



Ålesund Airport

102  
dB

# A Digital Twin

Ålesund

- NOISE EXPOSURE
- TRAFFIC

+ ADD LAYER

Nedre Strandgate

14  
km/h  
Slowest traffic  
flow in the region

Ivar Aasens gate

76  
dB



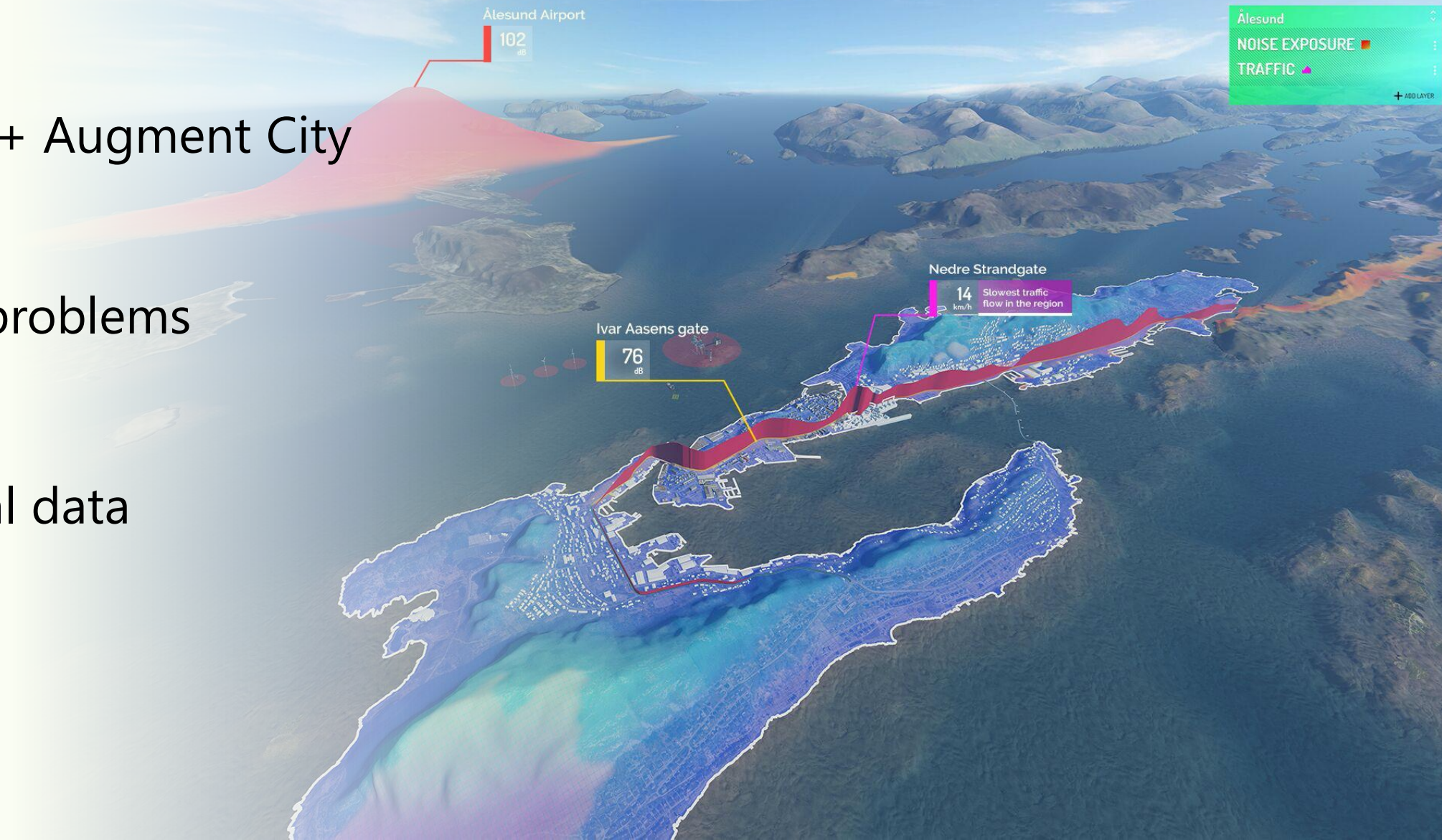
U4SSC + Augment City



Solve problems



Visual data





The key to the Digital  
Revolution

and

The key to us meeting our

stated goals is:

**Humans**  
interfacing

to

**Data and machines**





ÅLESUND



How can we reach the  
Paris agreement for our  
cities?



PARIS agreement: Carbon neutral by  
2050..



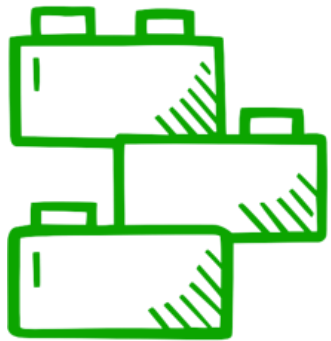
DO YOU KNOW what CO<sub>2</sub>  
your City is producing each  
day?

NO... Neither did we.

How can we get to carbon neutral  
When we do not know where we are today?



AUGMENT CITY



Build

Analyze

Digital twin

Control



# Where are we today with CO<sub>2</sub>

## Assumptions:

- ▶ **Over 99% of the electricity production in mainland Norway is from hydropower plants. hydro/renewable – No CO<sub>2</sub>**
- ▶ **Most CO<sub>2</sub> in Ålesund comes from**
  - ▶ **Road based vehicles, Lorries, Buses, Van, Cars etc. and Traffic**
  - ▶ **Airplanes**





# How did we measure CO<sub>2</sub>



Number  
Speed  
Length  
Engine type



Number  
Type  
Distance  
Route



Number  
Type  
Status  
Area

# Carbon and carbon capture



x  40 years...

Or



x  1 day...

# Demo





Digital twin of Aalesund city, with daily air, ocean and land traffic routes showing.



Geiranger Norway.



AUGMENT CITY

2018-07-15 T00:00



Vesttrafikk  
15  
Tungtrafikk  
Porsbjel  
Strykk  
Rindnes  
Mars  
Ålesund  
Dalsøyra  
Dalsøyra

