

VERONET Traffic Automation

*Bringing the benefits of
cooperative, connected, automated driving
really into effect!*

Dr. Andreas Kuhn, **ANDATA**

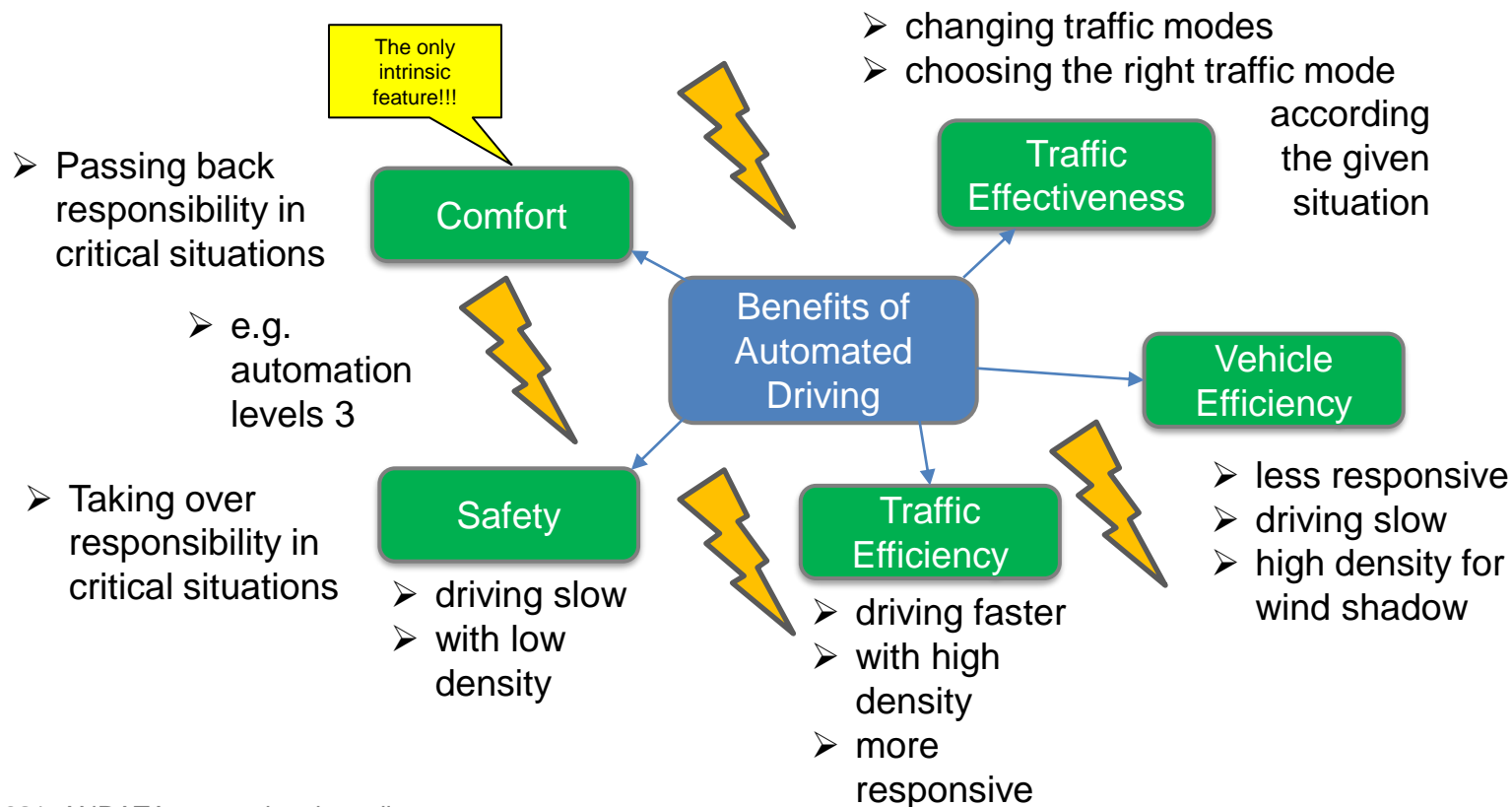


AUSTRIA IST ÜBERALL

9 December 2021 - 15 December 2021
Virtual, Austria

International Mobility Days
2021 #imdays2021

Expected Benefit Categories for Automated Driving



Who takes over responsibility and coordination?

- **Thought experiment:** crowded situation at intersection with automated, self driving vehicles



Nothing different than today!

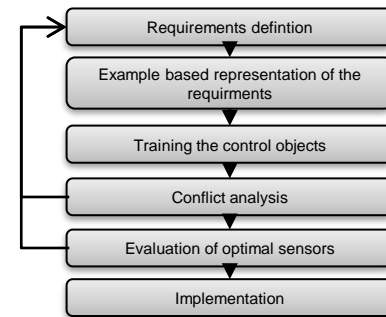
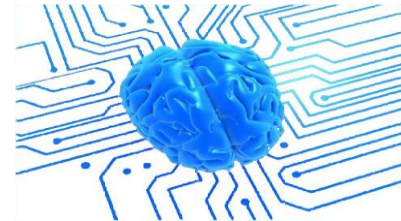
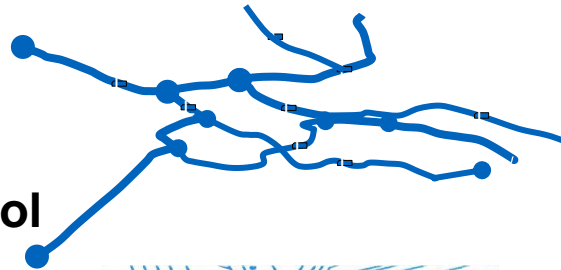
- Somebody has to take the lead and control
- Traffic control cannot be avoided and skipped

But:

- Self driving cars can be trained to be cooperative
- Traffic control must be refactored/redesigned to take advantage
- **Automation of traffic control**

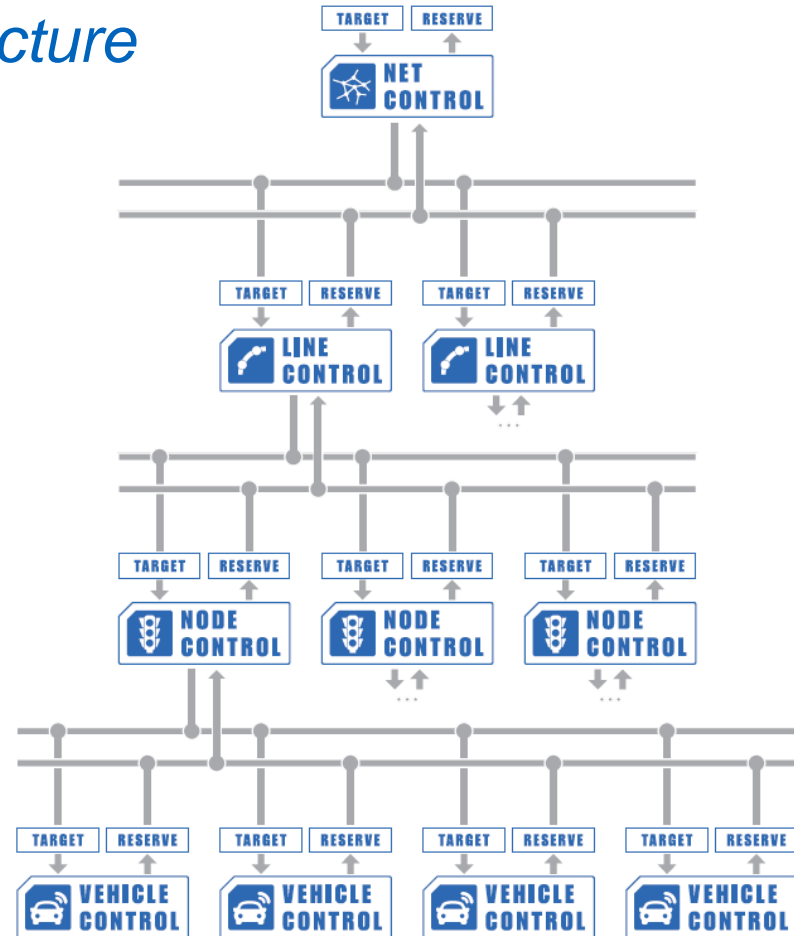
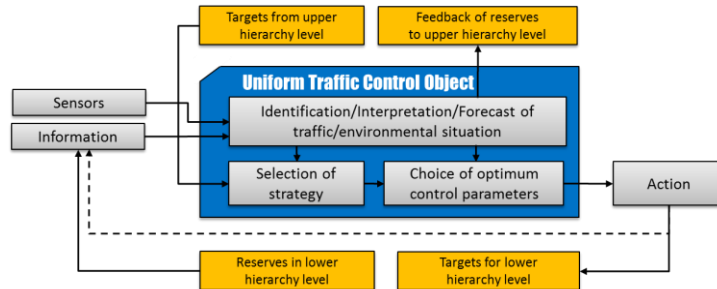
VERONET *Solution Concept*

- Structure and Architecture
 - Decentralized, subsidiary, hierarchically arranged network of **uniform, modular control objects**
- Mathematics of Control
 - Artificial Intelligence, Machine Learning, data driven modelling
 - Model based predictive control
 - Stochastic Simulation
- Process
 - Requirement driven process model

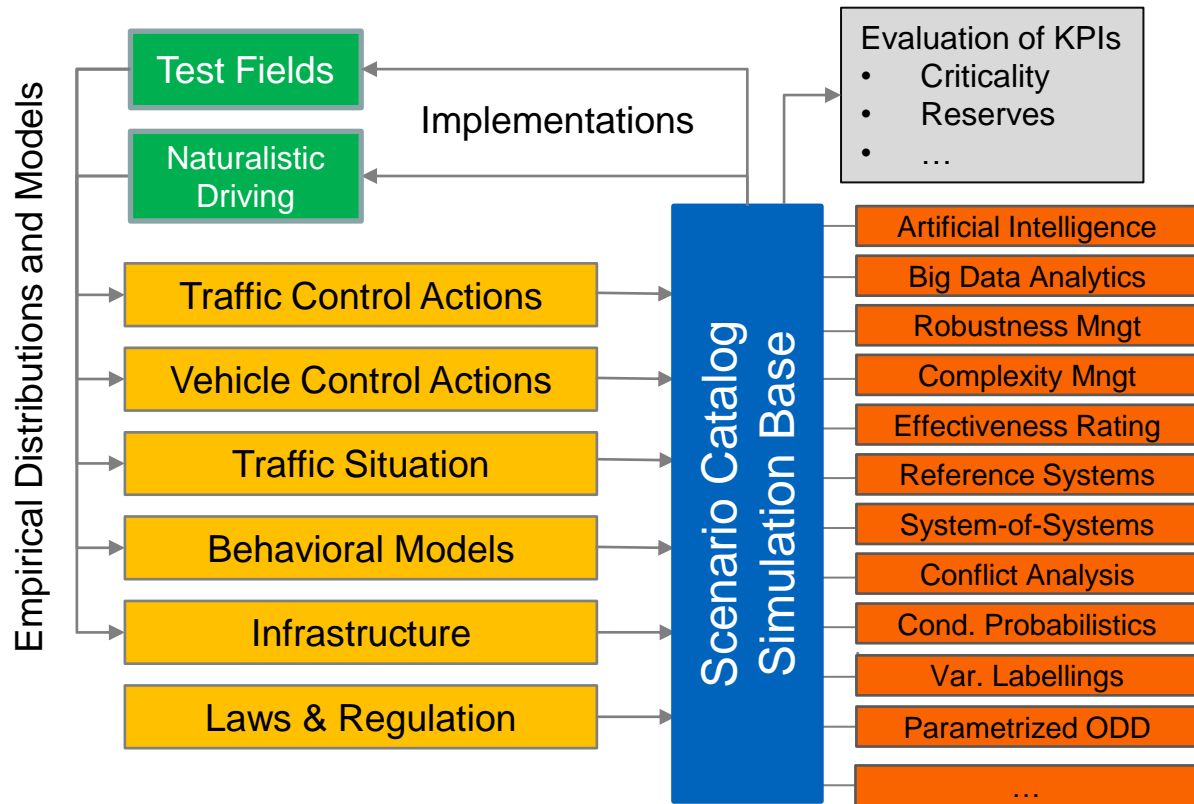
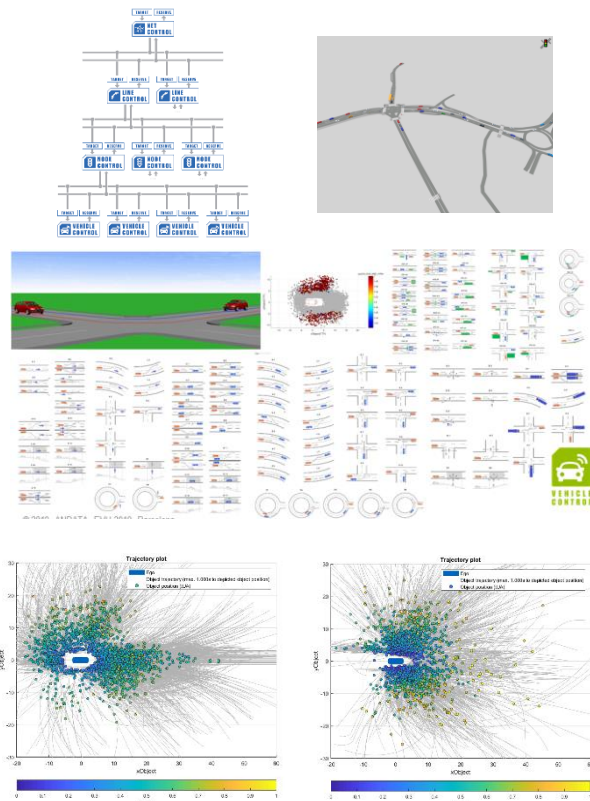


Structure and Control Architecture

- Decentralized
- Hierarchical, cascaded
- Subsidiary
- Modular
- Uniform
- Object oriented



Scenario Based Development and Validation for Traffic Automation Functions

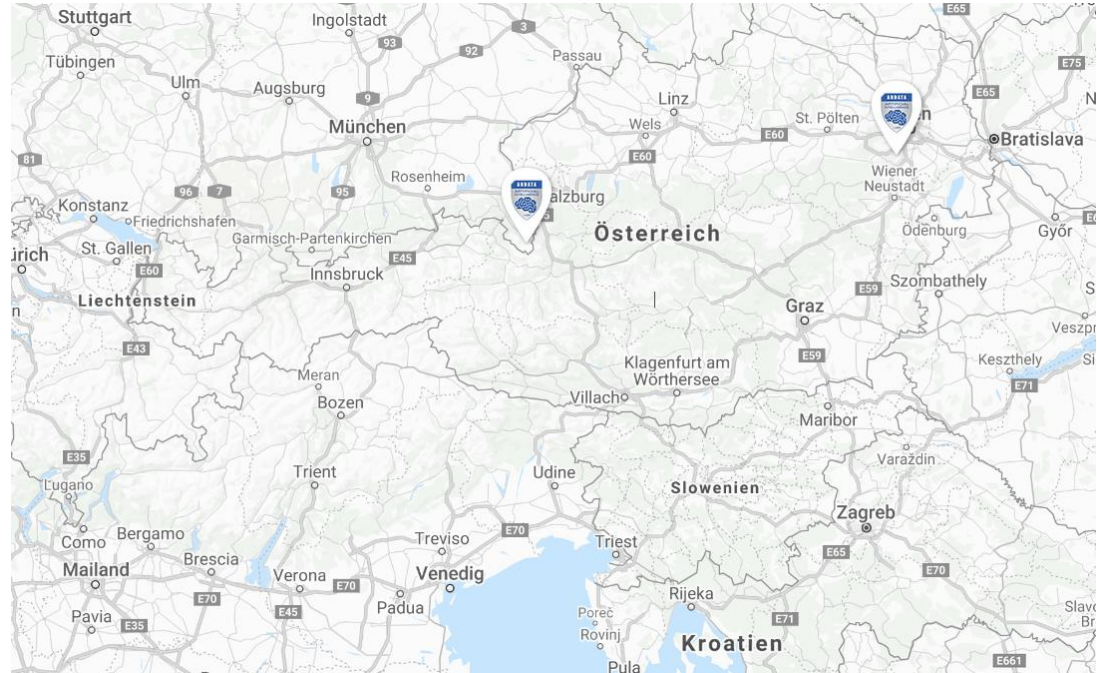
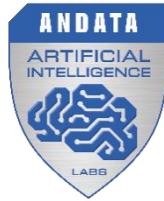


Reference



ANDATA®

- Engineering office
 - *Technical Mathematics*
 - *Mechanical Engineering*
- Founded 2004
- Completely family owned
- Offices in
 - *Hallein/Salzburg*
 - *Vienna, Austria*
- Joint venture with CARIAD/Volkswagen
 - *Gaimersheim, Germany*
 - *~200 employees*





Thanks, for listening!

The singularity is near, let's be prepared!

ANDATA GmbH

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