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T R A M

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12 Kjelsås

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02

THE PROJECT

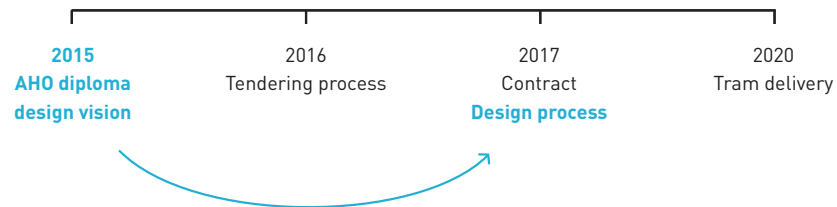
OVERVIEW

«2020 Oslo tram» is an industrial design diploma project by Mikkel Brandt Bugge and Taral Jansen, conducted during spring 2015. The diploma is a realistic design vision for the new Oslo trams. The project delivery includes exterior design, interior design and possibility driven design.

Some main deliverables are a design language inspired by Scandinavian simplicity, exterior illuminating lines, a high capacity interior, a practical driver's room and active route info.

In 2017, the new tram model for Oslo will have been chosen, and a customization process will be conducted to make the trams fit the identity and needs of Oslo.

The diploma goal is that the delivery can contribute to the design process, either as a concrete design suggestion or as a source of inspiration.



TARAL JANSEN

MA in industrial design.
Specialized in product design,
experience from interaction
design.

taral.jansen@gmail.com
+ 47 99105712
www.taraljansendesign.no

MIKKEL BRANDT BUGGE

MA in industrial design.
Specialized in product design,
experience from transportation
design.

brandt.bugge@gmail.com
+47 47327000
www.brandtbugge.no

OVERVIEW

BRAVE. FUNCTIONAL. SCANDINAVIAN.

The vision is brave by featuring illuminating lines, making it become a moving attraction, illuminating the urban streets and suburban areas of Oslo.

The tram is functional by focusing on efficiency and capacity.

The identity is inspired by the aesthetics of Scandinavian simplicity.

Illuminating lines

Blue colour

Inspired by Scandinavian simplicity

Integrated mirrors

Functional driver's room

Concealed roof components

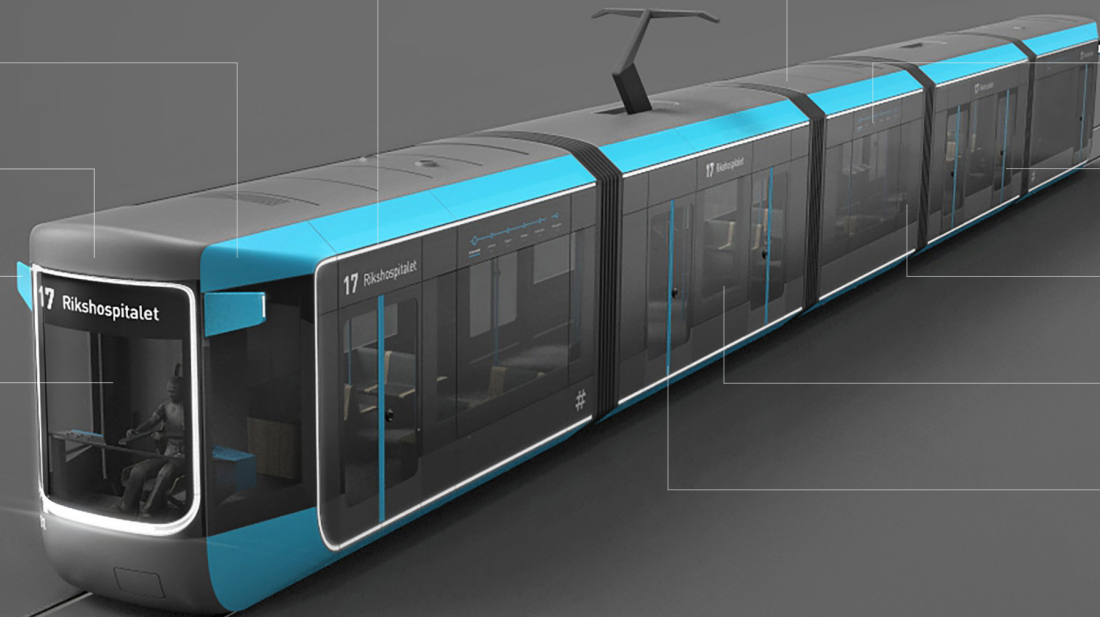
Exterior route info

Many doors

Panoramic windows

High capacity

Universal design



ILLUMINATING LINES

One of the key features with the 2020 Oslo tram vision is the illuminating lines. The idea is that the lines make the tram become a moving attraction, illuminating it's way through the streets of Oslo.



CAPACITY AND EFFICIENCY

KEY FEATURES

Higher capacity and efficiency are two important key features with the 2020 Oslo tram vision. In order to accomplish this the tram is longer, has fewer seats, more doors, more low floor, more open areas and a wider aisle.

LESS SEATS AND CAPACITY AREAS

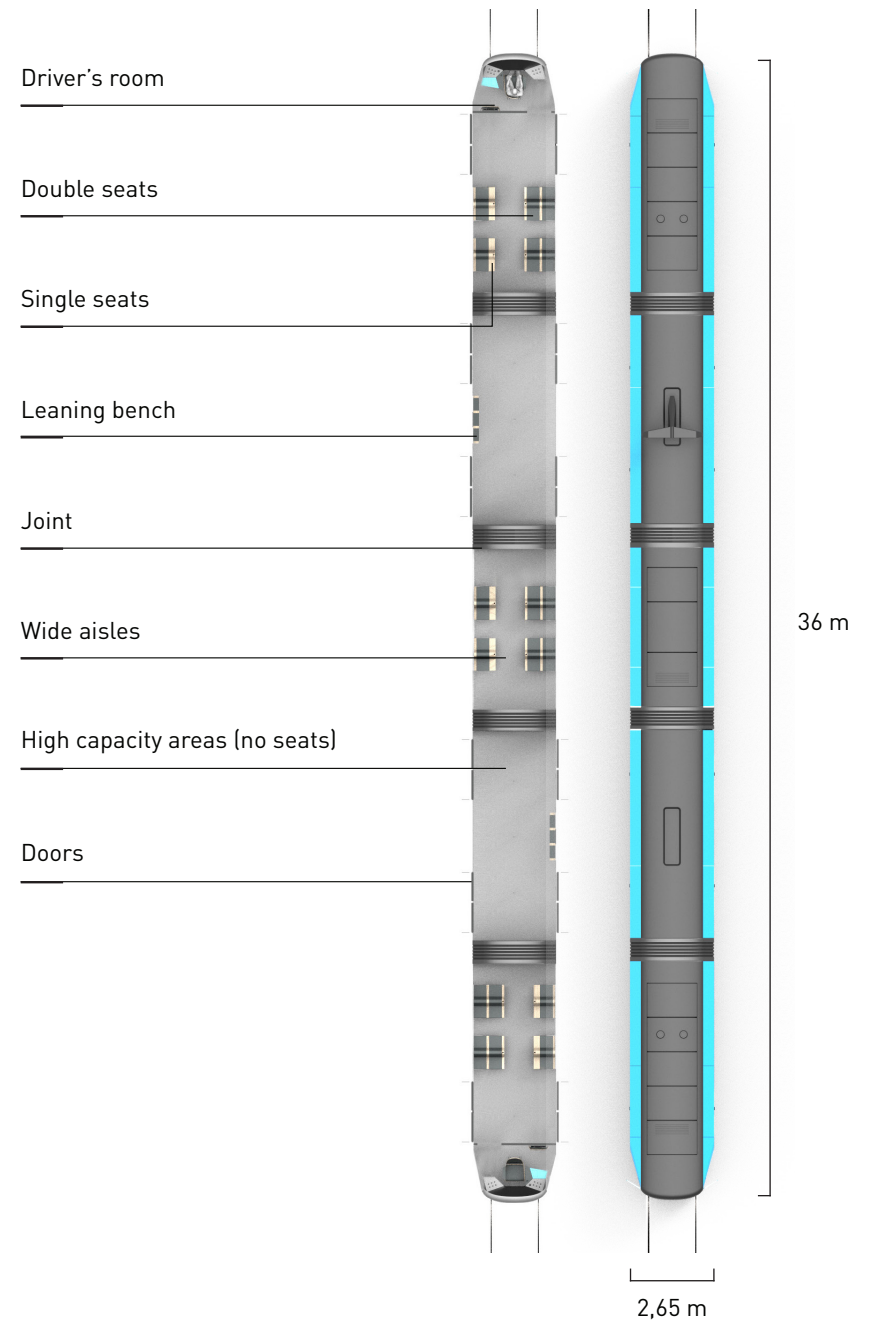
The number of seats in our suggested interior is given by the number of wheel boxes. The multi-articulated tram type has wheels under only three out of five wagons, enabling 100% low floor in the two wagons without wheels. Many trams based on this type have seats in these areas as well, but we have left them open, with only a leaning bench on one of the sides in order to fit a lot of people, strollers and wheelchairs.

EFFICIENCY AND REAL CAPACITY

The theoretical capacity with today's trams is higher than the real capacity. The reason for this is that people does not dare to move further into the wagon, as they fear that they will not get out again due to full trams, narrow aisles and few doors. Another challenge with the current trams is the slow emptying and filling at stops in rush hour. In order to accomplish a higher real capacity and better efficiency, we have integrated the highest possible amount of doors and widened the aisles.

COMFORT IS A QUESTION OF DEFINITION

Comfort is not necessarily to have a seat, but could be to not stand in a packed tram, or to not be left behind at the platform because of full trams.



INTERIOR

CLEAN AND SIMPLE

The 2020 oslo tram vision features a bright and open interior. The design is universally designed with low floor, contrast colours on the hand rails and space for strollers and wheelchairs. The seats are inspired by Scandinavian simplicity, which means a functional and simple design language. The suggested materials for the seats are Norwegian wood and felt.

DOUBLE SEATS

The double seats are separated by a wood splitter. The idea is that this could prevent that one single passenger occupies both seats. The wood splitter is also placed at the end of the seat row, towards the aisle. This is to make space between the sitting passengers and the standing passengers, to make it less possible that jackets, bags and other things hit the sitting passengers' faces.

SINGLE SEATS

In order to create a wide aisle, we have replaced the double seats on the other side with single seats. The seats are placed on top of the wheel boxes, which are wider than a single seat. The wood area is intended to place a backpack or other belongings. All fabric areas are made with the same measurements, making it cheaper and easier to replace them when they get worn out or soiled.

LEANING BENCH

The capacity areas are without any seats, in order to make space for many passengers, strollers and wheelchairs. As an option to stand, we have designed a leaning bench, which is something inbetween standing and sitting.



DRIVER'S ROOM

Camera screens

Transparent dashboard

Throttle joystick

Operation buttons

Cup holder

Mini fridge

Personal belongings

Armrest

Driver's seat

Instructor's seat

Protective area

Coat hooks

FUNCTIONAL AND SIMPLE

The vision for the driver's room focuses on functionality and simplicity, as well as pedestrian safety and practical solutions. One of the key features is a transparent dashboard, making it easier to see children and dogs that run in front of the tram. In order to make the tram driver less visually exposed from the outside, the dashboard is tinted black.



USER EXPERIENCE

INFO FOR PASSENGERS AT THE STOP

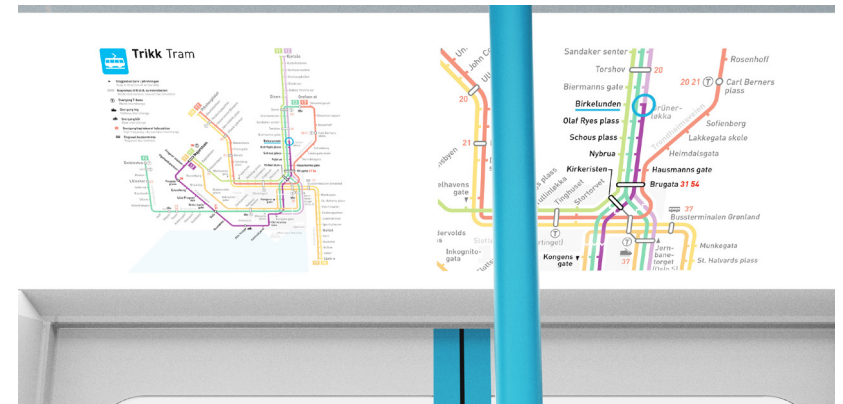
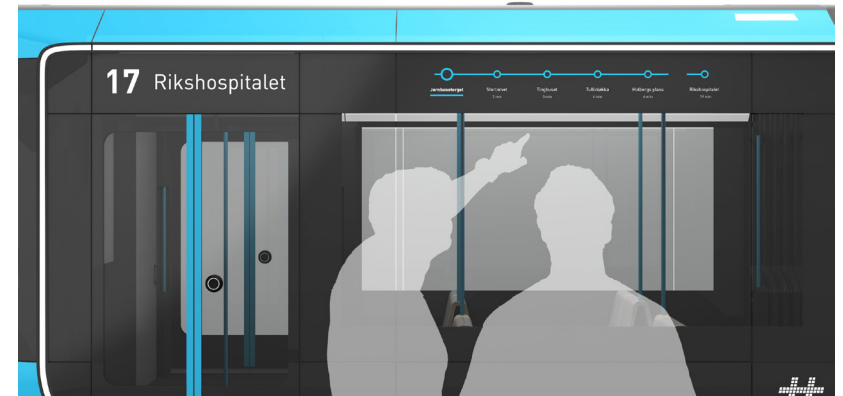
We want to contribute to a better tram experience by suggesting active route information on the tram exterior. With today's trams, there are static destination signs on the trams, and you will have to look at route info on a paper poster at the stop. When a tram arrives at the stop, it's not easy to quickly find information about which route the particular tram takes, but with the external screens, one could easily see the coming stops.

SUPPLEMENTARY INFORMATION

Additional to exterior and interior route information, we're also introducing the idea of active route maps. In today's trams, the route maps are printed and mounted over the doors. Our suggestion is to base the maps on screens, and by that enable a better communication of where the tram is at the moment, where the tram is going and where to change to other public transportation. In our suggestion, we've enlarged a section of the map in order to make it easier to read.

QUICK NEWS

Inspired by the Oslo Airport express train, we're also suggesting to use the interior screens to display quick news, in order to create a better tram experience. The news display is a public service, but also an attempt to create a more social tram, as people could have something in common to discuss. Some of the screens could also be used as space for advertisements, to make a source of income for Ruter.



AESTHETICS

Main surface 1: Dark gray front and roof for speed and direction

Main surface 2: Blue ribbon enclosing the passenger area

Main surface 3: Large plane window surface

Blue door markings for universal design

Short radius for proud expression

Illuminating line for recognizable front

Vertical front for Scandinavian simplicity

Rounded front for pedestrian safety

Bumper area for car impacts

Larger radius for lighter expression

Oblique cut for lighter expression

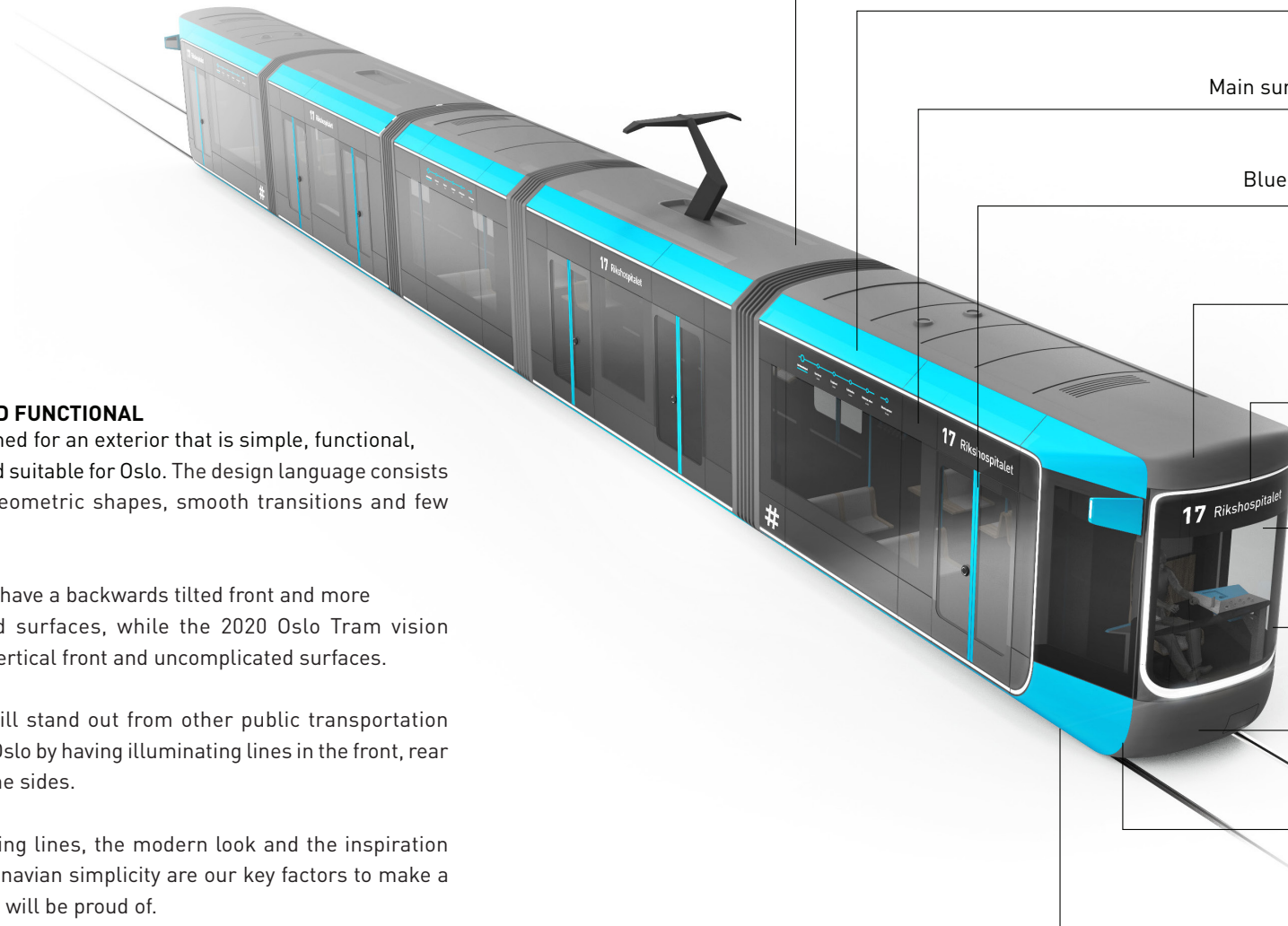
SIMPLE AND FUNCTIONAL

We have aimed for an exterior that is simple, functional, modern, and suitable for Oslo. The design language consists of simple geometric shapes, smooth transitions and few surfaces.

Most trams have a backwards tilted front and more complicated surfaces, while the 2020 Oslo Tram vision features a vertical front and uncomplicated surfaces.

The tram will stand out from other public transportation services in Oslo by having illuminating lines in the front, rear and along the sides.

The illuminating lines, the modern look and the inspiration from Scandinavian simplicity are our key factors to make a tram people will be proud of.



CONTRIBUTION SUMMARY

INTERIOR

1. Seat and leaning bench design with focus on functionality and aesthetics inspired by Scandinavian simplicity.
2. Seating arrangement with focus on capacity, efficiency and space for strollers and wheelchairs.
3. Screen based active route and map info, as well as quick news headlines.
4. A driver's room with focus on functionality, pedestrian safety and practical solutions.

EXTERIOR

1. Illuminating lines along the sides to make the tram become a moving attraction and to focus the design on the passengers.
2. Illuminating lines in both ends to make a recognizable shape that is original and easy to see.
3. A design language made to fit Oslo, inspired by Scandinavian simplicity: functional and simple.
4. Exterior route info for a happy customer experience.





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