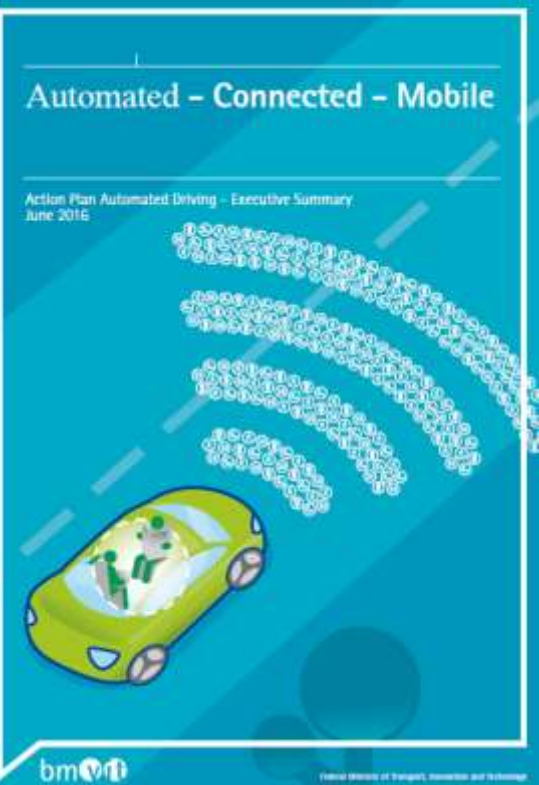


## Automated – Connected - Mobile

Strategies & Actions towards Automated & Connected Driving in Austria

# Action Plan „Automated Connected Mobile“



Framework, Visibility & Evidence

Competences  
& Value Creation



Use Cases  
& Impact

USP – Digital Infrastructure

## National Action Plan - Outline

- Legalize Tests & adapt legal frameworks
- Build & Run Test-Environments (Learning Labs)
- Prioritize Use Cases & Applications
- Secure & strengthen USPs
  - Technology Competences
  - Digital Infrastructures
  - Scientific Competences – Emerging Research!
- Monitoring & Evaluation

**Overall Budget: 25 Mio € (2016-18);  
leverage effect** of an additional 35 Mio. €

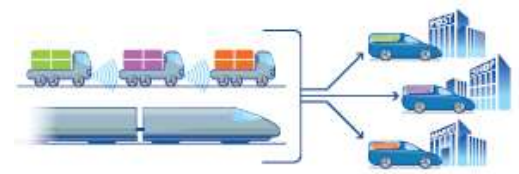
Main **budget elements:**

- Test Environments (Innovation Clusters), RDI Programmes (Mobility, ICT, Security), Digital Infrastructure Deployment

**!! ALL open for international participation !!**

# Use Cases & Application Scenarios

- **#Flex'n Easy (Automated Last Mile)**
- **#Safety+ (Connected ADAS)**
- **#Transport Works (Freight & Logistics)**
  
- #Create Time (Highway Chauffeur +)
- #Stay mobile (Aging and inclusion)
- #Create Space (urban mobility concepts)
  
- #Special Helpers (Off-Road, Airport, Terminals, ...)



# Legal Framework & Testing Environments

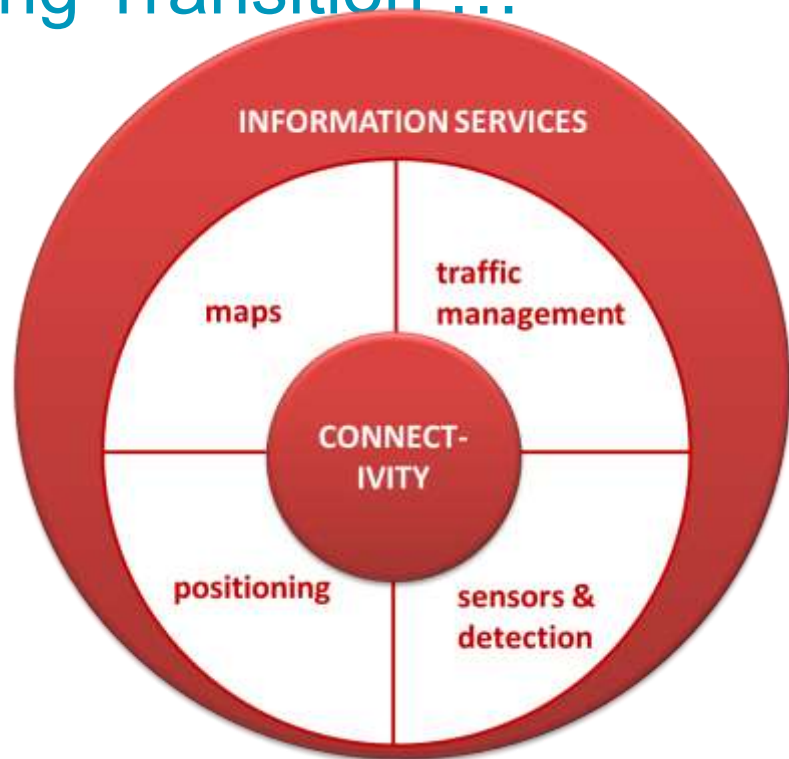
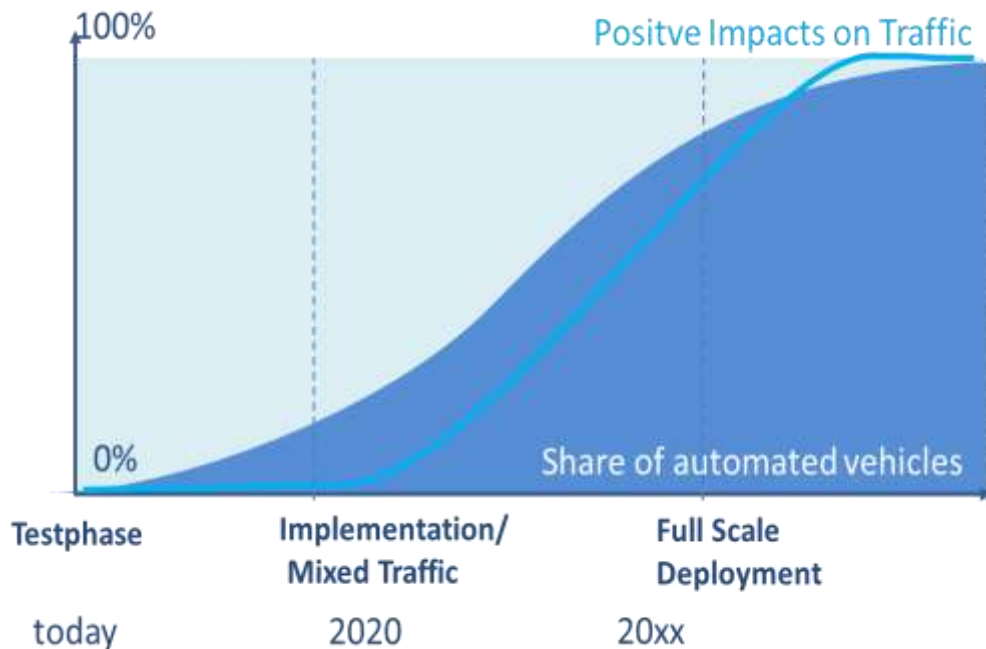
## 1. Type approval law – Legalise Testing

- Specific Regulations for Automated Functions (up to SAE4+)
- Delegated powers for Minister to issue legal regulations
- Code of Practice, International/EU harmonisation
- Standardised Application Form → test certificate

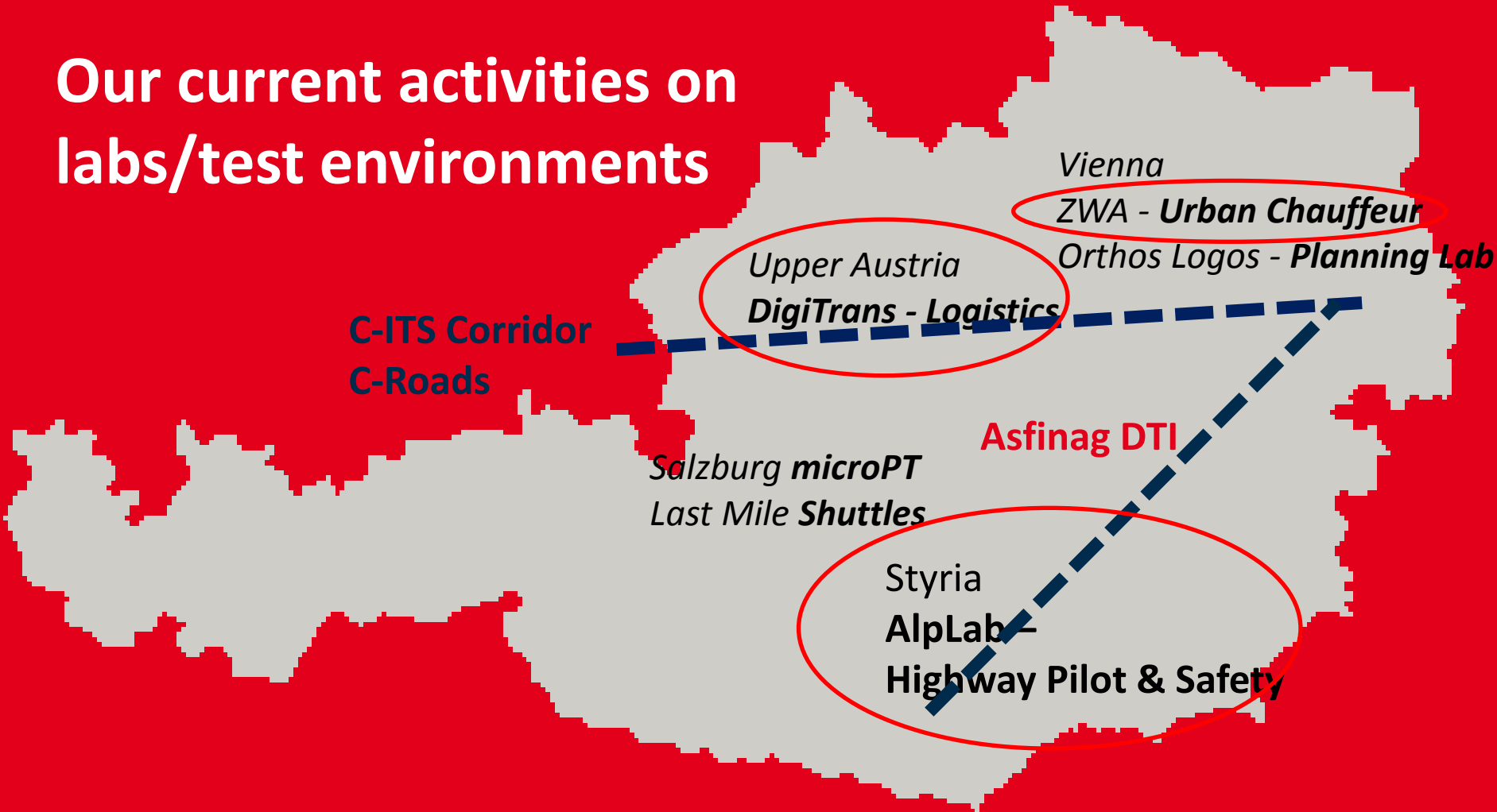
## 2. Goals / conditions of test environments:

- Bundle competences, joint learning for suppliers, OEMs, Infrastructure operators and the public domain
- Systematic testing and validation of products, components, vehicles and services
- Focus on prioritized Use Cases
- Integration of testing and validation aspects → Real life - test bench - simulation

# Digital Infrastructure = Managing Transition ...



# Our current activities on labs/test environments



C-ITS Corridor  
C-Roads

Upper Austria  
DigiTrans - Logistics

Vienna  
ZWA - Urban Chauffeur  
Orthos Logos - Planning Lab

Salzburg microPT  
Last Mile Shuttles

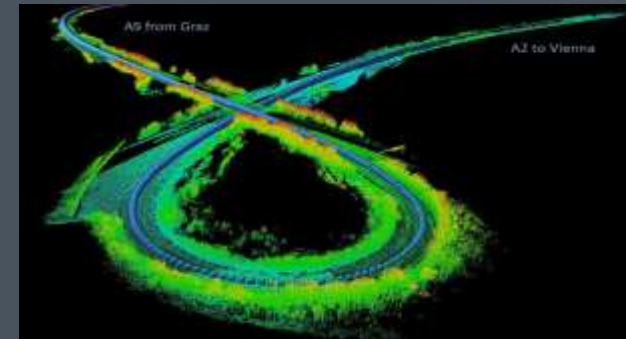
Asfinag DTI

Styria  
AlpLab -  
Highway Pilot & Safety



# USP of ASFINAG support

1. Simulation/modelling for test-preparation
2. Real-time info-exchange during tests,
3. Digital interfaces/data for test-monitoring; time-synced analysis
4. Documentation of test scenarios (HD Video)
5. Precise map support



# Austrian Road Operator is an active partner



## Vehicle Sensors



Vehicle Sensors & DTI — automated  
— manual



# ALP.Lab



## Traffic influence factors



Traffic density



Driver behavior



Weather conditions

# Structure and organisation of the stakeholders



**Industry  
sector**

**Public  
sector**

(5) Scientific/ industrial costumers

(4) Associate partners

(3) Strategic network partners

(2) Consortium partners

(1) Operating company  
(shareholders)

SIEMENS

ASFINAG

MAGNA STEYR

TU  
Graz

STADT  
GRAZ

AVL

ALP.Lab

virtual  
vehicle

Telemotive AG

TiTech

JOANNEUM  
RESEARCH

Das Land  
Steiermark

Infineon

AIT  
AUTOMOBIL INSTITUTE



Other test regions/  
test centers

e.g. AIMS Testregion Niedersachsen  
Testregion Baden Württemberg  
ADAS Testcenter Kempten  
Upper Austria truck/ offroad Testregion  
Car2Road

Austrian &  
German Tier 1/2

Global &  
European OEMs

The consortium is open for further (full and/or associate) partners and is aligned with the ACOÖ consortium

- Specific support for logistics- & freight use cases and applications (incl. Logistic chain integration)
- Development platform(s) for automated logistic services
- Implementation of freight specific infrastructures
- Freight Specific test procedures (safety, liability, acceptance )

## Partner network



## Challenges & Lessons learned

- **Active public sector** - allow learning for all stakeholders
- Agile developments require **agile actions – fit for purpose**
- **Managing transition** – especially mixed traffic scenarios
- Define & prioritize **use cases** – clear expectations
- Interoperable **test-data** handling
- Focus on **impact over time**: safety first but integrated view over long term with AD as one element of broader mobility transition
- **User acceptance & behaviour**

## Areas of cooperation

- All Austrian funding programs & test environments are **open for international participation**
- **Flexible testing** (SAE 4+) is possible in Austria – come & test!
- **Common learning**, common standards (C-ITS etc.)
- **Digital infrastructure** – functional architecture --> Pilot CCAV
- **Impact analysis** – based on use cases & real tests
- European Projects (H2020, CEF/C-Roads)

**+ post-test frameworks!**



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