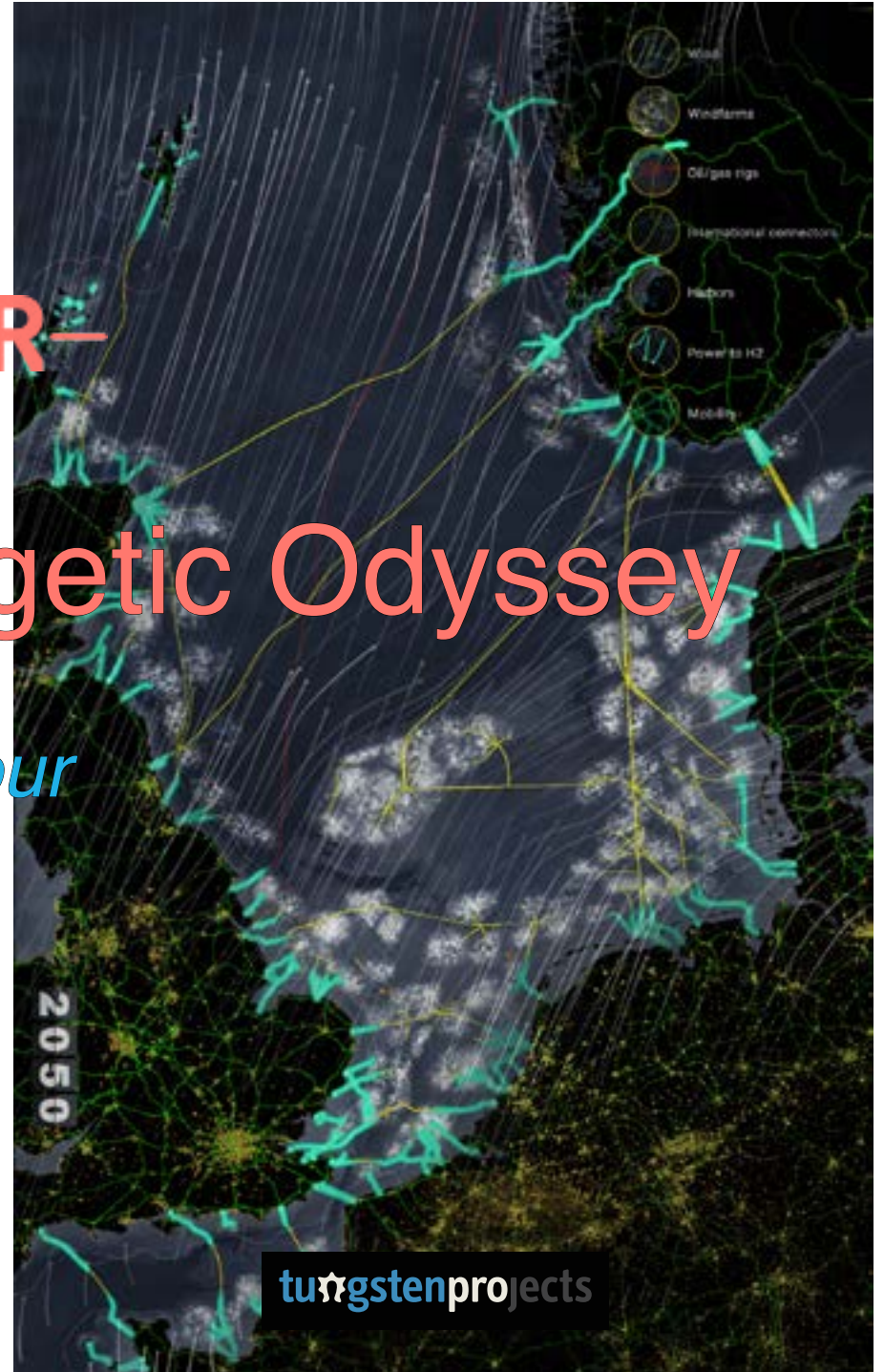# IABR—

2050 - An Energetic Odyssey

on tour

2050 - An Energetic Odyssey on Tour

2050 – An Energetic Odyssey is an installation comprising a 12-minute animation that provides answers to the seemingly simple question: 'If we take the two-degree climate target seriously, what should we do?' The Odyssey focuses on the North Sea. The highlight of the animation are 25,000 10MW wind turbines that will be able to meet about 90 percent of the energy demand of the North Sea countries by 2050. The animation is a meticulous visualization of a possible future: step by step, it takes the audience to 2050, explains what has to be done and what the underlying considerations are, addresses energy saving and decentralized energy production and describes the impact on employment and on the ecology of the North Sea. The logistics of this mega operation are extensively discussed as well.

2050 – An Energetic Odyssey is an initiative of the International Architecture Biennale Rotterdam (IABR), based on an idea by Maarten Hajer, chief curator of the 7th edition, IABR–2016–THE NEXT ECONOMY. The creative direction was in the hands of Lead Designer and landscape architect Dirk Sijmons. Responsible for its execution were H+N+S Landscape Architects, Ecofys and Tungsten. The IABR was the coordinating commissioner on behalf of a coalition of ten parties: the Dutch Ministry of Economic Affairs, the Port of Rotterdam, Van Oord, Shell, TenneT, Zeeland Seaports, the European Climate Foundation, RWE, Natuur & Milieu, and the Port of Amsterdam. The Odyssey is therefore a coproduction of designers, experts and stakeholders. The joint manufacturing process, the presentation of interim results and the exhibition and debate during IABR–2016 have forged a consortium of actors in which offshore builders, a wind turbine manufacturer, ports and power companies, several Ministries, nature NGOs, marine ecologists, and designers have jointly reached the conclusion that yes, it can be done.

In the context of the Dutch EU Presidency, the Directors-General for Energy and subsequently the informal council of EU countries' Energy Ministers have previewed the Odyssey. The Ministers not only watched the installation, but were also inspired: the press release following the regional partnership agreement of the North Sea countries that was established during the Dutch presidency states that 'it helped that we could show our colleagues how the operation would work'. 2050 – An Energetic Odyssey was one of the highlights of the main exhibition of the IABR–2016 and international and national professional journals as well as newspaper devoted a lot of attention to the installation.

On Tour

Now that the Biennale is over, many organizations both at home and abroad ask us if they can exhibit the installation, either incidentally, during debates and conferences, or for a longer period of time; by itself or as part of an exhibition. The IABR–2016 installation consisted of a large floor projection (5.5 x 8 m) accompanied by a voice-over, three flat screens with filmed technological and ecological explanations, and a series of drawings related to the constructing of an offshore wind farm. This booklet contains information about the exhibition of the Odyssey after the Biennale. We want the installation to continue to play its special role in the public debate, but we have set a number of requirements concerning the context and the way this is done.

Dramaturgy is crucial to the showing of the Odyssey. Twelve minutes seems short, but it is long. The Odyssey derives some of its impact from the special way it is presented. This creates a can-do-feeling and an attitude focused on collaboration and concretization. In that sense, the animation is intrinsically connected to the particular manner and quality of its presentation. This involves more than simply 'turning on' the animation. The presentation needs sound technical preparation and it must be the culmination of a series of presentations. It is this series that is part of the intervention. If this process is properly executed the story will grow, reinforce the coalition and bring concrete action nearer. In short, each display is made-to-measure and this presupposes close coordination. The dramatic impact depends on the method of projection, the size of the projection, its staging and its embedding by means of an introduction. The latter is often advisable or even necessary. Such an introduction can be provided by Maarten Hajer, Dirk Sijmons, or by some third person. This is decided after careful consideration.

We offer three different versions of the installation: small, medium or large.

Technical explanation how to project '2050 An Energetic Odyssey'

The highest possible -native- resolution for the portait orientated '2050 An Energetic Odyssey' composition is:
1700 x 2200 pixels = 1 x 1.294 Ratio
Codec: PNG sequence, ProRes, Animation or H.265.
Audio: stereo voice-over.

The composition ratio of 1 : 1,294 means that the screen/floor surface should be exactly the same ratio to avoid any unused space around the composition on the screen. For example, if the short side of a screen is 2,25m, the long side should be 2,00 x 1,294 = 2,90m. Or for example, if the long side is 1,80m, the short side should be 2.00 : 1,294 = 1,38m.

We offer three projection options: SMALL (1,38m x 1,80m), MEDIUM (2,25m x 2,90m) and LARGE (5,40m x 7,00m)

SMALL version can be projected by a single HD beamer with a resolution of 1080 x 1920 pixels.
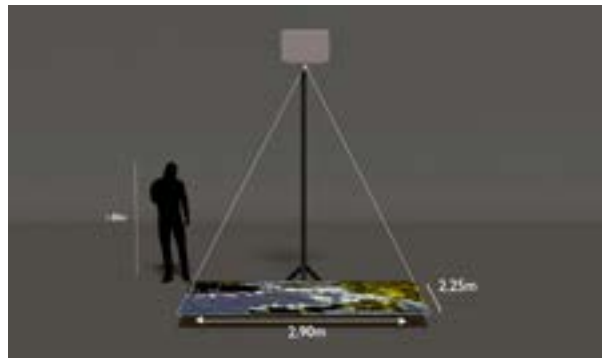**MEDIUM** version can be projected by a single HD beamer with a resolution of 1200 x 1920 pixels.
LARGE version HAS TO BE PROJECTED BY TWO IDENTICAL HD BEAMERS each with a resolution of 1200 x 1920 pixels.
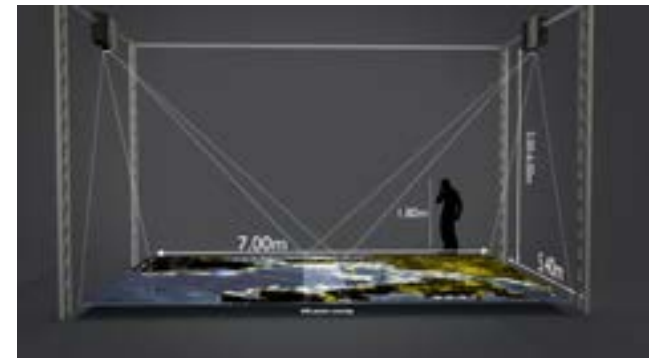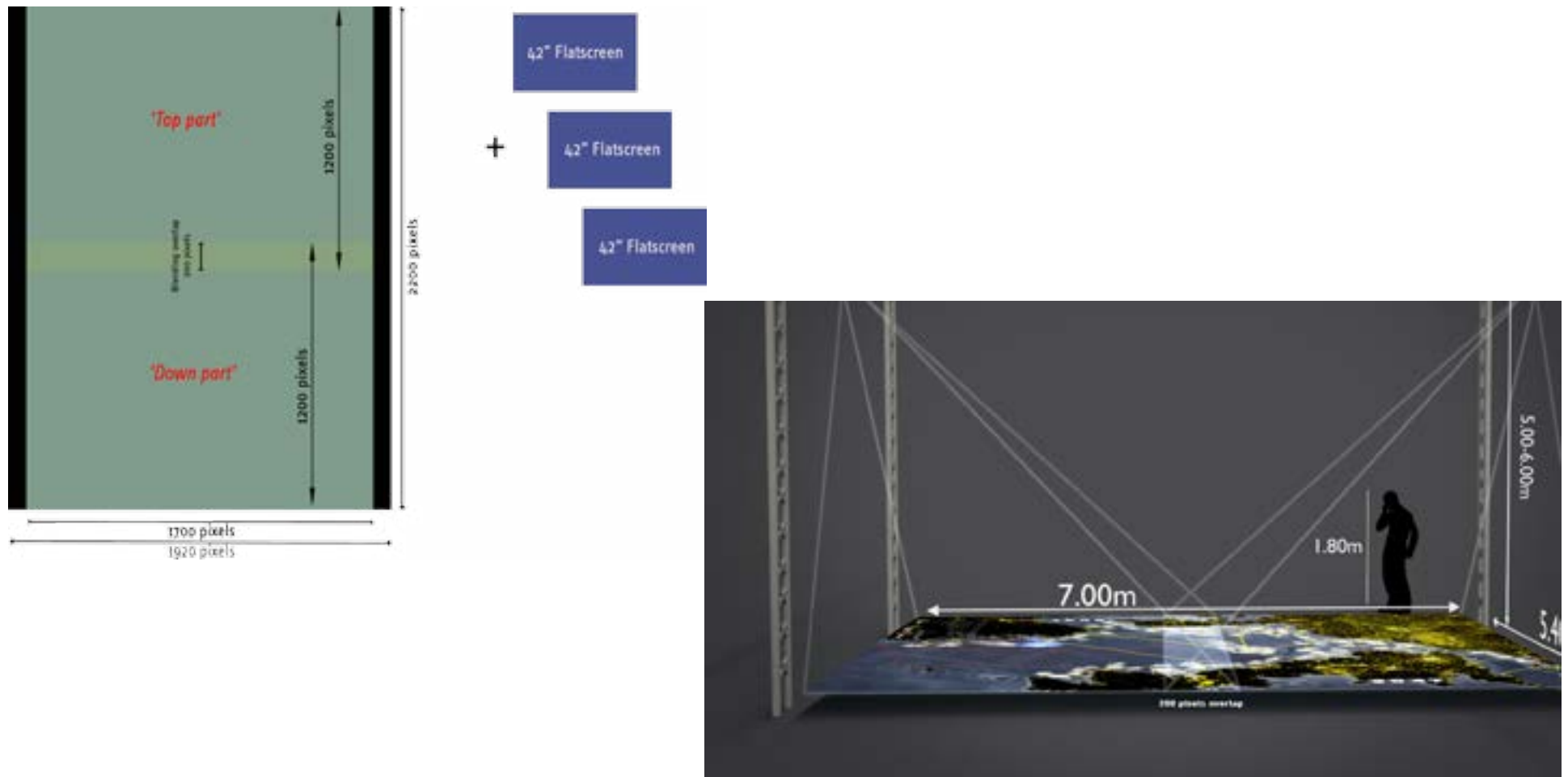
Small	Medium	Large
S	M	L

LARGE (100+ persons)

To project this composition, you need two Videoplayers and two high quality DLP video projectors with a resolution of 1200 x 1920 pixels, a light output of 8000 Ansi Lumen and preferably a build-in BLENDING function for a seamless overlap of the two parts. If this function is not build in, you'll need external video blending soft- and hardware like Dataton's 'Watchout'. To show the additional synchronised information, you need another three Videoplayers and three 42" Flatscreens.
We'll supply you for the projection part with the two parts of the composition (a 'top' part and a 'down' part) of identical lenght which are slightly bigger than half of the complete composition. They two parts overlap each other aproximately 200 pixels. You'll need the H.265 codec version for the two compositions, because this codec can handle the 1920 x 1200 resolution. A recommended video player is the BrightSign 4K1042 4K player.

MEDIUM (20-60 persons)

To project this composition you need one Solid State Videoplayer, one high quality DLP video projector with a resolution of 1200x1920 pixels and a light output of 8000 Ansi Lumen.
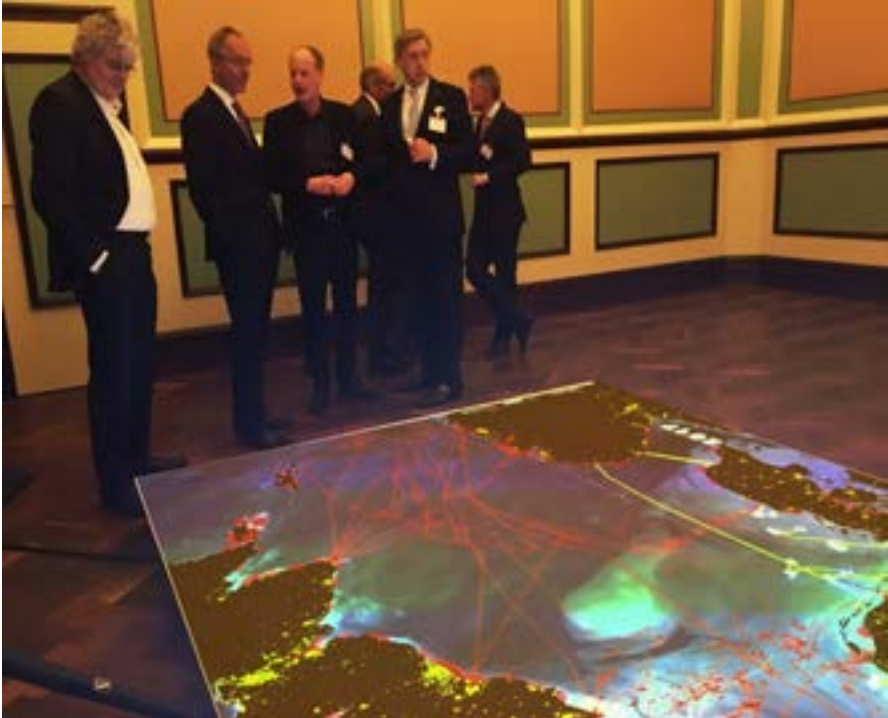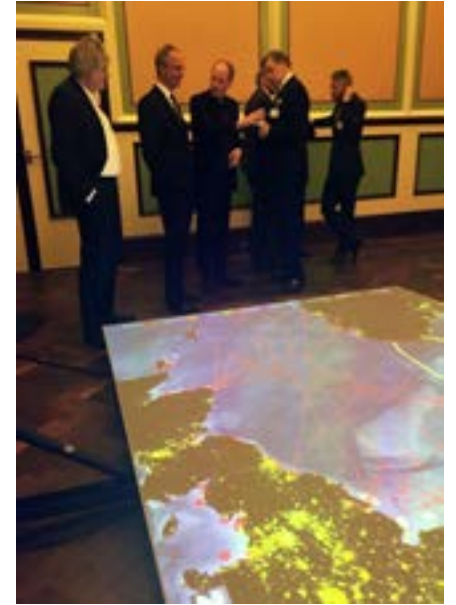Because the composition of 1200(x 1,294 = 1552) x 1552 pixels is more squarish than the projectors output, you'll get black bars (invisible in projection) of 184 pixels each at the top and bottom of the output.
You'll need an H.265 codec version of the composition, because this codec can handle the 1920 x 1200 resolution.
A recommended video player which can handle H.265 resolution is the BrightSign 4K1042 4K player.
To show the additional synchronised information, you need two extra Videoplayers and two 42" Flatscreen.
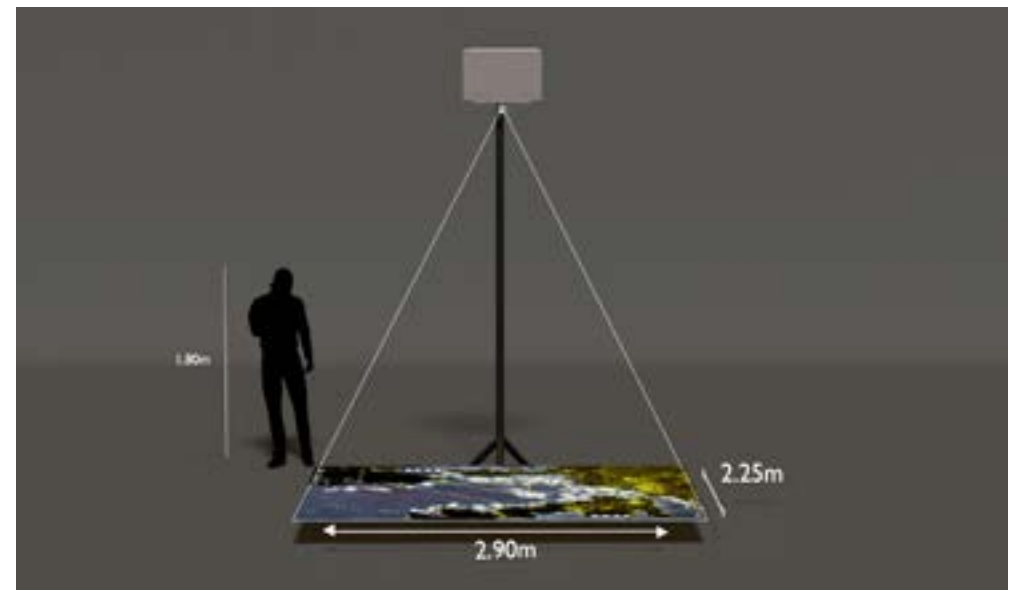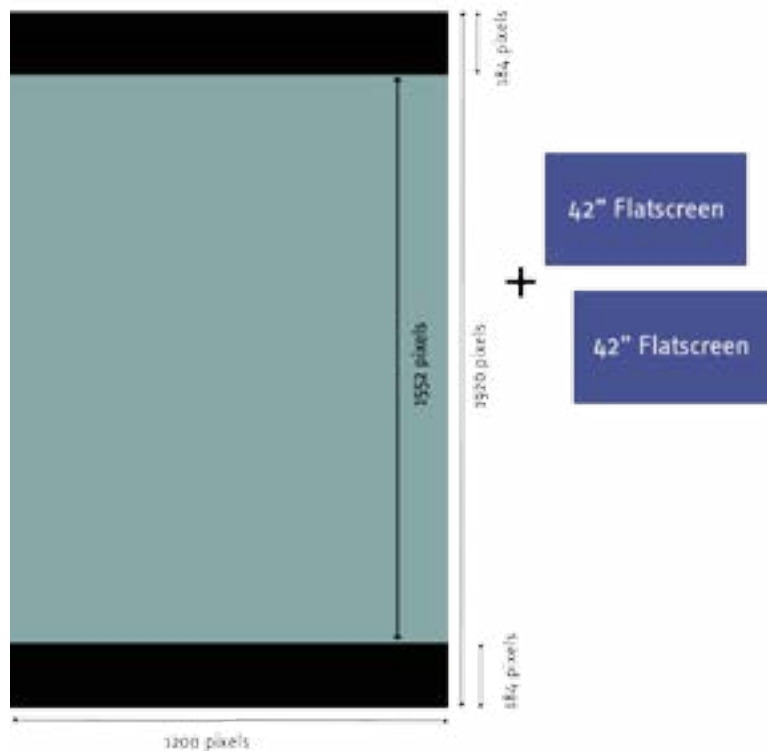
SMALL (5-15 persons)

To project this ratio by one projector, you need a high quality DLP/LCD video projector resolution of at least
1080 x 1920 pixels and a light output of 5000 Ansi Lumen.
Because the composition is far more squarish than the projectors output, you'll get black bars (invisible in projection)
of 261 pixels each at the top and bottom of the output.
You can use the H.264 codec version of the composition, because this codec will handle the 1080 x 1920 resolution.
A recommended video solid state player which can handle HD resolution is the Brightsign 1032 HD.
To show the additional synchronised information, an extra BrightSign XD1032 HD player and a 42" Flatscreen is needed.
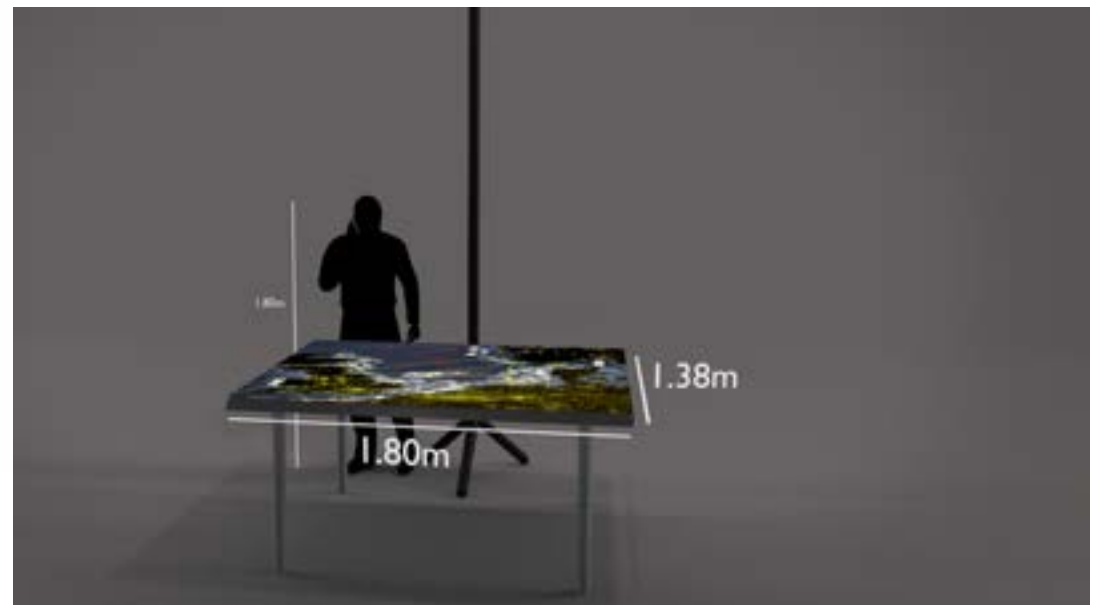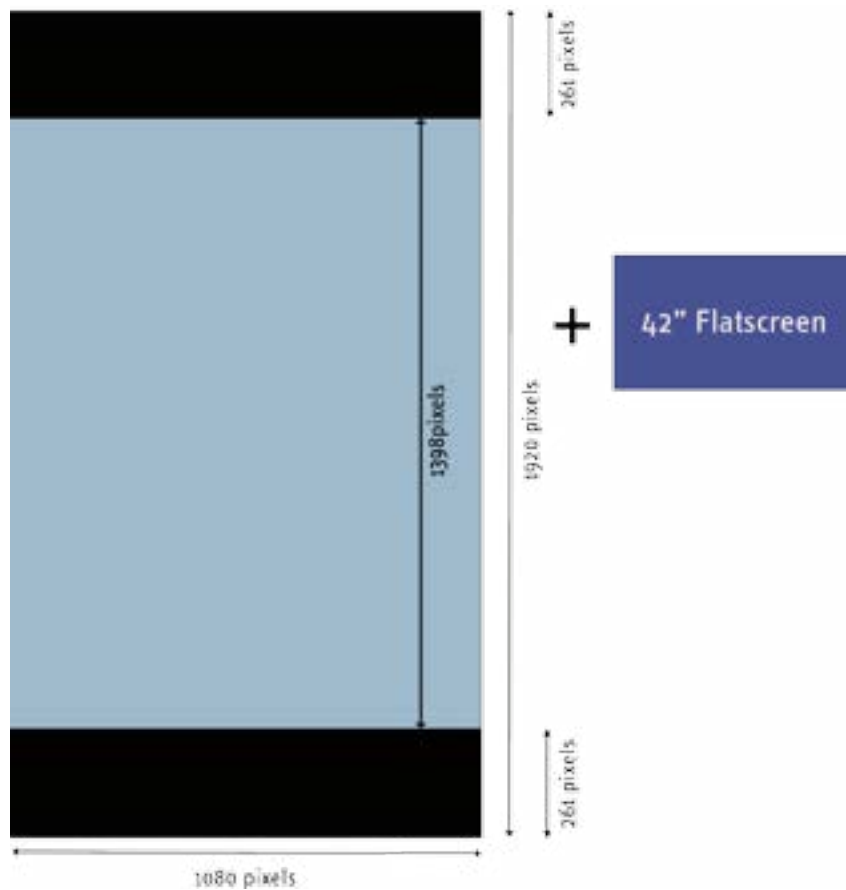
2050 - An Energetic Odyssey
commissioned by the International Architecture Biennale Rotterdam in the context of
IABR – 2016 – THE NEXT ECONOMY

Concept: **Maarten Hajer** and **Dirk Sijmons**
Realized by: **Tungstenpro**, **H+N+S+ and Ecofys**
In partnership with: **Ministry of Economic Affairs of the Kingdom of The Netherlands**, **Shell**, **Port of Rotterdam** and **Van Oord**

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