielje, Jan Marijnissen, Ahmed Marcouch en Willem Bijleveld



Canon van Nederland | Interview v.l.n.r. Jan Marijnissen, Rik van de Westelaken en Willem Bijleveld.



Canon van Nederland | Stoomtractor



Canon van Nederland | Strijdende Romeinen



Canon van Nederland | Gelders Orkest