Large Scale Collaborative Project

7th Framework Programme

INFSO-ICT 224067

Business cases, potential new functions and Technology Implementation Plan

Deliverable n.	D5.3.1	Business cases, potential new functions and Technology Implementation Plan	
Sub Project	SP n. 5	Dissemination, User Awareness and Exploitation	
Workpackage	WP n. 5.3	Facilitation of Exploitation	
Task n.	T n. 5.3.1	Exploitable Result Cases	
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Status	Draft		
Distribution	Public (PU)		
Issue date	M24 first release	Creation date	2010/03/16
Project start and duration	1st of June, 2008 – 48 months		

Project co-funded by the European Commission

DG-Information Society and Media

in the 7th Framework Programme

**European Commission
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SEVENTH FRAMEWORK PROGRAMME

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LIST OF ABBREVIATIONS

ABBREVIATION	DESCRIPTION
ERC	Exploitable Results Case
TIP	Technology Implementation Plan
CRM	Customer Relationship Management
SWOT (in SWOT analysis)	Strengths – Weaknesses – Opportunities – Threats SWOT analysis is a strategic planning method used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or in a business venture.
FOT	Field Operational Test
CBA	Cost-Benefit Analysis
SP	Sub Project
WP	Work Package
T (e.g. in T5.3.2)	Task

REVISION CHART AND HISTORY LOG

REV	DATE	AUTHOR	REASON
1.0	March, 16th 2010	E. Gaitanidou, E. Bekiaris (CERTH/HIT) R. Montanari, S. Fruttaldo, C. Ferrarini (UNIMORE)	First release
2.0	March, 29th 2010	E. Gaitanidou, E. Bekiaris (CERTH/HIT) R. Montanari, S. Fruttaldo, C. Ferrarini (UNIMORE)	Second release following the comments received during the Workshop on Exploitation (held on March 18th 2010)
	April/May 2010	R. Montanari, S. Fruttaldo, C. Ferrarini L. Gatti (UNIMORE)	Circulation of the ERCs template to all partners
2.1	May 2010	E. Gaitanidou, E. Bekiaris E. Chalkia (CERTH/HIT) R. Montanari, S. Fruttaldo, C. Ferrarini L. Gatti (UNIMORE) A.P. Morris A.J. May (LOUGHBOROUGH)	Update to Second release

2.1	May 2010		Provision of the draft deliverable for peer review
Report	July, 7th 2010	G. Maldini (METASYSTEM), A. Amditis (ICCS)	Peer Review results
QAM consensus report	July, 20th 2010	k. Paglè	Consolidation of peer review report
3.0	July, 29th 2010	R. Montanari, S. Fruttaldo (UNIMORE)	Circulation of the new version of the deliverable integrated on the base of peer reviewers' comments
3.1	August, 4th 2010	A.J. May (LOUGHBOROUGH) R. Montanari, S. Fruttaldo (UNIMORE)	Latest changes following authors' comments and English proof read

EXECUTIVE SUMMARY

D5.3.1: Business cases, and potential new functions has been renamed within D5.3.1 as follows: 'Business cases, and potential new functions and Technology Implementation Plan' - to include also the Technology Implementation Plan, planned in the DoW as the main outcome from T5.3.1 Exploitable Result Cases.

This Deliverable includes references to the main activities to be performed in **WP 5.3 Facilitation of Exploitation** and has strong links to other Work packages and Sub Projects activities. In particular D5.3.1 has input from:

- **WP 4.7 - Business Models and User Uptake Assessment**, in particular **T4.7.3 Operational business Models**. Results from this task will be published in D4.7.3, due M36;

- **WP 5.4 - Stakeholder Fora**: the First General Stakeholder Forum was held at M20. Results from this event have been published predominantly in D5.4.1, D5.4.2, and D1.9. The Second General Stakeholder Forum is planned at M32. Workshops will be organized by the end of 2010;

- **T4.9.1 - Special analysis from target stakeholders**: D4.9.1 - "A compilation of progress reports detailing consortium dialogues" - and D4.9.2 – "A catalogue of Fact-Sheets detailing project results and outcomes supplied to the stakeholders (on a regular basis)" - are both due by M48;

- **ERCs (Exploitable Result Cases)**, refers to **T5.3.1 (Exploitable Results Cases)**: contributions from all the project partners to define the ERCs are required and the deliverable is updated periodically in order to include ERCs. They are also published on the CRM.

- **CRM (Customer Relationship Management) tool** – which refers to **T5.3.2 (Assessment of the market potential of project results)** - is available to partners. Partners are required to use it to register and share the contacts they have with potential customers.

- **T5.3.3 (Business cases)** – this is to a large extent based on **WP 4.7 (**dealing with Business Models) and is closely related to **T5.3.4 (Cost-benefit analysis on market potential)** and **WP5.4 (Stakeholder Fora)**. A chapter (4) in this deliverable is dedicated to results from this T5.3.3. It will take into account relevant information from the Stakeholder Fora, which have been extensively published in D5.4.1, D5.4.2, and D1.9.

- **T5.3.4(Cost-benefit analysis on market potential)**: results from this task will be included in Chapter 2.2 in this deliverable. This task is linked to **T5.2.2 (Dissemination tools and results)** and to **T5.2.3 (Media Center creation and management)** – for what concerns the spreading of results – and uses results from **WP4.7 (Business Models and User Uptake Assessment)**.

As a consequence, this deliverable (D5.3.1)is structured as follows:

- **Chapter 1** is dedicated to potential TeleFOT results to be exploited; Sectioin 1.1 sums up the Exploitable Result Cases delivered by partners using the template in Annex 2 to this document. This Chapter will be updated on the basis of ERC tables filled in by partners;

- **Chapter 2** identifies the Market potential of TeleFOT Results. In this chapter the CRM (Customer Relationship Management) and the results from Cost-benefit analysis are also described;

- **Chapter 3** describes the TeleFOT related actors. It also includes a description of Target Groups, which also refers to D5.2.1 (Dissemination Plan and Brand Handbook);

- In **Chapter 4** the Business Cases and the Business strategy adopted in TeleFOT are described;

- In **Chapter 5** Business scenarios for the future are outlined, describing ways in which the positive impact that the TeleFOT project created can be taken forward in the future;

- **Annex 1** is dedicated to the TIP (Technology Implementation Plan);

- **Annex 2** contains the ERC (Exploitable Result Cases) template, to be filled in by partners when an exploited result case is identified;

- **Annex 3** contains all the ERCs provided by partners;

- **Annex 4** contains the Business Cases template. The first release of D5.3.1 is planned at M24. It will be revised following updates to the TIP and achievements in the related activities mentioned above. The final version, planned at M46, will include also results from Tasks, Deliverables and Activities not completed by the first release of D5.3.1.

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INTRODUCTION

TeleFOT is a Large Scale Collaborative Project under the Seventh Framework Programme, co-funded by the European Commission DG Information Society and Media within the strategic objective "ICT for Cooperative Systems".

Officially starting on June 1st 2008, TeleFOT aims to test the impacts of driver support functions on the driving task with large fleets of test drivers in real-life driving conditions.

In particular, TeleFOT assesses via Field operational Tests the impacts of functions provided by aftermarket and nomadic devices, including future interactive traffic services that will become part of driving environment systems within the next five years.

Field Operational Tests developed in TeleFOT aim to assess, comprehensively, the efficiency, quality, robustness and user friendliness of in-vehicle systems, such as ICT, for smarter, safer and cleaner driving.

Deliverable 5.3.1 refers to **WP 5.3 – Facilitation of Exploitation**. This WP covers a key element of every research project: **exploitation planning**, being indispensable for raising awareness also among the partner industries and other relevant parties on the work undertaken, promotion of results achieved, and ensuring their sustainability from a commercial point of view.

D5.3.1 follows the objectives and achievements set out in WP5.3. Moreover it describes the main results to be achieved in other WPs, Tasks, activities and Deliverables planned in TeleFOT.

Table 1 outlines how input from other WPs, Tasks, Activities, Deliverables planned in TeleFOT, as well as from WP5.3, are incorporated within the different chapters:

Table 1 – D5.3.1 structure and interaction with other WPs, Tasks, activities and Deliverables planned in TeleFOT

WP 5.3 OBJECTIVES	LINKED TO	STRESSED OUT IN THE FOLLOWING D5.3.1 CHAPTERS
To carry out activities to facilitate the actual exploitation process that will follow (ERCs and TIP)	▪ T5.3.1 "Exploitable Results Cases" ▪ T5.3.2 "Assessment of the market potential of project results" ▪ T5.3.3 "Business cases" ▪ T4.7.2 "Implications for up-take"	▪ Chapter 1 – TeleFOT results to be exploited ▪ Chapter 2 – Market potential of project results and in particular 2.1 (The TeleFOT CRM) ▪ Annex 1 - TIP ▪ Annex 2 – ERC templates ▪ Annex 3 – Exploitable Result cases
To assess the market potential deployment of project results (CRM)	▪ T5.3.2 "Assessment of the market potential of project results" and CRM (Customer Relationship Management) tool ▪ T5.3.4 "Cost-benefit analysis on market potential" ▪ T4.9.1 "Special analysis from target stakeholders" ▪ WP5.4 "Stakeholder Forum" ▪ D5.2.1 "Dissemination Plan and Brand handbook"- in particular Chapter 2 on Target Groups	▪ Chapter 2 – Market potential of project results ▪ Chapter 3 – TeleFOT related actors

WP 5.3 OBJECTIVES	LINKED TO	STRESSED OUT IN THE FOLLOWING D5.3.1 CHAPTERS
To develop and launch differentiated Business cases. Future business scenarios are also inserted in the deliverable.	▪ T5.3.1 "Exploitable result Cases" ▪ T5.3.3 "Business Cases" ▪ WP 4.7 "Business models and user uptake assessment"	▪ Chapter 4 – Business Cases ▪ Chapter 5 – Business scenarios for the future ▪ Annex 4 – Business Cases template
To provide a Cost – Benefit analysis of project results (results from T5.3.4) – also using results from WP 4.7.	▪ T5.3.4 "Cost-benefit analysis on market potential" ▪ T5.2.2 "Dissemination tools and results" and to T5.2.3 "Media Center creation and management" (for what concerns the spreading of results) ▪ WP 4.7 "Business models and user uptake assessment"	Chapter 2 , in particular 2.2 T5.3.4. – results from Cost-Benefit Analysis

In particular, in the section below, the activities, tasks and tools to be set up in WP5.3 and conveying into D5.3.1 have been summarized in order to highlight their relevance to the deliverable.

The special nature of TeleFOT, as it is based on the FOT methodology, compared to a conventional R&D project, and a very dynamic situation in the development of aftermarket and nomadic devices functions and services, make exploitation activities very challenging. Industries could gain benefit from having results available throughout the project, since part of their design and production processes could be adapted or improved. This issue has been also highlighted during the First General Stakeholder Forum organized by TeleFOT.

To achieve these aims, a specific structure of the **Technology Implementation Plan (TIP)** is planned, concerning project results for use in products, services and

innovations. Communicating its results to a range of industries, TeleFOT could become a form of reference project for many domains stakeholders, including OEM, suppliers, ICT providers, etc.

For this reason, it is important to adapt the message to the target audiences identified in the project, also on the basis of target groups described in D5.2.1, Dissemination Plan and Brand Handbook. For this reason a strong link to the Media Center is needed.

Since Exploitation is an important activity for the project, a Workshop on Exploitation was held on March 18th 2010 in Brussels.

It provided important feedback on WP 5.3 activities and on D5.3.1, in particular on:

- **Main requirements** to be covered in WP 5.3, namely: (1) Raising awareness on results achieved; (2) Ensuring their commercial sustainability.

- **Tools**, including TIP and ERCs; CRM; Business Models (WP 4.7) and Cost Benefit Analysis (T5.3.4).

- **Deliverable D5.3.1** - Business cases and potential new functions (which was renamed as D5.3.1. Business cases, potential new functions and Technology Implementation Plan in order to include the TIP).

Finally, the TeleFOT **Business Cases** are to be exported from the initial Exploitable Result Cases (ERC) and introduce the business strategy that must be developed in order to achieve the exploitable project results and ensure the delivery of the benefits to the TeleFOT's users, as set out by the project aims and objectives. The extracted business cases will then be incorporated within the TIP.

This deliverable is planned to be updated periodically, in order to include relevant progresses in exploitation activities: for example, different ERCs are supposed to be identified by partners during the project lifespan. The first version of D5.3.1 is planned for M24 and the final one for M46.

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1. TELEFOT RESULTS TO BE EXPLOITED

The aim of this chapter is to briefly present the exploitable results of the TeleFOT project which will be addressed to relevant stakeholders and constitute the starting point for any kind of business analysis. The rationale is summarized as follows:

Exploitable Result Cases (ERC) or 'pre-TIPs' represent the base upon which the TIPs are built.

The ERC development refers to Task 5.3.1 – Exploitable Result Cases.

ERCs are structured as standard use-cases including all the relevant information on exploitable results at a given moment.

As soon as a certain result is obtained and this is exploitable by one of the identified project audiences, an Exploitable Results Case is delivered to this audience.

The message is adapted to that audience, requiring a strong link with the Media Centre.

During the Workshop on Exploitation, held in Brussels on March, 18th 2010, all the SP leaders identified potential Exploitable Result Cases based on the activities carried out in their own Sub Projects.

The SP5 leader collected the list of ERCs (Exploitable Result Cases) and main partners responsible and asked all partners to contribute to it, by identifying the results they planned to exploit, as well as updating the general Exploitation Plan set out in the Description of Work.

The list of ERCs has been completed and presented during the PY2 General Assembly.

Partners then described the ERC by compiling the ERC template available in this document in Annex 1 (one template per ERC has been used) and sent them back to the SP5 leader. The ERCs that partners described are available in this document in section 1.1 (Description of Exploitable Result Cases).

A CRM (Customer Relationship Management) system was set up. It is accessible online by project partners, allowing them to identify strategies to (1) attract customers' attention, (2) to log each step of the relationship from the very informal start, and to (3)

improve the ongoing marketing strategies by learning from previous experiences (documented). The CRM is described in Chapter 2 , section 2.1.

Figure 1- ERCs, TIP and CRM - shows how ERCs contribute to the different versions of the TIP, and how the Media Center and the CRM can support the ERC delivery to the identified target audiences.

Figure 1- ERCs, TIP and CRM
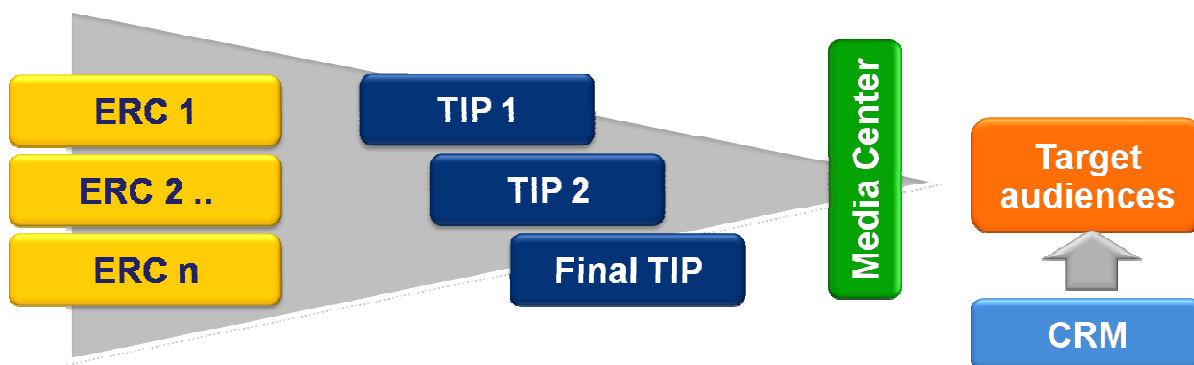
An annual report on ERCs is planned: this Chapter, will be updated annually on the basis of ERC tables completed by partners.

A Final TIP collating all the ERCs is planned to be delivered at the end of the project.

The TIP is included as Annex 1 to this deliverable.

Implications for Take-up of Services and Functions

When the FOTS are nearing completion, it will be necessary to interpret them in the context of user take-up and make comparisons to overall policy objectives as well as TeleFOT objectives. Results across the different sites will be analysed and where differences exist, the reasons for these will be identified and explained. The results of the TeleFOT test activities will also be compared to other similar activities in order to compare and contrast. The results will be considered for a transferability analysis, both across the EU regions and across different user segments.

It will be important to consider the implications of the results with respect to the up-take process and the different dimensions of these. User acceptance studies will be

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complemented by analysing the implications for safety, efficiency and environment as addressed in other parallel WPs. It will also be important to study and report on the implications of the up-take process on these assessment domains as addressed in other parallel WPs. As the links to business models and the wider deployment process are crucial elements in the up-take of new functions and services, this issue is specifically addressed in WP4.7.

From the results achieved, recommendations for the design of future services, functions and systems will be derived in order to achieve better up-take in the driving population.

1.1. Description of Exploitable Result Case (ERC)

The Exploitable Result Cases delivered by partners to date are described briefly in this section and more fully reported in Annex 1. Table 2 shows the list of ERCs collected:

Table 2 – List of ERCs

ERC Name	SP	Partner
Eco Driving System	SP3	Magneti Marelli
DB Structure	SP3	Emtele
Vehicular data logging for accurate risk assessment and incident characterisation	SP3	BroadBit
Software for processing driving performance indicators	SP4	VTT
Camera based system for monitoring driver's cockpit activity	SP3	VTT
Crash test procedures	SP4	ADAC
Benchmarking	SP4	ADAC

A short description of the ERCs is provided below:

- **Eco driving system** is designed to perform on-board automatic and progressive evaluation of the driving style of the driver, in relation to minimizing fuel consumption and emissions.

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- **DB Structure** aims to develop and evaluate the feasibility of the developed TeleFOT database structure. The result database is likely to be used as a template when developing database structures for commercial projects. The result will be distributed within the consortium to the group of partners that are interested. The database structure is to be tailored for each commercial project and hence cannot itself be commercialized.

- **Vehicular data logging for accurate risk assessment and incident characterisation** provides data for accident risk assessment and is capable of recording driving incidents. Insurance companies and vehicle leasing companies are the target exploitation group.

- **Software for processing driving performance indicators** is periodically run Java software that can extract several driving performance indicators from a database consisting of GPS and CAN (OBD-II and FMS interfaces) data. Most of the indicators are basic (such as total distance driven) and commonly known, but also indicators that require more processing and additional assumptions are being added to the software.

- **Camera based system for monitoring driver's cockpit activity** is a system comprising open source eye and face tracking software (TrackEye) and a low cost web camera, used for detecting a driver's eye and face location, orientation and movement. From this information, awareness of traffic surroundings is estimated by the developed software. The cockpit activity assessment module calculates driver workload which is divided into two categories: visual and cognitive distraction. Visual distraction refers to how much a driver is paying attention to the road ahead whereas cognitive distraction describes whether the driver is concentrating on the driving task or not.

- **Benchmarking** is a result from a task comprising a comparative test of different driver assistance systems (handset based navigation, PDA based navigation, mobile phone based navigation, aftermarket in-dash navigation, in-vehicle OEM navigation). The selection of the systems will be based on devices that are used in TeleFOT (SP 3).

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- **Crash tests procedures** is an ERC resulting from a set of tests carried out with 11 different fitting systems, as crash safety is an important issue for vehicle use of nomadic devices, and the stability of system mountings during a vehicle crash is very important. The results will be published and can be a basis for the selection of safe fitting systems for nomadic used in the FOTs.

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2. MARKET POTENTIAL OF PROJECT RESULTS

Outcome from **T5.3.2 "Assessment of the market potential of project results"** represents the main input to this chapter.

In T5.3.2 an analysis on the potential use of more marketable project results is carried out. This comprises not only test results, but also improvements in (1) the nomadic devices analysed, (2) the data storage systems, and (3) the sensors aimed at detecting certain drivers' behaviour which based on a specific monitoring capability. This is derived directly from the ERCs and the TIP results (as defined in task 5.3.1) and it feeds into Tasks 5.3.3 and 5.3.4. In contrast to the TIP, this task is more oriented to the market needs and it will encompass a vision extending beyond the end of the project.

Compared to the SP4 - WP4.7 activities, the focus here is on individual industrial partners and not the consortium and TeleFOT concept as a whole. In other words, the research results will be used by the industrial partners' internal development teams for enhancement of the existing products and services or creation of new ones. This will generate a competitive advantage for these partners and will create a substantial benefit for the end-users. The domain partners and the smaller SMEs will exploit the project results by incorporating the components in existing and new domain applications and thus improve performance and marketability of their products.

Furthermore, for accurately and continuously providing these analyses, a **TeleFOT Customer Relationship Manager (CRM)** has been set up at the project start. This platform is planned to be remotely accessible by all project members, allowing them to identify strategies to attract the customers attention, to log each step of the relationship, and to improve the ongoing marketing strategy by learning from previous documented experience.

The actions to be undertaken within this task may be in fact summarized as follows:

- **Transfer of research results** towards actual developments, products, and services (linking this task with the T5.3.1);

- Identification of **target groups** in different market sectors and their prioritization according to academic and commercial attractiveness (mainly via the CRM);

- **Acquiring feedback on business/economic benefits and impact** of the research projects especially through surveys and interviews (still via the support of CRM).

The Exploitation Workshop important considered which TeleFOT results could be exploited, and what impacts they could have beyond technological aspects.

The potential of TeleFOT results should be seen not just in terms of products, but e.g. in terms of possible applications. With reference to the project outcomes, the benefits from e.g. a safety or ecological point of view should be greater than just technological achievements.

With such a perspective, as explained in paragraph 2.2, a Cost-Benefit Analysis of individual after-market systems looking at end users and monitoring the market potential and user benefits determining the 'willingness to have' and "willingness to pay", should not take into account just economical factors. In addition, other values to the driver also need to be taken into account. Moreover, questionnaires to be distributed during the tests include specific questions on the users' willingness to pay for some functions/services.

A close relationship should be maintained with Stakeholders, investigating their needs, interests and expectations. Stakeholder Fora are relevant to this scope, the aim being to shape results and their "format" to specific stakeholders' needs.

The TeleFOT Media Center will have a specific role in supporting the communication of results, and adapting it to specific audiences. In this sense, the CRM is a relevant tool not only to manage contacts, but to understand Stakeholders and the best strategies to reach them, as well as to identify the results that are desired and/or expected. The CRM provides the ability to track contacts with Stakeholders and to refine them. Ultimately, the aim of the project is to make TeleFOT results effectively usable by Stakeholders.

Activities in T4.7.3 Operational Business Models will also support the exploitation of TeleFOT results, since they could be exploited to companies adopting those business models identified in the project.

2.1. The TeleFOT CRM

The TeleFOT CRM (Customer Relationship Management) tool was set up at the project start and later revised in order to simplify and improve it.

This platform is remotely accessible by all task members /partners (online access) at the following URL: http://www.telefot.eu/crm/home.

Access is restricted: partners need to log in by using a dedicated user name and password.

The CRM allows partners to:

- **identify strategies** to catch the customers attention

- **log each step of the relationship,** from inception

- **improve the ongoing marketing strategies**

The **TeleFOT CRM Home page**:

- Displays the first page of the collected information

- Gives access to most of the CRM functionalities (as showed in Figure 2 - CRM homepage):

    1. Add a new organization / contact

    2. Perform a simple search among the database

    3. Access to the advanced search page

    4. Display all the details of a selected organization

    5. Log out from the system

Figure 2 - CRM homepage
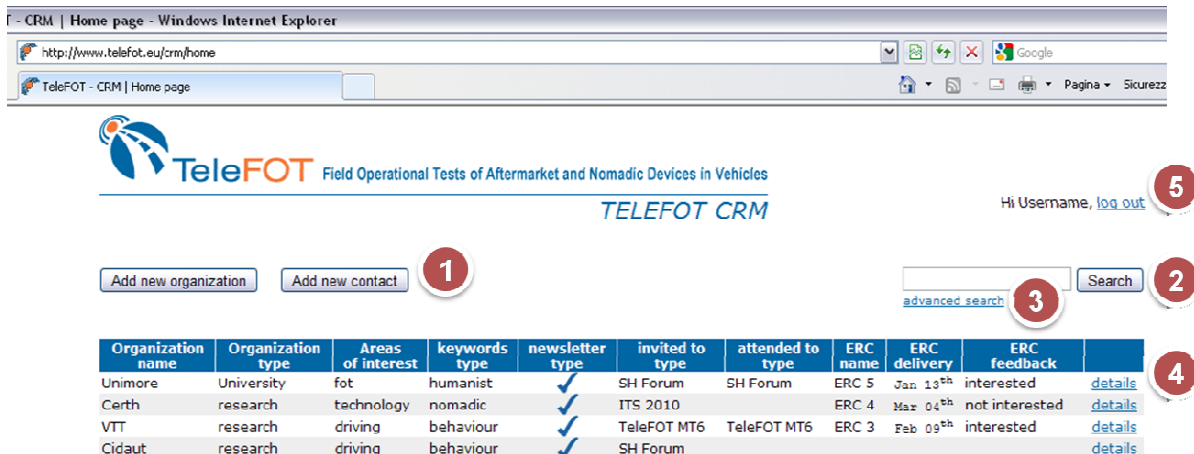
The TeleFOT logo is a link to the project website (www.telefot.eu).

The TeleFOT CRM logo is a link to the CRM homepage.

As shown in Figure 3 – **CRM –Details page**:

1. From the **Details page**, partners can display the details of a single organization, organized into 3 areas:

   • Contact details

   • Strategy

   • ERC

2. From this page it is possible to access to the editing page.

3. In addition, the Details page allows the deletion of the displayed organization (after a confirmation message).

The **Advanced_search** page allows a search by various parameters.

Apart from added data, it is possible to search by date and by TeleFOT partner who added that data.

Figure 3 – CRM –Details page
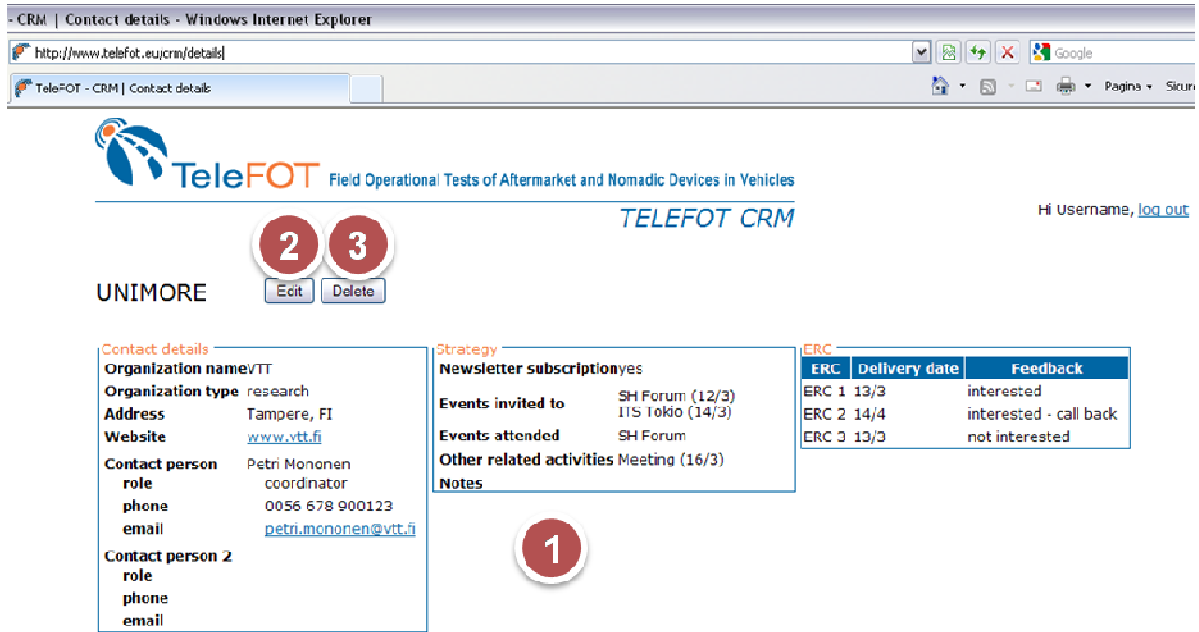
Contacts can be edited or deleted from the **Edit page** (Figure 4 - CRM - Edit page)

Figure 4 - CRM - Edit page
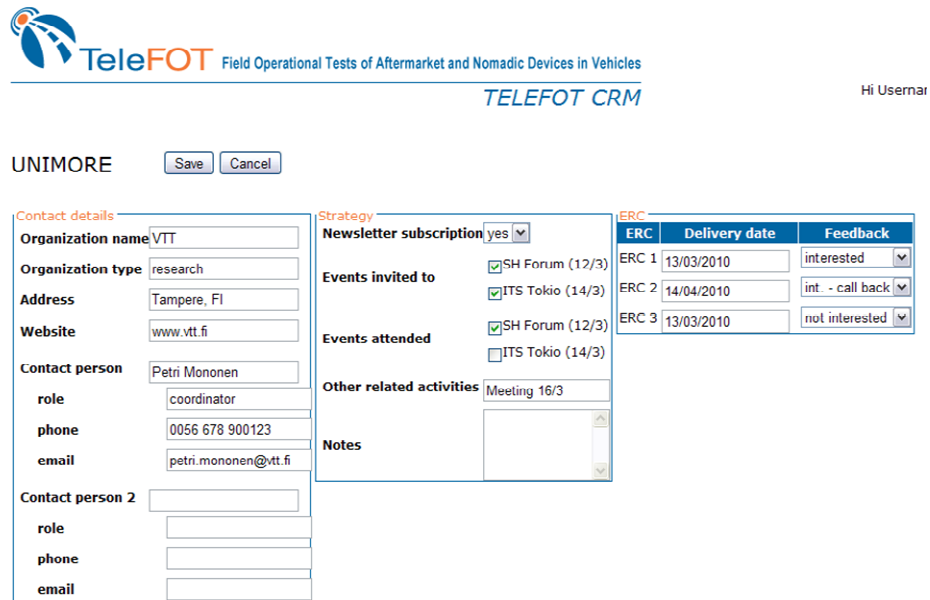
The CRM has two important functions, being a tool for:

- **identifying target groups** in different market sectors and their prioritization according to academic and commercial attractiveness;

- **acquiring feedback on business/economic benefits and impact** of the research projects, e.g. by tracking how the different contacts have been involved in the project.

2.2. Cost-benefit Analysis – Expected Inputs

Unlike the transport level Cost-Benefit Analyses (CBA) focusing on societal level costs, the work in this task focuses on CBA from a business point of view and will build upon the results of the bench-marking activities carried out within SP4 WP 4.7. The analysis will investigate end users and will monitor the market potential and user benefits determining the 'willingness to have' and 'willingness to pay'. These analyses will be developed in close contact with all project partners and in particular in conjunction with the industrial partners.

In general costs benefit analyses are a practical way of assessing systems and enable individual assessment to take a long-term view of the system. Overall system *efficiency* can also be determined. A cost-benefit analysis of individual after-market systems will be undertaken, particularly in situations where prototype systems that are being evaluated in TeleFOT are thought to offer a real and tangible benefit to drivers.

When appropriate, systems will be evaluated in terms of their desirability and as to whether the costs of system uptake outweigh the overall benefit to an end user. Theoretically this is plausible but in practice, it can be difficult to undertake. One of the best ways to handle this would be to evaluate the systems in terms of the "willingness of consumers to pay for a particular intervention (benefit)" against the "willingness to pay to not have the incident or situation that the system is designed to help you to avoid (costs)". This process will involve calculation of the monetary value of initial and on-going expenses against the likely expected return. However in TeleFOT, it should be remembered that not just the monetary values are being considered but that other values to the driver also need to be taken into account - therefore the cost-benefit needs to be considered in terms of a trade-off of multiple forms of 'costs' and 'benefits'.

By way of example, a system may be found through the assessments to increase overall driving efficiency but at the same time is found to be very distracting to the driver. An analysis of the benefits derived by increasing efficiency needs to be conducted in the context of costs that could potentially be incurred in the event of an accident.

Therefore a number of stages need to be considered:

- **Definition of the project** – in this context, what kind of nomadic device is being considered, what are the assumptions about how implementation and/or take-up will be managed?

- **Identification of project impacts** – categorised according to the 5 domains mentioned in Table 3. These could be *actual* impacts (i.e. from observations/experimental work) or assumed (from a literature review of existing studies), or could be a combination of both.

- **Isolation of economically relevant impacts** – fairly self-explanatory. There are a few impacts to which we couldn't attach an economic relevance, but this is for the project to determine.

- **Physical quantification of relevant impacts** – including attaching probabilities to uncertain events (how widespread the effects would be and how likely).

- **Monetary evaluation of effects** – including predicting prices for effects in the future and correcting market prices where necessary (e.g. things for which there is no market or the market is a monopoly, so prices don't reflect costs). There are a number of ways of dealing with situations where there is no price (shadow process, implied valuations etc).

- **Discounting cost & benefit flows** – in other words, converting benefits in the future to present value terms. The rate at which discount is applied is important here – it is not clear how to derive a discount rate for a Nomadic Device.

- **Calculation of ratio of costs/benefits** – the overall aim.

- **Sensitivity analysis** - if the model parameters are changed, how much does the assessment of the ratio change?

Table 3 – CBA: systems and impact quantification

Domain	System type	Impacts	Impact quantification
Safety	Lane-keeping Speed alert	Improves safety Lowers average speeds	Accident reduction (or casualty?) Fewer accidents, fewer casualties, less severe injuries
Efficiency	Traffic information	Allows drivers to make informed choices	Reduces congestion on busy parts of the network
Mobility	Traffic and Travel information	Directs users with additional needs to appropriate facilities	Increases mobility
Environment	Green driving indicators	Encourages more efficient driving	Reduces fuel consumption & wear & tear
User-uptake			To be calculated

3. TELEFOT RELATED ACTORS

3.1. Identified stakeholders and their relation with TeleFOT results

In D5.2.1 Dissemination Plan and Brand Handbook, target groups have been identified.

To date, the stakeholders that have been identified at the test-sites are as follows:

Northern test community

Finland

Stakeholder	FOT	Role
Logica, Destia, Emtele	All	TeleFOT partners
EC-TOOLS	LFOT2	Service provider
City of Oulu	LFOT2	Impact of service on traffic
City of Tampere	LFOT2	Impact of service on traffic
Liidea	LFOT2	Consulting, use of the services results
Trafi	LFOT2	Safety impact of the services
Emergency call centre	DFOT2	Receipt of eCall messages
Ministry of Traffic and Communications	All	Impacts of the services
Centre for Economic Development	LFOT2	Impact of the services
Oulu region	LFOT2	Impact of the services

Sweden

Stakeholder	FOT	Role
Stockholm city	LFOT1	Political goals for environment and safety
Stockholm city road admin	LFOT1	Responding to the goals above
Stockholm city	LFOT1	Fleet managers
INNOVA	LFOT1	Supplier of devices and information
SRA	LFOT3	Political safety goals
Tirona	LFOT3	Provision of access to national road database
Apella	LFOT3	Service provider
The drivers	LFOT3, LFOT4	End-users
SRA	LFOT4	End-users
Garmin	LFOT5	Device provider
RaceLogic	LFOT5	Data-logger provider

Central test community

Germany

Stakeholder	FOT	Role
BASt	All DFOTs	Possible interest
Germany OEMs	All DFOTs	Possible interest

UK

Stakeholder	FOT	Role
Department for Transport	All	Users of data analysis for policy purposes
Race Technology	DFOT 1 and DFOT 2	Supplier of data loggers
Loughborough University	All	Analysis of data and publication of results

Southern test community

Greece

Stakeholder	FOT	Role
ELPA (Automobile and touring club of Greece)	All LFOTs	End-user
Telenavis	All	Equipment and s/w supplier
ITS Hellas	All	Dissemination of results
Hellenic Ministry of Infrastructure, Transport and Networks	All	Public authority

Italy

Stakeholder	FOT	Role
Municipality of Reggio Emilia	All	End user of results
ACT (Public transport company)	All	Support in test subjects recruitment, endorser in initiatives e.g. Local SH Fora, spreading project results on a local scale End user of results
Local OEMS	All	End user of results
Insurance companies	All	End user of results

Spain1 Madrid

Stakeholder	FOT	Role
Madrid City council – Safety and Mobility area	LFOT2 (Spain-Madrid test site)	Public Authority
CRAMBO, S.A	LFOT2 (Spain-Madrid test site)	Device manufacturer and supplier (Vexia)

Spain2 Valladolid

Stakeholder	FOT	Role
General Directorate of Transport (Ministry of the Interior)	LFOT 1 and DFOT 2	Transport policy
SEAT	LFOT1 and DFOT1	End user, OEM

When looking at who the stakeholders are, it is useful to distinguish between the "**target groups**", the **primary stakeholders**, and the **broader group of stakeholders**: *target*

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groups are those people who can be directly affected by the problems in question and who might be the primary beneficiaries of the project. With such a perspective, it is necessary to identify the appropriate groups of people that will be the most interested in TeleFOT, in order to target messages and therefore increase the effectiveness of the dissemination and exploitation activities. The identification and appropriate involvement of the target groups is a critical factor, especially in promoting the ultimate sustainability of the benefits.

3.2. Target groups

In Table 4 Target groups profile and expectations are reported.

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Table 4 - Target groups profile and expectations

TARGET GROUPS PROFESSIONAL PROFILE	TARGET EXPECTATIONS	INTEREST (Low/High)	POWER (Low/High)
Human Factors Experts *who collect, analyze and deploy scientific data to make technologies compatible with human abilities*	*Does TeleFOT contribute to the development of innovative solutions to human- nomadic devices interaction during the driving task?*	*High*	*High*
Policy Makers *who manage decision making processes on both political and administrative level in local, national and international organizations*	*Can TeleFOT help better decision making concerning driving behaviour and safety e.g. by supporting public policies and normative processes in the safety domain?*	*High*	*High*
ICT Industry engineers and/or technicians involved in the development of nomadic products *Who design/work on nomadic and aftermarket devices or parts of them*	*Can TeleFOT be a guideline for design and re-engineering of aftermarket and nomadic devices?*	*High*	*High*

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TARGET GROUPS PROFESSIONAL PROFILE	TARGET EXPECTATIONS	INTEREST (Low/High)	POWER (Low/High)
Automotive Industry engineers and/or technicians involved in the development of vehicles *who design/work on a vehicle or parts of it*	*Can TeleFOT be a guideline for design and re-engineering of vehicles?* (Es. a car manufacturer wants a deep understanding of product use and driver behavior and acceptance)	*High*	*Low*
Engineers and/or technicians involved in the development of an infrastructure *who devise a system in the infrastructure*	*Can TeleFOT be a guideline for design and re-engineering of those infrastructures supporting devices on board?*	*High*	*High*
Traffic safety experts *who draw up traffic control plans, monitor potentially hazardous conditions and do research on accidents involving drivers and vulnerable road users*	*Can TeleFOT help in better and more efficient road traffic planning and road Safety?*	*High*	*High*
Transport Economists *who provide guidelines for new market for technologies and channels for diversification*	*Does TeleFOT show possible benefits for all the actors involved in the transportation system, due to the adoption of nomadic devices?*	*High*	*Low*

TARGET GROUPS PROFESSIONAL PROFILE	TARGET EXPECTATIONS	INTEREST (Low/High)	POWER (Low/High)
Nomadic Devices Companies' Sales Executives	*Does TeleFOT open new Markets for nomadic and aftermarket devices?*	*High*	*Low*
General public *people living in test sites areas; sample of test sites' users; generic public; end users*	*Does TeleFOT promote safety benefits and drawbacks of nomadic devices use?*	*High*	*Low*
Promoters of local FOTs (es. Transport General Manager)	*Can TeleFOT results be applied to local environments,, to improve road safety?*	*High*	*High*
Another Project (FOT) (es. EuroFOT)	*Can we share / compare studies and procedures developed in TeleFOT with those carried out in other projects? How do they relate to each other?*	*High*	*High*
Another Project (not FOT) (es. PReVENT)	*Can we share results developed in TeleFOT with those carried out in other projects?*	*Low*	*Low*

On the basis of impact of TeleFOT and priorities', TeleFOT target groups can be mapped out on a Power/Interest Grid (Moorhouse Consulting 2007) such as the following **Table 5 - Power/Interest Grid**:

Table 5 - Power/Interest Grid

Target groups' position on the grid shows the actions to take with them:

- **High power, interested people**: these are the people who TeleFOT must fully engage with, and make the greatest efforts to satisfy.

- **High power, less interested people**: put enough work in with these people to keep them satisfied, but not so much that they become bored with messages.
- **Low power, interested people**: these people are to be kept adequately informed, and dialogue is needed to ensure that no major issues are arising. These people can often be very helpful with the detail of the project.
- **Low power, less interested people**: again, these people have to be monitored, but not bored or overloaded with excessive communication.

This Table was created to make clear whom Dissemination is directed to, and needs to be incorporated within an effective communication strategy. However, it can also be a reference point to plan a strategy to identify audiences for exploiting the ERCs, and to determine the priority that should be given to different audiences.

The **CRM** has moreover two important functions in supporting the management of the TeleFOT target groups. In particular, as anticipated below, it is relevant for:

- **identifying target groups** in different market sectors and **prioritizing them** according to academic and commercial attractiveness;

- **acquiring feedback on business/economic benefits and impact** of the research project, e.g. by tracking how the different contacts have been involved in the project.

3.2.1.1   Consumers

The success in the market of functions to be tested in the TeleFOT test sites from the consumer point of view will be largely dependent on how the input/output of the function are designed, which in turn will allow an assessment of likely user acceptance and uptake. The HMI issues in terms of the user engagement with the device/function are also important. These issues can be addressed in some of the Detailed FOTs, especially when and if HMI issues are identified. However, the analyses made in the impact area "user up-take" can be complemented by usability testing (designed as a usability benchmarking exercise). This will also be carried out within TeleFOT.

Both theoretical approaches (e.g. Hierarchical Task Analysis (HTA) and Cognitive Walkthrough (CW)) and practical laboratory performance testing (applying usability testing methodology) are needed for making a comparison between different system designs and the user access to a specific function. It is important to emphasise that the work must be seen as a neutral setting (desk top studies, usability laboratories, etc.) as in any TeleFOT testing activity, the brand of the system should not be a major influencing factor. The topic to be addressed is the functionality of the system and how (the interaction logic, the interface principles used, etc) this is accomplished by the system interacting with a potential user.

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4. BUSINESS CASES

This Chapter is mainly based on activities carried out in T5.3.3 Business Cases.

The aim of a Business Case is to study and analyse the elements and stakeholders interacting in a market environment where the project results could be applied.

Within the Business Cases description, all main actors of the market sector will be defined and categorised, as well as information describing how they interact with each other, and including information on the benefits that the actors will obtain from the project results.

The TeleFOT Business Cases are exported from the initial Exploitable Result Cases (ERC). They introduce the business strategy that must be developed in order to achieve the exploitable project results and ensure the delivery of the benefits to the TeleFOT's users, as set out by the project aims and objectives. The extracted business cases will be later on incorporated in the TIP.

4.1. Business strategy of TeleFOT

This section defines an organizational framework for TeleFOT so that the key roles and interactions between the participating partners can be defined in terms of achieving the key exploitable results. This will form the basis for developing business cases for the project.

The business strategy presents which stakeholders are expected to participate in the exploitation of the projects outcomes and promulgate them into the market. The business strategy also defines the connection between the organizational structure and the stakeholders and the data flow between them.

The overall TeleFOT business strategy consists of three levels as defined below.

- **Preliminary stage**: At the centre of the organizational structure are the TeleFOT's exploitable outcomes, presented in chapter 1 of the current Deliverable.

- **Level 1**: The first level of the TeleFOT hierarchy consists of those stakeholders who are the providers of existing devices and technology

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available to TeleFOT. These may be individual ICT developers, OEM's, SME's, industry, service providers, automotive companies and suppliers.

- **Level 2**: The second level consists of the Institutes, Consulting Companies and the Research Bodies and Authorities that can use the TeleFOT outcomes in order to develop new and updated methodologies, or implement the TeleFOT's methodology in different domains, or even use it for educational purposes.

- **Level 3**: The higher level (Level 3) of the TeleFOT organisational structure contains the Public authorities, the Government, Municipality, EC and its Bodies and Standardization Bodies that can implement the standardization of the TeleFOT outcomes.

Table 6 - Target groups profile and expectations (below) summarizes the three-level organisational structure described above, and **Figure 5 - The TeleFOT levels and links between them** - shows a diagrammatic presentation. The arrows in the diagram represent the relationships that would need to be established between actors assuming the various roles represented by the boxes of different shapes. As already noted in Chapter 3 of the current Deliverable, each actor may have agreements with several other actors performing the same or alternative roles.

Table 6 - Target groups profile and expectations

Levels in the TeleFOT hierarchy	Main roles of actors at a given level
Level 1	OEM's
Level 2	Research Bodies
Level 3	Public Authorities

Figure 5 - The TeleFOT levels and links between them

1st Level: ICT developers, OEM's, SME's, industry, service providers, automotive companies, suppliers.

2nd Level: Institutes and authorities.

3rd Level: standardization bodies and government.
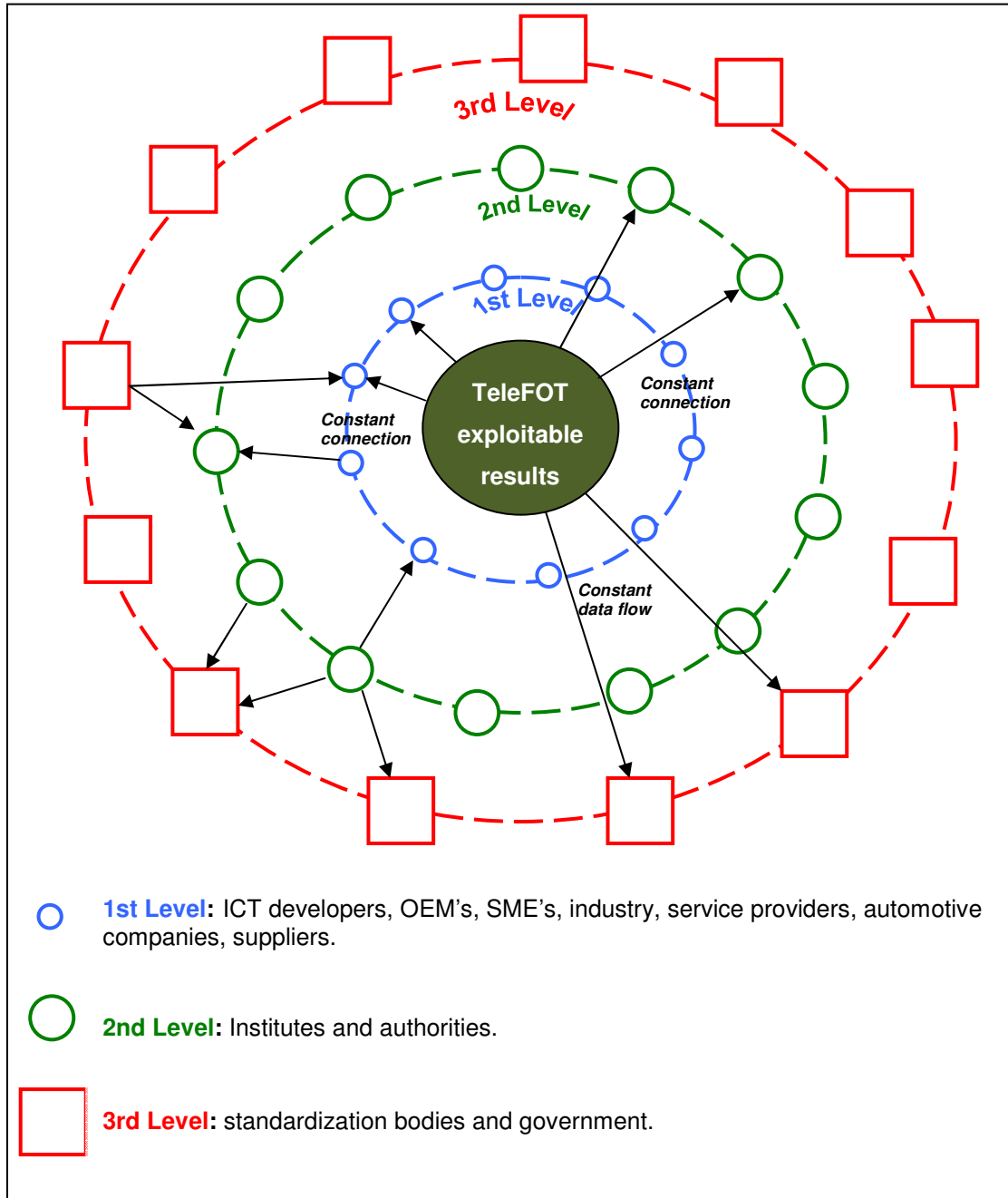
4.1.1. Internal Capability of TeleFOT Consortium

Each partner has its own role in the exploitation of the TeleFOT and consequently, in the business framework of the project. This chapter summarizes the exploitation role of each partner and the capabilities in the business cases according to its expertise.

In the following pages, a short exploitation plan by partner is presented. It is also shown in Annex 1, where is reported as a reference for the Technology Implementation Plan.

Partner 01: Technical Research Centre of Finland, VTT →Level 2

As an applied research institute VTT belongs to the second level of the aforementioned business framework and can use the knowhow developed in the project to apply Location Based Services more to the Automotive sector and especially cooperative driving. The current very strong trend is to bring different kinds of services to mobile users. Furthermore, VTT is willing to exploit the results on the system level in **other applications** areas of ICT that M2M provides today. In particular, telemedicine, business and logistics are good examples of areas where the TeleFOT project's systems level experiences can be applied to. Eventually, the vast amount of data collected in TeleFOT will be used in further **education** of young researchers in the company.

Partner 02: ADAC → Level 3

ADAC's main area is consumer assistance and information provision related to cars and traffic. Concerning aftermarket and nomadic devices, the crash /sled tests and usability tests as well as benchmarking activities provide lots of material to be exploited. Furthermore, functions provided by aftermarket devices help ADAS to orientate towards cooperative driving and associated testing in the future.

Partner 03: BLOM, SISTEMAS GEOESPACIALES, S.L.U. → Level 1

BLOM provide nomadic devices and can use TeleFOT results to further develop its devices with new functionalities, or new physical design of the technical features according to the main needs and priorities of the users identified by the large scale tests.

Partner 04: BroadBit → Level 1

BroadBit has been developing personalized vehicle insurance systems and is aiming to bring it to market. The TeleFOT project is very valuable for integrating and proving this technology, as well as integrating it with further traffic safety applications.

Partner 05: Centro Ricerche FIAT (CRF) → Level 1, 2

FIAT as an OEM, will exploit the interoperability of the telematic platforms available in different vehicles to guarantee the access to different services, and to enable a sustainable deployment of cooperative systems for safety and mobility. FIAT Automobiles, as well as other OEMs, has recently introduced on the market a telematic platform that has a potential openness to mobility services and to cooperative systems for safety and mobility. All current telematic platforms have or will have capabilities for communication, localisation and processing.

Partner 06: CERTH/HIT → Level 2

The Centre for Research and Technology Hellas (CERTH/HIT), being a Public Organisation, acts as an official stakeholder providing consultancy services to the Greek Government on issues which are closely related to its research activities (i.e. traffic safety issues, etc.). They will take over the promotion of the TeleFOT project outcomes in the Greek community, both public and private stakeholders, and the provision of all technical consultancy services required for future short-term application.

Partner 07: Chalmers → Level 2

Chalmers has long experience of using and developing evaluation methods and tools, e.g., usability studies in order to assess the interaction between user and vehicle/information system; analyses of the prerequisites for user adoption of new technology; as well as surveys to assess the overall benefits and adoption of a new ICT-based information service. TeleFOT provides several possibilities to further develop and apply these skills to other national and international projects, as well as providing a core methodology that can be implemented in different domains.

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Partner 08: CIDAUT → Level 2

The main objective will be to anhance the expertise and knowhow through this kind of scientific study. This will continue and enhance its research activity with the final aim of increasing competitiveness and the industrial development of companies operating in the automotive sector.

Partner 09: Destia → Level 1

Destia, as a publicly owned Enterprise, will use the project results in order to optimise its products and services and make them more competitive within the market.

Partner 11: Emtele → Level 1

As a M2M Service Provider, Emtele will promote the commercial use of the developed technologies and results to prospect customers, with the aim of getting them to understand what added value business benefits they can acheive.

Partner 12: Electronic Trafic S.A., ETR → Level 1

As a major industrial player in the ITS market, ETR plans to play a leading role in bringing to the market some of TeleFOT results. In particular, ETR will use the methodological work in TeleFOT to support the deployment of new safety related services among its customer base. They will also use the evaluation results of TeleFOT to back the deployment of its current portfolio of ITS products and solutions.

Partner 13: ICCS → Level 2

As an academic research & educational institute ICCS will make use of the TeleFOT results to extend its expertise in vehicle and traffic telematic systems research and teaching.

Partner 14: IKA → Level 2

IKA will use the results of the TeleFOT project concerning the developed methods and tools for evaluation for working on standardisation of methods and tools for the assessment of safety related systems, teaching and education of students at the Aachen University, and proving evaluation and testing services to the automotive industry and other stakeholders based on the achieved results.

Partner 15: Logica Suomi Oy → Level 1

Logica aims to further focus on services provided via mobile devices, and the TeleFOT project provides an excellent testing ground for this. The project's results will be used in the company both in the redesign of nomadic devices as well as developing new services for travellers.

Partner 16: Loughborough ESRI → Level 2

ESRI intend to fully exploit the results of the project and the experience and contacts gained thanks to the Project. It is anticipated that follow-on research proposals will be developed involving use of the formation system, becoming thus a device that collects data for verification and validation of infotelematic contents in terms of functionality and security.

Partner 17: Magneti Marelli → Level 1

Magneti Marelli Sistemi Elettronici S.p.A. as an automotive electronic equipment supplier, will exploit the results by upgrading, as far as possible, its products taking into account the feedback from users' tests - introducing new functions/characteristics on its new equipment keeping into account new requests or needs which have been expressed during the tests.

Partner 18: Metasystem → Level 1

Metasystem will exploit TeleFOT results by improving and extending its business model's scope and additionally providing another role to its unit.

Partner 19: MIRA LTD → Level 2

MIRA will contribute to SP2, SP3, SP4 (leader of WP 4.10 – Technical Evaluations) and SP5 and has a significant role in deploying the experience gained in national FOT trials. The experience accumulated from these activities will further strengthen their expertise in this area this knowledge will used in other national and international comparative projects. Especially automated methods to use, transfer, retrieve and analyse data will be fully used in our future activities.

Partner 20: Navteq → Level 1

NAVTEQ's Advanced Driver Assistance Systems Research Platform (ADASRP) possesses all the functionalities needed to match TeleFOT test data and road coordinates. The ADASRP is a Windows-based framework application and software development kit (SDK) originally intended for prototyping map enabled ADAS solutions. It provides access to the Map and calculates the Electronic Horizon up to a given distance in front of the vehicle. The Electronic Horizon basically corresponds to the road network around the vehicle including road attributes and therefore provides an image of the driver's perception horizon. TeleFOT accumulating experience in precise positioning further strengthens Navteq's expertise in this area, and the results and new experiences gained in this projects are directly used for further developing of our position technologies and maintain the cutting-edge technology position we possess in this area..

Partner 22: Rücker Lypsa → Level 1

Rücker Lypsa will use experiences gained from TeleFOT in the integration work in automotive systems such as nomadic devices connection to vehicle systems. The main objective for Rücker Lypsa in this project is to increase the capability and knowhow through the results obtained in these studies. These can contribute to a vision of where the future is heading, and increase its industrial development that will be used for automotive customers.

Partner 23: Swedish Road Administration, SNRA → Level 3

The Swedish Road Administration (SNRA) will assume responsibility for ensuring that the knowledge and experience gained from the activities carried out through Test Site Sweden will be further used in improving the transport safety towards "0 vision" target.

Partner 25: UNIMORE → Level 2

UNIMORE will carry out an exploitation plan for TeleFOT project results inside its structures. The project achievements will be turned out into a resources multiplier, as the results, in terms of infrastructures and knowhow, are going to be durable and therefore they do not have to be recreated every time there is the need of a test site, with monetary and time resources expenditure.

Partner 21: Universite de Technologie de Belfort-Montbeliard → Level 2

TeleFOT gives UTBM the opportunity to evaluate the adequacy of services offered by mobile communication to users and hence enlarge its knowledge to promote applied research with mobile communication technologies in the field of transportation systems. Also, due to close collaboration with local partners, TeleFOT will allow UTBM to bring the expertise of its Systems and Transportation (SeT) Laboratory in both fundamental and applied research on transportation systems by providing consultancy and advice services to institutions, transport industry and telecom operators.

After this short presentation of the partner's exploitation abilities, we will categorise them according to the levels of the TeleFOT's Business Strategy in order to identify the role each one has in the business scenarios. The table below illustrates this categorisation. Some partners be presented in more than levels due to their multiple nature.

Table 7: Partners categorization according to the Business Strategy levels

Level	Main roles of actors at a given level	Partner
1	OEM's	BLOM, BroadBit, CRF, Destia, Emtele, ETR, Logica Suomi Oy, MetaSystem, Navteq, Magneti Marelli, Rücker Lypsa.
2	Research Bodies	VTT, CRF, CERTH/HIT, Chalmers, CIDAUT, ICCS, UNIMORE, IKA, Loughborough ESRI, MIRA LTD, UTMB
3	Public Authorities	SNRA, ADAC

Figure 6: TeleFOT's partners place in the Business strategy presents the place of each partner in the TeleFOT Business strategy.

Figure 6: TeleFOT's partners place in the Business strategy
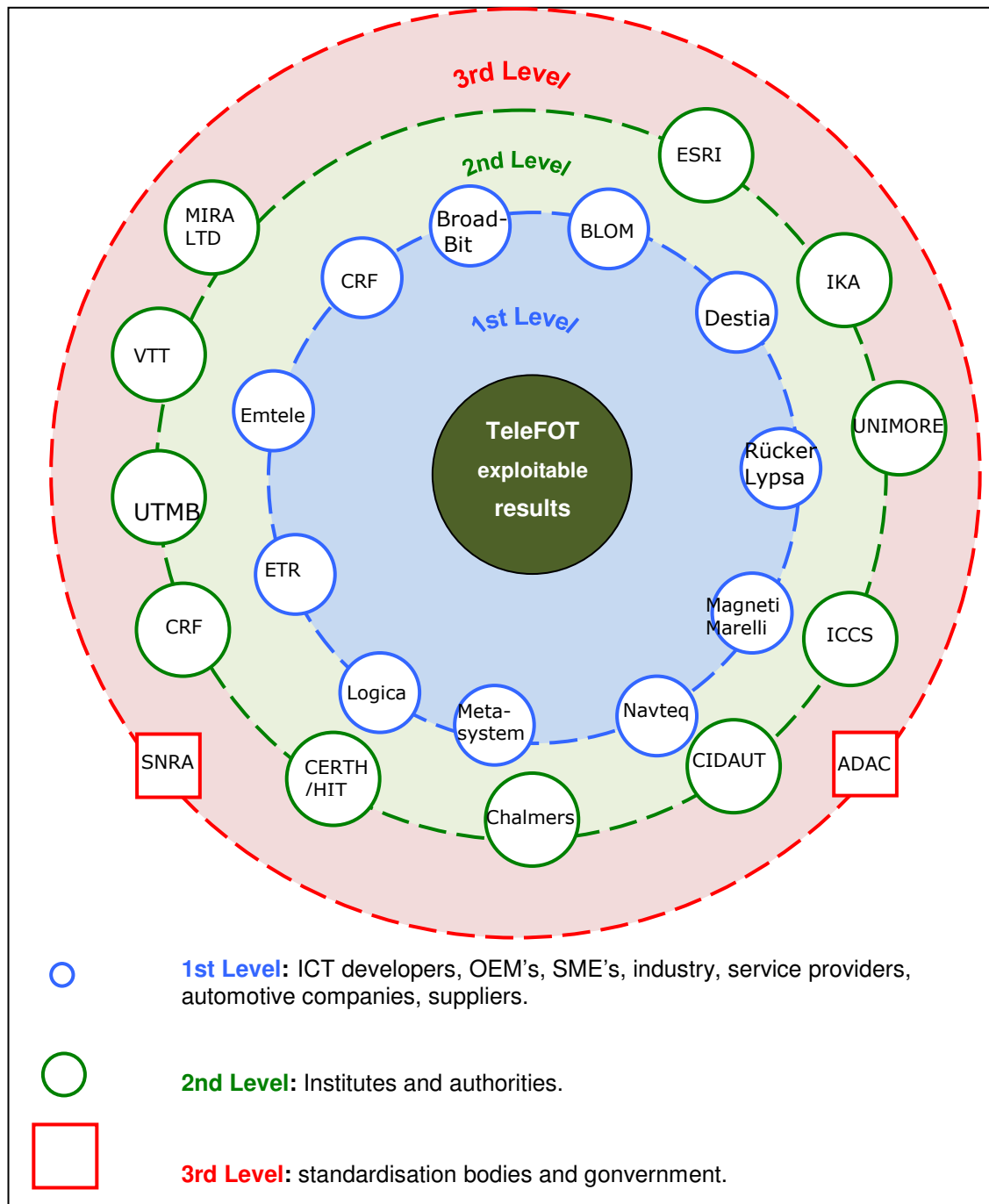
4.2 Business cases description

A fundamental element of the business model set-up at each TeleFOT site is the development of the organisational strategy based on the 3-level organisational structure described in Section 4.1. This section describes the main aspects of this strategy for each site so as to ensure the successful delivery of the TeleFOT exploitable outcomes.

The key roles of bodies associated with a given site (such as OEMs, research institutes and Public Authorities), which may be internal or external to TeleFOT, must be identified as well as the business links and interactions between them. In order to clarify this important information a template has been developed, to be filled in by all the test sites.

The template that describes the role of each test site in the Business Cases and the exploitation of the TeleFOT contains the following fields:

- Test site;
- Test Community;
- Function & service tested;
- Business strategy level;
- Vertical links;
- Horizontal links;
- External Companies;
- Connecting Sites;
- Other links;
- Description of the type of links/ interactions between the TeleFOT actors within the overall business TeleFOT model;
- Ways of exploitation.

This template is presented in Annex 4 of this Deliverable.

It will be distributed to partners from M24 and contributions from test sites will be integrated in the next versions of the deliverable.

For this reason, this chapter needs to be integrated later on in the project.

4.3 SWOT analysis

Further to the individual partners' assessment of their role and contribution to the project, a more general SWOT analysis has been performed based on the characteristics of the TeleFOT consortium, integration aspects of the TeleFOT sites and the analysis of the market.

Strengths

- Multi-disciplinary nature of partners covering several business sectors. The Consortium is active in a variety of industrial sectors and their products address various market segments.

- Significant expertise of the TeleFOT consortium in areas such as the provision of Business IT solutions, ICT tools, transport and routing based services, training, rehabilitation products for people with disabilities and elderly, design-for-all technology, industrial applications.

- Diversification of all TeleFOT partners' business customers coming from both the private and the public sector.

- The extent of national (such as Greece, Germany, Finland and Spain) and European markets for the TeleFOT results play an important role in facilitating their exploitation. The deep-rooted internationalism of key TeleFOT participants is another great strength.

- Extensive technological know-how over many years in the local markets for all partners.

- Unique innovation power available in the TeleFOT consortium, based on great commitment and excellence.

Weaknesses

- Although the aggregation of the sales' networks by all partners satisfactorily covers many parts of Europe, a wide-spread distribution channel for the TeleFOT products/ services is not readily available.

- The marketing focus among TeleFOT partners varies, as some tend to be working more on the consulting side, others in software development and system integration or telecommunication and some in the area of services' provision. Thus, their work after the end of the project may diversify, learning some of the developed products without supporting modules.

Opportunities

- Emerging new technologies (use of new network technologies/ applications, working anywhere- anytime, new services at possibly lower prices, new mobile telephone communication applications, development of web applications, improved localisation and communication technologies). The new technologies that are assessed by TeleFOT ensure that the resulting products/ services can be strongly competitive within the European market.

- Use of direct links with National and International Consumers' Associations.

- Increasing demand for interoperability between systems.

- Ongoing product innovation, commitment to excellence.

Threats

- The funding of public authorities from European or National funds constantly decreases, due to the economic crisis.

- Economic instability may influence the interest or purchasing power of potential customers.

- Possible market limitations (promotion and marketing strategies).

5. BUSINESS SCENARIOS FOR THE FUTURE – POTENTIAL NEW FUNCTIONS

This section examines several ways in which the positive impact that the TeleFOT project created can be taken forward in the future.

5.1. TeleFOT future business scenarios

There are 3 Business Cases that can be developed in the future and they are the following:

Business Case 1: *One among others*

In this Business Case TeleFOT is sold as a toolkit for the automotive market. It has no difference with the other commercial tools and it is commonly operated by its future buyers.

The advantage of this scenario is that there is no need for promotion by anyone and no specific agreements are required. The main aim of TeleFOT is to deliver Methodology to assess the impacts of aftermarket and nomadic devices, ensuring interoperability, context-awareness and support seamless service provision through all types of devices. This requires strong industry participation and close cooperation between leading network and service providers as well as device manufacturers. The TeleFOT products and services and the key actors of the TeleFOT consortium satisfy these requirements.

Business Case 2: *Services provision*

The second scenario requires that the TeleFOT methodology be patented and implemented in this and other fields.

The advantage of this scenario is that the TeleFOT methodology can go further than the automotive field with nomadic and aftermarket devices, and can be implemented in an extended market field. The methodological framework that will derive from TeleFOT can also be used for educational purposes and be taught in Universities and Research Institutes. This can be an extension of the implementation of TeleFOT from the respective partners of Level 2.

Business Case 3: *Standardisation*

The final and most long-term approach will employ alliances at the local and global level that could make the use of TeleFOT-like evaluation strategies for devices mandatory by promoting standardisation procedures.
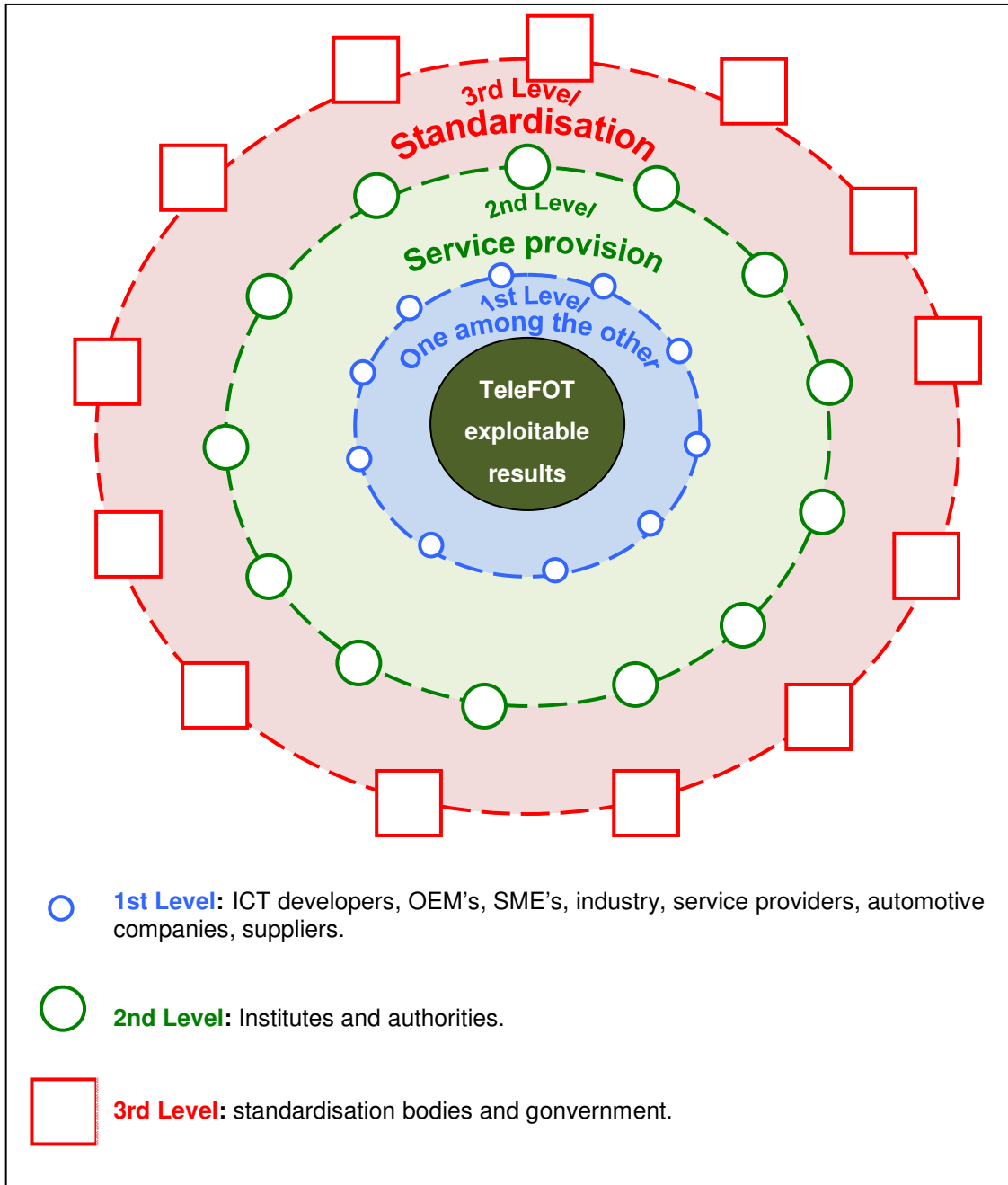
First at a regional and local level, cities or regions or countries could adopt the overall TeleFOT framework and operate on various business models that have been adapted to the local circumstances. Each alliance will have their individual local agreements and will be responsible for maintaining the content and providing the relevant service.

In addition, a global model could be developed whereby the TeleFOT methodology is becoming a standardised procedure, supported by governments and standardisation bodies. For the realisation of this business case, apart from the TeleFOT methodological framework, the certification of the stakeholders that would have the ability to implement this methodology must be defined, as well as a homologation plan for the procedures that are going to be implemented.

The aforementioned Business Cases are to be realised step by step. The first Business Case "One among others" is a short term scenario and can be realised within the time frame of 1-2 years. The second Business Case, the "Service provision" is a medium term scenario that can be realised within the time frame of 3-6 years. Finally the last Business Case "Standardization" is a long term scenario that needs at least 6 years to be realized.

Correlating the Business scenarios with the levels of the stakeholders involved in the exploitation of the TeleFOT, the following figure (Figure 7) shows Future Business cases and levels integration.

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Figure 7 : Future Business Cases and levels integration

○ **1st Level:** ICT developers, OEM's, SME's, industry, service providers, automotive companies, suppliers.

○ **2nd Level:** Institutes and authorities.

▢ **3rd Level:** standardisation bodies and gonvernment.

CONCLUSIONS

The special nature of TeleFOT (compared to a conventional R&D project) and a very dynamic situation in the development of aftermarket and nomadic devices functions and services make exploitation activities challenging. Industries could gain benefit from having project results available, since part of their design and production processes could be adapted or improved. This issue has been also highlighted during the First General Stakeholder Forum organized by TeleFOT.

For this reason and in order to include relevant progression in Exploitation activities, this deliverable is planned to be updated periodically.

D5.3.1 refers to **WP 5.3 – Facilitation of Exploitation**, but it is **linked to and/or based on results achieved in other Work Packages, Tasks, Activities and Deliverables.** Such interactions have been thoroughly described - in particular in the Executive Summary and in the Introduction.

Concerning the relationship with **WP 5.3 – Facilitation of Exploitation,** Deliverable 5.3.1 aims to cover some key issues of every research project: exploitation planning, being indispensable for raising awareness also among the partner industries and other relevant parties on the work undertaken, promotion of results achieved, and ensuring their sustainability from a commercial point of view.

To achieve these aims, a specific structure of the **Technology Implementation Plan (TIP)** is planned, relating to project results for use in products, services and innovations.

The importance of including a TIP in this document was highlighted during the Workshop on Exploitation (17-18th March 2010). For this reason, D5.3.1 was renamed into D5.3.1. 'Business cases, potential new functions and Technology Implementation Plan' in order to include the TIP.

Exploitable Result Cases (ERC) or 'pre-TIPs' represent the basis for building the TIP. Partners are invited to identify them. Communicating its results to industries, TeleFOT could become a kind of reference project for many domains stakeholders, including OEM, suppliers, ICT providers, etc. To this aim, it is necessary to shape results and their "format" to specific stakeholders' needs.

The TeleFOT Media Center will have a specific role in supporting the communication of results, adapting it to specific audiences. In this sense, the **CRM** is a relevant tool not only to manage contacts, but to understand the Stakeholders' potential, and the best strategies to reach them, as well as to map the results that are desired and/or expected.

Business Cases for TeleFOT have been defined, including all the main actors within the market sector, how they interact with each other, and information on the benefits that the actors will obtain from the project results.

The **TeleFOT Business strategy** is resumed in Chapter 4 - Business Cases. Moreover section 4.1.1 – Internal capability of TeleFOT Consortium presents in brief the exploitation role of each partner and the capabilities in the business cases according to its expertise. **Future business scenarios** are also included in the deliverable, as ways in which the positive impact that the TeleFOT project created can be taken forward in the future.

A **Cost – Benefit analysis of project results** (from T5.3.4) – also using results from SP 4.7 was developed, evaluating TeleFOT systems in terms of the "willingness of consumers to pay for a particular intervention (benefit)" against the "willingness to pay to avoid them" (costs).

Due to the confluence of a large number of relevant inputs from WP5.3 and other input from different Tasks, WPs and activities planned in TeleFOT, this deliverable achieves a high value within but also outside the project.

In particular:

- For **partners** and in particular for **industries**: D5.3.1 contains important information to develop a strategy for the exploitation of the project results. This is evident in particular in Chapter 4 – Business cases, where the TeleFOT strategy is explained.

- In addition, chapter 4 presents a summary of the exploitation role of each partner and the capabilities in the business cases according to the partner's expertise.

Finally, D5.3.1 gives instructions in how to use the CRM tool and highlights the importance of the Media Centre as support for disseminating different messages to different audiences;

▪ For **stakeholders**: D5.3.1 outcomes and in particular the ERCs identified in Chapter 1 will be delivered to the stakeholders with the support of the CRM and of the Media Center, following the guidance provided by the Business strategy.

In particular Chapter 3 outlines the target groups to be reached by following the Business strategy described in section 4.1.

Finally, within the Business Cases description (imported from the initial Exploitable Result Cases), all main actors within the market sector will be defined and categorised, inicluding information on how they interact with each other and the benefits that the actors will obtain from the project results.

ANNEX 1 - TIP (TECHNOLOGY IMPLEMENTATION PLAN)

1. Introduction

Industries can gain benefit from having project results available since part of their design and production processes could be adapted or improved.

It is known from extensive past experience that usability results are rarely included within the design process of onboard information systems by both the OEM and aftermarket suppliers. This issue has been also highlighted during the First General Stakeholder Forum organized by TeleFOT.

To achieve these aims, a specific structure of the **Technology Implementation Plan (TIP)** is planned, covering project results for use in products, services and innovations. In addition, requirements for further research will be identified during the analysis of the potential use of the project results.

The Technology Implementation Plan is traditionally the key document for the exploitation strategies of R&D project results. The structure of the document is more flexible than a traditional TIP, and versions will be provided annually, up until the final version, planned at M46.

The TIP is based mainly on **Exploitable Result Cases (ERCs)** or **'preTIPs'**. Therefore, as soon as a certain result is obtained and this can be exploited by one of the identified project audiences, an Exploitable Results Case is delivered to this audience. Each project year, a general report that gathers all the ERCs is drawn up and delivered. Even if the main customers of this document are industrial organisations, other audiences such as public decision makers aimed at improving safety oriented policies could be interested.

Specific **business models** to create valuable for the consortium from the outputs of the final ERCs are under definition in WP 4.7, in particular in T4.7.3 Operational Business Models. They are described in this document in Chapter 4 Business Cases.

2. TIP structure and timeline

The structure of the TIP is flexible, being updated periodically, based on the ERCs delivered by partners, as showed in Figure 8 - TIP versions.

Figure 8 - TIP versions

| TIP version 1	TIP version 2	TIP version …	Target audiences
Exploitable Result (e.g. usability results interest for OEM)			OEM (including association)
	Exploitable Result (e.g. crash/sled test results for suppliers)		Supplier
			ICT developer
	Exploitable Result (e.g. crash/sled test results for PA)		EC and its bodies
Exploitable Result Case (e.g. usability results interesting for Resarch Bodies)			Research bodies
TeleFOT intermediate results	*TeleFOT intermediate results*	*TeleFOT final results*	

Following their overall Exploitation strategy – outlined in Chapter 1 of this document – when TeleFOT partners either 1) have been involved in generating, OR 2) plan to exploit a result case, they are required to complete the Exploitable Result Case (ERC) template for those results and deliver it to the SP 5 leader. The form can be found below in this document (in Annex 2). One form should be filled out for each result. For results that have been generated by more than one partner in collaboration, the involved partners are asked to coordinate the descriptions of the results.

ERCs are structured as a standard use case, including all the relevant information with regard to the exploitable results arising at any given time. This should be adapted to the target audiences. In doing this, a strong link with the Media Centre leader is created, since the message should be "packaged" in a way that different audiences can

understand and actually use. A different format is needed for different types of audiences, eg industries, public authorities or research bodies.

The TIP is periodically updated, including the ERCs specified by partners. The Final TIP version is planned at M46.

Figure 9 -TIP expected timeline
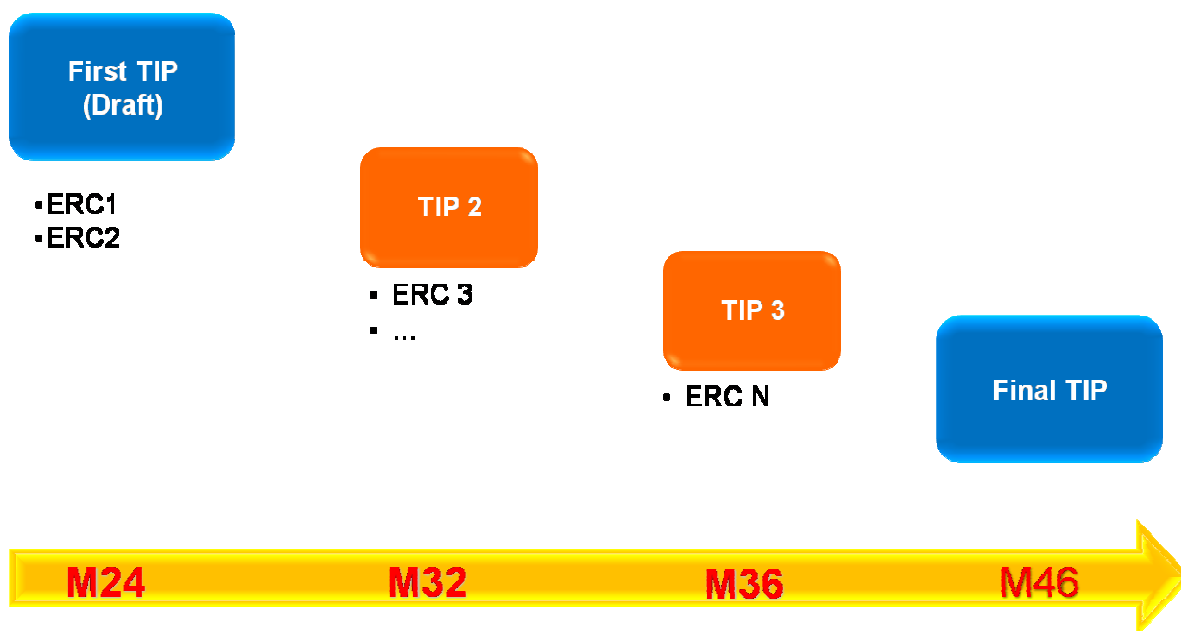
A final TIP will gather all ERCs and it will be delivered by the end of the project. This exploitation plan will cover a detailed (as much as possible) outline of the actions to be undertaken during the exploitation of the project and will explain how the partners will turn the project results into marketable products, services and knowhow and how much will this cost. In this final TIP, the overall exploitation strategy of the consortium as a whole will be also described, as well as the strategies of individual partners as traditionally proposed by the EC.

3. Overview of the Partners Exploitation plans

3.1   General principles

The consortium will draw up an IP-exploitation or Technology Implementation Plan (TIP) of the project results for use in products, services and innovations. These activities will be pursued first in SP 5 and finally, are completed according to the guidelines from the EC in the context of final reporting. The exploitation plan will remain the consortium's confidential document due to its sensitive nature. It forms the confidential part of the deliverable on dissemination of knowledge. Depending on the role of each partner, they will provide a technology implementation plan at the end of the subproject. For the academic and research institutes this is fairly straight-forward, since it will describe gains in expertise, know-how and transfer of that to teaching or marketing services.

Furthermore, needs and requirements for further research will be identified during the analysis of the potential use of the project results. The results will be used to formulate the later phases of the TeleFOT projects; potential areas of further research after the end of the project will be highlighted.

3.2   Exploitation plans by partner

In the following pages, a short exploitation plan by each partner is presented.

Information is also presented above in section 4.1.1 – Internal capability of TeleFOT Consortium, in order to show the role of each partner in the exploitation of TeleFOT and consequently, in the business framework of the project. In particular paragraph 4.1.1 summarizes the partners' capabilities in the business cases according to their expertise, while in this Annex the Exploitation plans by partner are reported as a reference for the Technology Implementation Plan.

3.2.1   Technical Research Centre of Finland, VTT

As an applied research institute VTT has a particular target to use the know-how developed in the project to apply Location Based Service more to the Automotive sector and especially cooperative driving. The current very strong trend is to bring different

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kinds of services to mobile users. VTT wants to be ranked among the leading institutes to realise the digital convergence in terms of mobile handsets and vehicles.

Furthermore, VTT is willing to exploit the results on the system level in other application areas of ICT that M2M provides today. In particular Tele-medicine, business and logistics are good examples of areas where the TeleFOT project's systems level experiences can be applied to.

Eventually, the vast amount of data collected in TeleFOT will be used in further education of young researchers in the company.

3.2.2 ADAC

ADAC's main area is consumer assistance and information provision related to cars and traffic. The TeleFOT project provides direct results for consumer enlightenment and information. Concerning aftermarket and nomadic devices, the crash /sled tests and usability tests as well as benchmarking activities provide lots of material to be provided to our members in Germany and sister organisations across Europe. This area produces the main exploitable results. Furthermore, functions provided by aftermarket devices help ADAS to orientate towards cooperative driving and associated testing in the future.

3.2.3 BLOM, SISTEMAS GEOESPACIALES, S.L.U.

BLOM will ensure and improve its position in the geographical information sector with the participation in this project. As a result of the evaluations performed in the different tests of the nomadic devices supplied for the project, Blom can improve its nomadic device regarding to:

◆ New functionalities detected like requirements for better driving, less interference between the driver and the driving environment.

◆ Elimination of some functionality which is not required, or that can cause mistakes in the driving.

◆ New physical design of the technical features according to the main needs and priorities of the users, as detected by the tests undertaken.

This information can be used in the development of future devices and can increase the competitiveness of Blom in the navigation/location software development in the Navigation/Location Sector.

3.2.4   BroadBit

BroadBit has been developing a personalized vehicle insurance system and is aiming to bring it to market. TeleFOT project is very valuable for integrating and proving this technology, as well as integrating it with further traffic safety applications. Incremental benefits, which shall be exploited in follow-up product deployment, are the following:

- Implementing a data-logger that is suitable for personalized vehicle insurance. The expected result is a cost-effective vehicular black-box solution, that can be operated without incurring telecommunications costs;

- Working with nomadic devices, which are capable of also delivering eCall and Speed Alert functionality. We will use this result for deploying nomadic devices, which provide these safety functionalities as well, integrated into a personal navigator;

- Infrastructure for real-time weather reporting will be integrated with the central system during this trial. This enables the personalization of vehicle insurance on the basis of weather during the drive, encouraging drivers to avoid driving under dangerous weather conditions;

- Assessment of driver acceptance during field trial enables fine-tuning of personalized vehicle insurance into a mass-market capable system.

3.2.5   Centro Ricerche FIAT (CRF)

Currently, different in vehicle telematic platforms are under development by European OEMs. As a consequence the challenge of the near future is how to establish the interoperability of the telematic platforms available in different vehicles in order to guarantee access to different services and to enable a sustainable deployment of cooperative systems for safety and mobility. FIAT Automobiles, as well as other OEMs, has recently introduced to the market a telematic platform that has a potential openness

to mobility services and to cooperative systems for safety and mobility. In fact all current telematic platforms have or will have capabilities for communication, localisation and processing.

As far as FIAT Auto is concerned, for example, the modular info-telematic device Blue&Me Nav, developed in cooperation with Centro Ricerche Fiat, Microsoft and Magneti Marelli, is an open telematic platform that offers a number of functions and services for infomobility like SOS Emergency or car traceability in the case of theft. However, all OEMs in Europe are just starting point to offer new functions and services supported by in vehicle telematics.

New communication technologies are today under discussion in a number different European funded projects, as well as in some national projects - to develop future cooperative systems to improve mobility and safety that include also communication with infrastructures and service centres. Here the task for the OEMs is to understand how these technologies shall be compliant with current and future European regulations and to the open telematic platforms that are today under development. In addition to this, the challenging task for the future is to agree upon how shall an interoperable environment for all different vehicles can be created.

Additionally an emerging and fast growing market is related to portable devices (like portable navigation devices) that have to be safely used by drivers on board a vehicle. The full interoperability with automotive portable devices is one of the challenges that the FIAT Group has already undertaken as a pioneer (e.g. the use of a portable navigation device on board the new FIAT 500). Magneti Marelli has a key role in this activity, for this reason the joint effort of Centro Ricerche FIAT and Magneti Marelli will support the deployment of project results in the FIAT Group in line with current activities.

3.2.6   CERTH/HIT

The Centre for Research and Technology Hellas (CERTH/HIT), being a Public Organisation, acts as an official body providing consultancy services to the Greek Government on issues which are closely related to its research activities (i.e. traffic safety issues, etc). CERTH/HIT will take over the promotion of the TeleFOT project outcomes in the Greek community, both public and private stakeholders, and the provision of all technical consultancy services required in order for them to be applied in the near future.

3.2.7   Chalmers

Chalmers has long experience of using and developing evaluation methods and tools, e.g., usability studies in order to assess the interaction between user and vehicle/information system; analyses of the prerequisites for user adoption of new technology; as well as surveys to assess the overall benefits and adoption of a new ICT-based information service. TeleFOT provides ample possibilities to further develop and apply these skills to other national and international projects. Also the novel approach to automated data collection, transfer and handling methods introduced in TeleFOT will applied to our other projects as well.

3.2.8   CIDAUT

CIDAUT is aimed at actively contributing to the needs of companies in the automotive sector, thus enhancing their competitiveness and industrial development, as well as coordinating and channeling the research potential of the University of Valladolid. As a research centre, CIDAUT promotes the use of technology, design and the manufacturing of new products, as well as the creation of advanced programs for the improvement of the industrial process as a whole.

Moreover, CIDAUT plays a key role in the National market of Transport Safety, providing customers with a holistic approach towards safety solutions (thus, covering a range from preventive and active safety to pasive safety solutions). These customers get support in their design, development and testing activities, namely, design of Human-Machine

Interaction systems, development of safety systems and systems assessment and validation. Thus, all the knowledge gained from the TeleFOT project will be of paramount importance for CIDAUT since it will be applied in its whole innovation process when supporting the automotive industry.

3.2.9   Destia

For Destia TeleFOT aims to use the project results in the following areas:

- Create a fleet of dynamic sensors (with in car devices) producing up to date dynamic information flow to a Traffic Information Platform.

- To understand the integration of the traffic and weather alert information to in car devices for further enhancement of the services (mobile devices, information screens etc.).

- To commercialize traffic safety functions and services in Finland through various contexts and value networks. In the value chain of the business model Destia operates as a traffic service integrator.

The features of the future service will include:

- Speed limit information

- Speed alert

- Driving conditions warning

- Applications for professional transport/drivers and active, experienced drivers – pay-as you drive

- Navigation (enhanced with traffic information).

3.2.10   Emtele

As a M2M Service Provider, Emtele will promote the commercial use of the developed technologies and results in the following ways:

◆ Demonstrate achieved technology results to current and possible prospect customers in order to get them to understand what added value business benefits they may get through co-operation with Emtele

◆ Where possible to implement the technologies tested in Emtele's production environment for the benefit of customers

◆ Emtele also wants to continue co-operation with partners within the TeleFOT project to get European wide business in a way to provide authorities, insurance companies and other stakeholders with a first class service

In general, the TeleFOT projects provides Emtele an excellent opportunity to promote its M2M system thinking among the consortium members, and to connect to European major players in the field of traffic information management.

3.2.11 Electronic Trafic S.A., ETR

As a major industrial player in the ITS market, ETR plans to play a leading role in bringing to the market some of TeleFOT results. Following a tradition of 30 years, ETR will use TeleFOT to continue leading the deployment of advanced ITS solutions in the following fields:

- ◆ from on-board devices and systems to roadside infrastructure and signals,

- ◆ from new sensors to advanced services,

- ◆ from simulators to integrated traffic management systems,

- ◆ from passengers' mobility to freight transport,

- ◆ from e-ticketing to fleet management.

- ◆ Access control systems, including e-Id, biometrics, multi-application smartcards, etc.

- ◆ Satellite-related applications.

- ◆ Location based personalised services.

- ◆ Complex Distributed Real Time control systems.

In particular, ETR plans to

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   ◆ use the methodological work in TeleFOT to support the deployment of new e-safety related services among its customer base –which includes more than 30 major cities

   ◆ use the evaluation results of TeleFOT to back the deployment of its current portfolio of ITS products and solutions

   ◆ push the industrial deployment of the innovative services and solutions to be piloted in TeleFOT

3.2.12 ICCS

As an academic research & educational institute ICCS will make use of the TeleFOT results to extend its expertise in vehicle and traffic telematic systems research and teaching.

In addition, there are internal processes within partners for transfer of research results and concepts to other parts of the businesses, and these will be fully used, in particular ICCS intend to fully exploit the results of the project and the experience and contacts gained.

Moreover, the expertise gained from TeleFOT and the results emerging from the project will be exploited in follow-up European research projects in the cooperative traffic sector. The latter will be targeted so that projects developed can benefit the Hellenic Department for Transport.

3.2.13 IKA

IKA will use the results of the TeleFOT project concerning the developed methods and tools for evaluation for:

   • Working on standardisation of methods and tools for the assessment of safety-related systems.

   • Teaching and education of students at the Aachen University.

   • Proving evaluation and testing services to the automotive industry and other stakeholders based on the achieved results.

3.2.14 Logica Suomi Oy

AS a world class player Logica has experience in the conceptualizing, developing and producing of several nomadic device-based information and road safety solutions for automotive use, as well as in testing them and checking their usability and effectiveness. The company has good skills in designing nomadic IVIS in vehicle environments. The mobile solutions team based in Finland has developed several already commercially deployed services that contribute to the better awareness of road/traffic and weather conditions while driving. Logica aims to further focus on services provided via mobile devices, and the TeleFOT project provides an excellent testing ground for this. The project's results will be used in the company both in the re-design of nomadic devices as well as developing new services for travellers.

3.2.15 Loughborough - ESRI:

ESRI intend to fully exploit the results of the project and the experience and contacts gained thanks to the Project. It is anticipated that follow-on research proposals will be developed involving use of the methodologies developed within the project. These will be targeted so that projects that develop from them can benefit the UK Department for Transport and the vehicle manufacturing industry.

3.2.16 Magneti Marelli

Magneti Marelli S.p.A. as an automotive electronic equipment supplier is greatly interested in the results coming from the project field operational tests and will exploit these results by:

- Upgrading, as far as possible, its products taking into account the remarks coming from users' tests.

- Introducing new functions/characteristics on its new equipment taking into account new requests or needs which have been expressed during the tests by a meaningful number of users.

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The above listed actions will give Magneti Marelli S.p.A. the opportunity to produce automotive electronic equipment which better meet users' needs and preferences, both in terms of comfort and of performance, and therefore to increase its market share

3.2.17 Meta System

Metasystem will carry out its TeleFOT results exploitation plan with a double aim: first of all, extending market area inside its business model's scope (according to which insurance companies give to customers Metasystem's board unit), and secondarily giving another role to the unit: this must be seen not only as a validation instrument in case of legal issues, but also as a mean to enhance its own information system, becoming thus a device that collects data for verification and validation of infotelematic contents in terms of functionality and security.

3.2.18 MIRA LTD

MIRA will contribute to SP2, SP3, SP4 (leader of WP 4.10 – Technical Evaluations) and SP5 and has a significant role in deploying the experience gained in national FOT trials. The experience accumulated from these activities further strengthens our expertise in this area and this knowledge will be used in other national and international comparative projects. In particular, automated methods to use, transfer, retrieve and analyse data will be fully used in our future activities.

3.2.19 Navteq

NAVTEQ's Advanced Driver Assistance Systems Research Platform (ADASRP) possesses all the functionalities needed to match TeleFOT test data and road coordinates. The ADASRP is a Windows-based framework application and software development kit (SDK) originally intended for prototyping map-enabled ADAS solutions. It provides access to the Map and calculates the Electronic Horizon up to a given distance in front of the vehicle. The Electronic Horizon basically corresponds to the road network around the vehicle including road attributes and therefore provides an image of the driver's perception horizon. From TeleFOT accumulating experience in precise positioning further strengthens Navteq's expertise in this area, and the results and new experiences gained

in this projects are directly used for further developing of our position technologies and maintain the cutting-edge technology position we possess in this area.

3.2.20 Universite de Technologie de Belfort-Montbeliard

TeleFOT gives UTBM the opportunity to evaluate the adequacy of services offered by mobile communication to users and hence enlarge its knowledge to promote applied research with mobile communication technologies in the field of transportation systems. Also, due to close collaboration with local partners, TeleFOT will allow UTBM to bring the expertise of its Systems and Transportation (SeT) Laboratory in both fundamental and applied research on transportation systems by providing consultancy and advice services to institutions, transport industry and telecom operators.

3.2.21 Rücker Lypsa

Rücker Lypsa will use experiences gained from TeleFOT in the integration work in automotive systems such as nomadic devices connection to vehicle systems. Rücker Lypsa can contribute with technical knowledge on devices that achieve the legal requirements to be installed on homologated vehicles, and with its experience in the electrics and mechanical parts of a vehicle. Rücker Lypsa can also use the results for technical articles, publications, conferences and/or exhibitions.

The main objective for Rücker Lypsa in this project is to increase the capability and know-how through the results obtained in these studies, that can contribute to determining future trends, and to increase its industrial development that will be used for the automotive customers.

3.2.22 Swedish Road Administration, SNRA

The Swedish Road Administration (SNRA) will assume responsibility for ensuring that the knowledge and experience gained from the activities carried out through the Swedish Test Site will be further used in improving the transport safety towards the 0-vision target. This includes two ways of using the information and knowledge accumulated in the project (i) adapt that information (road, weather, behaviour) that will have the best impacts on behaviour (ii) take care of the information flow within Sweden.

3.2.23 UNIMORE

UNIMORE will carry out an exploitation plan for TeleFOT project results inside its structures. The project achievements will be turned out into a resources multiplier, as the results, in terms of infrastructures and know-how, are going to be durable and therefore they do not have to be re-created every time there is the need of a test site, with monetary and time resources consumption. Furthermore, the advantageous situation already created by the fact that the resources are 'naturalistic', not laboratory ones, means that they can be exploited in a non-exclusive manner, with obvious benefits for all the local scientific community and administrations.

3.2.24 UTMB

TeleFOT gives UTBM the opportunity to evaluate the adequacy of services offered by mobile communication to users and hence expand its knowledge in order to promote applied research with mobile communication technologies in the field of transportation systems. Also, due to close collaboration with local partners, TeleFOT will allow UTBM to bring the expertise of its Systems and Transportation (SeT) Laboratory in both fundamental and applied research on transportation systems by providing consultancy and advice services to institutions, transport industry and telecom operators.

ANNEX 2 - Exploitable Result Case (ERC) template

In this Annex a template to be filled in with single Exploitable Result Cases (ERC) is included.

Partners planning to exploit a project result should fill in an Exploitable Result Cases (ERC) and send it to:

Roberto Montanari, SP5 leader

roberto.montanari@unimore.it

and

Serena Fruttaldo

serena.fruttaldo@unimore.it

A separate form must be completed for each Exploitable Result Case (ERC).

In the below tables, please describe in words the result/case and its exploitation/impact. Please, use one form per ERC.

ERC Name:	Self-descriptive title of the result
SP:	

CONTACT PERSON FOR THIS RESULT

Name	
Position	
Organisation	
E-mail	

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	
Database, Data Source	
Experimental development stage (laboratory prototype)	
Prototype/demonstrator available for testing	
Results of demonstration trials available	
Other (please specify):	

DESCRIPTION AND EXPLOITATION / IMPACT

Short Description of ERC:	Functionality, purpose, innovation etc.
Exploitation target group	
Planned or potential exploitation:	If your company plans to exploit the result commercially, describe in what form (e.g. in terms of products), and how – directly (launch of new products, spin offs etc) or indirectly (licensing).
	Exploitation can also be non-commercial, e.g. in the form of development of internal processes or procedures within a company, or in the form of new standards or policies.
	Also, in what groups or constellations will the result be exploited – on individual basis or as a consortium/group of partners? If you do not plan to exploit the result, try to provide a description of potential exploitation by others, and of who would typically be interested in exploiting the result.
Timetable for exploitation:	If commercialisation or some other form of exploitation is potential or expected, what timescales are involved for the various steps involved in exploitation?
Socio economic impact:	If the result is exploited as described above, what is the expected impact on the European society and economy? Increased road safety? Increased mobility of European citizens? Increased competitiveness of European vehicles (improved performance, lower price etc.) on the global market? Please try to be more specific than just repeating one or more of these general statements, and make sure it is clear why this result will have the impact you describe.

Cost and license restrictions (if available)	
Status of commercialisation:	If work towards potential commercialisation has started, describe, if possible, any commercial contacts already taken, demonstrations given to potential licensees and/or investors and any comments received (market requirements, potential etc.)

ANNEX 3 – EXPLOITABLE RESULT CASES

1. ECO Driving System

ERC Name:	ECO Driving System
SP:	SP3

CONTACT PERSON FOR THIS RESULT

Name	Mario Bongioannini
Position	
Organisation	Magneti Marelli S.p.A.
E-mail	mario.bongioannini@magnetimarelli.com

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	
Database, Data Source	
Experimental development stage (laboratory prototype)	
Prototype/demonstrator available for testing	X
Results of demonstration trials available	
Other (please specify):	

DESCRIPTION AND EXPLOITATION / IMPACT

Short Description of ERC:	Objective of the system:
	On-board automatic and progressive evaluation of the driving style of the driver, regarding the minimization of fuel consumptions and pollutants.
	Merit rate of the driving behaviour of the driver shown with real-time audio and video presentation of the results on PND and suggestions with the purpose of educate the driver with the correction to carry out, for an improvement of the vehicle use in ecological way.
	Method of evaluation:
	Identification and real-time measurement of the working point of the engine and vehicle, characterized by a non optimal performance of the mechanical power, due to a non appropriate use of gear, clutch, accelerator and brake.
	The estimating algorithm use some constructive parameters of the car and a set of measures updated from engine and vehicle sensors.
Exploitation target group	New Magneti Marelli PND purchasers and all Magneti Marelli PND owners
Planned or potential exploitation:	Magneti Marelli plans to exploit commercially this application in term of additional feature on its PND devices.
Timetable for exploitation:	Magneti Marelli thinks that market is ready to introduce this new function, and is willing to commercialize it as soon as possible.
Socio economic impact:	This system aims at reducing fuel consumption and pollution, in terms of CO_2 emissions, of vehicles, and indirectly, also safety on

	roads, encouraging a more appropriate driving style. These effects are more important more the system is widely used.
Cost and license restrictions (if available)	n.a.
Status of commercialisation:	Ready for commercialization

2. Db Structure

ERC Name:	DB Structure
SP:	SP3

CONTACT PERSON FOR THIS RESULT

Name	Oskari Heikkinen
Position	Development
Organisation	Emtele Ltd
E-mail	oskari.heikkinen@emtele.com

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	
Database, Data Source	X
Experimental development stage (laboratory prototype)	
Prototype/demonstrator available for testing	
Results of demonstration trials available	
Other (please specify):	

DESCRIPTION AND EXPLOITATION / IMPACT

Short Description of ERC:	We plan to develop and evaluate the feasibility of the developed database structure
Exploitation target group	
Planned or potential exploitation:	The result database is likely to be used as a template when developing database structure for commercial projects. The result will be distributed within the consortium to the group of partners that are interested.
Timetable for exploitation:	Preliminary version is already available in a deliverable. The final version will be ready when the interface has been tested with partners and data transfer from local test sites has begun.
Socio economic impact:	None.
Cost and license restrictions (if available)	None.
Status of commercialisation:	The database structure is to be tailored for each commercial project which is why it cannot be commercialized itself.

3. Vehicular data logging for accurate risk assessment and incident characterisation

ERC Name:	Vehicular data logging for accurate risk assessment and incident characterisation
SP:	sp3

CONTACT PERSON FOR THIS RESULT

Name	Andras Kovacs
Position	Managing Director
Organisation	BroadBit
E-mail	andras.kovacs@broadbit.com

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	
Database, Data Source	
Experimental development stage (laboratory prototype)	
Prototype/demonstrator available for testing	X
Results of demonstration trials available	
Other (please specify):	

DESCRIPTION AND EXPLOITATION / IMPACT

Short Description of ERC:	The vehicular data collection system, which provides data for accident risk assessment and is capable of recording driving incidents
Exploitation target group	Insurance companies and vehicle leasing companies
Planned or potential exploitation:	This vehicular data collection system that has been developed for the purpose of data logging in TeleFot. It will be used as a "black-box" data recorder component of BroadBit's solution offering for insurance companies and car leasing companies. In the vehicle insurance context the purpose of this data collection system is to generate statistics on the amount of risky driving behaviour - such as over-speeding or brisk lane changing. The availability of such data then allows insurance companies to personalise vehicular insurance and to directly motivate drivers' risk aversion. In the vehicle leasing context the purpose of this data collection system is to record details of eventual accidents. Having an objective and detailed view of the accident circumstances is generally needed for the leasing company's settlement process with the vehicle insurer, and the present lack of such black-box data is sometimes problematic for the leasing company.
Timetable for exploitation:	The above described risk-management solution, which relies on this result's exploitation, will be available from 2011.

Socio economic impact:	The described exploitation result represents a cost-effective data logging technology, which enables the business case for a personalised vehicle insurance product to stack up. With increased personalisation, vehicle insurance pricing becomes more fair. Safe drivers will be rewarded for their behaviour, and risky drivers will be incentivised to become more risk averse. The ramping up of personalised vehicle insurance products also works as a means of making drivers directly aware of risky driving habits. The overall rate of accidents is consequently expected to decrease because drivers will have an awareness of the major risk factors along with a financial motivation for safer driving.
Cost and license restrictions (if available)	
Status of commercialisation:	System development for a commercialised vehicular data collection system is in progress.

4. Software for processing driving performance indicators

ERC Name:	Software for processing driving performance indicators
SP:	

CONTACT PERSON FOR THIS RESULT

Name	Sami Koskinen
Position	Research Scientist
Organisation	VTT
E-mail	sami.koskinen@vtt.fi

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	x
Database, Data Source	
Experimental development stage (laboratory prototype)	
Prototype/demonstrator available for testing	
Results of demonstration trials available	
Other (please specify):	

DESCRIPTION AND EXPLOITATION / IMPACT

Short Description of ERC:	From a database consisting of GPS and CAN (OBD-II and FMS interfaces) data, this periodically run Java software can extract several driving performance indicators. Most of the indicators are basic (such as total distance driven) and commonly known, but also indicators that require more processing and assumptions are constantly added to the software.
Exploitation target group	This software is of general purpose and it suits also other FOT projects where similar data is processed.
Planned or potential exploitation:	Non-commercial analysis tool development and knowledge sharing between partner organizations.
Timetable for exploitation:	The software development is ongoing and it can be made available inside consortium.
Socio economic impact:	None – just effective and automated analysis of collected data.
Cost and license restrictions (if available)	To be decided. Free within the consortium for the duration of the TeleFOT project. Currently no other developers than VTT.
Status of commercialisation:	No plans towards commercialization.

5. Camera based system for monitoring driver's cockpit activity

ERC Name:	Camera based system for monitoring driver's cockpit activity
SP:	

CONTACT PERSON FOR THIS RESULT

Name	Maria Jokela
Position	Research Scientist
Organisation	VTT
E-mail	maria.jokela@vtt.fi

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	
Database, Data Source	
Experimental development stage (laboratory prototype)	X
Prototype/demonstrator available for testing	
Results of demonstration trials available	
Other (please specify):	

DESCRIPTION AND EXPLOITATION / IMPACT

| Short Description of ERC: | An open source eye and face tracking software (TrackEye) and a low cost web camera are used for detecting driver's eye and face location and orientation movements. From this information awareness of traffic surrounding is being estimated by the developed software.

The cockpit activity assessment module calculates driver workload which is divided in two categories: visual and cognitive distraction. Visual distraction means how much a driver is paying attention to the road ahead whereas cognitive distraction tells whether driver is concentrating on the driving task or not. |
| --- | --- |
| Exploitation target group | All vehicle operators whose work requires concentration and distractions would cause significant damage. The module can be implemented to monitoring vehicle drivers as well as operators in factories control room. |
| Planned or potential exploitation: | Plan is to extend system's environment of use from drivers to other operators (e.g. working machines' operators) to investigate and monitor their ability to concentrate on their main task.

Negotiations with Finnish and Japanese work machine companies have been initiated to sell licences to utilise the software in supervising the operator's workload and sleepiness.

The tool is also useful in the upcoming cooperative-FOT programs for online and offline driver workload estimator. |
| Timetable for exploitation: | The first commercialising initiatives have been started already but wider deployment needs 3-5 years. |
| Socio economic impact: | Improved traffic safety when combined with an assistant system that would e.g. block phone calls when driver is distracted thus |

	decreasing the number of distractive tasks.
	Decrease of financial and other costs when warning distracted operators of their diminished awareness level.
	The tool is also useful for guiding people to drive in ecologically sustainable manner.
Cost and license restrictions (if available)	Free within the consortium for the duration of the TeleFOT project. Currently no other developers than VTT.
	The eye tracking part of the module will be freely available since it bases on open source engine. However, the workload estimator and driver monitoring part will be commercial and licence royalty prices will be defined case bases
Status of commercialisation:	Software development under work in a national project. The reliability of the algorithm still needs some improvements.
	One confidential commercialising project has been executed and the results are expected to be found in real products during next 5 years.

6. Crash tests procedures

ERC Name:	Crash tests procedures
SP:	4

CONTACT PERSON FOR THIS RESULT

Name	Gauss Christof
Position	Head of Vehicle Testing
Organisation	ADAC
E-mail	christof.gauss@tzll.adac.de

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	
Database, Data Source	
Experimental development stage (laboratory prototype)	
Prototype/demonstrator available for testing	
Results of demonstration trials available	
Other (please specify): Consumer information	

DESCRIPTION AND EXPLOITATION / IMPACT

Short Description of ERC:	Crash safety is an important issue also for in vehicle use of nomadic devices. The stability of fitting systems during a vehicle crash is very important. Therefore ADAC carried out tests with 11 different fitting systems. The results will be published and can be a basis for the selection of safe fitting systems for nomadic used in the FOT.
Exploitation target group	Consumers all over Europe
Planned or potential exploitation:	One of the ADAC main goals is consumer protection and consumer information. Results from this TeleFOT task can be published by participating motoring clubs in Europe (test partners of ADAC) in different media: - club magazines: In the scope of ADAC's consumer test of navigation devices - Internet: Websites of motoring clubs
Timetable for exploitation:	Tests of navigation devices usually are published at the end of the year (before Christmas). Next publication can be Nov or Dec 2010
Socio economic impact:	Test results and recommendations have a strong impact on buying behaviour of consumers.
Cost and license restrictions (if available)	-
Status of commercialisation:	-No commercialisation planned

7. Benchmarking

ERC Name:	Benchmarking
SP:	4

CONTACT PERSON FOR THIS RESULT

Name	Gauss Christof
Position	Head of Vehicle Testing
Organisation	ADAC
E-mail	christof.gauss@tzll.adac.de

Type of ERC (Please tick one category only:)

Scientific and/or Technical knowledge (Basic research)	
Guidelines, methodologies, technical drawings	
Software code	
Database, Data Source	
Experimental development stage (laboratory prototype)	
Prototype/demonstrator available for testing	
Results of demonstration trials available	
Other (please specify): Consumer information	

DESCRIPTION AND EXPLOITATION / IMPACT

Short Description of ERC:	This task contains a comparison test of different driver assistance systems (Handset based navigation, PDA based navigation, Mobile phone based navigation, Aftermarket in-dash navigation, in-Vehicle OEM navigation). The selection of the systems will be based on devices that are used in TeleFOT (SP 3).
Exploitation target group	Consumers all over Europe
Planned or potential exploitation:	One of the ADAC main goals is consumer protection and consumer information. Results from this TeleFOT task can be published by participating motoring clubs in Europe (test partners of ADAC) in different media: • club magazines: In the scope of ADAC's consumer test of navigation devices • Internet: Websites of motoring clubs
Timetable for exploitation:	Tests of navigation devices usually are published at the end of the year (before Christmas). Next publication can be Nov or Dec 2010
Socio economic impact:	Test results and recommendations have a strong impact on buying behaviour of consumers.
Cost and license restrictions (if available)	-
Status of commercialisation:	--No commercialisation planned

ANNEX 4 – BUSINESS CASES TEMPLATE

Test Site	
Test Community	
Function & service tested	
Business strategy level	
Vertical links	
Horizontal links	
External Companies	
Connecting Sites	
Other links	
Interactions between the TeleFOT actors within the overall business TeleFOT model	
Ways of exploitation	