

# **SAFER**

**VEHICLE AND TRAFFIC SAFETY CENTRE AT CHALMERS**

## **Overview of Swedish FOT activities**

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# Background

# FOT-Involved SAFER Partners

VINNOVA

Epsilon High Tech AB

CHALMERS

Imego AB

AB Volvo

Sicomp AB

Saab Automobile AB

Lindholmen Science Park AB

Scania CV AB

Scandinavian Automotive Suppliers

Volvo Car Corporation AB

SP Technical Research Institute of Sweden

Autoliv Development AB

Swedish Road Administration

Telia Sonera AB

Swedish National Road and Transport Research Institute

Saab Microwave Systems AB

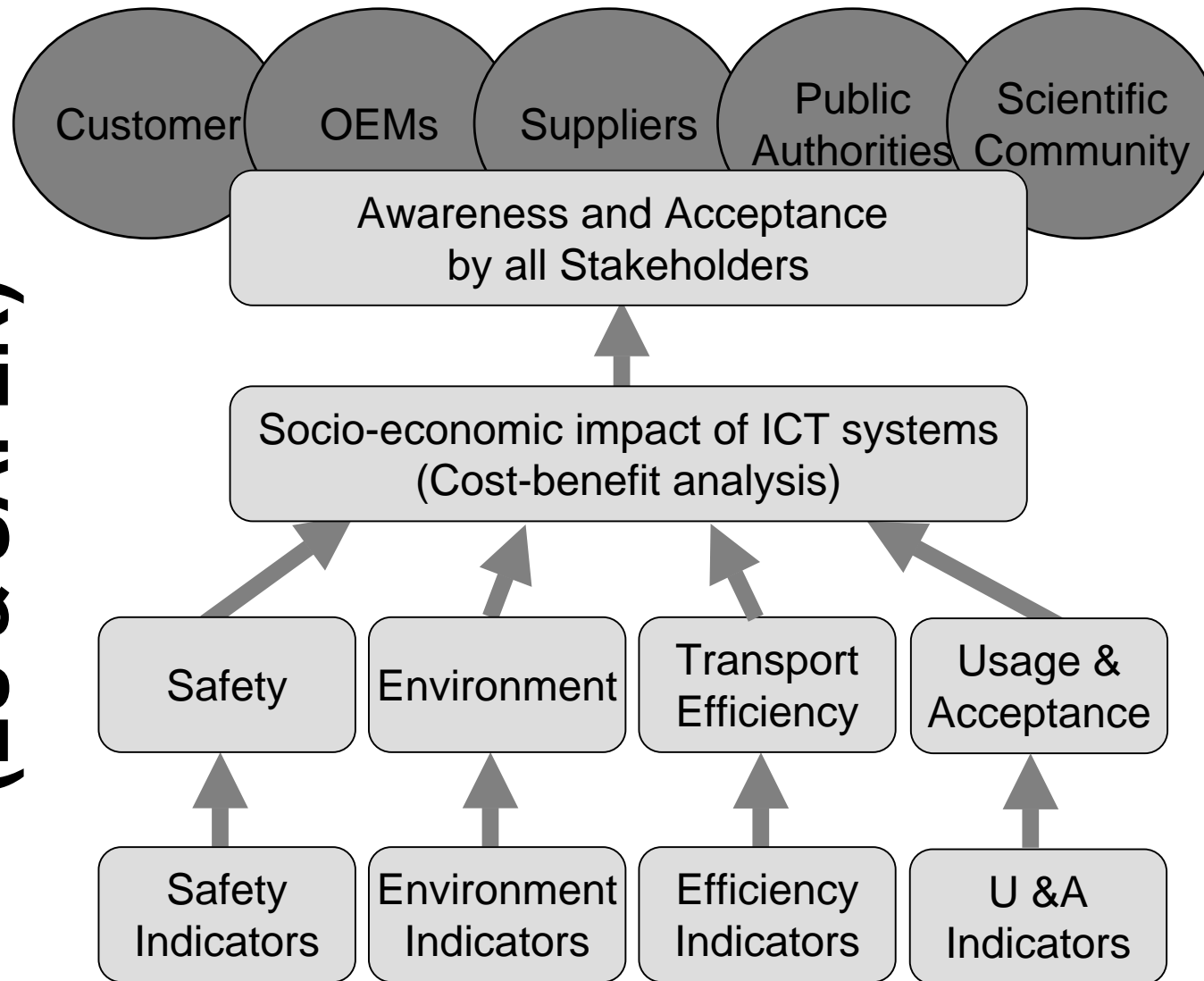
Göteborg University

Folksam

VGR, Region Västra Götaland

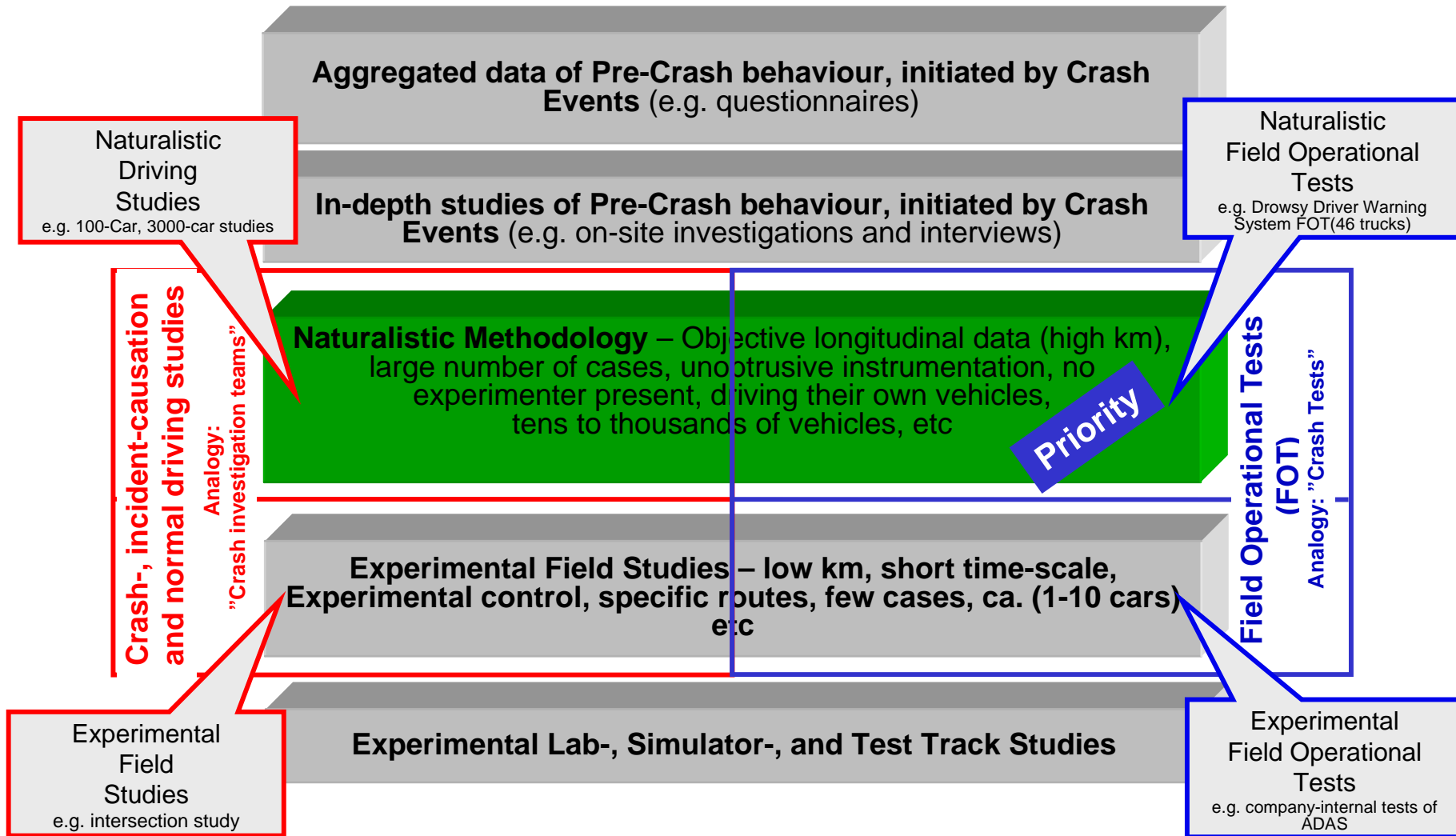
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# General FOT Goals (EU & SAFER)



- “Field Operational Tests are large-scale test programmes aiming at a comprehensive assessment of the efficiency, quality, robustness and user-friendliness of ICT solutions for smarter, safer and cleaner vehicles and real-time network management” (p. 46, ICT Work Programme 2007-08, Dec 22, 2006).

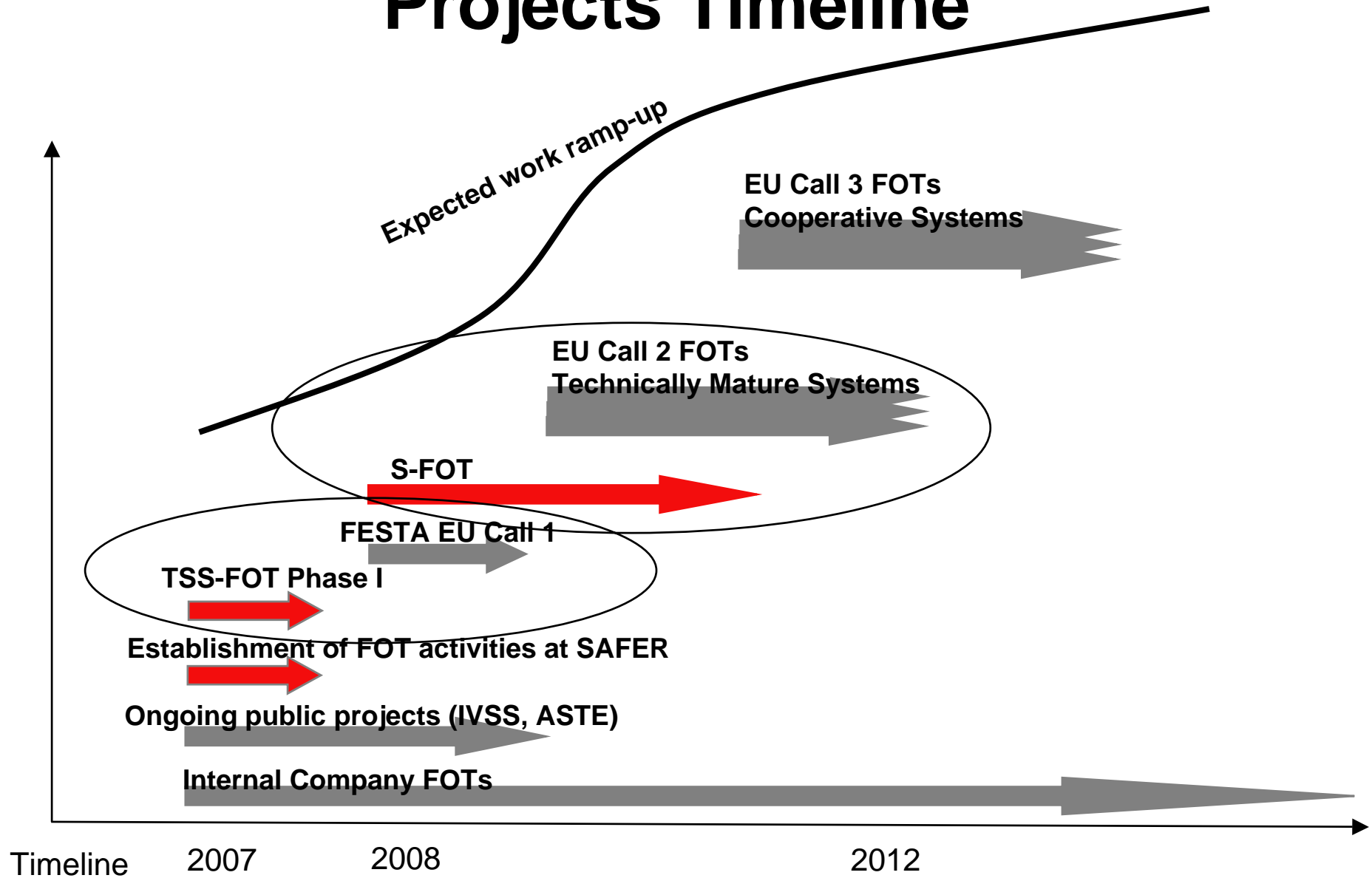
# Naturalistic Methodology in Relation to Existing Methods



# Main activities

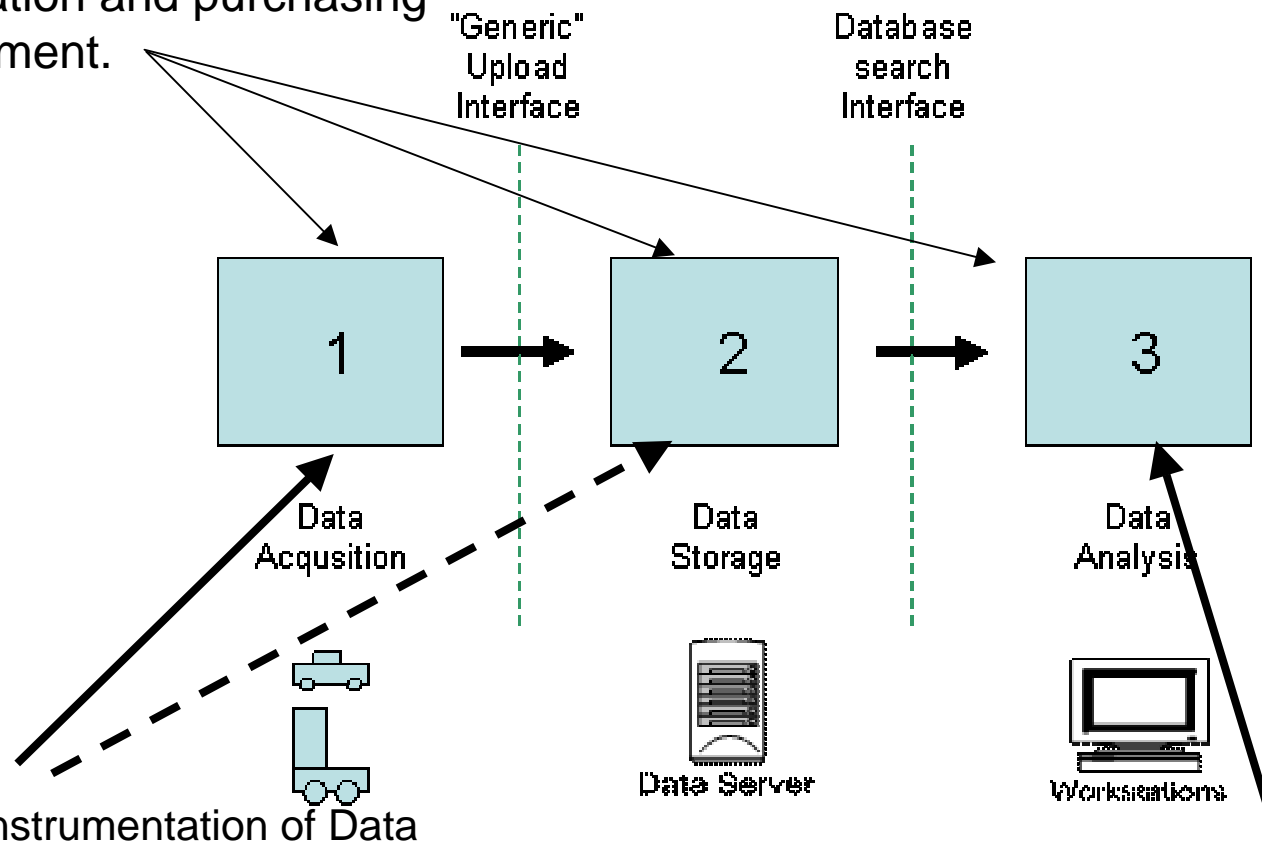
- Establishment of FOT activities at SAFER
  - Agreeing on common methodology
  - Establish interactions with international activities
- Test Site Sweden (TSS) FOT, Phase 1
  - Develop technologies for data acquisition, storage and analysis
  - Perform small-scale study with instrumented vehicles
- S-FOT
  - Perform large-scale Swedish FOT
  - Similar scale as Swedish ISA trials
  - Possibly integrated in EU-funded FOT activities

# Projects Timeline



# TSS FOT "Methodology Chain"

Task 1. Requirements specification and purchasing of equipment.

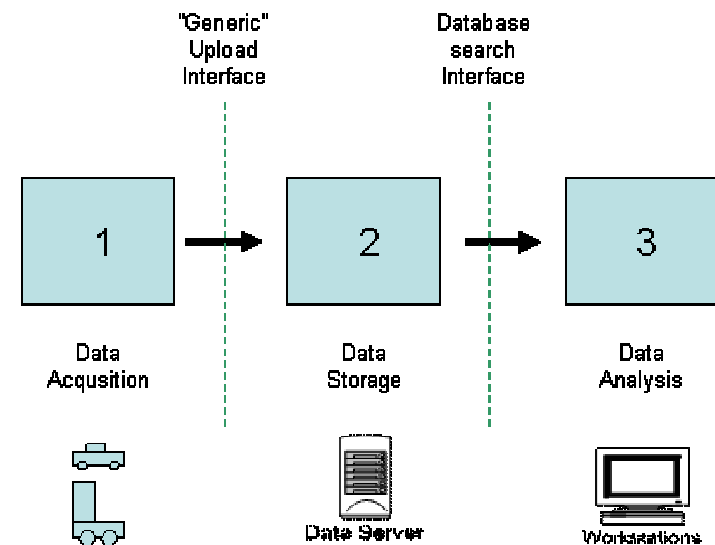


Task 2. Instrumentation of Data Acquisition Systems, and administration of data collection

Task 3. Data Analysis

# US Collaboration in TSS FOT

- Collaboration with UMTRI
  - Logger "lessons learned"
  - Data retrieval (from logger)
  - Database design
  - Data reduction
  - Data querying
  - Experimental design
  - Performance indicators

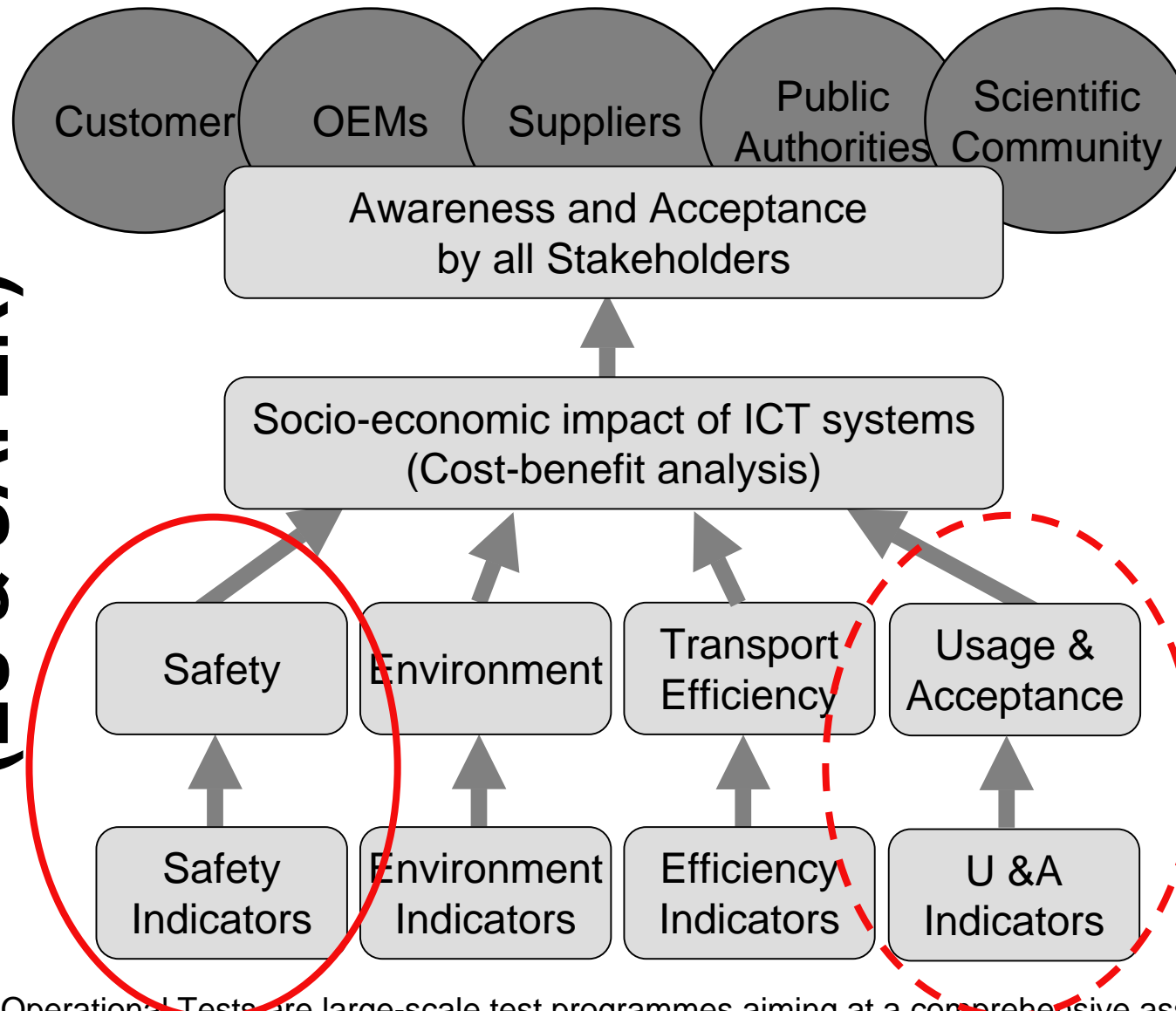


# Sweden-Michigan Partnership

- FOT area was prioritized for cooperation (see results of Michigan visit to Sweden 10 May)
- Next step is to define the content of the partnership  
e.g.:
  - A secondary analysis of incidents, near-crashes, and crashes comparing Sweden and USA. Based on UMTRIs current data and the new Swedish data.
  - Assistance with build-up of FOT methodology, design, and analysis for Swedish/EU FOTs.
  - Inclusion of UMTRI in EU projects

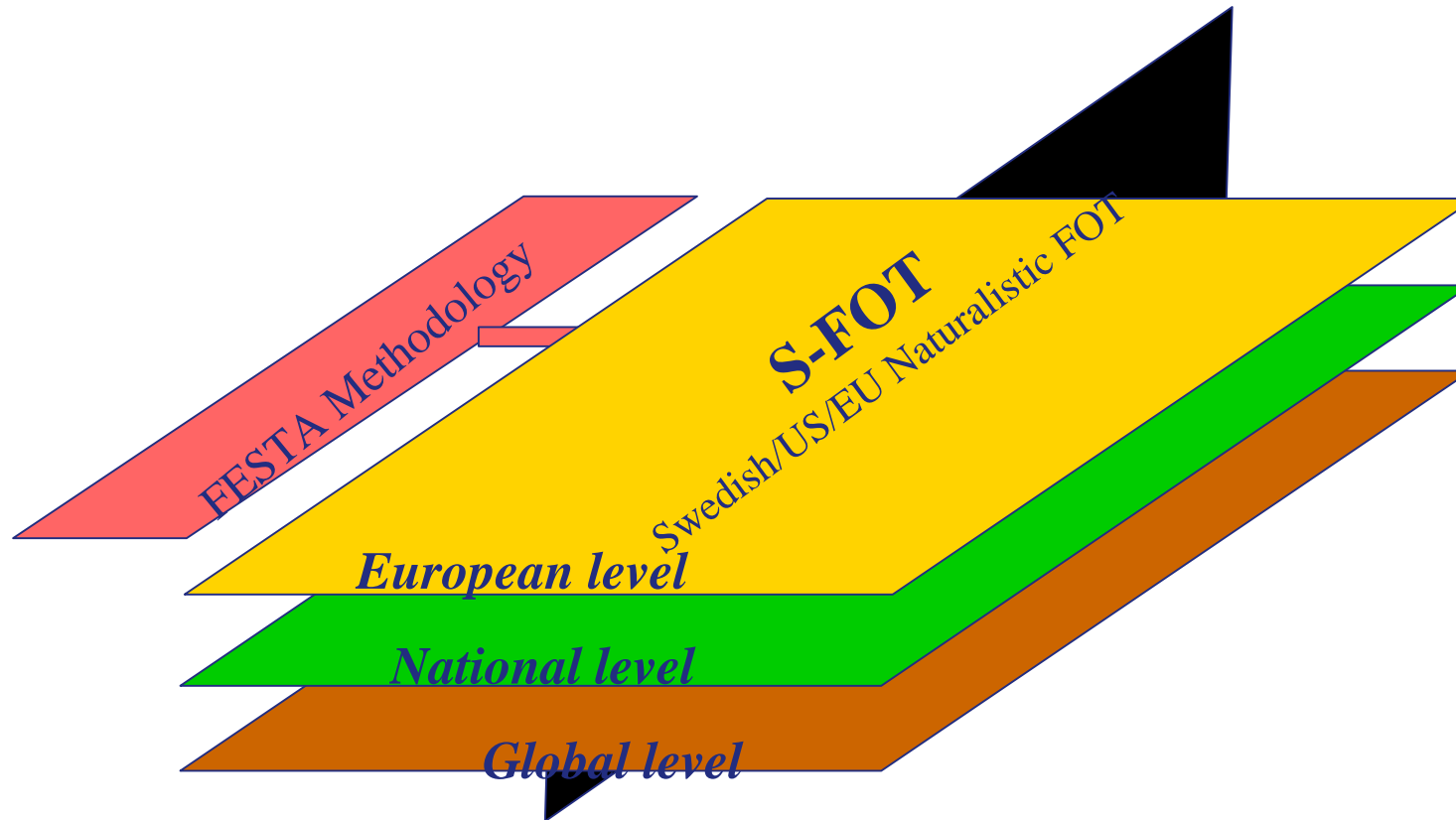
# Goals & priorities

# FOT Goals (EU & SAFER)



- “Field Operational Tests are large-scale test programmes aiming at a comprehensive assessment of the efficiency, quality, robustness and user-friendliness of ICT solutions for smarter, safer and cleaner vehicles and real-time network management” (p. 46, ICT Work Programme 2007-08, Dec 22, 2006).

# Long-term goal: Form close links with European and Global FOT activities



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# S-FOT Goals

## Primary Goals:

### 1. **Accidentology**

- Use the Naturalistic Methodology to collect Crashes, Near-crashes, and Incidents during the FOT. Study pre-crash behavior.

### 2. **Evaluation of Safety, and Usage & Acceptance**

- Test hypotheses for *individual functions* (see next slide for clustering of individual systems)
- Test hypotheses for integrated and/or *multiple functions* e.g. "ADAS safety package"
- Study long-term effects in real traffic
- Study acceptance, attitudes towards functions - questionnaires, interviews, focus groups
- Study driver characteristics & driver modelling

# Priorities (still under discussion)

- Use the **Naturalistic** FOT method to study baseline and pre-crash data
- Test hypotheses regarding *On-Market* Vehicle-Autonomous Functions
  1. **Impairment warning**
  2. **Autobrake**
  3. **ACC+/FCW**
  4. **LKS/LDW**
  5. **Speed Alert**
  6. **ESP**
  7. **Night Vision+**
  8. **Blind Spot warning**
  9. **Information Management**
- Test hypotheses regarding *On-Market* Traffic Info Functions
  1. **Real-time Traffic Info**
  2. **eCall**
- Test hypotheses regarding Prototype Functions
  - e.g. Start inhibit, Low speed obstacle warning/Lane Change Support

End

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