

# PROJECT PROGRESS

## Group 3 | Smart Mobility

### FIRST RESEARCH

- A car is occupied by 1.42 people on average (*in The Netherlands*)
- **Public cars** are popular and a growing business

### FOCUS

Users of an autonomous vehicle must feel:

- **Safe** - trust the car's decisions
- **In control** - know how to influence the car's behaviour

Exploring **positioning** of two people in a car



### IDEATION

#### Large windows

*make the user  
feel safer*

#### Moveable chairs

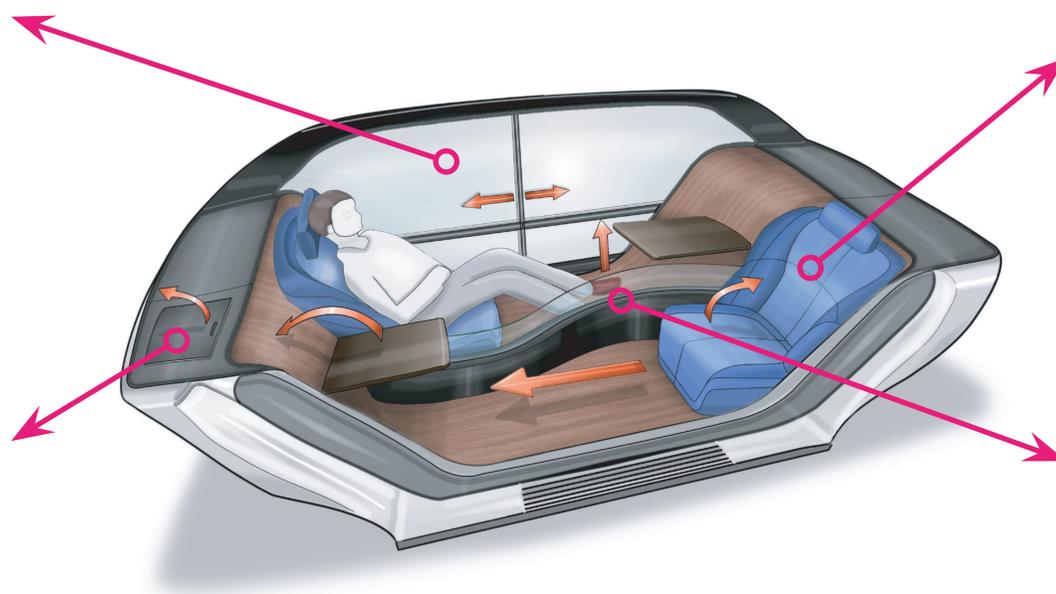
*multiple possible  
positions for  
multiple activities*

#### Storage

*placed conveniently  
behind the chairs,  
out of sight*

#### Privacy shutter

*create a more  
private area when  
desired*



What will people **need** in this new environment?

## NEEDS OF THE USER

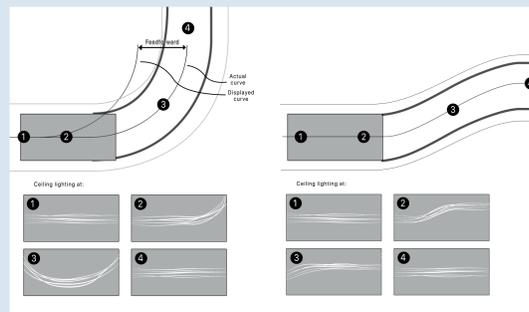
- **Controls** - adjusting the temperature, driving style, etc.
- **Communication** - user is informed about car's behaviour
- **Atmosphere** - making the car a **psychological property**

## DESIGN OPPORTUNITIES

- **New User Interface** - communication between user and car can be improved to be more **intuitive, easy-to-use & appealing**
- **Predictive behaviour** - car's decisions must be clear to user

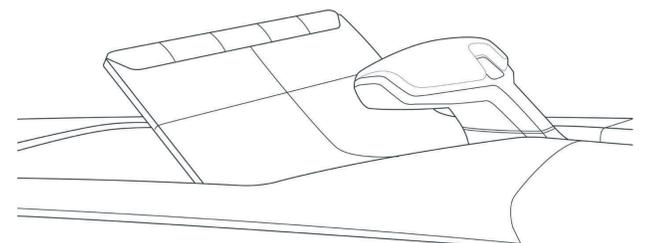
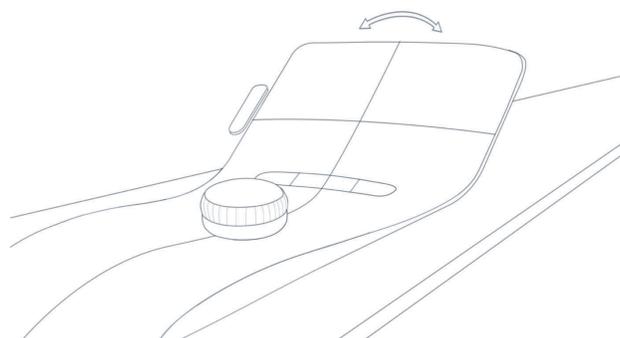
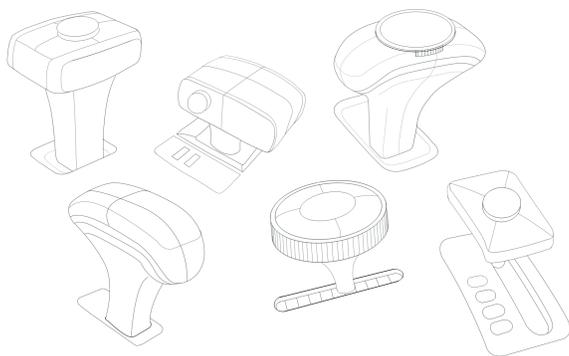
Exploring two **most promising ideas**

Communicate towards the vehicle with an new **interactive system**



Vehicle communicates decisions towards user with **predicting lights**

## IDEATION



Diving deeper into **intuitivity and affordance**



# CYLEX 360°

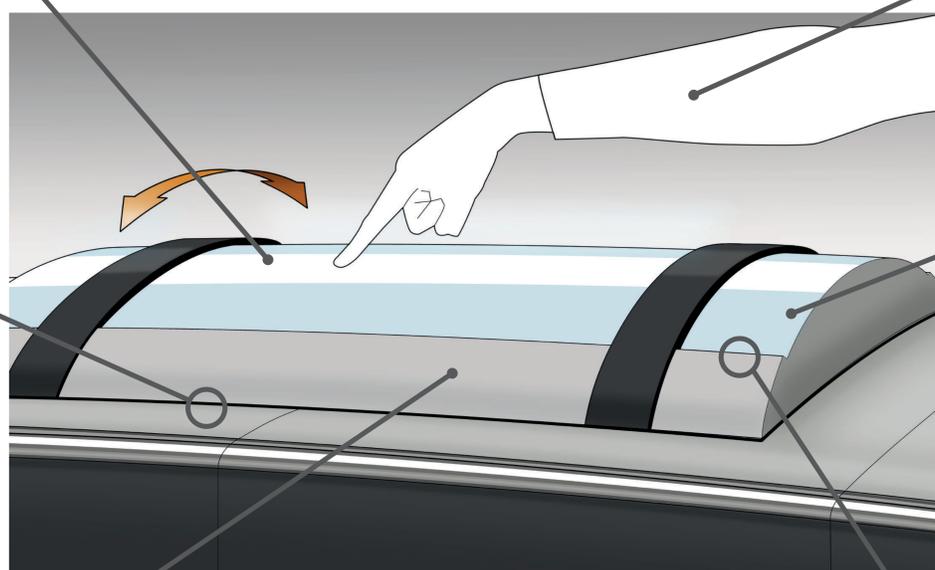
We want to create a more comfortable shared car system by improving the communication between the car and the passenger.

In order to achieve this improvement we have designed a system that can effortlessly personalize the vehicle.

The system consists of a simplistic and easy to use cylinder containing an interface to communicate with the vehicle.

Passengers can effortlessly interact with the system from their chair by only reaching their arm.

Seamless integration in the dashboard in the center of the car



System detects which passenger wants to interact with it and adapts the interface to it.

Round shapes allow only one interaction: rolling.

Categories are separated by texture or colors to clarify differences and automate interaction.

The cylinder is pulled to a certain position when left in a position in between, to only show one category.

Dynamic borders provided by lights indicate pressable area and exclude other button options that might confuse, distract or causes errors.

Rotary knob is used consistent, in every category the knob is used for ranged variable.

Instant feedback about the current category.



Buttons from other categories fade out.

No hidden commands, all options are immediately visible.

Easy to recognize rotary knob for altering variables with a range of possible values.