

1. Project information

BMW Vision iNEXT World Flight

Event date: from 09.09.18 to 14.09.18, concept phase started in September 2017, installation of the showroom in the aircraft: 07.09.-08.09, with a preliminary construction phase from 22.08.-07.09.

Event agency: VOK DAMS Events GmbH

AV consultant for the technical planning and implementation of the concept as well as event direction: macomNIYU GmbH

Systems integrator: Pool Group

2. Client requirements

- The unique event concept should be evaluated and implemented in terms of AV technology.
- The aim was to use compact AV technology that could be installed in the limited space of a Boeing 777F, but still deliver outstanding results that are appropriate for such a premium event.
- Since the installations could not be dismantled because of the tight schedule they had to be able to withstand forces of up to 3G.
- Smooth operation, which allowed virtually no gaps or delays, had to be guaranteed.

3. Showroom in the belly of Boeing 777F

The aircraft itself had three areas separated by kinetic gates. These were an immersive showroom in the front part, the main showroom incl. turntable in the middle area and a lounge in the back area. The 15-minute press conference released all areas during the show, followed by the 45-minute exploration phase including expert talks. The concept car was shown on a turntable and driving without passengers in the aircraft fuselage. Additionally, there was a backstage area including the necessary control technology.

4. Technology specification for system(s) installed

- 157 Tiles Infiled 7.8 LED floor, 10x Panasonic DZ13K,
- 4x Pandoras Box media server for native feed of all media areas
- 34x GLP FR1, 20x SGM P2, 34x GLP X4 Bar, 1,5km Flex LED, 2x GrandMA Light
- 22x Meyer Sound MM4 XP, 5x Meyer Sound M1D-Sub, 2x Yamaha QL1
- Large number of special designs for mounting the devices

5. Project challenges

Planning phase:

- Special requirements on the logistics for the realisation of the show:
 - The event had four shows in four cities (Munich, New York, San Francisco, and Beijing) on three continents within 98 hours in the same setup.
 - For this a perfect crew planning was necessary. This was only possible through the use of 2 identical crews (25 persons each). Both crews had

to have all information of the other crew and had to have at least one rehearsal at the first location.

- Special requirements on the technology:
 - The installation of such a complex technical setup in an aircraft is utterly unique to date. Totally new territory for all trades and a huge challenge that was met superbly by all parties.
 - Additional challenge: due to the nature of the event it was important when selecting the technology that only rentable material could be used.
 - The vehicle prototype was to be illuminated in a very confined space (2.5 m at the highest point in the aircraft) but nevertheless in comparable quality to a trade fair stand.
 - Due to the constraints of the space it was imperative that compact materials (e.g. LED lamps SGM P2 and GLP FR1) were used. Some of these products were brand-new and were only presented at trade fairs this year. Only through very close communication with the manufacturer was it possible to make the material rentable for the project.
 - This was a highly demanding concept with many media surfaces, which in most cases could only be realised technically by projections.
 - Here, too, the requirement was to be as compact as possible with as high a brilliance as possible - disciplines that are often diametrically opposed.
 - There was a large input and cost in the projection planning due to curved surfaces and unfavourable projector positions (oblique projection in at least one axis, partly 2 axes)
 - The projection mapping required detailed planning in the 3D model. The 3d model allowed for all the possibilities of the lenses in the planning stage, such as Lensshift or zoom ranges to the edge of the lens to over 95%. Normally, these are reserved for on-site structural correction.
 - It had to be taken into account that a maximum of 10 hours set-up time would be available on site – including all preparations and set-building. The physical set up obviously reduced the time available for the set-up of the projectors.
 - Detailed simulations, right up to overlapping areas in the 3D model, were created in order to provide the content producers with as much input as possible to help them to prepare the content for the corresponding conditions already during production.
 - Installation of a control room, which had to be ready to play with the touchdown of the aircraft and the connection to the external power supply.
 - There were special challenges also for the assembly of all equipment, as the schedule would not have allowed a complete assembly and disassembly of all technology - therefore, all items had to be built to an “airworthy Standard”, designed for normal forces of up to 3G in order to withstand a "normal" aborted take-off as well as turbulence.
 - In addition to the optical and technical aspects of resolution and colour brilliance, the LED floor with a length of just under 10 metres had to meet two main requirements:
 - The concept car had to be able to stand and drive on it.
 - It had to be made airworthy by a particularly fast assembly and disassembly of individual parts.

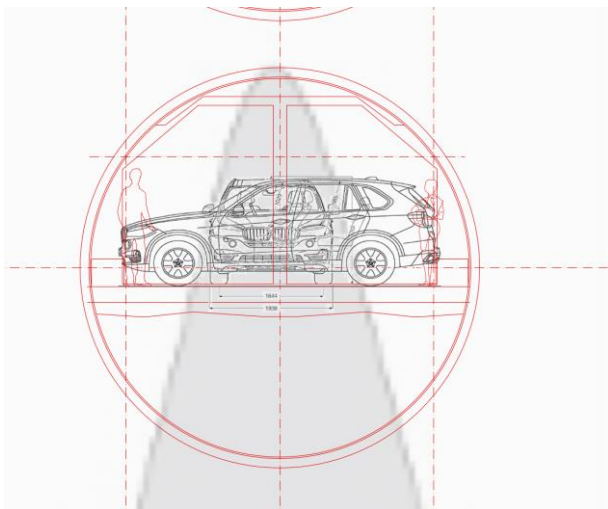
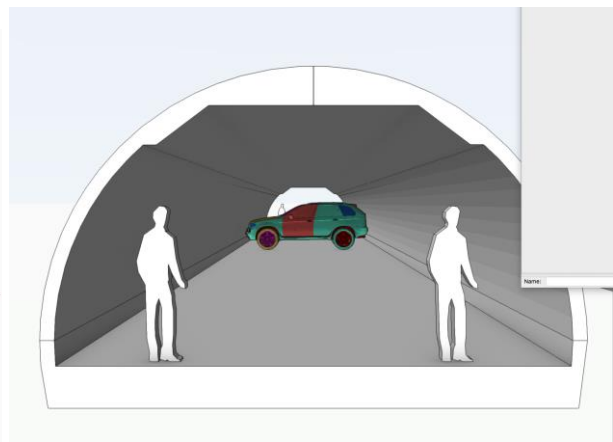
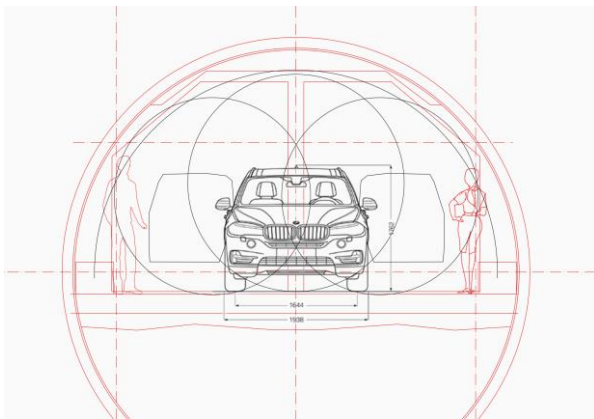
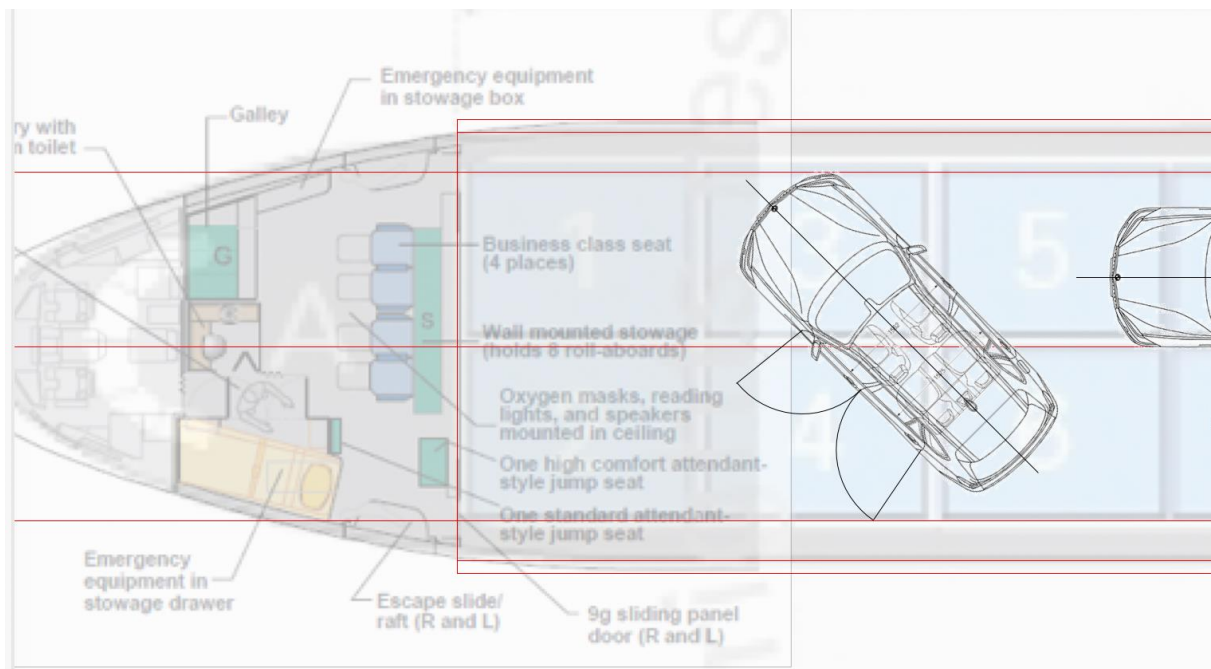
Construction phase:

- The complete setup was pre-assembled in a storage hall.
 - The pre assembly enabled us to identify and solve technical and structural challenges at an early stage.
 - This reduced the installation time on the aircraft and thus the costs: Due to the pre-assembly, the installation in the aircraft could be reduced to only 1.5 days.
 - The entire construction was carried out on heavy-duty pallets (PZA pallets)
 - The upper deck of the Boeing 777 has space for a total of 17 PZA pallets as well as a smaller PMC pallet (direction was located here).
 - In flight mode, the pallets could not be connected to each other, as the aircraft twists under load and therefore requires a certain degree of freedom.
 - In order to make the installation in the aircraft as smooth as possible, there were several appointments in advance during which an identical aircraft was measured down to the last detail. Boeing provided only limited construction plans.
 - During the short construction phase of 1.5 days, logistics was also a very decisive topic.
 - Almost every work step was planned in detail and timed in advance - as up to 40 crew members had to work together in the tightest of spaces. This prevented traffic jams and collisions during assembly.
 - In total, 157 floor LED modules, 10 projectors, 100 lamps, 30 loudspeakers, 1.5 km FlexLED, 7.5 km cable, a turntable as well as two kinetic gates and a large volume of set construction & exhibits were brought into the aircraft within this extremely short time frame.

Event phase:

- The event phase differed from the usual events mainly by the tight timing.
 - The event started with the first show in Munich and ended for the whole team 98 hours later with the last show in Beijing - everything in between was clocked closer than a typical trade fair day on an A-Show.
 - Every minute was filled with content right from the start: A delay in one of the phases would have had serious consequences for the entire following calendar.
 - Starting with slots for aircraft handling and take-off clearance, dates with customs at the respective location offices.
 - The press conferences were also closely timed with 15min shows and 45min expert talks at three points in the setup.
 - With this meticulous planning, the event phase could then, almost be described as a stroll
 - All systems worked smoothly together and were integrated into a perfect show.
 - all elements including kinetic gates, media content, light staging to a moving vehicle without passengers in a freight plane, created a sublime user experience for the guests that needs not fear comparison.

Concept approach



Technical Sketches

Plan Technics Draufsicht

macomNIYU GmbH
Registrierungs-Nr. 12
D: 13359 Berlin
Web: www.nyu.de / post@nyu.de

Scale: Scaled

Planformat: ISO A3 (297 x 420 mm)

Date: 06/04/2018 | Version 1.0

drawn: macomNIYU

CONFIDENTIAL DOCUMENTS

Architecture	Architect Company
Communication	VCA Team
Media Concept Planning	macomNIYU
Light Concept Planning	macomNIYU
Light Company	Not
Audio Company	Not
Video Company	Not

BMW
Bold World Flight

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Plan Technics Projector

macomNIYU GmbH
Registrierungs-Nr. 12
D: 13359 Berlin
Web: www.nyu.de / post@nyu.de

Scale: Scaled

Planformat: ISO A3 (297 x 420 mm)

Date: 21/06/2018 | Version 1.0

drawn: macomNIYU

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0 1 2 3 4 5 10 15 20

SCALE: METERS

Variante 3, 50er LED Boden (164x Module)
zentriert

Variante 4, 60er LED Boden (138x Module)
zentriert

Plan LED Boden Draufsicht

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3D Models

