

# Artificial intelligence - an ease or a burden

GATEINSTITUTE, LORA GEORGIEVA

HELLO

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# GATE

Develop Big Data and AI  
applied research,  
innovation and education  
in collaboration with  
government, industry and  
entrepreneurs

СОФИЙСКИ УНИВЕРСИТЕТ  
„СВ. КЛИМЕНТ ОХРИДСКИ“



CHALMERS  
UNIVERSITY OF TECHNOLOGY



CHALMERS  
INDUSTRITEKNIK





# About Us



## Future cities

3D city model of Lozenets; Air quality prediction in the cities; Mobility; Urban Heat Islands



## Intelligent Government

Dissinformation projects and research / Fighting deepfakes



## Smart Industry

Environmental monitoring and prediction / Modelling production processes and customer sentiment mining and engagement to increase speed to market for new products, to build better products and services, etc.



## Digital Health

Mobility surveillance patent / Alzheimer project / Regional Health Data Space





# CURRENT REGULATION OF THE AI IN THE EUROPEAN UNION





# WHAT WE DO?

DATA SPACES

MOBILITY  
SURVEILLANCE AND  
MODELLING

URBAN HEAT ISLANDS

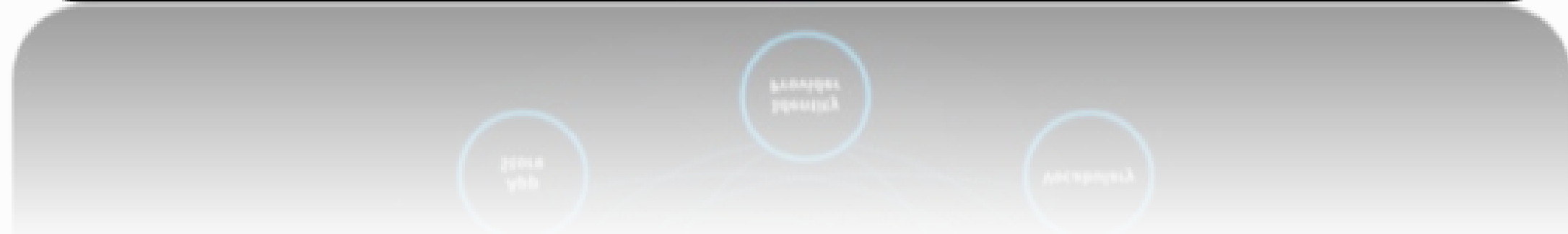
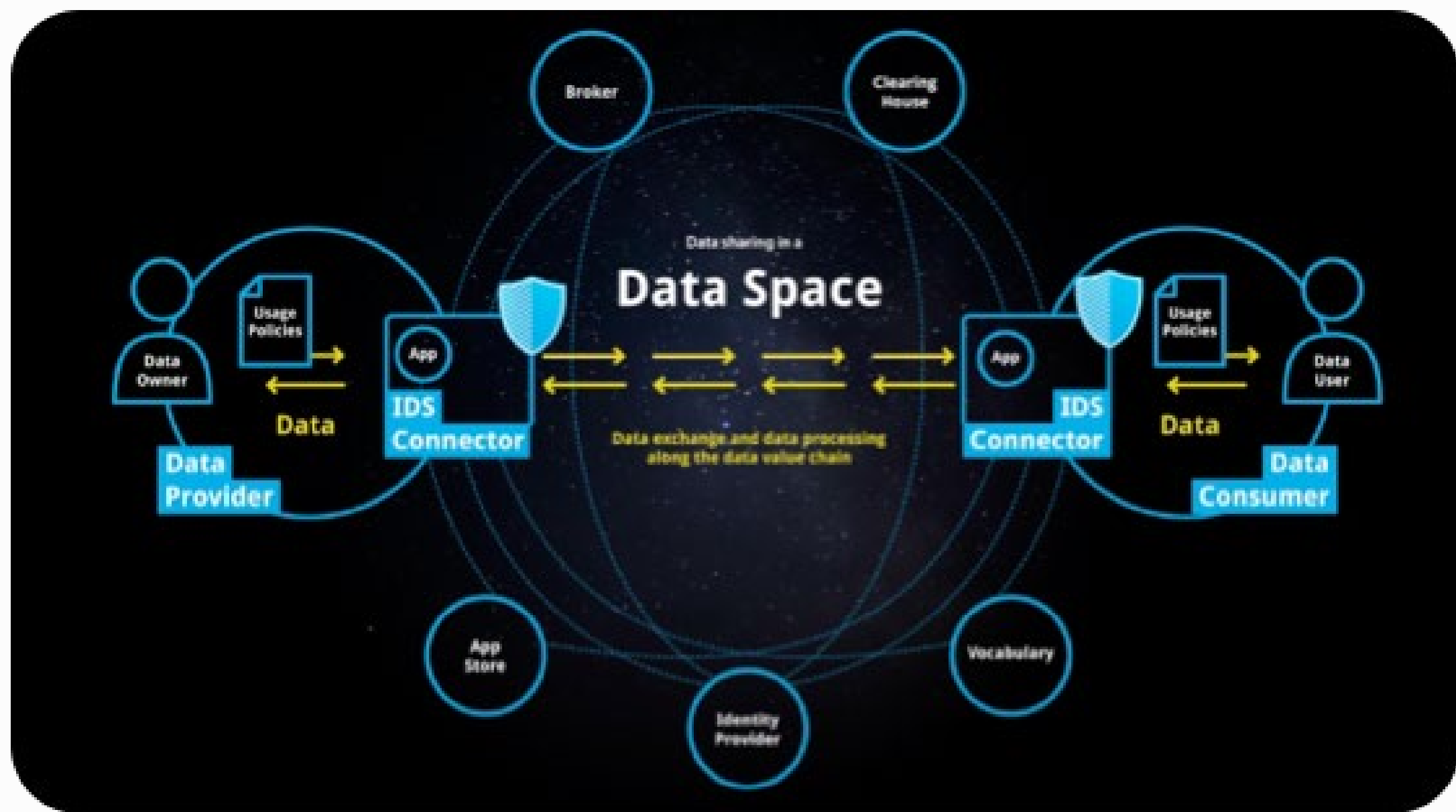
DIGITAL TWIN OF  
LOZENETS DISTRICT

AIR QUALITY PREDICTION



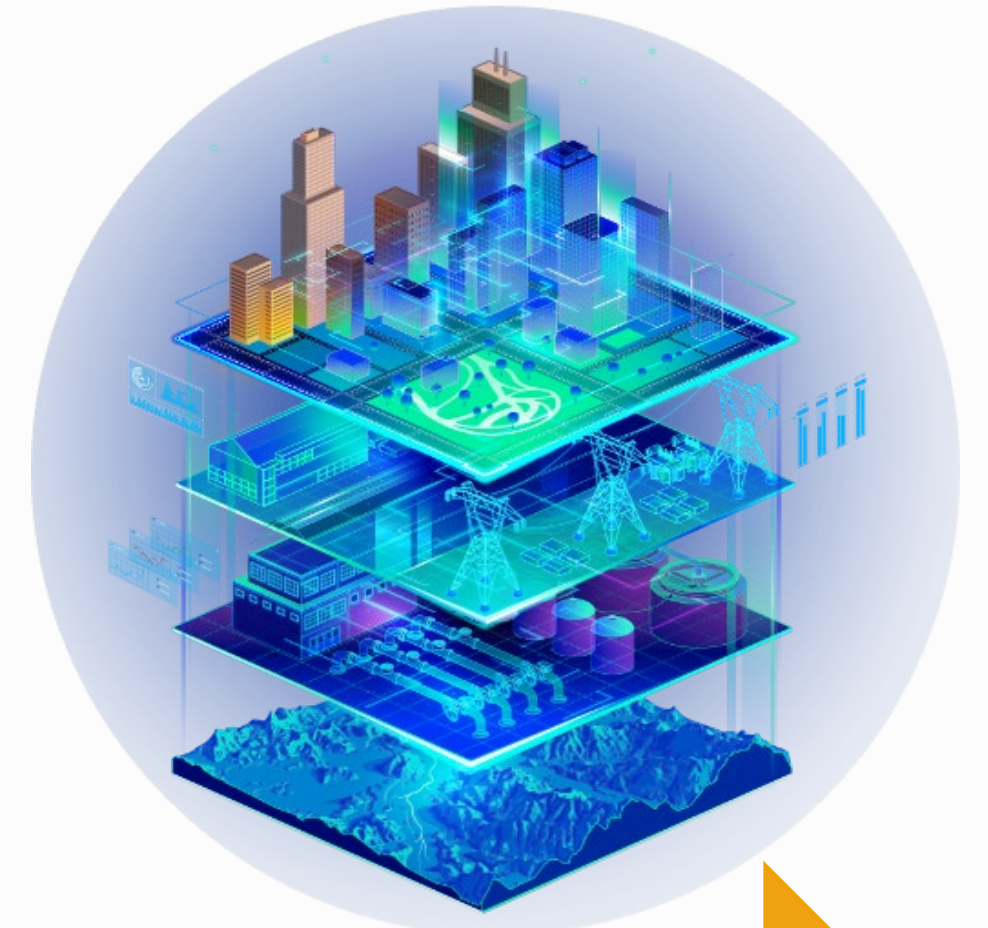


# Data spaces





# DIGITALTWIN IN



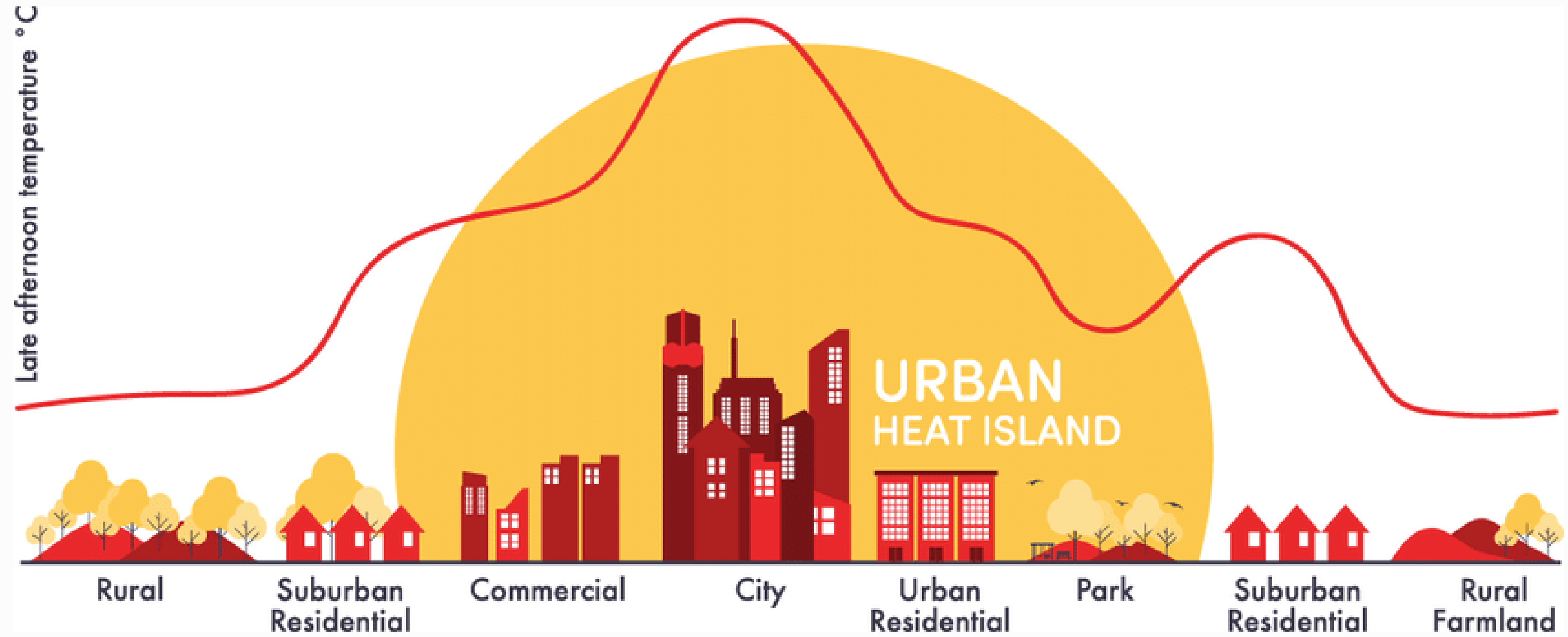
One-Stop-Shop for Data | Trust, Transparency and Sovereignty | Security | Added Value







# URBAN HEAT ISLAND



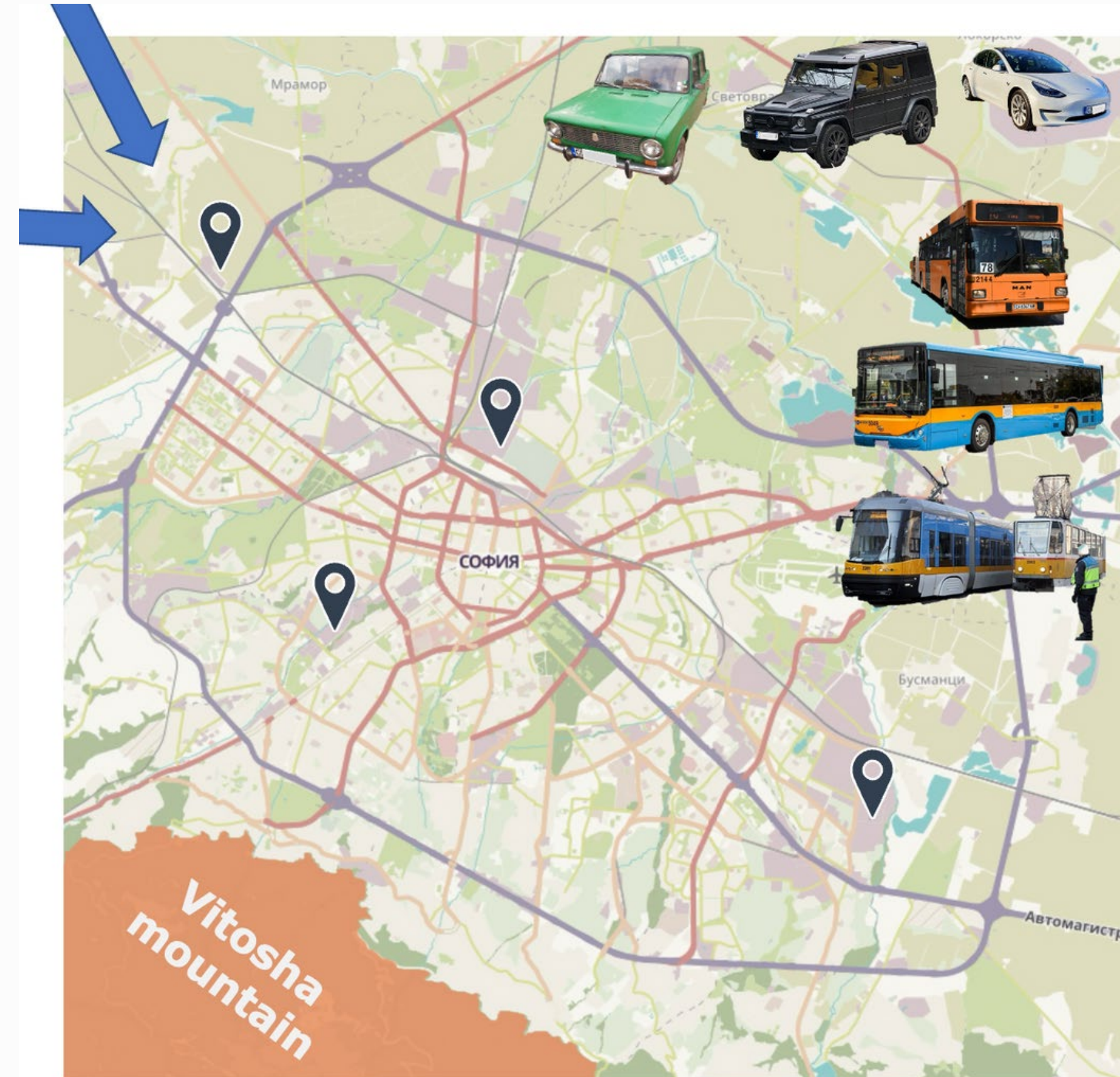
# AIR QUALITY MODELLING

So how do we hope to do anything at all?

Split air quality into modelling and experimental streams.

Split modelling by:

- scale - city and street levels
- type data-based and physics-based
- nature transport and static emissions, dispersion
- location outdoor and indoor
- dimension spatial and temporal





# Remote Event Detection with Synchronous Patient Optical Tracking

- Starting from Automated Video Detection of Motor Seizures in epilepsy patients.
- Enhance the Detectors by adding the “Detection of Non - periodic Movements” functionality.
- Add Dynamics by “Autonomous Object’s Following” functionality.

- Better Medical Care Service
- Detection, Alerting & Prevention
- Real-Time
- Diagnostics & Predictions
- Tele-Medicine, and Conventional Medical Practice via SMART Detectors (CV, ML, AI, SI)
- Remote & Wearable Sensors

# Thank You

