



**01**

**MUSEUM INSIDER  
IN FOCUS**

**SPOTLIGHT ON  
OUTSTANDING PROJECTS**

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HORSENS PRISON MUSEUM  
KVORNING DESIGN & COMMUNICATION

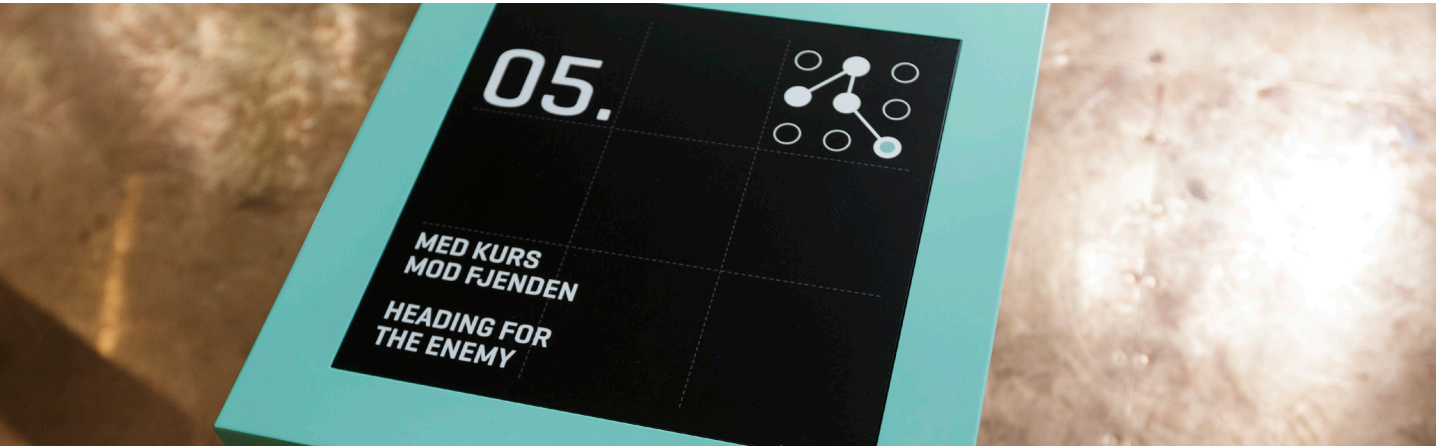




**EXHIBITIONS   GRAPHICS   INTERIORS**

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PHOTOS FROM KØGE MUSEUM JUNE 2015 · EXHIBITION DESIGN DEVELOPED IN COLLABORATION WITH THE MUSEUM'S INHOUSE DESIGNERS · NICOLAI PERJESI PHOTOGRAPHY

01

MUSEUM INSIDER  
IN FOCUS

SPOTLIGHT ON  
OUTSTANDING PROJECTS

HORSENS PRISON MUSEUM, DENMARK  
KVORNING DESIGN & COMMUNICATION

**GRAPHIC DESIGN**

KVORNING DESIGN & COMMUNICATION

**PHOTO FRONT COVER**

HORSENS PRISON MUSEUM

**PHOTOGRAPHERS**

NICOLAI PERJESI PHOTOGRAPY

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# 01

## MUSEUM INSIDER IN FOCUS

The creation of successful visitor experiences in museums, heritage sites and visitor attractions is a unique creative collaboration between the client, designer, and a host of subcontractors.

One thing that has become clear to me when talking to many of our museum readers is that museums often have an incomplete idea of what a big exhibition project is all about... How many processes go into exhibition design, and how many professions, competencies and experiences – creative and practical – must co-operate.

The objective of this publication is to focus on an outstanding project and illustrate the processes required, from defining the project concept at the very beginning, to evaluating visitor experience at the very end. In this way, our readers will be able to better plan for enough time, money and internal resources to get everything done.

Written specifically for museum professionals at the UK and Ireland's museums and heritage institutions, we've gathered together information that we think will help you understand the complexity and the various professional contributors and roles within exhibition design, the better help you produce your own outstanding projects.

*Ann Curtis*

Ann Curtis





# DENMARK'S REVAMPED PRISON MUSEUM TELLS REAL-LIFE STORY OF PRISONERS AND GUARDS

## Concept development, exhibition design and implementation in collaboration

Horsens Prison Museum reopened on 20 May 2015, marking the 162nd anniversary of the facility, after the second phase of a significant redesign and refurbishment of the former state prison. For several months the museum and Copenhagen-based design studio Kvorning Design & Communication co-operated on concept development, exhibition design and implementation to tell the real-life story of former prisoners and guards in an extraordinary atmosphere.

### 10 DIFFERENT PERSPECTIVES

Occupying a large part of the former state prison, the exhibitions are more advanced than ever and apply AV technology to offer the visitors original features. On arrival guests can choose from 10 authentic identities and get a personalized experience facilitated by RFID technology as they move around the premises. The prison comes to life through

new technologies, ambient and dramatic historic narratives, animations, lighting, sounds and analogue means, which give adults as well as children authentic and personal insights.

### TOP 10 ATTRACTION

The collaboration between Horsens Prison Museum and Kvorning Design & Communication has lasted for more than three years. Shortly after the first phase of the exhibition opened in May 2012, it made CNN's top 10 list of the most interesting prison attractions worldwide. The following year, visitors rated the museum as the 6th best attraction in Jutland on TripAdvisor.

### FUNDED BY THE NORDEA-FOUNDATION

Kvorning Design & Communication and the museum are currently outlining the third phase of the expansion, which will take off later in 2015 and be fully complete in 2016-17. Due

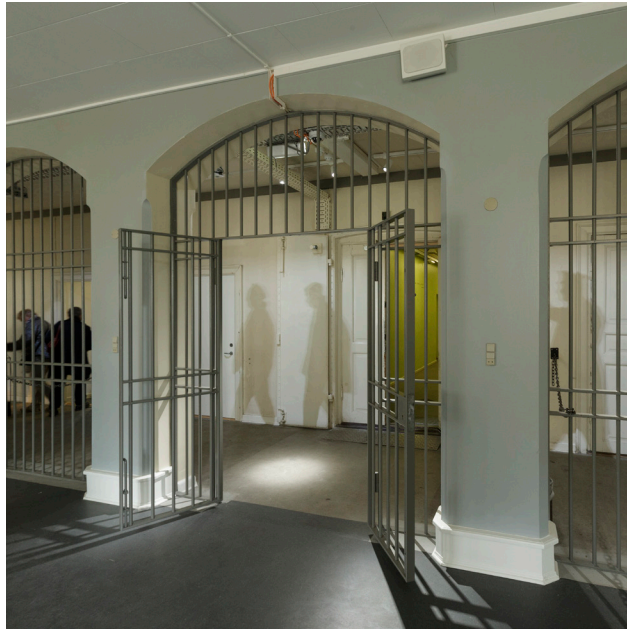
### ABOUT HORSENS PRISON MUSEUM

The State Prison in Horsens was the first prison to work under the country's modern criminal law principles. The first prisoners were admitted in 1853 and the prison was shut down in 2006. Its continuous function as a state prison over 153 years makes it a unique representative of part of society's cultural heritage, which has remained unexplored until now. Horsens Prison Museum – part of Museum Horsens and run in collaboration with FÆNGSLET – is already on CNN's top 10 list of most interesting prison museums worldwide. [www.faengslet.dk](http://www.faengslet.dk)

to the project's exceptional narrative and dramaturgical approach it has already received a major contribution from the Nordea-foundation of Dkr 21.8m (US\$3.2m,

€2.9m, £2m). This means that visitors can expect several new attractions at Horsens in the coming years.





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*Horsens Prison Museum's vision was to transform the former Danish state prison into one of the world's best prison museums*

ANNE BJERREKÆR  
DIRECTOR, HORSENS PRISON MUSEUM

Exhibition design is an obliging collaboration between the museum and exhibition designer. The goal is to transform a shared story into a physical rendition and experience: challenging work for both parties of course. As the

exhibition technology has been chosen as a common framework to achieve a set goal with the audience, the responsibility and interest in meeting these goals lies with both parties. Kvorning Design & Communication's collabora-

tion with Horsens Prison Museum is a fine example of several years of aligning expectations, collaboration and mutual respect.

#### AUDIENCE-CENTERED

Horsens Prison Museum and Kvorning Design & Communication have collaborated for more than three years. The museum director and curator contacted the company after enjoying the 'Operation Dynamo – Rescue from Dunkirk' AV show Kvorning produced for English Heritage, located 26 m beneath Dover Castle. It was an experience that in every sense centred around the audience and affected all.

#### VISION WORKSHOPS

The museum's vision is to transform the former Danish state prison into one

of the world's best prison museums. The three-phase plan to achieve this was discussed and agreed upon by director Anne Bjerrekær, curator Maria Berg Briese, and exhibition designers Mads Havemann and Arne Kvorning. Input on graphic, AV, light and sound was also given by designers at Kvorning Design & Communication and other sub-contractors.

#### FOUR-PHASED PLAN

The prison first opened as a visitor attraction in May 2012. Phase two of the refurbishment expanded the exhibition space to offer a look at prison life from several perspectives, showing both former prisoners' and guards' points of view. The third and fourth phases of expansion, currently being outlined by the parties, will

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*Exhibition design is an obliging collaboration between the museum and exhibition designer*

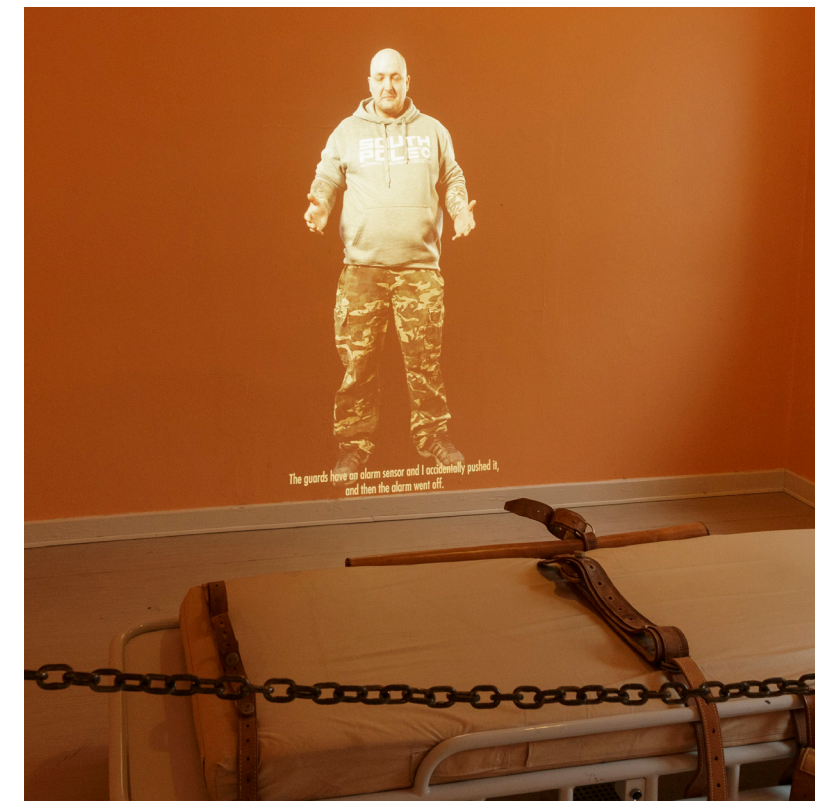
ARNE KVORNING  
EXHIBITION DESIGNER, KVORNING DESIGN & COMMUNICATION



start work late in Q3 2015, with a completion date of Q2 2017.

#### NOTHING LEFT FOR CHANCE

The museum/designer collaboration combined 20,000 unique items over 4,000 m<sup>2</sup> with state-of-the-art AV installations and RFID-tagged identity walks. Clever use of scenographic and dramatic exhibits breathes life into an immersive and interactive experience. To tell 162 years of prison history in a new and evocative, yet authentic and honest, way requires carefully chosen means.



DRESSED SPACES, ORIGINAL INTERIOR COMBINED WITH WALL PROJECTIONS LIGHTING AND SOUND.





THE CUSTOMER

ANNE BJERREKÆR  
DIRECTOR  
HORSENS PRISON MUSEUM

WHAT IS THE PRISON MUSEUM'S VISION?

*To transform the former State Prison in Horsens into one of the world's best prison museums.*

WHAT HAS BEEN THE PRISON MUSEUM'S PRIMARY ROLE IN THE PROCESS OF TRANSFORMING THE MUSEUM INTO A WORLD LEADING ATTRACTION?

*Our job is not only to present history and provide a context, but also to give a voice to former prisoners, relatives and staff members. And to create a platform where visitors can join the current debate – both during and after their visit – a place where they can form and voice an opinion.*

WHAT REQUIREMENTS SHOULD KVORNING AS MAIN CONTRACTOR MEET?

*It is paramount that they understand our vision and values – that they work constructively to find solutions which support these. Basically, I expect them to*

*deliver what they promised, meet deadlines and adhere to agreements.*

WHAT ARE THE KEY FACTORS THE COMMISSIONING PARTY SHOULD BE AWARE OF?

*Matching of expectations, both prior to the launch and throughout the process. Include all the practicalities and everything not explained in detail in the contract. Make realistic timetables and clearly define the financial framework – this minimizes disagreements and conflicts.*

WHAT HAVE YOU LEARNED ABOUT PROJECT DEVELOPMENT AND COLLABORATION?

*I am wildly impressed by how the project evolves once skilled people from different fields work together to reach a common goal. But it is also really difficult and involves many necessary discussions. The main contractor must maintain tight control.*

HOW WOULD YOU DESCRIBE THE IDEAL PARTNER FOR MUSEUM AND ATTRACTION DEVELOPMENT?

*The most important aspect is that they understand our values, and that they carry these values into their dealings with us. They have to know their way around a museum, so that the layout and design meet our day-to-day needs. Naturally, they must also be familiar with the latest presentational styles and means of communication – and have a great professional network to consult when there are matters of dispute.*



THE EXHIBITION DESIGNER

ARNE KVORNING  
OWNER AND  
EXHIBITION DESIGNER  
KVORNING DESIGN &  
COMMUNICATION

WHAT IS YOUR VISION FOR THE PRESENTATION CONCEPT?

*To create as authentic an experience as possible. To recreate the ambience of the prison during its heyday and to dramatize and stage key events in a way that speaks to the visitors' emotions.*

WHAT HAS BEEN KVORNING'S PRIMARY ROLE IN THE PROCESS OF TRANSFORMING THE MUSEUM INTO A WORLD LEADING ATTRACTION?

*We have been dramaturges and set and exhibition designers. Our foremost task has been to convey ambiances and we have incorporated artistic effects of cinematography. This has resulted in a prison museum unlike any other in the world...*

WHAT REQUIREMENTS SHOULD THE PRISON MUSEUM MEET?

*The museum must be an active partner in developing the concept. They should deliver the academic content and give us relatively free*

*rein to choose the artistic effects. Collaboration is based on an active dialogue and should ideally be workshop-based.*

WHAT ARE THE KEY FACTORS EXHIBITION DESIGNERS SHOULD BE AWARE OF?

*In this case, our job has been to stage the different spaces in a superb way, with varying artistic effects and a cohesive storyline. From the moment the visitors enter, the level of abstraction is clear and this enables them to attune their expectations. More than anything, this exhibition is meant to touch something in you.*

WHAT HAVE YOU LEARNED ABOUT PROJECT DEVELOPMENT AND COLLABORATION?

*The prison is a highly complex building – at once both robust and sacrosanct in its original state. It has been challenging to integrate AV equipment etc. in a subtle way, so that the visitors sense the effect rather than see the equipment. A meticulous script has been paramount in order to control all the different processes.*

HOW WOULD YOU DESCRIBE THE IDEAL CLIENT IN REGARDS TO MUSEUM AND ATTRACTION DEVELOPMENT?

*An active partner. Someone who generates mutual respect and who give us designers leeway to come up with the best solution regarding presentation style and means of communication. Trust, respect and free hands.*

BEHIND BARS / BIRMINGHAM NOVEMBER 2015

Museums Association Conference and Exhibition 2015 Birmingham, 5-6 November

Learn more about the transformation of the former Danish state prison into one of the world's best prison museums at the Museums Association Conference and Exhibition 2015 in Birmingham in November. Visit Kvorning's booth and meet Arne Kvorning, the exhibition designer.

The dedicated museum/exhibition designer collaboration combined 20,000 unique items and 4,000 m<sup>2</sup> with state-of-the-art AV installations and RFID-tagged identity-walks. Clever use of scenography and drama breathes life into the walls once more. The museum merged research, AV technology and story-telling; transforming the authentic location into an immersive and interactive experience.

”  
*20,000 unique items, 4,000 m<sup>2</sup> with state-of-the-art AV installations and RFID-tagged identity walks*



# THE PROCESS TIME SCHEDULE 2012-2017

## FROM IDEA TO VISITOR EXPERIENCE

The making of the Prison Museum has been an extensive process and has required the intense and combined efforts of the museum, the designers and the manufacturers. The exhibition has been delivered as a complete design and build project and Kvorning has delivered, produced and implemented it all in collaboration with their regular subcontractors in Denmark. Final detailing, production and implementation have been completed in just six months and because of this, careful planning, strict management and quality assurance processes have been of the utmost importance. Development, production and implementation of an exhibition project of this size is carried out slightly differently in Denmark than in the UK, as they do not have a fixed system like the British RIBA stages. The process is, however, similar in many ways. The exhibition at the Prison Museum was brought to life through the following six stages:

### IDEA DEFINITION / CONCEPT DESIGN

- In close collaboration with the museum, the concept's content and design is developed

### SKETCHES / EXHIBITION DESIGN

- The complete exhibition experience is organized, defined and designed

### DETAILS / TECHNICAL DESIGN

- All details are determined – both physical and digital elements

### PRODUCTION

- Physical elements are produced, interactive elements are programmed and tested

### CONSTRUCTION / IMPLEMENTATION

- Staging of the museum's many rooms – furniture, AV equipment, lighting and sound are installed and tested

### HANDOVER / EVALUATION

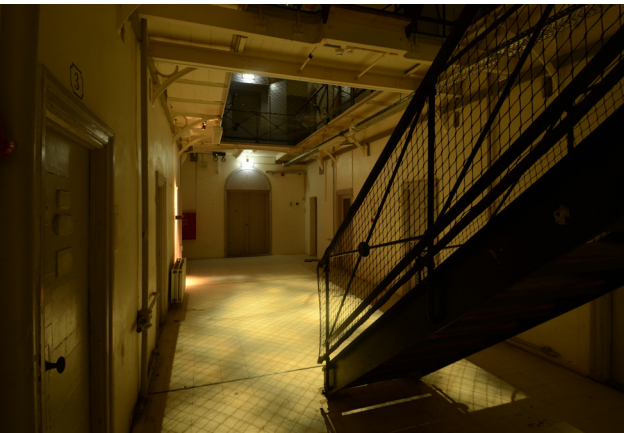
- The exhibition is handed over to the museum; the exhibition opens. Subsequent evaluation with both the museum and the subcontractors

These were implemented at Horsens across four phases.

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## PRISON MUSEUM PHASE 1 – MAY 2012

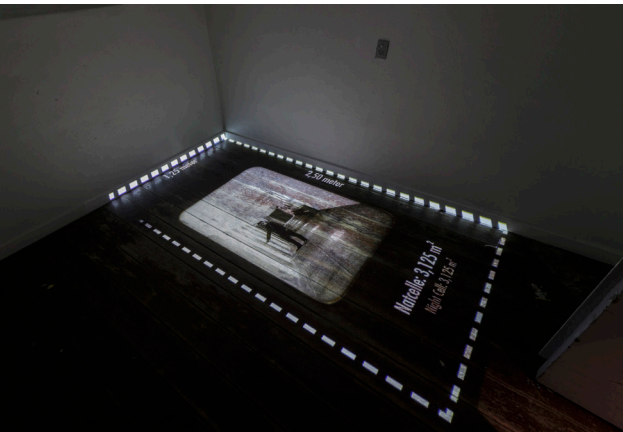
### VISITOR ATTRACTION OPENS



02

## PRISON MUSEUM PHASE 2 – MAY 2015

### NEW EXHIBITIONS IN EXPANDED EXHIBITION SPACE



03

## PRISON MUSEUM PHASE 3 – MAY 2016

### 4 NEW EXHIBITION THEMES PLANNED – FOCUS ON DEBATE





THE PROCESS  
TIME SCHEDULE 2012-2017

04

PRISON MUSEUM  
PHASE 4 – MAY 2017

NEW EXHIBITION THEME AND RECONSTRUCTION  
OF ESCAPE TUNNEL  
- FOCUS ON ESCAPE



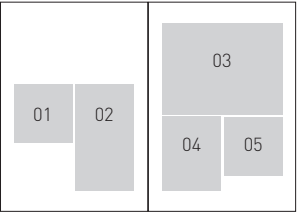


THE MEDIA

SCIENTIFIC RESEARCH  
INTERVIEWS  
20,000 UNIQUE ITEMS  
GRAPHICS  
SIGNAGE  
SOUNDSCAPES

LIGHTING DESIGN  
SPECIAL EFFECTS  
INTERACTIVE MEDIA  
PHOTOGRAPHY  
VIDEO  
ANIMATIONS

AV TECHNOLOGY  
RFID TECHNOLOGY  
SCENOGRAPHIC AND DRAMATURGIC MEANS  
STORYTELLING  
ANALOGUE PRESENTATIONS



- 01. DRESSED SPACES
- 02. RFID-IDENTITIES
- 03. WALL PROJECTIONS AND IMAGE MAPPING
- 04. UNIQUE CONTENT FOR EACH IDENTITY
- 05. INTERACTIVE SCREENS







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## THE TEAM

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Members of the team have their own unique competencies and experiences (creative and practical). They come from many different professions and cooperate closely throughout all phases.

### MAIN CONTRACTOR

## KVORNING DESIGN & COMMUNICATION

### SUBCONTRACTORS

**ALIEN WORKSHOP / SPECIAL EFFECTS AND INTERACTIVES**

**AV-HUSET / AV TECHNOLOGY**

**COWI LYSDESIGN / LIGHTING DESIGN**

**IDESKILTE / SIGNAGE**

**MASTERMIND PRODUCTION APS / SOUNDSCAPES**

**SPORRING / CARPENTRY**

**WAGNER MONTAGE / MOUNTING**

**WONDERLAND INTERACTIVE / INTERACTIVES**



# SPECIAL EFFECTS

## Engaging user experience

OLE SAMSE, ALIEN WORKSHOP  
INTERACTIVE AND FILM CREATOR

Ole Samsøe joined Kvorning Design & Communication as an external consultant at the very early stages of interactivity and film-production. Nearly 75,000 lines of code were programmed from scratch over a period of approximately 2 months. The codebase is spread across 37 interactive installments, including applications ranging from interactive RFID activated infopoints to multi-touch installations to highly advanced games based upon real-time camera tracking systems.

### INCREDIBLE AUTHENTICITY

The prison museum features an incredible authenticity and feels very much alive due to the many largescale videoscapes portraying the harsh life in prison. To visualize the daily procedures, emotions and often chaotic situations the designers used the biggest

green screen stage available in Denmark.

### NO ACTORS

To make sure the exhibits were 100% accurate, only actual prisoners and prison guards were used on request from the museum – no actors were used during production

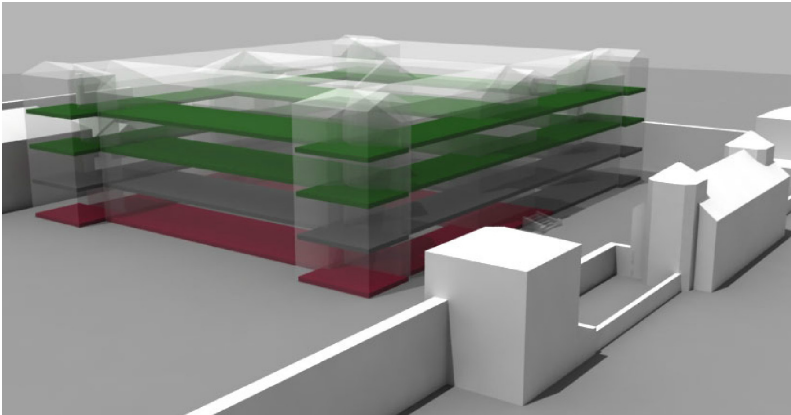


WALL PROJECTIONS AND INTERACTIVE SCREENS

# WAYFINDING AND 3D

## Find your way through the old prison

PIM FEIJEN  
INTERACTIVE MEDIA COMPOSER



FLY-BY IS USED TO SHOW VISITORS THEIR CURRENT LOCATION

Wonderland Interactive designed and programmed eight interactive “Wayfinder” screens that help visitors find the exhibitions that they would like to visit and provide them with additional information about these exhibitions. There is also a “Read-more” part, where visitors can type their own email address and a link leading to even more relevant information will then be sent to them.

The prison building is rather large and maze-like, so it was modelled and rendered in 3D. Fly-by is used to show visitors their current location.

Wonderland Interactive chose to put all Wayfinders online to allow easier updates: anytime, anywhere.



# LIGHTING DESIGN

## Lighting design sets spotlight on bleak atmosphere in Danish prison

JØRGEN KJER  
LIGHTING DESIGNER

The new refurbishment of Horsens Prison Museum uses video, animation, sound and a subtle lighting design to bring the old prison stories to life.

Grey, grim and gloomy: without attempting to embellish the bleak reality, the exhibition at Horsens Prison Museum offers a view into the daily life of inmates and prison staff during the 153 years the prison was in use.

### EXCEPTIONAL LIGHTING DESIGN EMPHASIZES PRISON ATMOSPHERE

Kvorning Design & Communication developed the concept for the exhibition and COWI's lighting designers are responsible for the lighting.

With a colour temperature

of about 6,000 degrees kelvin, the lighting design completely avoids the fancy shades and consistent lighting effects that are otherwise typical when making an exhibition feel inviting. Instead, the light is deliberately understated and bleak and does not leave the visitor in any doubt that they are in a building that was designed to confine some of Denmark's most hard-boiled criminals of all time.

"We have approached this task in a completely different way than we typically do with museum exhibitions," says Jorgen Kjer, who was responsible for the lighting design. "We couldn't make it nice. Therefore, we increased the degrees kelvin, and kept many of the original fittings, such as fluorescent lamps that gave the place more originality."

Unlike the typical lighting design for an exhibition where the focus is on the individual exhibits, the whole building and everything that belongs to it is the object. This includes the doors, windows and fittings, all of which appear as when the building was abandoned in 2006.





# AV DESIGN

## Wall projections, image mapping and RFID identities

JENS RAVN AND LASSE WERNER OF AV-HUSET  
AV DESIGNERS AND INSTALLERS

### THE CHALLENGE

In 2015, the former Horsens State Prison was to be re-furnished and reinterpreted as a museum, which would convey the prison's history, while simultaneously giving visitors a customized experience through interactive storytelling. It was challenging to integrate new AV equipment while maintaining the old prison's appearance. The AV solution had to be long lasting and of high quality, with maximum working life and minimal maintenance.

### THE SOLUTION

In collaboration with Kvorning Design & Communication, AV-Huset delivered and installed over 50 LED projectors and more than 30 screens with Solid State Media Players of the highest quality and which match the latest standards. Kvorning Design has been

in charge of the design and content, while AV-Huset has installed, adjusted and programmed all AV solutions. They have also taught the museum staff how to operate the equipment.

### ADVANTAGES

By doing this, the Prison Museum has received a state-of-the-art technical solution that provides visitors with many great experiences and merges effortlessly with the original prison space. The chosen LED projectors have cut the museum's service checks in half, compared to conventional projectors, and have greatly reduced the risk of breakdowns.



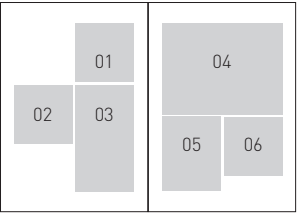


# RFID-IDENTITIES

## Become a prisoner or a guard for one day ...

### GET A PRISONER IDENTITY

When entering the former prison, visitors get a wireless RFID (radio frequency identification) that enables them to choose a personal experience with an authentic prisoner or guard. These include Denmark's most famous escape artist, Carl August Lorentzen, and former minister of justice and conman, Peter Adler Alberti. The RFIDs can be activated in the prison cells, kitchens, bathrooms and prison church. The RFID tags activate via a controller one or several media forms such as sound, lights or video content either on a screen or a video projector. For example, an RFID activates a film on a flat screen and so when the speaker talks about a specific item a spotlight will automatically highlight it.



- 01. CHOOSE YOUR IDENTITY
- 02. LOG IN WITH YOUR NEW IDENTITY
- 03. MEET YOUR IDENTITY
- 04. SPECIFIC CONTENT PRESENTED
- 05. SPECIFIC CONTENT PRESENTED
- 06. SPECIFIC CONTENT PRESENTED





# DIRECTORY LISTING OF PROJECT TEAM

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