

Building the Port of the Future

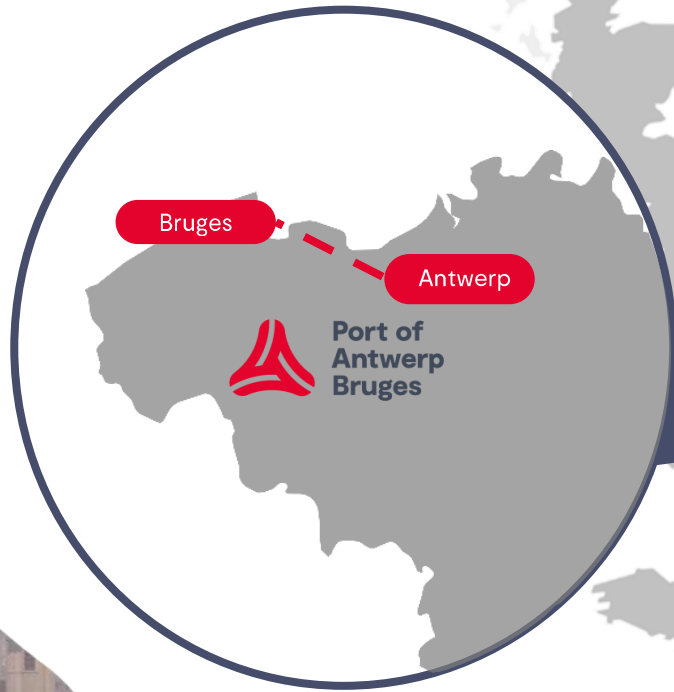
Digital SHIP

May 10, 2022, Copenhagen

Piet Opstaele



Port of
Antwerp
Bruges



**A global port
in the heart of Europe**

**One port
Two sites**





2nd largest
port in **Europe**



Port of
Antwerp
Bruges



Largest **car handling**
port in Europe
3,160,000 cars/year



21,400
Seagoing ships/year



Largest **chemical**
hub in Europe



Number one **export**
port in Europe
147 mio tons/year



Total throughput
289 mio ton/year



Important **cruise**
port in Benelux
8,800 passengers (covid-19)
+ 300,000 passengers



15% of EU **gas** market



Belgium's most important economic driver



14,322

Hectares



1,400

Companies



€ 20,8 billion

Added value



4,5%

GDP



164,000 **jobs**

Direct and indirect



Energy transition

frontrunner

Home port as a lever for a sustainable future



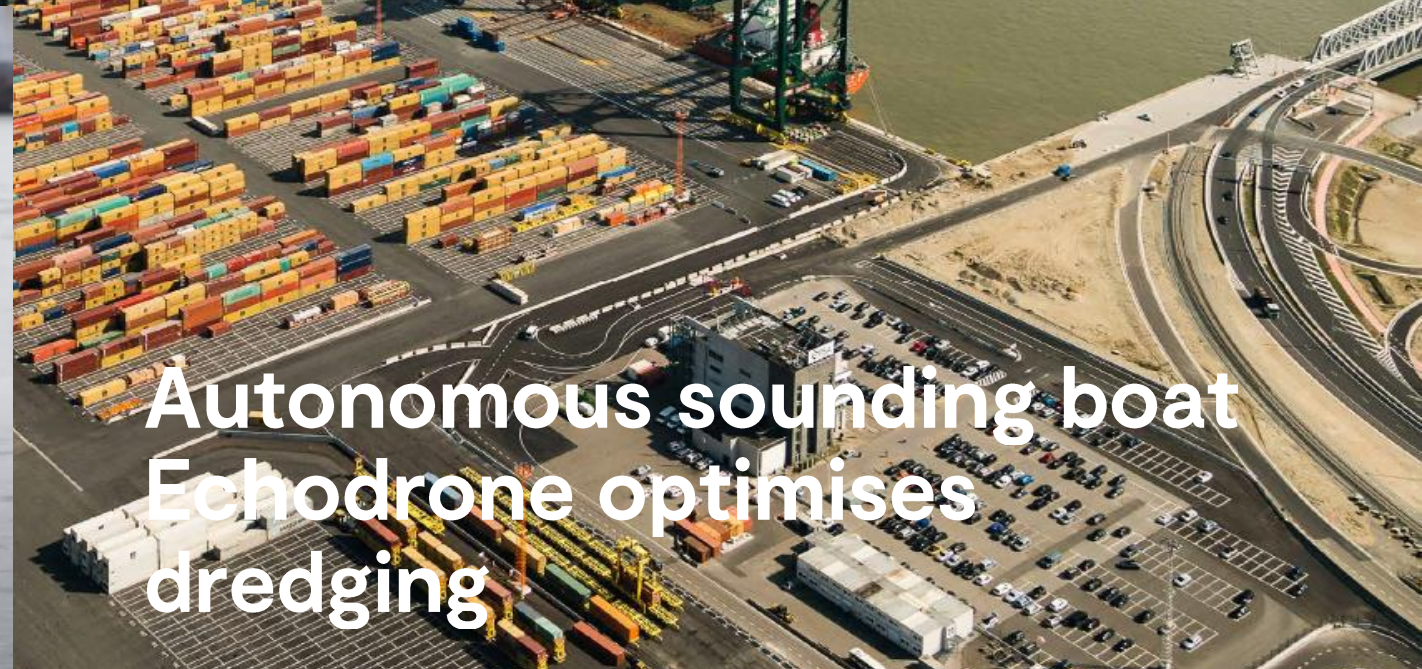


Fully engaged in transition





SMART SHIPS



Autonomous sounding boat
Echo Drone optimises
dredging



Bruges

Antwerp

Connectivity

Accessible port at sea
and 80 kilometers inland

Seafar - remote control center



First remote controlled inland ship



Seafar wants to sail autonomously in the Netherlands soon

ANTWERP SEPTEMBER 04, 2021, 12:00

The future is closer than you think. This is clear from the emergence of remotely operated sailing. Seafar in Antwerp shows that sailing without or with a reduced crew on board is no longer science fiction.



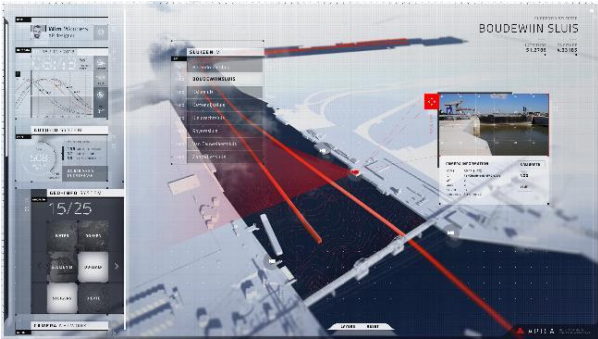
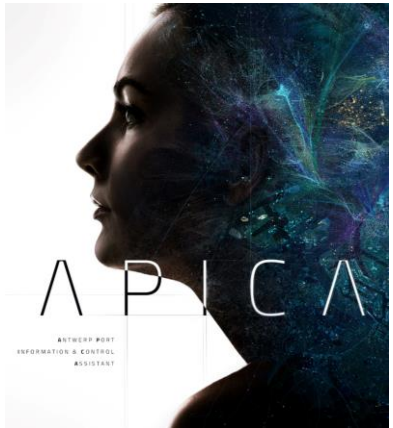
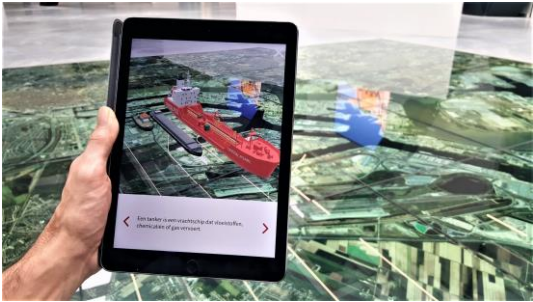
Analogue twin: 1930 Antwerp World Expo



1968 - *Human twins* - equal DNA



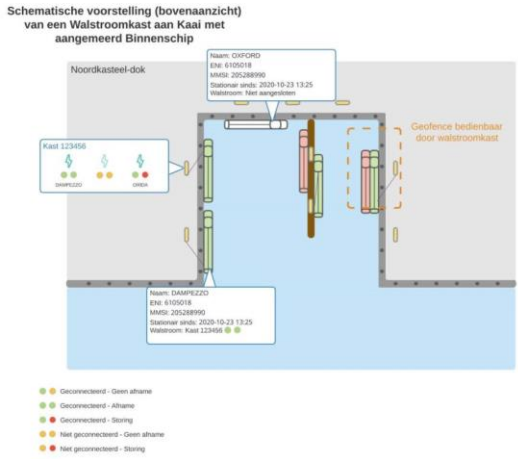
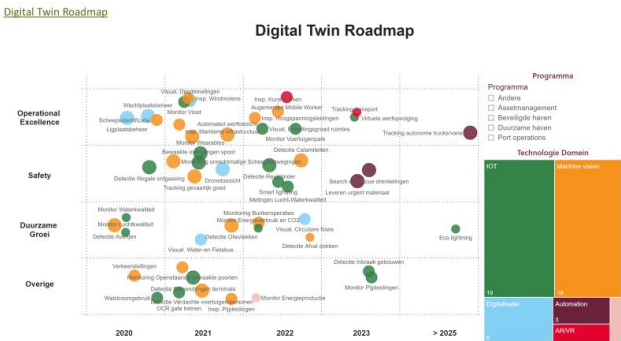
Development APICA: from vision to operational implementation



2017 Ideation

2018 Inspiration

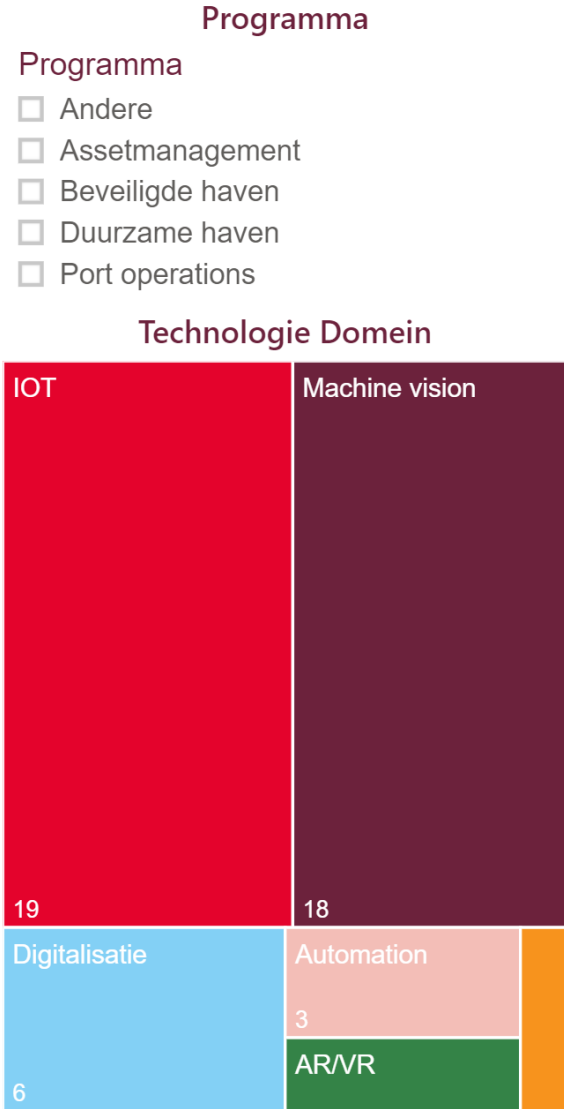
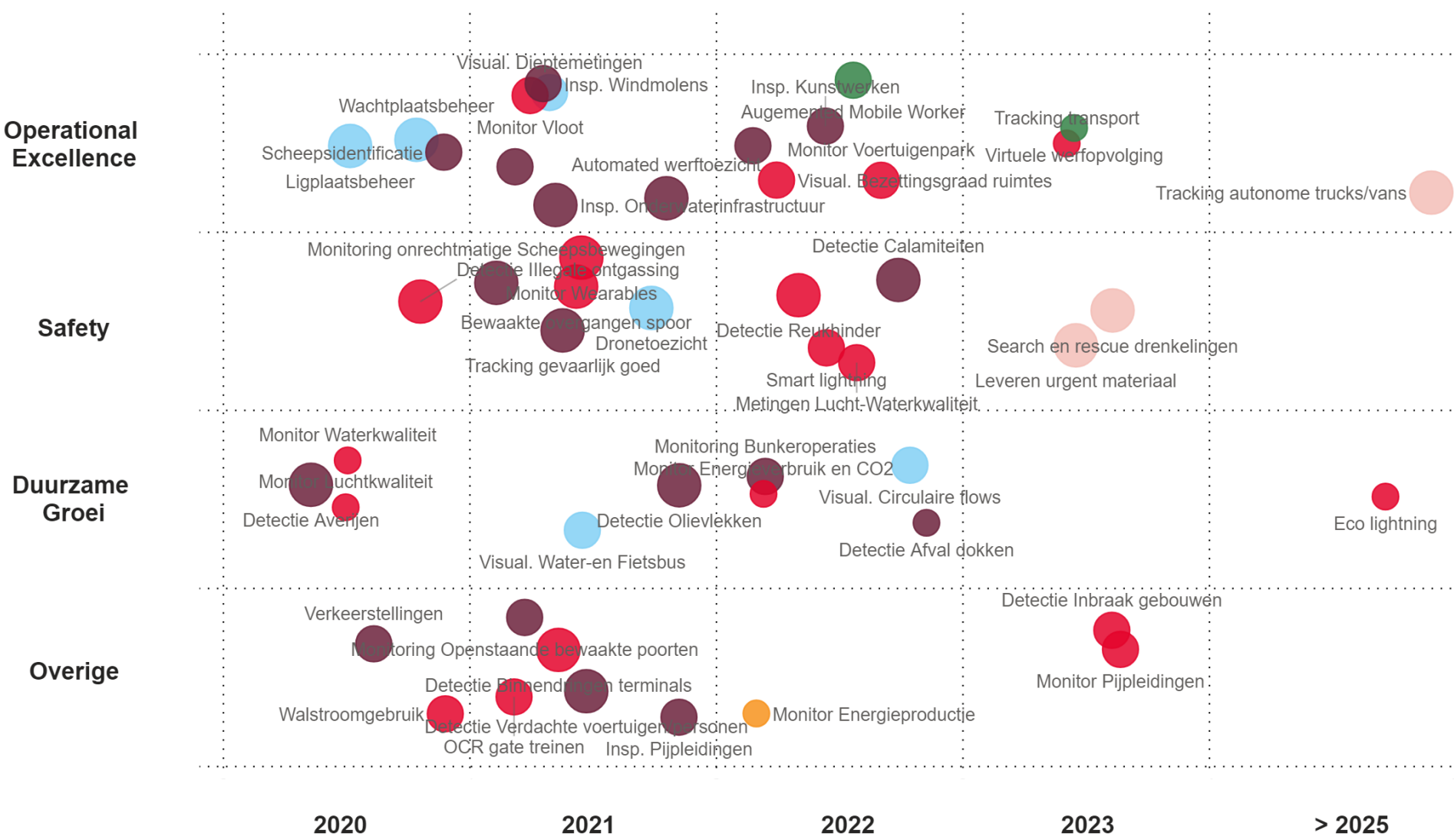
2019 Proof-of-Value

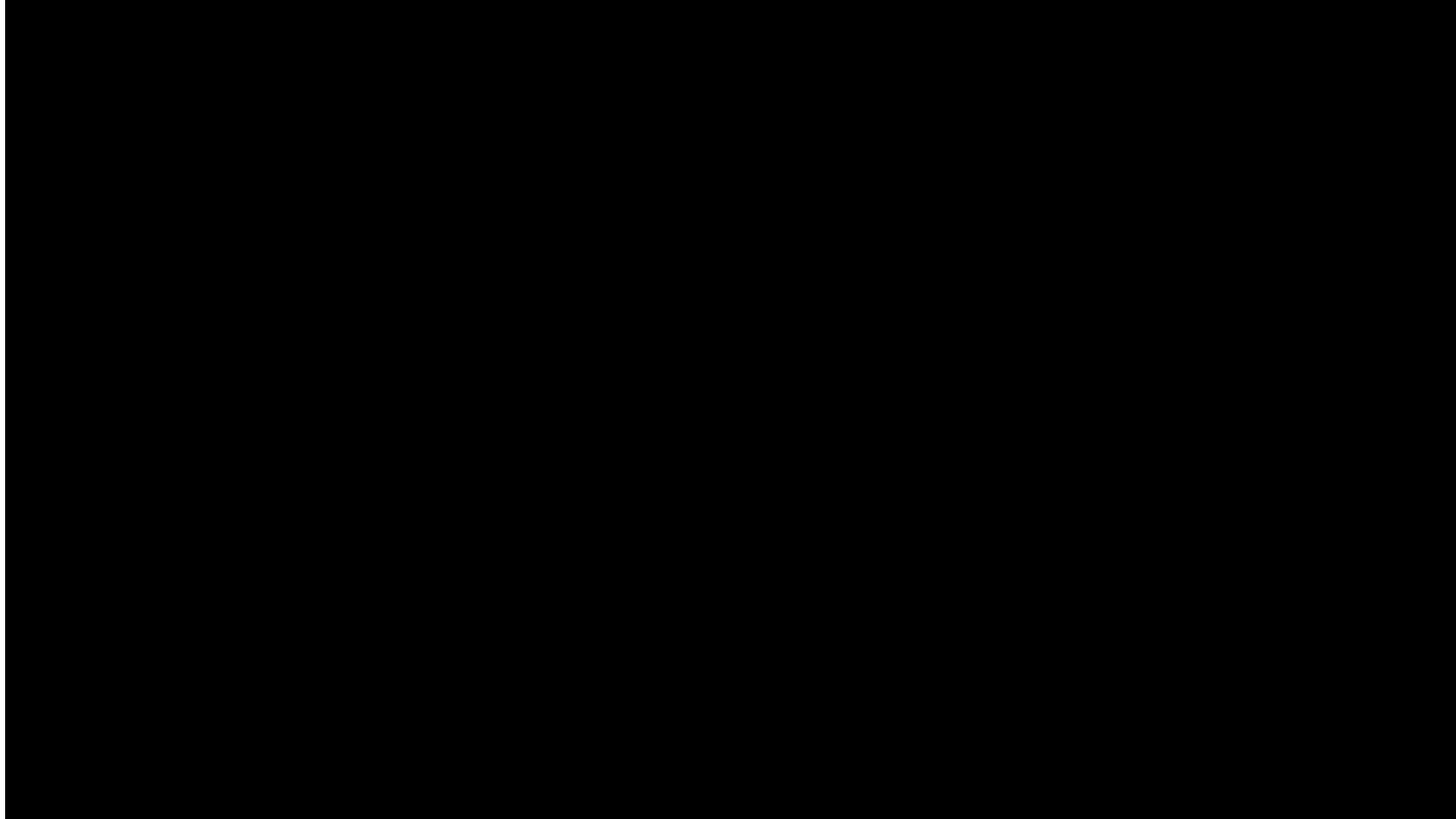


2020 User requirements

2021 Operational implementation

Digital Twin Roadmap





In tune with the world