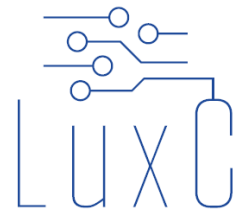


LiDAR for ADAS: bridging the gap to autonomy

Mirvais Yousefi
mirvais.yousefi@luxc.tech

Holographic AR HUD with Lidar Night Vision



Road accidents are a “work hazard”!

25000 Deaths by traffic accidents in EU (2016)



60%

accidents **during**
emergency use



70%

accidents **during**
emergency use

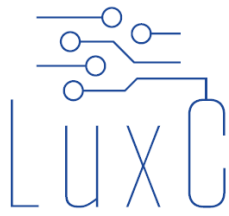
POLITI



Double

rate of **crashes** than
the general public

Current State of the Art: Tablet and Screens



Unsafe Driving!
Eyes are NOT
on the road!

Human-Centric Approach

We design the product according to the users' wishes

Survey with end users

>120 respondents

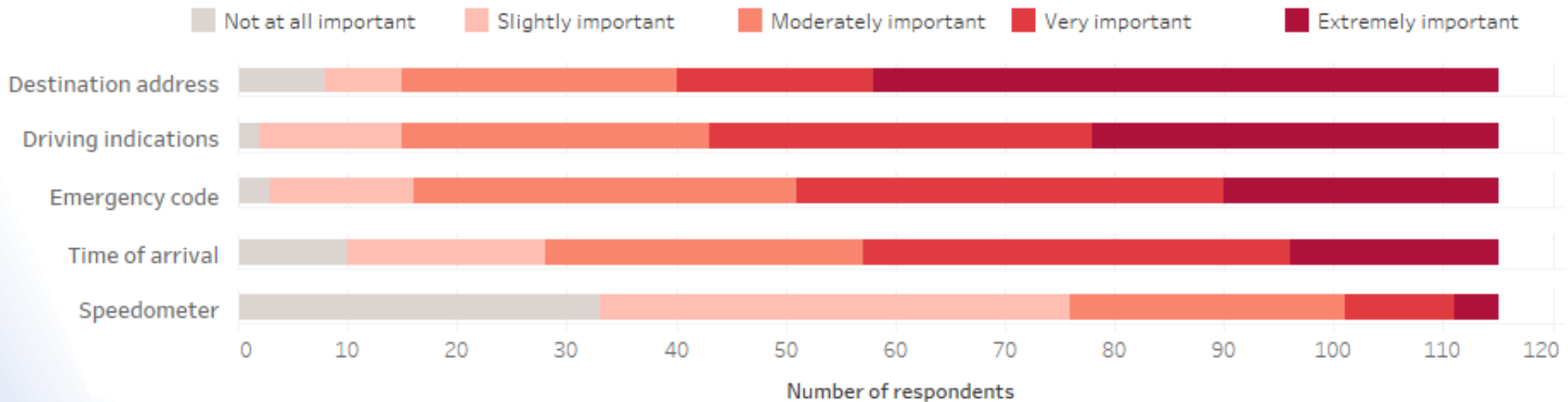


Fire brigade

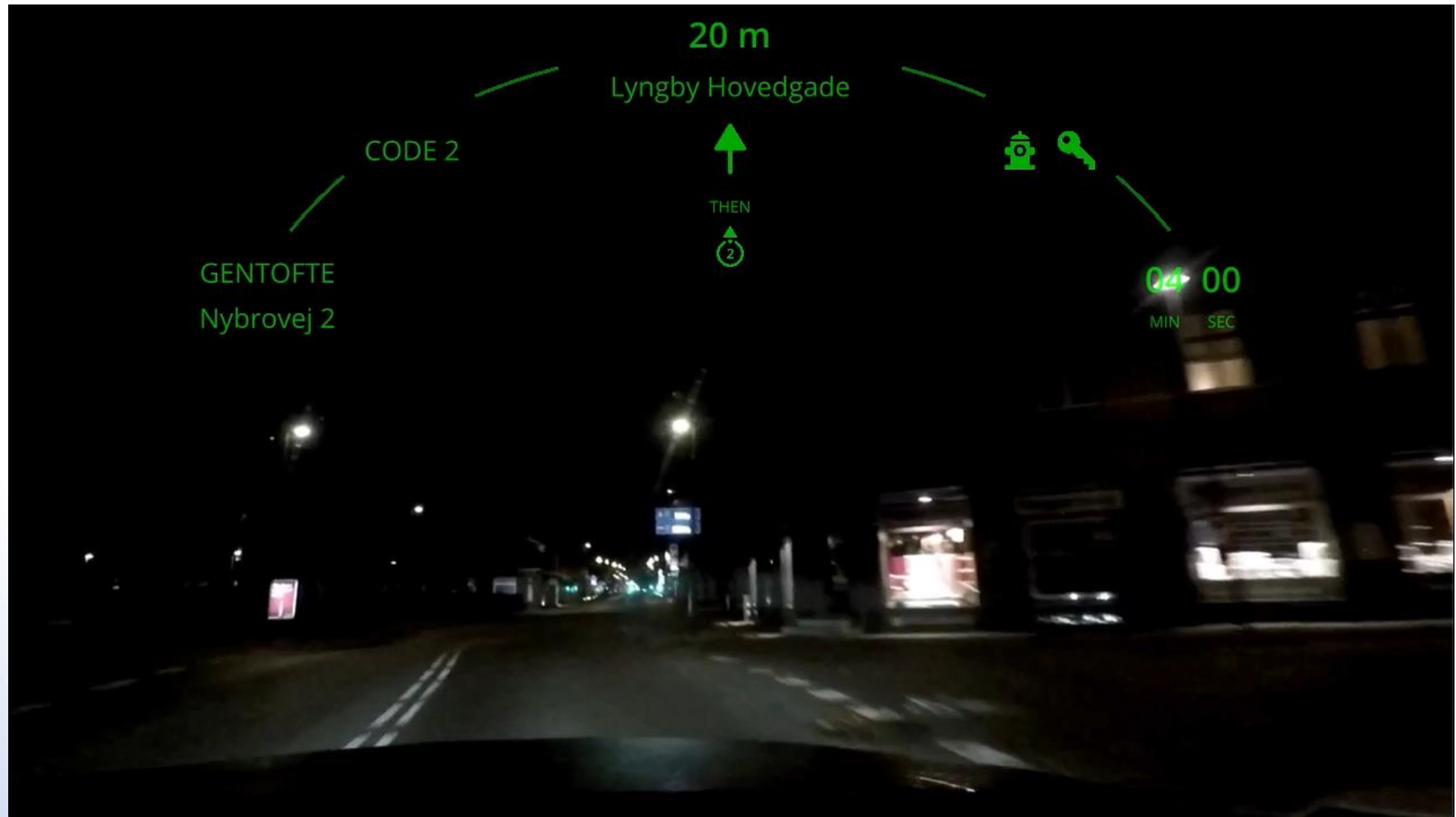
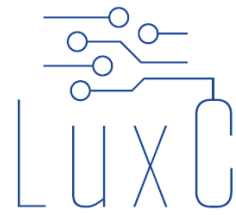


Ambulance

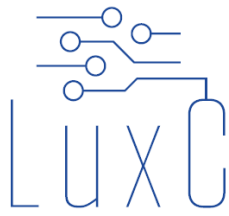
Priority of information during the driving



Critical info in field of view → Safer driving



Minimum Marketable Product Features

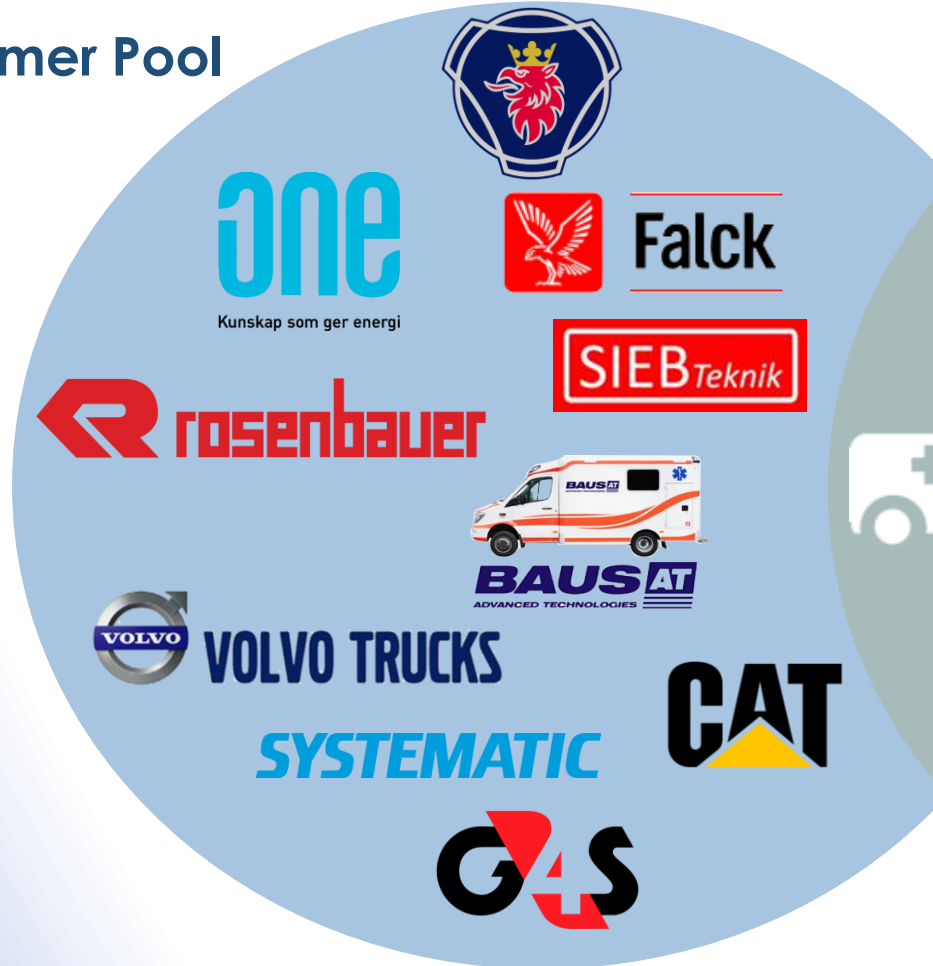


- Minimalistic UI
- Cross-fleet user profile
- Directions, Destination, Time to Target (T^3)
- Mission critical information
- Night vision
- Real-time fleet management

Customers & End Users

Our Customers and End Users are separate groups

Customer Pool

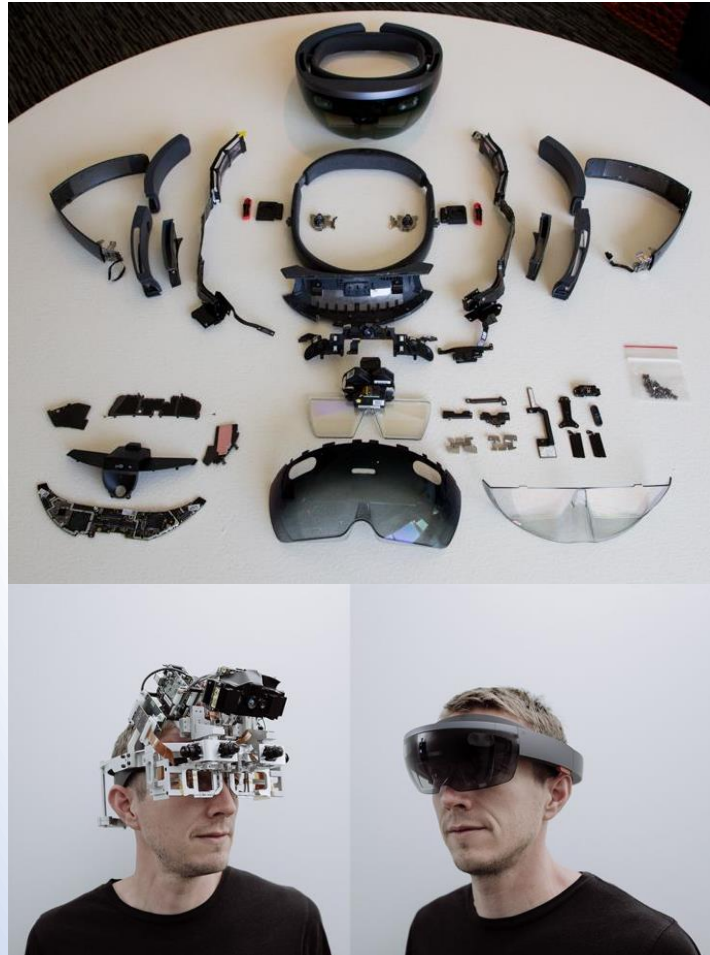


End User Pool



Strategy: Simplify AR Glasses and build into a car

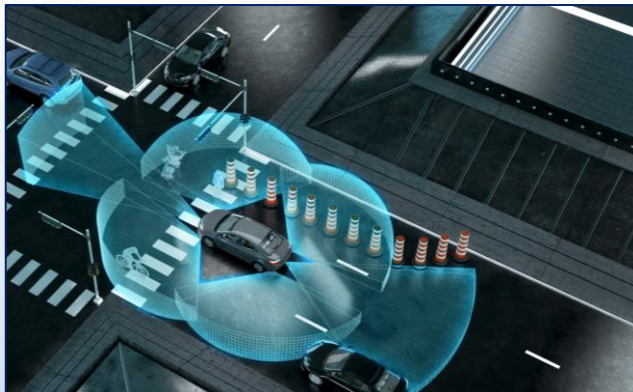
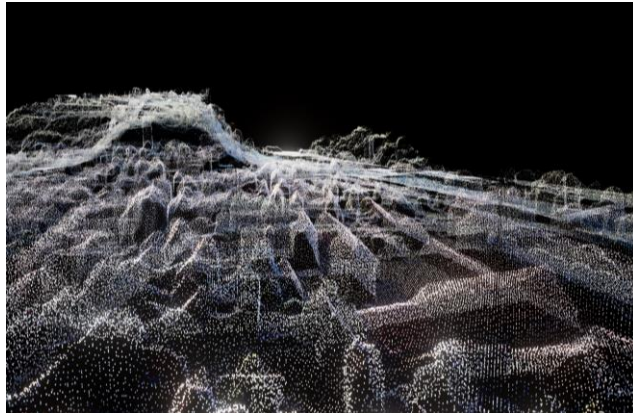
Ex. Microsoft HoloLens HMD



- No Screens → **Eyes on the road**
- **Less Complex & Lower Cost**
- After Market → **Fits all cars**
- Uniform interface across **whole fleet**
- Real time **fleet management**

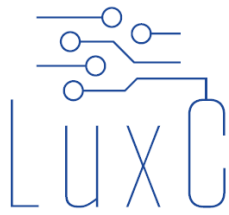
...add a Lidar to the mix for Night Vision

Lidar is a “Laser Radar” that uses infra red technology to make a 3D map in the form of a “**point cloud**”.



- Lidar + AR → **Night Vision**
- **LuxC WFHD MEMS Lidar**
- **AI** assisted augmented driving assistance
- Lidar = “**holy grail**” of Robotics, Automation and Autonomous Mobility

Roadmap



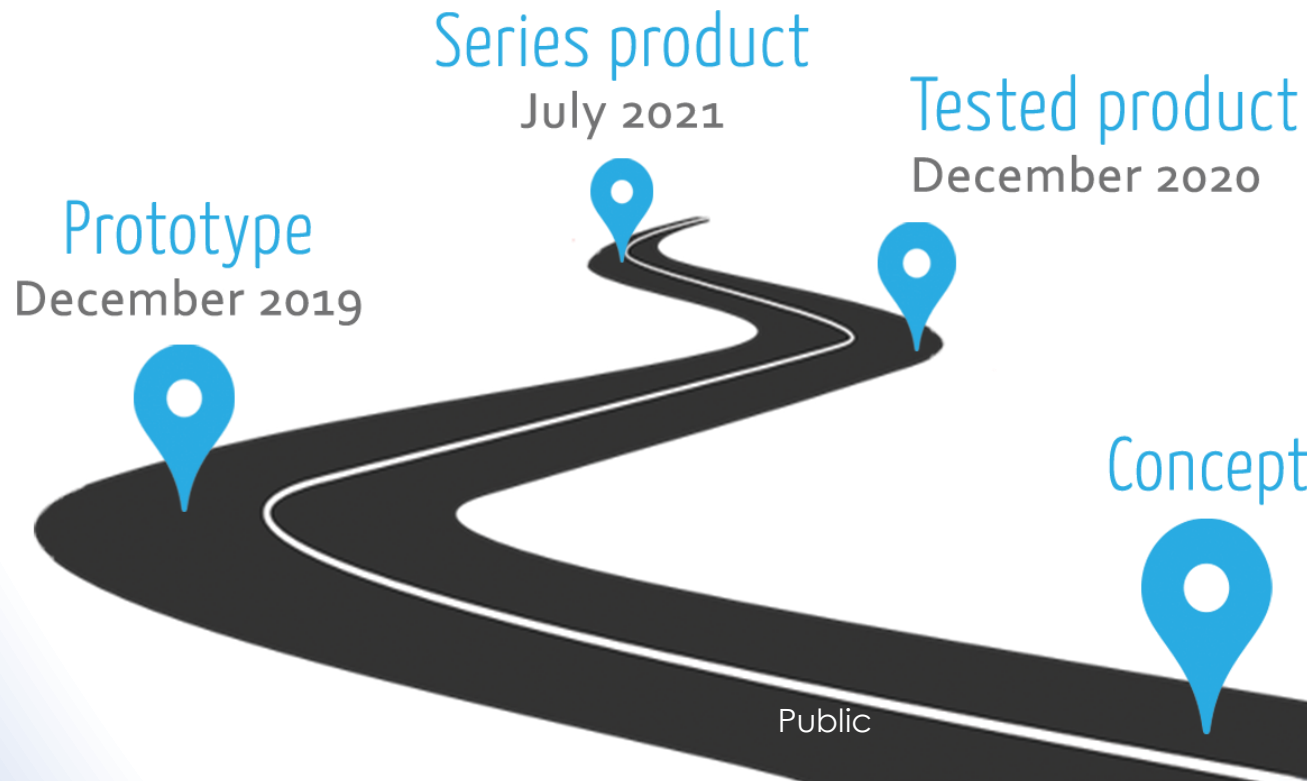
2021: B2B



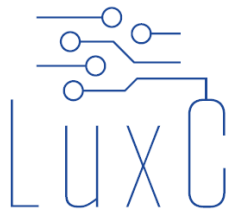
2023: B2B



2025: B2C



Preparing for our first release ...



Can you help?

- Customers & Investors
 - Seeking niche customers outside Denmark
- Lidar
 - Micro optics (especially high quality lenses)
 - Assembly partners
 - Partners on the road towards manufacturing
- AR
 - Holographic (or any other type of) Combiner partner

Summary

- **Merger of AR and LIDAR**

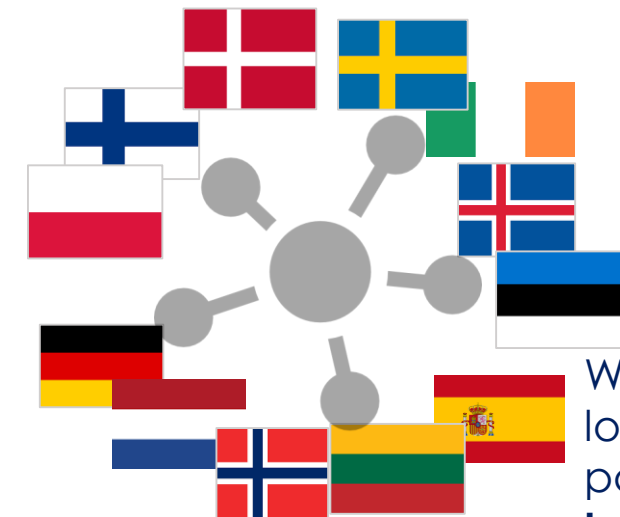
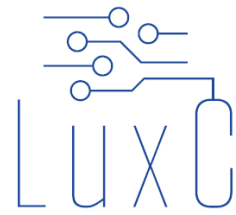
→ New and Unique technology solution

- **LuxC is a Lean StartUp**

→ Minimum costs until a Minimum Marketable Product

- **LuxC is a System Assembler**

→ Can leverage the development partners



We are looking for partners to **help us excel**

Thank You



mirvais.yousefi@luxc.tech

<https://www.linkedin.com/in/mirvais-yousefi-7361945/>

Road Accidents are a problem!

25 000 deaths caused by road accidents in EU (2016)

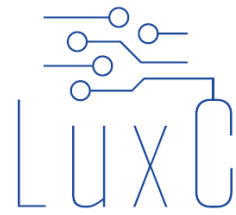
>18 000 during «**Scandinavian Nights**» (3:30pm until 8:30am)



https://ec.europa.eu/transport/road_safety/sites/roadsafety/files/pdf/statistics/dacota/asr2018.pdf
http://www.euro.who.int/_data/assets/pdf_file/0015/43314/E92789.pdf
<https://www.sciencedirect.com/science/article/pii/S0386111216300103>



The Team: Agile, Depth of Field, “problem solving”



Dr Mirvais Yousefi
CEO



Troels Trebbien
Sr Software



Vice Roncevic
Mechatronics



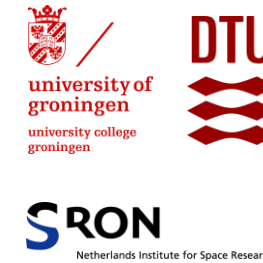
Sofia Muschio
User Interface



Callum Blair
Software



Carla Salazar
Software



Board of advisors



Dr Jörg Baumbach
Director Leica

BoD Member



Torsten Vahrenkamp
CEO ficonTEC

Chairman of the BoD



Bjørn Pedersen
Instructor Police Academy

Advisor

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