

## AUTOMATED VEHICLE PILOTS: CHALLENGES FOR DATA COLLECTION AND SHARING

# Adapting current frameworks to meet the challenges of automation

Helena Gellerman, SAFER  
ITS WC, October, 13 2016

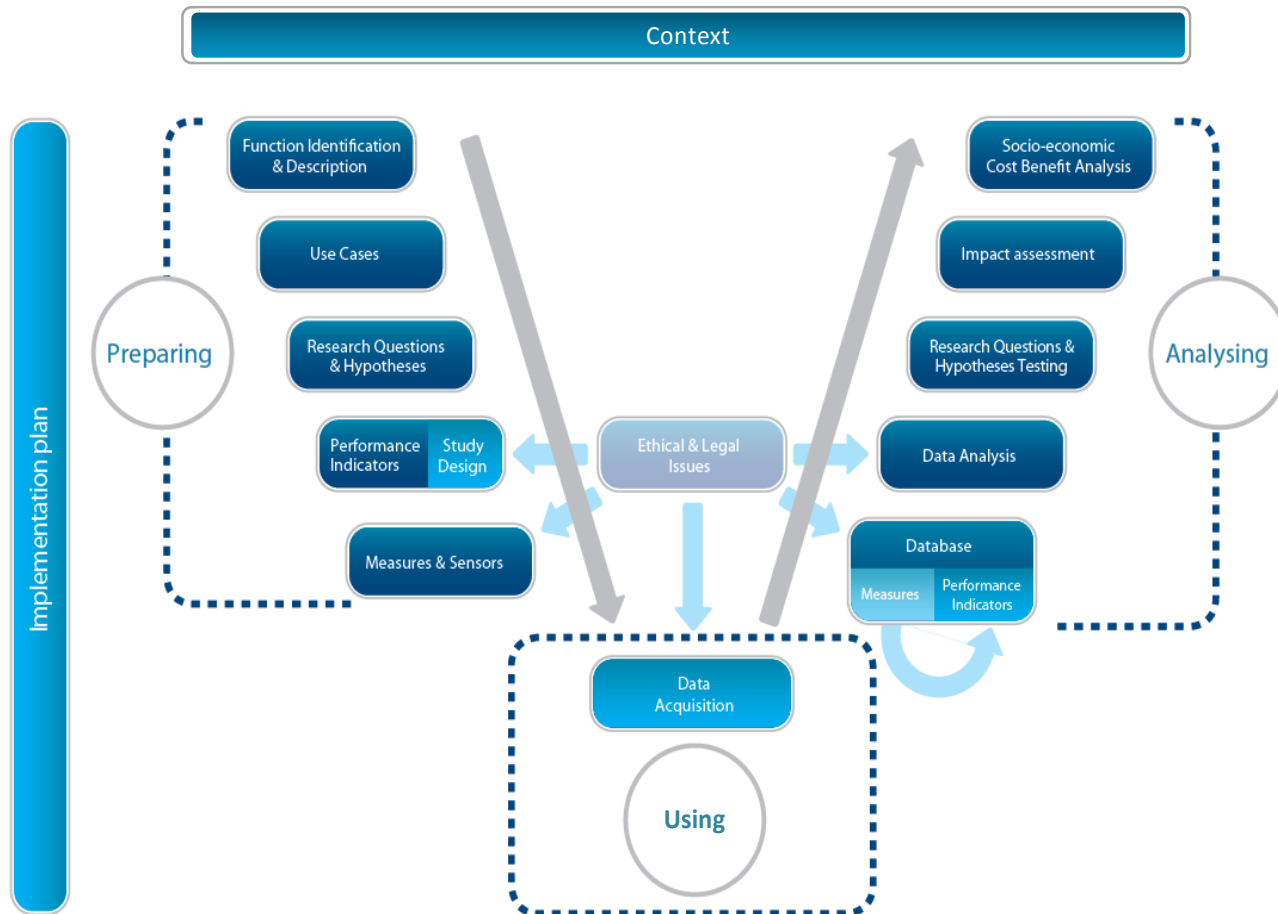


# INTRODUCTION

- Large datasets have been collected globally
- New projects retrieving data in two ways
  - Collecting data (New areas - autonomous driving, VRU...)
  - Re-using data (driver behaviour, normal driving, baseline in automation)
- FESTA Handbook provides guidance
- Data Sharing Framework - a detailed FESTA Annex
- **What is new in data collection and sharing based on automation data?**



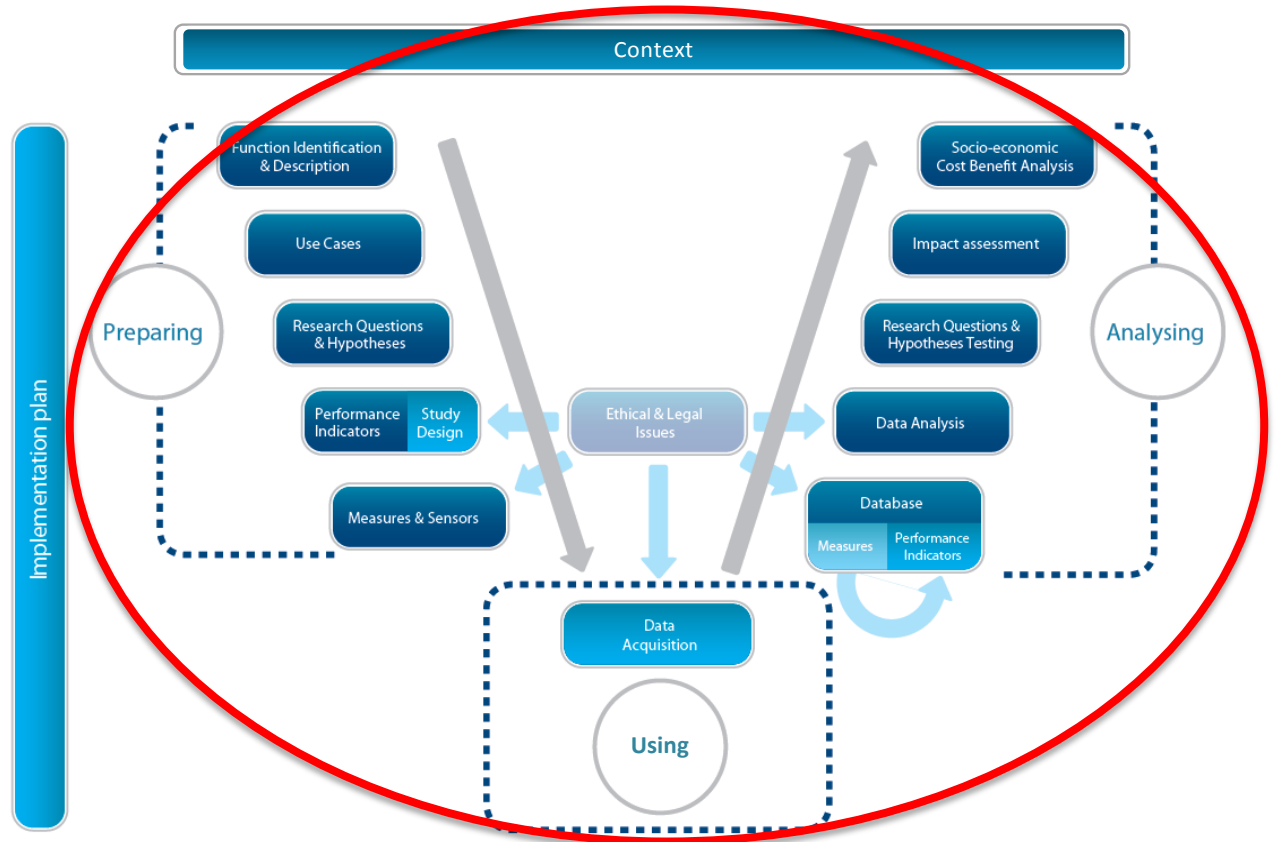
# FESTA HANDBOOK



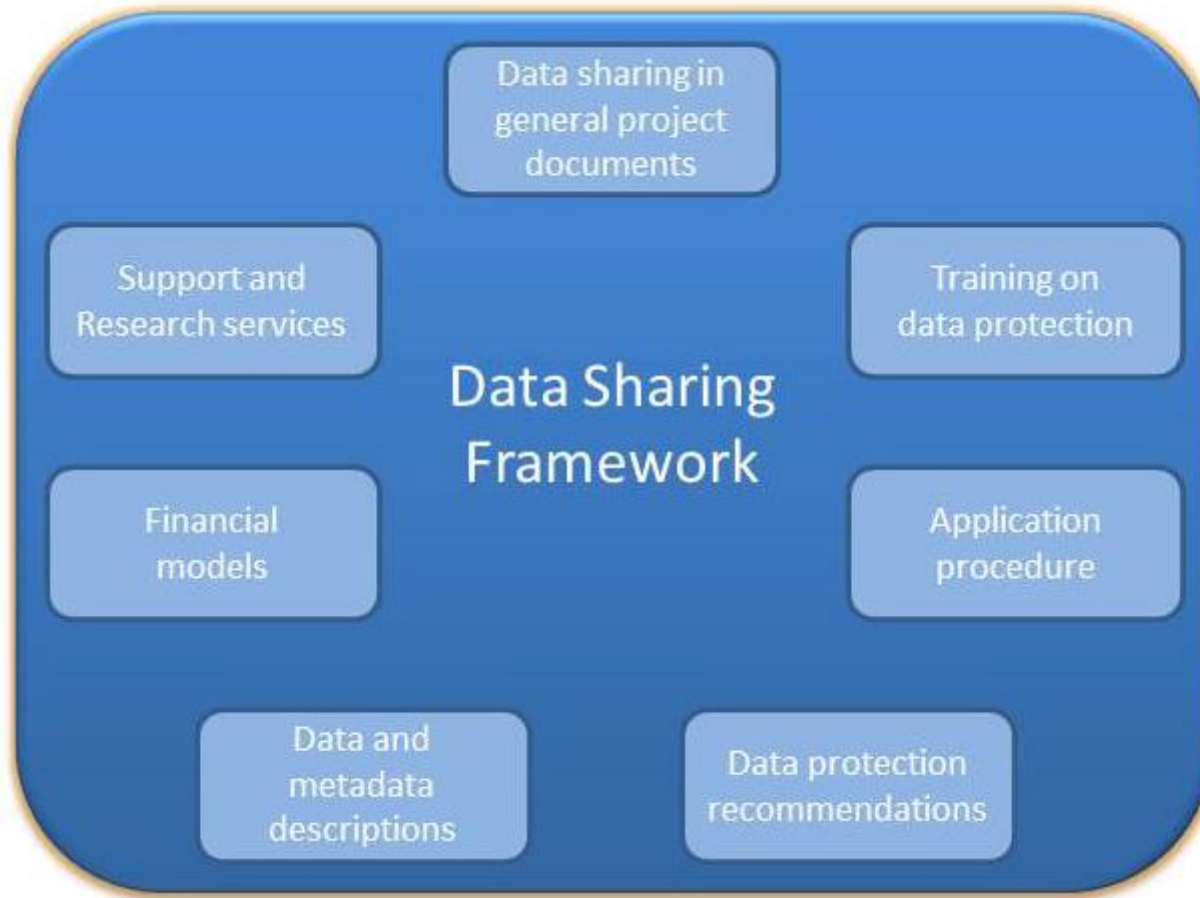
# FESTA ON DATA SHARING

Data sharing need to be considered from Day 1 in an FOT/NDS/Pilot

- Agreements
- Funding
- What data to collect
- Documentation
- Analysis tools
- Data protection



# DATA SHARING FRAMEWORK



# DATA SHARING FRAMEWORK

## DATA SHARING IN PROJECT DOCUMENTS

### Grant agreement

- Requirements on data sharing after project
- Conditions for data sharing, i.e. funding of data

### Consortium agreement

- Ownership and access to data and data tools
- Storage and download of data
- Post-project re-use of data
- Post-project financing

### Participant agreement

I *also* consent to have collected data (including video recordings and pictures) to be re-used in other research projects focusing on factors...

Yes  No

### External data provider agreement

- May data be accessed by all project partners/third parties?
- Data available after the project?

# AUTOMATION RELATED DATA

- Mixed traffic - other road user's reactions
- Larger amount of sensor data
- Physical integrated sensors – user reactions
- Data to know baseline in societal scenarios that is affected by automation
  - Such as today's vehicle sharing activities
- Mobility patterns from transport planners
- Questionnaires to potential automated vehicle users



# CHALLENGES IN FOT DATA COLLECTION IN AUTOMATION

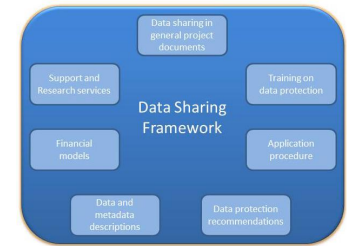
- Use of enhanced current test data loggers for in vehicle data collections
- Storage capacity
- Video – need for more details on other road users – legal restrictions
- Collect societal baseline – new data collection methods
- New collection methods based on simulations



**Important** – test data for societal impact analysis (FOT/Pilot), not automated function test data (OEMs)



# CHALLENGES IN SHARING AUTOMATION DATA

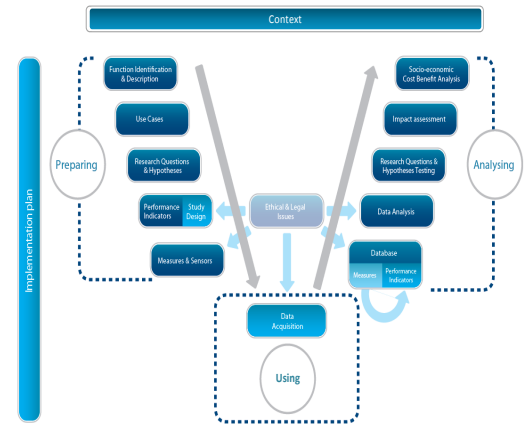


- Data from competitive systems (sensors, algorithms), earlier - mature systems
- Sharing for common good/policy for automation, common goals incentive for sharing
- Liability; driver => OEMs
- Data protection – data anonymization/annotations (i.e. video)
- Common data format – OEM collect with their tools and change format before upload of common data



# CONCLUSIONS

- Existing frameworks can be re-used
- Additional features based on automation challenges
- Collect societal baseline
- New simulation methods
- Sharing – incentives based on common goals



**Thank you for your attention!**

For more information  
and cooperation opportunities

**[www.fot-net.eu](http://www.fot-net.eu)**  
**[info@fot-net.eu](mailto:info@fot-net.eu)**

Helena Gellerman  
**[helena.gellerman@chalmers.se](mailto:helena.gellerman@chalmers.se)**  
+46 761 191429