

Large Scale Collaborative Project

■ FOT-NET & TeleFOT

Use and Impacts of Aftermarket & Nomadic Devices in Vehicles

Large Scale Collaborative Project, EU 7 FP DG INFSO - ICT 2nd Call

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<http://www.telefot.eu> ■

- **A general presentation of TeleFOT, on:**
 - ✓ **General outline (status, group, funding,..)**
 - ✓ **Objectives**
 - ✓ **Basic methodology & structure**
 - ✓ **TeleFOT in light of FESTA**
 - ✓ **Interfacing between other FOTs**



TeleFOT in a Nutshell

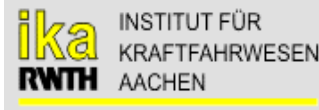
- TeleFOT - Field Operational Tests of Aftermarket and Nomadic Devices in Vehicles. Runs from June 2008 to May 2012.
- Assesses the impacts of functions provided by aftermarket and nomadic devices in vehicles with large scale field operational tests and raises wide awareness of these impacts.
- VTT as coordinator, total project volume 14.5 M€. EC Contribution 9.7 M€.
- Partner pool research institute driven - but also industry and others e.g. Navteq, ADAC, Elektrobit, Magneti-Marelli, CRF, etc. (+ **Stakeholder Forum**)





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Investigación y Desarrollo

■ General Objectives

- ✓ **Assess usability, safety, efficiency and environmental impacts of aftermarket and nomadic devices' functions and services in vehicles.**
- ✓ **Raise wide awareness of the potential these devices offer.**
- ✓ **Accelerate the take up of ICT systems for driver support.**

Scientific and technological objectives

- 1. Build and mobilise a Europe-wide user community for testing and assessment of innovative location-based and personalised driver support functions for aftermarket and nomadic devices**
- 2. Set up and manage a testing process of selected driver assistance functions and services**
- 3. Study usability & user acceptance, behaviour & safety, efficiency & socio-economic impacts of these selected functions (incl. negative impacts)**
- 4. Investigate the impacts of AM&ND in promoting the “Green driving” concept**
- 5. Investigate the information contents and future applications for cooperative driving support by using AM&ND**
- 6. Develop effective procedures of enhancing awareness and take-up of driver support ICT systems among the public**

How does TeleFOT carry out the tests

- ✓ **Benchmarking of devices in lab conditions**
- ✓ **Piloting the FOTs**
- ✓ **Recruited drivers (3000) using their own vehicles and**
 - ✓ **own devices or**
 - ✓ **test devices**
- ✓ **Experimental vehicles: drivers perform detailed tests in controlled conditions having the devices in vehicles either (i) not connected or (ii) connected to vehicle systems**

- ✓ **Data transferred automatically M2M, centralised server**
- ✓ **Key experimental design involves the use of *test groups* and *control groups***



Equipping the vehicles

Baseline measurements

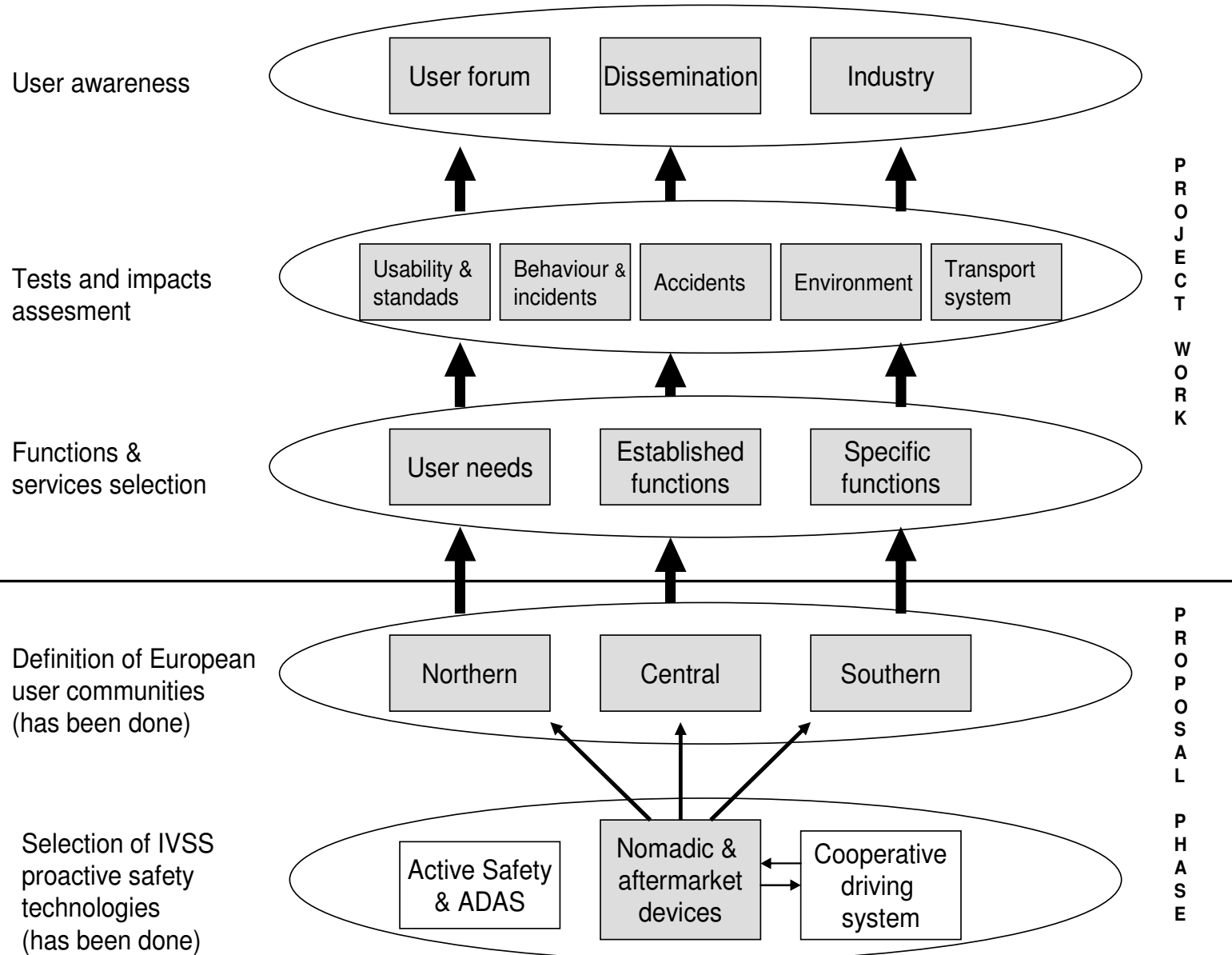
Treatment (Test group)

Learning phase measurements (right after "Treatment")

Mid-term measurements (6 months)

Long-term measurements (1 year+)

TELEFOT Concept and process



Work structure by Sub-Project and WP

"Manage"

SP1 Coordination (VTT)

WP1.1 Management (VTT)
WP1.2 Project administration (VTT)
WP1.3 Quality, Risk and Knowledge Management (VTT)

"Plan"

SP2 FOT Framework (CHA)

WP2.1 Coordination and communication (CHA)
WP2.2 Methods and tools (CHA)
WP2.3 Data specification (LOUGH)
WP2.4 Implementation issues (ETR)
WP2.5 Liaison (CHA)
WP2.6 Technology and service observatory (TID)

"Execute"

SP3 Field Operational Tests (ICCS)

WP3.1 Coordination & comm.(ICCS)
WP3.2 Test tools development (MET)
WP3.3 Test sites set up (ETR)
WP3.4 FOT Plans (CERTH/HIT)
WP3.5 Large-scale FOT Execution (ICCS)
WP3.6 Detailed FOT execution (VTT)
WP3.7 Data and User Mngmnt (EMT)

"Evaluate"

SP4 Evaluation & Assessment (LOUGH)

WP4.1 Database usability & accessibility (VTT)
WP4.2 Co-ordination and review (LOUGH)
WP4.3 Safety impacts (LOUGH)
WP4.4 Mobility impacts (VTT)
WP4.5 Efficiency impacts (CERTH/HIT)
WP4.6 Environmental impacts (IKA)
WP4.7 Business models & user uptake (CHA)
WP4.8 Benchmarking (VTT)
WP4.9 Special analyses and transport system level implications (LOUGH)
WP4.10 Technical evaluations (MIRA)

"Open up"

SP5 Dissemination, user awareness and exploitation (UNIMORE)

WP 5.1 Coordination and communication (UNIMORE)
WP 5.2 Dissemination (UNIMORE)
WP 5.3 Facilitation of exploitation (UNIMORE)
WP5.4 Stakeholder Forum (ADAC)

TeleFOT in light of FESTA

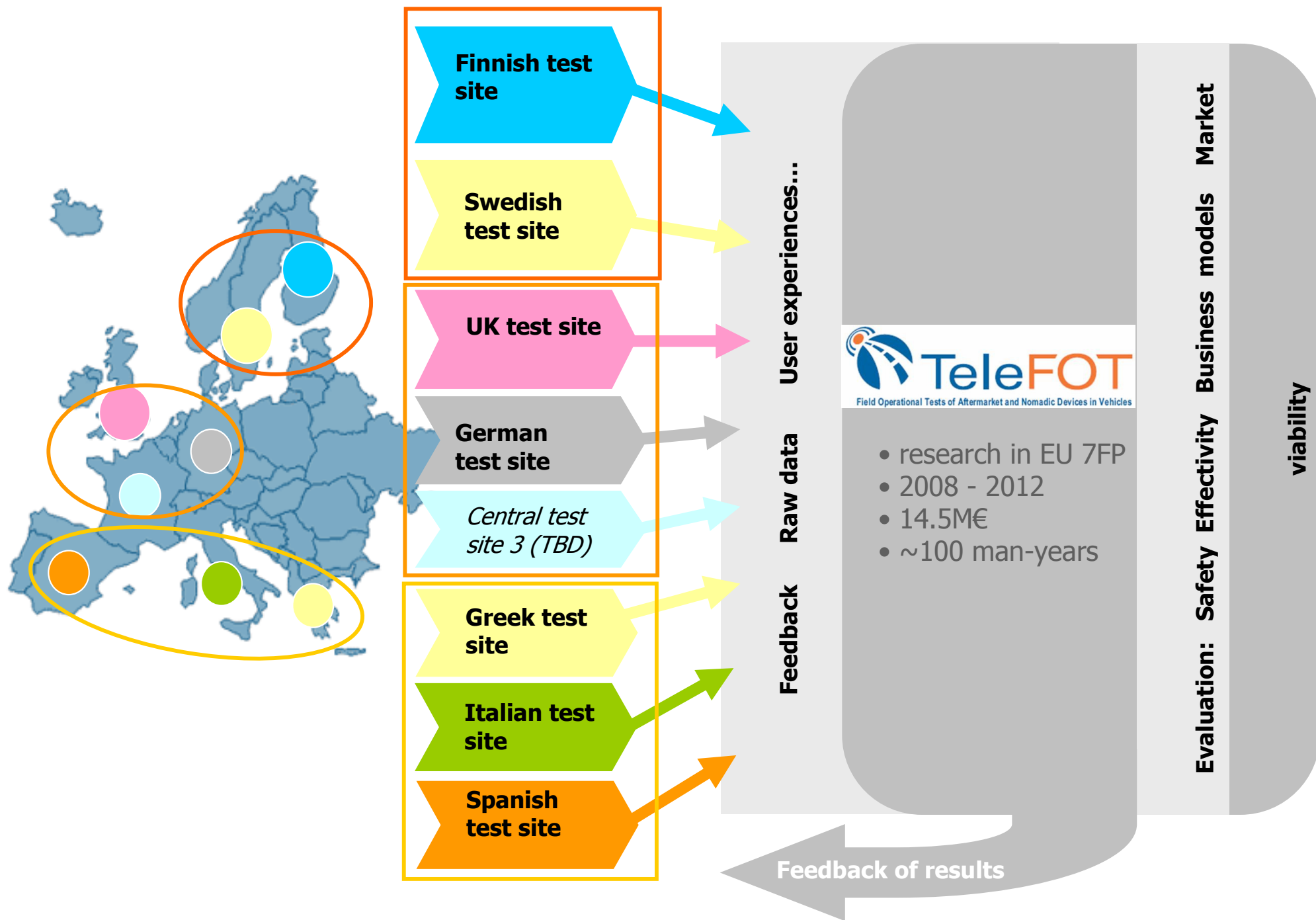
- ✓ **FESTA results will be utilised to their full extent in TeleFOT**
 - ✓ **E.g. FOTIP, checklists, D5 hypotheses etc.**
- ✓ **The FOT Chain (“FESTA V”) complies to the TeleFOT methodology design and structure (or rather: vice versa)**
- ✓ **TeleFOT consortium is well geared towards utilising FESTA: many key TeleFOT partners & specialists part of FESTA work**

Possible driver assistance functions/services to be studied (TBD)

- 1) Information on traffic jams, disruptions, road works.
- 2) ISA (Speed info, Speed alert)
- 3) Road weather information
- 4) (Personalised) navigation services
- 5) Personalised information and default routes
- 6) FCD
- 7) Rail road level crossing warnings on the approaching train
- 8) Driver's log; debriefing (e.g. on green driving issues)
- 9) POI; Advertising the services along the road
- 10) PAYD
- 11) eCall
- 12) Other functions, e.g. patrol and emergency services
- 13) Nomadic device integration to vehicle systems: e.g. music streaming, phonebook access, information from vehicle bus to navigation system

Technology observatory for future functions & services

TeleFOT & National Test Sites; Three communities: Northern, Central, South



Finnish Telematics Initiative

- VARO –service users
- Navigation (enhanced with TI)
- Pay-As-You-Drive Console
- Speed Indication / smart phone
- Speed Alert / smart phone
- TI from navigating smart phones
- eCall

INPUT

- Own Time "in kind"
- Financing support

OUTPUT, RESULTS, BENEFITS

Business:

- Quantum leap in international competition
- Export
- Boost to markets

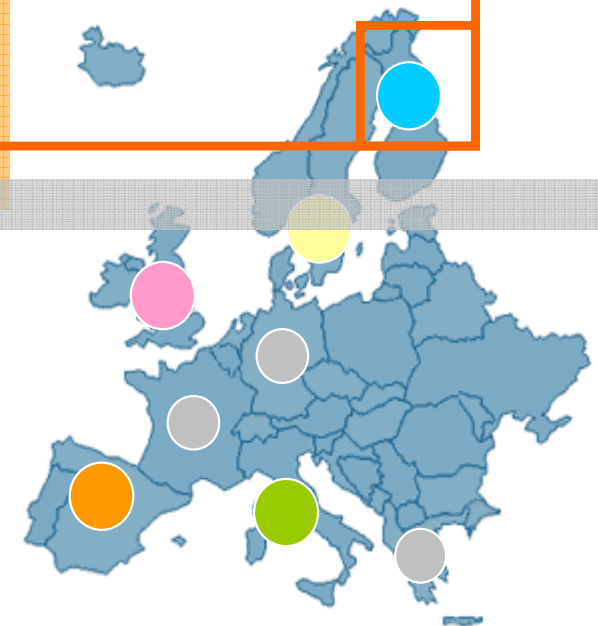
Public sector:

- Finnish ITS uptake boost
- Healthy cost/benefit ratios
- Support to policy goals

Travellers:

- Fluency in travel
- Economy of scale -> quality and prices of devices & applications

Raw Data



Support flow Interface TeleFOT

TeleFOT (EU FP7)

- Research of
- Impacts
 - Financial models
 - Market viability, etc

- Analysis of data
- Evaluation
- Dissemination EU & global
- Exploitation
- Limited financial support

TeleFOT Current Status

“Calendar”:

- ✓ **KoM 23-25 June 2008, Helsinki**
- ✓ **Various meetings & workshops for national Test Sites during summer**
- ✓ **SP leaders meeting 2-3 September, Brussels**
- ✓ **Comprehensive meeting and WS on functionality identification, use cases and test site build up 10-12 September, Santorini (SP3)**
- ✓ **Several other activities & meetings upcoming (e.g. Data Handling WG, national test site development, SPs 2-4, FOT-NET, etc.)**

General Status:

- ✓ **Project is under contract, all SPs 1-5 are actively running**
- ✓ **Identification and definition of functions to be tested is ongoing**
- ✓ **Parallel and otherwise relevant activities: EUROFOT, FOTNET (TeleFOT is a partner), General framework development (e.g. ESoP, standards, etc), NDWG**

Interfacing between other FOTs?

EUROFOT ↔ TeleFOT

- **Functions are complementary**
- **Size and geographical coverage are similar**
- **The methods have similarities and some differences:**
 - **TeleFOT more “information technology” oriented**
 - **EuroFOT more “automotive industry” oriented**
- **Role of FOTNET in the interaction?**

Interfacing between other FOTs?

Potential collaboration areas?

- **Methods for data collection through data loggers?**
- **Data transfer from vehicles / data security?**
- **Matching techniques between driving parameters and road attributes?**
- **Conflict analysis?**
- **Statistical methods (testing / confirmation of hypotheses)?**
- **Methods for subjective data collection (interviews and surveys)?**
- **Links with worldwide community (USA & Asia)?**
- **Possible planning of a common test regarding the use of ADAS & nomadic devices?**

SOURCE: G. Alessandretti (visiting professor at VTT)

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TeleFOT in the WWW

<http://www.telefot.eu> (public, online, but under construction)

<http://telefot.openinno.fi> (for partners only)