



ITERATE

IT for Error Remediation And Trapping Emergencies

Revised plan of dissemination and use of results

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V 1.0	2010/06/01	First version from KITE
V 2.0	2010/06/17	Revised version with Partners' contribution
V 2.1	2010/06/25	Final revision by Partners ready submission

The ITERATE project

This report is produced within the European project ITERATE (IT for Error Remediation And Trapping Emergencies), Grant agreement number 218496. The project started the 1st of January 2009 and will end 31st of December 2011.

The objective of ITERATE is to develop and validate a unified model of driver behaviour (UMD) and driver interaction with innovative technologies in emergency situations. This model will be applicable to and validated for all the surface transport modes. Drivers' age, gender, education and experience and culture (whether regional or company/organisational) are factors that will be considered together with influences from the environment and the vehicle.

Such a unified model of driver behaviour will be of great use when designing innovative technologies since it will allow for assessment and tuning of the systems in a safe and controllable environment without actually putting them to use in real traffic. At the concept stage, the model could guide designers in identifying potential problem areas whilst at the prototype stage, the model could inform on the scenarios to be used in system evaluation. In this way the systems will be better adapted to the drivers before being available on the market and will provide better support to the driver in emergency situations. Along the same lines, the model could be of use for authorities as a guide in assessing and approving innovative technologies without performing extensive simulator experiments or large scale field trials.

ITERATE is based on the assumption that the underlying factors influencing human behaviour such as age, gender, culture etc. are constant between transport modes. This assumption allows for a unified model of driver behaviour, applicable to all surface transport modes, to be developed. This will be done within ITERATE and the model can be used to improve design and safety assessment of innovative technologies and make it possible to adapt these technologies to the abilities, needs, driving style and capacity of the individual driver. The model will also provide a useful tool for authorities to assess ITS which is missing today.

The project consortium consists of seven partners:

Statens väg och Transportforskningsinstitut (VTI) Sweden; University of Leeds (UNIVLEEDS) UK; University of Valenciennes (UNIVAL) France; Kite Solutions s.n.c.(Kite) Italy; Ben Gurion University (BGU) Israel; Chalmers University (Chalmers) Sweden; MTO Psykologi (MTO) Sweden

For more information regarding the project please see <http://www.iterate-project.eu/>

I hope you will enjoy this and all other deliverables produced within the ITERATE project. If you seek more information or have questions don't hesitate to contact me.

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EXECUTIVE SUMMARY

This document contains the revised plan for using and disseminating knowledge and foreground developed within the ITERATE Project.

The Deliverable contains five main Chapters and an Appendix.

The first Chapter describes the purpose of the document, its structure, and introduces the other sections.

Chapter 2 and 3 define the dissemination strategy of the ITERATE project and provide a classification of dissemination activities. For each type of dissemination action, the corresponding implementation approach is proposed. Then, for each type of dissemination activity, the actions performed to date and those planned are described in details.

The dissemination materials already produced by the project and their usage are briefly described. Materials and products already completed, as well as planned, are described, even though a dedicated Deliverable is foreseen in the future that will contain copies of the actual products provided for dissemination purposes. This is particularly true for the Proceedings of the Workshops organised by ITERATE in collaboration with other EU co-funded Projects, which will result in dedicated books and monographs.

The Exploitation plan is discussed in the last Chapter of the Deliverable. The two different natures and typology of partners, i.e., academic and industrial/consultancy, are considered. In particular, for each partner, a market and competition analysis is performed and the objectives and guidelines for subsequent exploitation of the results is preliminarily discussed. A further aspect of exploitation of results is discussed in relation to possible developments of EC directives and initiatives in terms of transport safety.

Finally, the appendix contains, for completeness, the Dissemination and Exploitation Questionnaire utilised to collect information among partners.

1. INTRODUCTION

1.1 Purpose of this document

This document is the revised plan for using and disseminating knowledge and foreground for the ITERATE Project; it focuses on both Dissemination and Exploitation activities which are dealt in dedicated sections of the document.

Dissemination (addressed in Chapters 2, 3 and 4) is intended as a mean to create and spread awareness about the project, its goals and results. This document addresses how to promote ITERATE outcomes, in terms of technologies and services, to potential recipients, including stakeholders of the transportation domains, such as private companies and public administrations.

Dissemination includes the following activities:

building a complete promotion policy;

setting up of a website to present the project, describe its objectives and promote the ongoing results;

promotion via the participation to Seminars and Workshops;

preparation and diffusion of material for dissemination including leaflets and posters;

publications on the main Journals, on Books and Monographs of the transportation and Human Factor domains.

Two previously released Deliverables, i.e. D 8.1 a (month 10) and D 8.2 (month 12) contain only preliminary Dissemination and Exploitation Plans. This deliverable is meant to present updated and more detailed results with respect to the activities performed to date.

The Exploitation section focuses on two aspects, related to the different natures and objectives of the partners. On one side, commercial applications and solutions are the main targets of industrial interests and, for this reason, a market analysis is provided to identify the most attractive and gainful areas to address. On the other side, the academic interests, not so deeply involved in commercial issues, are more oriented toward obtaining scientific results and progresses in their disciplines. Their research activities domain are therefore presented and described in order to show how they can get benefit from ITERATE outcomes. A third component to the exploitation is revised at this stage. It is related to the possible development of contributions to an Agenda for Sustainable Future in European Surface Transportation Safety.

Having clearly stated what the partners' expectations are, it will be possible to keep the project focused on its achievements, thus minimising the risk that the final outcomes of the project won't be enough exploitable or rewarding.

1.2 Structure of this document

The document is composed of the following chapters:

Chapter 1 - Introduction: this chapter describes the purpose of the document, its structure, lists the acronyms, tables and pictures and presents the glossary and referenced documents.

Chapter 2 - Dissemination methods: it defines an outline of the dissemination strategy of the ITERATE project, provides a classification of dissemination activities and, for each type of envisaged dissemination activity, it provides the proposed approach for achieving its objectives.

Chapter 3 - Dissemination activities: for each type of dissemination activity, it describes the actions already performed and which are planned.

Chapter 4 - Dissemination Material: the material produced by the project that can be used for dissemination is briefly described. The products already completed, as well as planned, are presented.

Chapter 5 - Exploitation plan: it describes the current scenario for ITERATE services; it provides market and competition analysis and defines objectives and guidelines for the project in view of its subsequent exploitation actions to be carried out by each partner.

Appendix A - Dissemination and Exploitation Questionnaire: the questionnaire used to collect information among partners is included.

2. DISSEMINATION METHODS

This chapter describes ITERATE dissemination plan.

A four stage procedure is presented and the resulting process flow will drive the dissemination activities throughout the whole duration of the project.

Finally, the classification of the activities that will be carried on is described.

2.1 Dissemination work flow

Every dissemination activity will be accomplished by means of a well defined and standardised four steps approach. Each stage foresees specific actions to perform in order to determine adequate choices and decisions.

This process is depicted in Figure 1.

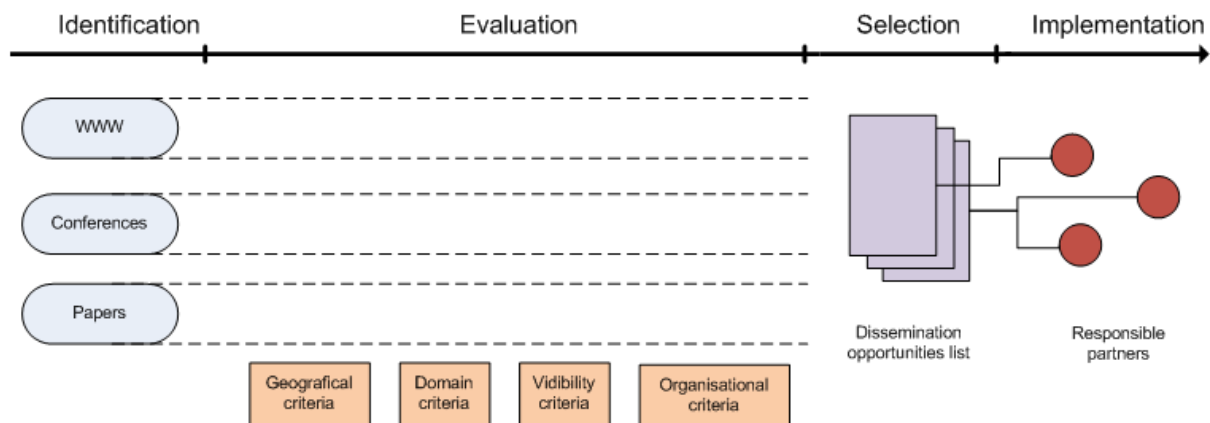


Figure 1: Dissemination process flow

2.1.1 Identification

Dissemination means are identified and selected on the hypothesis that circulation of project activities and progress amongst potentially interested organisations and stakeholders must take place by different sort of channels. These are the ways that will spread ITERATE announcements and result assessments.

Three major means are identified:

WWW: Websites and online portals are a resource of paramount importance. Several thematic sites are present on the “net”, dealing with the same domain addressed by ITERATE and they will be used to keep scientific and dedicated communities informed about the project status.

Conferences and public venues: Lectures, workshop and symposiums are usually addressed to a selected and specific audience. For this reason they are precious occasions to present ITERATE and its activities, to a public strongly linked with the project domain.

Written Papers and Contributions to books and monographs: Articles, papers and every kind of peer reviewed publication can be used to promote the project activities. This category includes specialised newspapers, journals and magazines, as well as thematic books and monographs.

2.1.2 Evaluation

Once a specific means for evaluation has been identified, several criteria are used to evaluate its effectiveness and its capabilities to reach stakeholders. The Project will privilege those means that will be able to deliver communications of high quality and able to reach to the widest public in the most effective way, avoiding to waste time and resources in activities not sufficiently effective.

The evaluation criteria that will be adopted may vary, mainly depending on the adopted means.

Geographical criteria: the geographical criteria account for the cost and the easiness of participation of each partner to the related event. They also can be applied for assessing the possibility to reach the proper target in relatively less expensive ways.

Domain criteria: the connection of means with the project topics are considered. Those being more related with transportation and human factors will be underpinned.

Visibility criteria: number and expertise of people reachable by the means is an important factor that won't be neglected and will be placed in high priority position.

Organisational criteria: The organisation responsible for managing the means, including its prestige, authority and reputation, will be considered. The most influential ones will be preferred.

2.1.3 Selection

Once evaluation has been performed, the dissemination opportunities will be selected on the basis of the previously defined criteria. This will allow to identify the most appropriate means and their prioritization.

2.1.4 Implementation

Finally, the operation will be brought to an end by the most suitable partner (or partners). The selection will be performed by the overall consortium but volunteers activities will be welcomed and encouraged.

2.2 Classification of dissemination activities

Dissemination activities are organised in different levels focusing on two independent perspectives.

The first perspective is related to the scope of the action and includes:

Global activities: activities carried out at international level by ITERATE consortium. Global activities usually include organisation and participation to conferences, workshops, exhibitions and related events.

Internal activities: activities aiming at developing solid links amongst ITERATE partners.

Cross fertilisation activities: activities aiming at identifying other European or national research projects with topics of interest for ITERATE.

The second perspective is related to the organisation of a certain activity:

Active dissemination: activities in which ITERATE partners are expected to establish connection to the audience (lectures organisation, paper presentation at conferences, workshop participation...)

Passive dissemination: activities in which the audience is expected to act in order to become better-acquainted with ITERATE goals (brochures, posters, websites...)

3. DISSEMINATION ACTIVITIES

Following the classification presented in 2.2, the activities collected among partners are presented in dedicated chapters. Both activities so far performed and those planned for the future are included.

3.1 Global

Global activities include international events and publications. International events are mainly participation to workshops and conferences related to ITERATE domain. Concerning publications, a list of journals, magazines and newspapers pertaining to ITERATE topics has been identified.

Both events and publications are an effective way to widely disseminate the project results among the appropriate communities.

3.1.1 Events

Title of the event	Participants	Date	Venue	Website	Organiser
HCI International 2009	A. Amantini	20 - 24 July, 2009	San Diego (CA) USA	http://www.hcii2009.org/	HCI
The 19 th annual International Railway safety Conference	Lena Kecklund	28 September 2 October, 2009	Båstad (Sweden)	http://banportalen.banverket.se/banportalen/templates/bvSubPage.aspx?id=1564&epslanguage=EN	Banverket, Sweden, UIC
First conference on Human Modelling in Assisted Transportation	ITERATE consortium	30/6 - 2/7, 2010	Belgirate (Italy)	http://www.hmat-ws.eu/	ITERATE consortium
IFAC HMS 2010 Symposium	Unival	31/8 - 03/ 9, 2010	Valenciennes (France)	http://www.univ-valenciennes.fr/IFACHMS2010/	IFAC (IFIP – IFORS – IEA - UNIVAL)
Transportforum	VTI	13 – 14 January, 2010	Konsert och Kongress, Linköping, (Sweden)	http://www.vti.se/templates/Page___3975.aspx	VTI
U.S. Transportation Research Board Annual Meeting	D. Shinar	10 – 14 January, 2010	Washington DC	http://www.trb.org/annualmeeting	
HCI International 2011	P.C. Cacciabue	9-14 July 2011	Orlando, Florida, USA	http://www.hcii2011.org	HCI
The 22 nd ICTCT annual conference	O. Carsten, F. Lai, S. Jamson, K. Chorlton, Y. Barnard	22-23 October 2009	Leeds, UK	http://www.ictct.org/workshop.php?workshop_nr=29	UNIVLEEDS
IFAC 2011 World Congress	F. Vanderhaegen, M. Pichon, P. Millot, K.A. Ouedraogo, S. Enjalbert	28/8 - 02/ 9, 2011	Milano (Italy)	http://www.segreteriacovention.com/2011/ifac/wordpress/	IFAC

Table 1: international events

In Table 1 the list of international events so far collected is presented.

In particular:

The first conference, “Human Modelling in Assisted Transportation” (HMAT) is a planned workshop organised by ITERATE project together with other three EU project: ISI-PADAS and HUMAN.

Transportforum is an annual national/Nordic conference which every year attracts 1600 persons from the transport domain. In the event of 2010, the train simulator that will be used in ITERATE will be demonstrated at the VTI stand.

3.1.2 Publications

In Table 2 the main specialised magazines and journals are presented. The purpose is to use them both as input source and to divulgate ITERATE outcomes.

Publisher	Title	Website
Cambridge Journals	Journal of Navigation	http://journals.cambridge.org/action/displayJournal?jid=NAV#
Elsevier	Applied ergonomic	http://www.elsevier.com/wps/find/journaldescription.cws_home/30389/description
Elsevier	Control Engineering Practice	http://www.elsevier.com/wps/find/journaldescription.cws_home/123/description
Elsevier	Engineering Applications of Artificial Intelligence	http://www.elsevier.com/wps/find/journaldescription.cws_home/975/description
Elsevier	Information Processing & Management	http://www.elsevier.com/wps/find/journaldescription.cws_home/244/description#description
Elsevier	Journal of safety research	http://www.elsevier.com/wps/find/journaldescription.cws_home/679/description#description
Elsevier	Mathematical and Computer Modelling	http://www.elsevier.com/wps/find/journaldescription.cws_home/623/description#description
Elsevier	Safety science	http://www.elsevier.com/wps/find/journaldescription.cws_home/505657/description#description
Elsevier	Simulation Modelling Practice and Theory	http://www.elsevier.com/wps/find/journaldescription.cws_home/622330/description#description
Elsevier	Transportation Research Part F: Traffic Psychology and Behaviour	http://www.elsevier.com/wps/find/journaldescription.cws_home/600660/description
Hindawi Publishing Corporation	Modelling and Simulation in Engineering	http://www.hindawi.com/journals/mse/
Inderscience Publishers	International Journal of Human Factors Modelling and Simulation	http://www.inderscience.com/browse/index.php?journalID=124

Palgrave Macmillan Journals	European Journal of Information Systems	http://www.palgrave-journals.com/ejis/index.html
Palgrave Macmillan Journals	Journal of simulation	http://www.palgrave-journals.com/jos/index.html
Springer	Cognition Technology & Work	http://www.springer.com/computer/journal/10111
Taylor & Francis	Ergonomics	http://www.tandf.co.uk/journals/titles/00140139.asp
Tudelft	European Journal of Transport and Infrastructure Research	http://www.ejtir.tbm.tudelft.nl/
World Academic Press, World Academic Union, England, UK	World Journal of Modelling and Simulation	http://www.worldacademicunion.com/journal/1746-7233WJMS/default.htm
Elsevier	Accident Analysis and Prevention	http://www.elsevier.com/locate/aap

Table 2: International journals

Table 3 contains already published and planned papers of partners associated to the work of the project. Of course further publication will occur in future phases of the project according to the achieved results.

Title	Authors	Type	Status
A simple simulation predicting driver behaviour, attitudes and errors	<i>A. Amantini P. Cacciabue</i>	Paper presented at the HCI International 2009 and included in the conference proceedings published by Springer	Published
A simple simulation based on rules and task for analysis of driver behaviour	<i>A. Amantini P. Cacciabue</i>	Book, Human Performance Modeling in Safety Critical Systems: A Cognitive Engineering Perspective, (Eds. A. Luedke, L. Urbas) publisher TBD	Planned
Imperfect in-vehicle collision avoidance warning systems can aid distracted drivers	<i>M. Maltz D. Shinar</i>	Paper published on Transportation Research F, 2007, 10, 345-357.	Published
Traffic Safety and Human Behavior	<i>D. Shinar</i>	Book published on Oxford: Elsevier, 2007	Published
Validation of a single screen simulation for speed perception and production	<i>D. Shinar A. Ronen</i>	Paper published on Advances in Transportation Studies: an International Journal, 2007, 5, Special Issue	Published
In-Vehicle Information Systems to Improve Traffic Safety in Road Tunnels	<i>G. Vashitz D. Shinar Y. Blum</i>	Paper published on Transportation Research Part F: Psychology and Behaviour, 2008, 11	Published
The relationship between driving experience and road signs relative to their location	<i>A. Borowsky D. Shinar Y. Parmet</i>	Paper published on Human Factors, 2008, 50(2)	Published
Alertness Maintaining Tasks (AMTs) while driving	<i>T. Oron-Gilad A. Ronen</i>	Paper published on Accident Analysis and Prevention, 2008, 40(3)	Published

	<i>D. Shinar</i>		
Effects of THC on Driving Performance, Physiological State and Subjective Feelings Relative to Alcohol	<i>A. Ronen P. Gershon H. Drobiner A. Rabinowits R. Bar-Hamburger R. Mechoulam Y. Cassato D. Shinar</i>	Paper published on Accident Analysis & Prevention, 2008, 40(3)	Published
Looks Are (Almost) Everything: Where Drivers Look to Get Information	<i>D. Shinar</i>	Paper published on Human Factors, 2008, 50(3)	Published
Sign location, sign recognition, and driver expectancies	<i>A. Borowsky D. Shinar Y. Parmet</i>	Paper published on Transportation Research F, 2008, 11(6)	Published
The Effects of an Interactive Cognitive Task (ICT) in Delaying Fatigue Symptoms in Driving	<i>P. Gershon A. Ronen T. Oron-Gilad D. Shinar</i>	Paper published on Transportation Research F, 2009, 12	Published
Evaluation of experience-based fatigue countermeasures	<i>P. Gershon D. Shinar A. Ronen</i>	Paper published on Accident Analysis and Prevention, 2009, 41(5)	Published
Review of research on train driver behaviour modelling.	<i>TBD</i>	TBD	Planned
ITERATE: Information Technology for Error Remediation and Trapping Emergencies	<i>D. Shinar I. Oppenheim</i>	Conference presentation during Transportation Research Board Annual Meeting, January 12, Washington DC	Planned
Development of a generic driving simulator for cross-cultural comparison studies	<i>Jamson, H. and Horribin, A.</i>	Paper be presented at the Driving Simulator Conference and be part of the conference proceedings	Planned
How do drivers deal with emergency situations – the role of driver assistance systems	<i>Lai, F., Barnard, Y., Carsten, O.</i>	Journal paper	Planned
From theoretical model to experimental data: A structured approach to design experiments to seed a model of vehicle operation with new systems	<i>Yvonne Barnard, Oliver Carsten, & Frank Lai</i>	HMAT 2010 - Paper	To be published by Springer
Review of Models of Driver behaviour and development of a Unified Driver Behaviour model for driving in safety critical situations	<i>David Shinar, Ilit Oppenheim</i>	HMAT 2010 - Paper	Submitted to be published by Springer
Human Factors Engineering (MTO) in train drivers cab design – Prospects and problems	<i>Kecklund, L*1 Mowitz, A*, Dimgard, M*</i>	HMAT 2010 - Paper	Submitted to be published by Springer

The ITERATE project Overview, theoretical framework and validation	<i>M. Hjalmdhalm, D. Shinar, O. Carsten</i>	HMAT 2010 - Keynote	Submitted to be published by Springer
Automated driving, secondary task performance and situation awareness	Merat, N., Lai, F., Jamson, H., Barnard, Y. and Carsten, O.	Paper presented at the Human Factors and Ergonomics Society Europe Chapter Europe Chapter Annual Conference, 14-16 October 2009, Linköping, Sweden.	Published by HFES
Preparing field operational tests for driver support systems: a research oriented approach	Carsten, O., Barnard, Y.	Paper presented at the Human Factors and Ergonomics Society Europe Chapter Europe Chapter Annual Conference, 14-16 October 2009, Linköping, Sweden.	Published by HFES
Using eye-tracking for studying situation awareness in a driving simulator	Barnard, Y., Lai, F. and Merat, N.	Paper presented at the Human Factors and Ergonomics Society Europe Chapter Europe Chapter Annual Conference, 14-16 October 2009, Linköping, Sweden.	Published by HFES
Semi-automated driving: how does the supported task affect driver response?	Carsten, O, Lai, F., Barnard, Y.	Paper to be presented at the IFAC HMS 2010 Symposium, Valenciennes, France.	To be published by the IFAC

Table 3: Publications

3.2 Internal dissemination

Results gained during the project lifecycle will be also used internally by partners in order to strengthen links with other partners and the project itself. These activities include events in which partners can disseminate ITERATE project during events organised by their company/organisation, not related with the whole consortium or third parties tasks.

Possible collaborations among more partners are still considered as “internal dissemination” activities, as they do not require a direct involvement of the consortium and resources investment.

Table 4 shows the current state of the art of this activity. The results of ITERATE could also be incorporated in university courses given at the Department of Shipping and Marine technology at Chalmers and other partners University Departments.

Title	Type	Target	Timing	Partner
The vigilance issues of the tramway driver	Research Master Thesis in Automatic Control	LAMIH Laboratory and Human-Machine System team	September 2009	UNIVAL
Interaction between the driver and assistance systems	Institutional seminal	Transport professionals	Late 2010	UNIVLEEDS
Lectures at academy, HF courses	information	Maritime students	Several times in a year	Chalmers

Table 4: Internal dissemination activities

3.3 Cross fertilisation

ITERATE project could derive benefits from other research projects, of the same specific domain, in terms of visibility, results reuse and knowledge enhancement. A revised list of the currently ongoing projects is here presented, dividing the Projects into two categories according to whether they are co-financed by the European Commission (Table 5), or not (Table 6). The latter include projects funded at national or international level.

Name	Topic	Contact / Website
<u>ISi-PADAS</u> Integrated Human Modelling and Simulation to support Human Error Risk Analysis of Partially Autonomous Driver Assistance Systems	Provide innovative methodology to support risk based design and approval of Partially Autonomous Driver Assistance System (PADAS) focusing on elimination and mitigation of driver errors by an Integrated Driver-Vehicle-Environment modelling approach	Andreas Luedtke (andreas.luedtke@offis.de) http://www.isi-padas.eu/
<u>MODSAFE</u> Modular Urban Transport Safety and Security Analysis	Security in the Urban Guided Transport sector	modsafe@de.tuv.com Izaskun Arenaza (izaskun.arenaza@de.tuv.com) http://www.modsafe.eu/
<u>HORIZON</u> Integrated Research into the effects of fatigue on the cognitive performance of maritime watchkeepers under different watch patterns, using ship's bridge, engine and liquid cargo handling simulators.	Analyze effects of fatigue and workload on cognitive performance of maritime watchkeepers by full-scale simulation.	Graham Clarke (graham.clarke@inchmery.eu) https://www.chalmers.se/smt/SV/forskning/fartygs-arbetsmiljo/forskningsprojekt/horizon
<u>HUMAN</u> Model-Based analysis of Human Errors during Aircraft Cockpit System Design	To develop a methodology with techniques and prototypical tools based on a cognitive model of the crew behaviour, to support the prediction of human errors in ways that are usable and practical for human centred design of systems operating in complex cockpit environments	Andreas Luedtke (andreas.luedtke@offis.de) http://www.human.aero/
<u>2-B-Safe</u> 2-Wheeler Behavior and Safety	Research, that directly targets those behavioural and ergonomic factors cited in the MAIDS study as contributing to PTW crashes, including research on crash causes and human error, the world's first naturalistic riding study involving instrumented PTWs, research on motorcycle rider, risk awareness and perception, the development of new research tools to support the research program, in-depth research on the factors that underlie driver failures to see PTWs and their riders, and the development of recommendations for practical	Stephane Espie (espie@inrets.fr)

Table 5: EU founded projects

Name	Topic	Contact
<u>QUADRA</u> Quantitative Driver Behaviour Modelling for Active Safety Assessment	Development of quantitative models of driver behaviour, which can be applied within industry, research institutes and academia in computer simulations with the purpose of evaluating, verifying and/or tuning active safety systems.	Gustav Markkula (gustav.markkula@volvo.com)
<u>CISIT</u> Campus on Safety and Intermodality in Transportation	The first mission is to develop basic research and lead them to industrial innovation (Fundamentals of involved scientific disciplinary, Applied research, Technical solutions). An important part of the project involves the training component in which CISIT aims to graduate experts in transportation and logistics.	Eric Markiewicz (eric.markiewicz@univ-valenciennes.fr)
<u>HAMASYT</u> Machine System in Transportation	To reinforce and to structure the research in Human engineering over Europe, to encourage the mobility of students, young researchers, confirmed researchers, assistant professors and professors between the involved partners, for an international impact and regarding the harmonization of the BMD (Bachelor, Master, Doctorate) educational training and to integrate this GDR E as partner of national research programmes or poles.	Peter Wieringa (P.A.Wieringa@tudelft.nl) http://www.univ-valenciennes.fr/gdrehamasyt/
<u>PHC SAKURA</u> Machine Collaboration for Safety and Comfort of Transport System	Conceptual project for the use of cooperative capacities for Human Machine Systems	Frédéric Vanderheagen (frederic.vanderheagen@univ-valenciennes.fr)
<u>EfficienSea</u> Efficient, safe and sustainable traffic at sea	EfficienSea is an Interreg project aiming at improving the Baltic Sea with focus on the environment and the safety of navigation. EfficienSea has a budget of close to 8 million Euro, gathering 17 partners from six countries around the Baltic Sea.	Maritime Safety Administration (Farvandsvaesenet) http://www.ufficiensea.org/
<u>IMPACT</u>	Effects of change in the maritime industry	Margareta Lützhöft

Table 6: Non EU founded projects

4. DISSEMINATION MATERIAL

In order to better perform the dissemination activities, a set of products has been developed. Its purpose is to support the project results, spreading them by means of attractive information material, so to propose them to the public in an appealing and professional way.

Although a dedicated deliverable has been developed (D 8.2) for this topic, a general overview is provided, in order to briefly describe the adopted approach and instruments and to update them according to the work carried out to date.

4.1 Criteria

Several factors will be taken into account in the production of such material, in order to ensure a coherent and standardised process.

Look & Feel: a lot of attention is dedicated to the layout and appearance of the material produced, in order to ensure attractiveness at a glance.

Synthesis of contents: important pieces of information should be immediately accessible to the readers. Therefore, the structure of the layout will highlight the most relevant elements of the Project.

Easy to access: information should be easy to access and should not require too much time for searching for it.

Recognition: ITERATE project should always be clearly identifiable, within the contents of all dissemination materials.

Uniformity: all the material should share a common layout, colour schema, pictures and terminology, in order to both increase their identification with the project and harmonise the several sources for the public.

4.2 Material

As previously mentioned a complete description of the produced material has been done D 8.2 "Dissemination material including website". For this reason, a detailed description will not be here provided for them.

The documents of the project, both internal and public, should share the same layout. Therefore, a template for their creation is provided.

The project website is already online (<http://www.iterate-project.eu/>) and it fulfils a double purpose. On one side it will provide general information to possible stakeholders about the project objectives, functioning, progress and consortium layout. At the same time, it is utilised by partners to coordinate Project activities and speed up the work process by its private area and functionalities.

A first set of leaflets has been developed, printed and already distributed amongst partners, in order to easily divulgate the project main features and goals.

A poster, aimed to promote the project during main events, has been completed and distributed to partners for the same purposes.

Figure 2 shows the screenshot of ITERATE website homepage while in Figure 3 and Figure 4 the leaflet. Finally, Figure 5 contains the poster developed for presentation of ITERATE in venues and events with the possibility of allocation space for posters.



Figure 2: Iterate website homepage

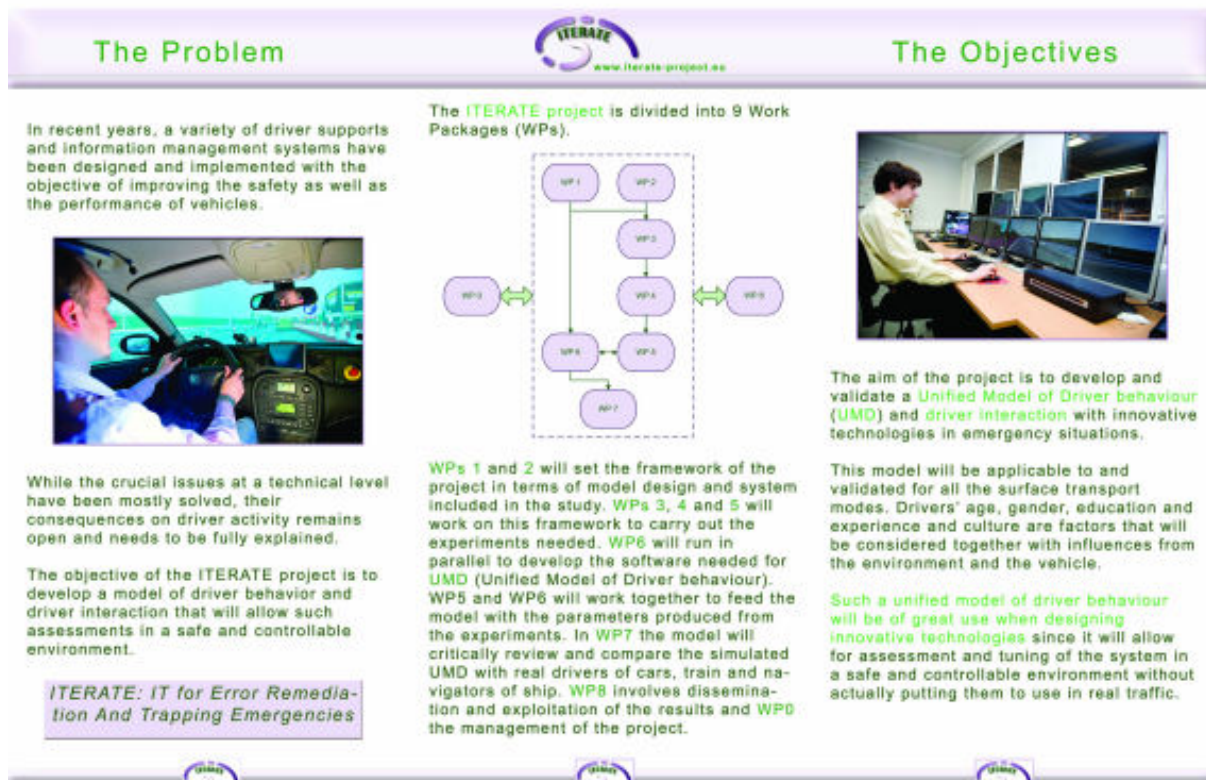


Figure 3: Leaflet back

Research Outcomes

Consortium

1. The UMD can be used to **improve design and safety assessment of innovative technologies** and make it possible to adapt these technologies to the abilities, needs, driving style and capacity of the individual driver.

2. Identifying **potential problem areas**, even if at the prototype stage, the model could inform on the scenarios to be used in system evaluation. In this way the system will be adapted to drivers before being available on the market and will better support them in emergency situations.

3. The UMD will perform **risk evaluation prediction**. It will perceive what is going on in the current situation with respect to the driver, vehicle and environment; it will interpret what is going on; and it will predict what is going to happen at the next time step, including what the driver is likely to do. There exists the potential to have the model running as a "co-driver" or driver assistant, warning the driver when the risk level becomes too high, helping to manage risk by monitoring and managing driver workload, and even trigger automatic system response when the situation is considered unmanageable by the driver.

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Project Web Site
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This project is partially funded by the European Commission

IT for Error Remediation And Trapping Emergencies


www.iterate-project.eu

Figure 4: Leaflet front






IT for Error Remediation And Trapping Emergencies



The Objectives of the ITERATE Project




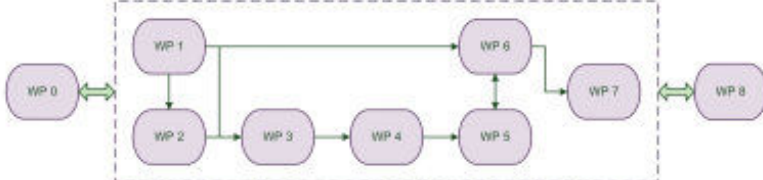
In recent years, a variety of driver support and information management systems have been designed and implemented with the objective of improving the safety as well as the performance of vehicles. While the crucial issues at a technical level have been mostly solved, their consequences on driver activity remains open and needs to be fully explained.

The objective of the ITERATE project is to develop a model of driver behavior and driver interaction that will allow such assessments in a safe and controllable environment.

The Project Structure and Work Packages (WPs)

WPs 1 and 2 will set the framework of the project in terms of model design and system included in the study. WPs 3, 4 and 5 will work on this framework to carry out the experiments needed. WP6 will run in parallel to develop the software needed for UMD (Unified Model of Driver behaviour). WP5 and WP6 will work together to feed the model with the parameters produced from the experiments. In WP7 the model will critically review and compare the simulated UMD with real drivers of cars, train and navigators of ship. WP8 involves dissemination and exploitation of the results and WP0 the management of the project.





Research Outcomes

The project will develop and validate a **Unified Model of Driver behaviour** (UMD) and driver interaction with innovative technologies in emergency situations.

1. The UMD could inform on the scenarios to be used in system evaluation identifying potential problem areas, even if at the prototype stage. In this way the system will be adapted to drivers before being available on the market and will better support them in emergency situations.
3. The UMD will perform risk evaluation prediction. It will perceive the current situation with respect to the driver, vehicle and environment; it will interpret what is going on; and it will predict what is going to happen at the next time step, including what the driver is likely to do.
4. The model will possibly run as a "co-driver" or driver assistant, warning the driver when the risk level becomes too high, helping him to manage risk and workload, and even triggering automatic system response when the situation is considered unmanageable.

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The ITERATE Project Consortium




Figure 5: ITERATE poster

5. EXPLOITATION PLAN

In this section the revised exploitation plan will be presented. The major business opportunities for the domain will be described and detailed. These include market oriented considerations and research priorities.

ITERATE Project will operate following two main targets both of them representing relevant usage of final results. On the one side industrial orientated activities will be more interested in results easily transferable to a market context, gaining profit from them. Academic interests on the other hand will be more oriented in finding results applicable to studies and support research activities of each partner. Moreover, some considerations about a possible exploitation of the results of ITERATE by the European Commission, in terms of new rules and regulations relative to surface transport could be envisaged on the long term.

This chapter will start presenting an analysis of the market related to transportation according to different typologies addressed by the project and together with the partners' specific domain. Afterward, a description of the academic and research activities that will benefit from the ITERATE outcomes will be provided. Finally, general considerations referring to possible EC exploitation are developed.

The position of each partner within the project is also detailed and clarified, focusing on mid and long term strategies and goals will be stated. The purpose of this analysis, at individual partner level, is to:

share among partners a common view of the project expected outcomes;

identify possible priorities of the project;

determine guidelines, strategies, and business model for their achievement.

5.1 Market analysis

Transportation is an actual and important sector and several organisations have evident interests in it. These includes both public departments dedicated to the monitoring of transportation systems, organisation dedicated to the integration of infrastructures and private companies operating in the people and goods transportation domain.

Improvement of quality and competitiveness, is one of the most high priority elements when dealing with market domains. In addition, safety assessment is a topic which is gaining growing attention by safety authorities and general public, and, consequently, all involved organisation (private, industries and academic institutes) are very active in this aspect. Therefore the industrial approach of ITERATE aims at propose to such stakeholders effective solutions derived from the project activities in order to meet these expectations.

5.1.1 Road transportation

High interests are put in the models that ITERATE project is trying to develop by the vehicle industry and the road administration. The vehicle industry is interested in tools that make prototyping and testing quicker and more efficient and thereby also cheaper. For this purpose projects like AIDE, PREVENT and Quadra have been launched. The interest from the road administration comes from the need to test and approve systems that are introduced in our vehicles, primarily from a safety perspective.

5.1.2 *Naval transportation*

Cooperation with shipping companies is also an addressed target. The shipping domain is dominated by large companies for the commercial sector (for example for large cargo ships). Chinese and Russian manufacturers have taken a leading position in the last years on international market. Such companies are demanding for tools able to evaluate the impact of several factors (e. g. stress and fatigue) on mariners and this gap may be filled by the software that will be developed within ITERATE. National regulating authorities may instead have an interest in additional tools to assess the safety of the sector, but note that the legislation is quite complicated.

5.1.3 *Railways transportation*

Finally, for the railway domain ITERATE can equally provide valuable point of insertion. The underlying infrastructures, needed to guarantee the correctness of services, in terms of safety and efficiency, are very complex and interconnected. They are demanding for growing coordination, standardisation and security (of passengers, operators and infrastructures themselves).

The safety of passengers, in particular, is becoming a very sensitive indicator of the level of technology imbedded in the vehicles and transportation means, in support of safe operations and accident avoidance. For these reasons the improvement of the technology and support tools for safe “driving” represents a very valuable market.

Profitable partnership may be established with organisations working in this domain, such as the European Railway Agency (ERA, <http://www.era.europa.eu/>) in order to enhance visibility and business opportunities.

5.2 **Research**

Transportation is a primal element in every aspect of everyday life. Modern commercial activities are strongly connected with efficiency in goods and people moving. With the term efficiency several meanings are implied, that can vary according to the final applicative environment. The most common aspects are:

Speed: minimizing the time spent travelling is a key issue for all the activities that need a fast and constant supplying.

Punctuality: delays in deliveries are a source of additional costs and inefficiencies.

Safety: both people and goods must be assured a high level of safety to avoid them to be damaged. Other than avoid threats to people, damaging goods usually results in money loss.

Comfort: passengers and driver optimal travelling conditions have to be taken into account. In fact not optimal driving condition can lead to a lowering of the driving performances and increase the accident probabilities.

For these purposes exhaustive studies are performed in this domain, aiming to improve the overall functioning. Since the thematic area is a very wide research domain, offering several opportunities of deepening, development and application, academic partners will focus on different aspects. However each of them will be coherent with the general scope of the project and will provide a complementary contribution to its fulfilment.

5.2.1 VTI

VTI has a long history of partnership with companies and industries on developing and evaluating both Information Technology Systems and Driver Support Systems. Particular attention is dedicated to the experimental work and data analyses.

For this reason VTI will develop and run a portable train simulator that will allow for identical experiments on different locations. This will allow for several kinds of studies and analyses. For instance, it will be possible to investigate cultural differences which have been difficult to carry out in the past. The portable simulator will use the train model that VTI uses in its full scale train simulator.

For VTI the ITERATE project will be a catalyst into the train research domain and is a way to highlight the need for HMI research and driver training within the rail domain. The work on the ITERATE-simulator has already led to both new research and market opportunities.

5.2.2 UNIVLEEDS

The Institute for Transport Studies (ITS) at the University of Leeds is one of the world's leading interdisciplinary groups involved in teaching and research in transport studies and is the largest university-based transport teaching and research organisation in Europe. The Institute's aim is to advance the understanding of transport systems throughout the world, by teaching and research activities which develop the necessary skills and best practice in the planning, design, operation, and use of transport systems.

The research of ITS is carried out in collaboration with industry, government and local authorities as well as other schools and departments in the University — the Leeds University Business School, Civil Engineering, Computing, the Institute of Psychological Sciences, Statistics, Geography, Process, Environmental and Materials Engineering, and Electronic and Electrical Engineering. Research in ITS is co-ordinated via research groups in: Safety; Network Modelling; Traffic, Environment and Informatics; Economics and Behavioural Modelling; and Transport Policy and Appraisal.

The work of the Safety Group at ITS aims to improve fundamental understanding of road user behaviour in interactions with the road environment, the vehicle, traffic systems and information systems, and to use that understanding to develop and assess new systems for road user safety. The group is multi-disciplinary, with a wide range of academic and research backgrounds, including psychology, physiology, engineering and social science. A particular focus of the group's work is on the safety and human factors aspects of new technologies, particularly in road transport.

Within the ITERATE project, ITS will design a series of simulator experiments investigating driver's interaction with support systems and collect data by means of the Leeds Driving Simulator, and will develop a portable driving simulator facilitating the interaction between the driver and support systems be observed in different locations/counties. The scenarios developed for the Leeds Driving Simulator will be implemented on the portable driving simulator enabling consistence in data specification between the Leeds Driving Simulator and the portable driving simulator.

5.2.3 UNIVAL

The University of Valenciennes has a long experience on human behaviour modelling and evaluation. The work is done in a pluridisciplinary context involving ergonomic, psychologists, physiologists and engineers. Competences focus on human reliability and risk control, diagnosis principles for control and supervision, human-machine cooperation, learning effect, situation awareness, etc.

The research approach usually aims at developing and/or validating behavioural models after observations on field, analyses of feedback of experience or analyses of experimental data on simulation. Therefore, several technological platforms have been developed: car driving simulator, air traffic control simulator, train control and supervision simulators, and so on.

Such validated models are then good tools to predict, for instance, human erroneous behaviours and to control them or to limit their consequences. This human centred automation process is followed through the ITERATE project from which a generic model of driving tasks will provide the research teams of Valenciennes with supports for improving the design of future onboard automated systems.

5.2.4 KITE

In the research domain KITE has developed a model for simulating driver performances and behaviour called SSDRIVE (Simple Simulator of Driver Performance). This tool aims to represent subjective different driving profiles according to some parameters describing drivers internal status, affecting perception and decision processes and governing its behaviour and determining error generation.

On the safety transportation domain KITE is currently developing, in another EU project, a methodology and a software tool to support Driving Assistance Systems Designer in their work, using a Risk Based Design Approach.

Inside ITERATE project KITE aims to expand its driver model adding new functionalities and increasing its complexity in terms of driver mental representation and dependencies. Other goals to pursue include implementing new interactions as well as designing new scenarios to test.

5.2.5 BGU

In the research domain BGU has three advanced laboratories for experiments related to driver behaviour: driving simulation laboratory, eye tracking laboratory, and 'dome' laboratory for evaluating pedestrian behaviour.

In the driving simulation, eye tracking laboratory, and on-road studies the impact on driving performances of several in-vehicle devices has been evaluated on different age groups of drivers. Such devices include advance brake warning system, in-vehicle emergency displays, cell phones, and navigation systems.

The hazard perception in experienced and novice drivers has also been studied, together with the conspicuity of motorcycle riders for drivers under various conditions and treatments.

BGU hopes to integrate the ITERATE simulation model into its driving simulator in order to evaluate the impact of various technologies – existing and emerging – on safety.

5.2.6 CHALMERS

The Shipping and Marine Technology department is active in different research and education areas, for example in ship work environment and safety.

Ongoing work from ITERATE is expected to influence the research activities in project related to bridge working environment, decision-making on the bridge, fatigue and shipping, etc. It is possible that master theses will be related to activities closely linked to the ITERATE project.

The Department of Shipping and Marine Technology has several different simulators for research and education, and in the navigation simulators an expansion of the data collection and analysis methods is planned within the project.

5.3 Partner Objectives

According to what has been previously described the partners' objectives and expectations towards the project are here summarised in order to determine a common perspective of the directions to follow during the project lifecycle and guidelines during circumstances requiring decision making.

5.3.1 VTI

VTI participates in this project to be able to continue on the work carried out in AIDE and to be able to do cutting edge research in driver modelling. VTI has a long history of working together with the industry on developing and evaluating ITS and driver support systems and will use the results from ITERATE to improve the assessment of these. Of particular interest is to see how the ITERATE model can be implemented in microsimulation programs used at VTI. VTI is further interested in the experimental work in this project which will require coordinated and standardised procedures to succeed, building on previous work in projects such as HASTE. A final objective is to move forward in the train research and train simulator domain.

5.3.2 UNIVLEEDS

One of the research focuses at the Institute for Transport Studies (ITS), University of Leeds is driver behavioural studies.

ITS has led a number of projects on the safety assessment of new transport technologies, including European research on driver distraction from in-vehicle information systems (IVIS), whose major output was a draft test regime for the assessment of the impact of IVIS on driving performance. In terms of systems to enhance safety, the University has pioneered research on intelligent speed adaptation (ISA), in both European and national projects and is leading the UK national research project on ISA. The University was also the only UK partner in the EU-funded AIDE project and was significantly involved in works of driver modelling and experimental design.

The participation of the University of Leeds in the ITERATE project enables the University to continue its contribution to broaden the knowledge on driver's interaction with assistance systems.

5.3.3 UNIVAL

Results addressed by UNIVAL mainly reside in the scholastic and scientific domain and are linked with current objectives of UNIVAL, regional policy and national policy concerning transportation and safety researches.

These objectives include:

Training of Master Science students for such a research,

Training of PhD students with such a research,

ITERATE European project will lead to knowledge improvement, publication and mobility for professors and assistants. PhD thesis students will be associated and motivated by such a research. This project is a challenge for Unival to collaborate with psychologists as an Automatic related to Human Machine System specialist. Moreover, partnerships are developed in order to realize a train/tramway simulator called ILLUSIO. This platform will help to test and validate all kind of urban guided transport driver behaviour by experimentation.

5.3.4 KITE

KITE is active in the market of transport safety. The current clients of Kite are both in the aeronautical and road transportation domains. They cover the whole spectrum of activities carried out in these domains, namely, development of control systems, management of traffic and design of human-machine interfaces. KITE is developing databases, safety assessment tools, and software instruments for preventive accident analyses. Therefore the dimension of the market of Kite is established and there is no aim to augment it.

However, KITE is aiming at expanding the number and range of services and the quality of the existing services/instruments for its clients. The investment that KITE makes in ITERATE is certainly justified in terms for this objective of expansion. In particular, the experience and tools developed in ITERATE represent a very important way forward in the following directions:

The implementation of the knowledge and expertise gained in ITERATE, will offer the possibility to improve the effectiveness of the current instruments owned by KITE (background knowledge) by ensuring a safe link between the data collected from safety critical hardware systems (such as data on accidents, Flight Data Recorders, on board of each airplane, etc.) and the reporting of non-conformity situations, such as the company/police Safety Database System (software developed by for automatic reporting). This represents the area of improvement of the services offered by KITE to its clients.

In aviation as well as road infrastructures and vehicle design, the use of complex IT systems is expanding enormously. Nowadays, they are widely utilised for the management of data, maps, procedures, route plans etc. The drivers/pilots will no longer utilise paper copies or maps, but will bring on board either their lap tops or USB Keys with all necessary data and information for planning their journey/flight and possible contingencies planning. The “drive/fly-by-wire” concept is being expanded to “air/road bag” concept in support to drivers/pilots.

They (drivers/pilots) will be in constant contact with a centralised data management system. It is very important that the security and safety of such complex infrastructures is preserved and granted by adequate instruments and tools. This represents the area of expansion of the services offered by KITE to its clients.

In addition, the possibility to develop adequate training in the area and to improve the safety of transport systems could be another area of exploitation to be coupled to the already existing variety of courses that KITE offers to pilots, maintenance personnel, flight attendants etc. in the area of Human Factors and Safety.

In relation to the tools developed in ITERATE, KITE believes that they will not be directly exploitable. Each client will probably require a specific adaptation. However, the experience and expertise gained in ITERATE will enable the KITE to tackle a new market, in terms of products to be offered to its clients, and to improve the existing number of instruments already implemented, as mentioned above.

Therefore, by participating in ITERATE, KITE is aiming at improving its own background knowledge and expertise and at developing the basic methodological instruments that will enable to improve and ameliorate the variety of tools offered to its clients. In addition to this main return from ITERATE, KITE is hoping to gain also:

Improved visibility on the market of software houses active in the domain of transport, having the possibility to offer a wider set of tools and improved safety instruments.

Improve the variety of its training tools, by coupling Human Factors training with the training in security of the infrastructures.

Finally, to be able to offer more professionally qualified services and therefore be able to apply higher cost of its experts.

5.3.5 BGU

BGU's traffic safety research is aimed at evaluating the effects of technologies, environments and driver variables on safety. Much of the research is commissioned by National agencies, and implementation of the ITERATE model will greatly enhance BGU's ability to provide the government with accurate evaluations of various laws and actions (e.g. prohibition and/or restrictions on phone and text messaging).

5.3.6 CHALMERS

Chalmers University of Technology - Shipping and Maritime Technology aims to use the project results both through research activities performed by researchers and students at the department, through teaching and course activities, and finally through close contacts with shipping manufacturers, industry and legislative organs. All these tasks are linked with bridge environment, working and decision making.

Moreover CHALMERS has close cooperation with shipping companies which could be interested in having tools to evaluate impact of different factors on mariners.

Exploitation in business terms is a result of the dissemination, and particularly the shipping industry is known to be more conservative with new technologies than for example the car industry.

5.3.7 MTOP

MTOP specializes in human factors research, in particular in projects, especially consultancy projects, concerning train drivers behaviour. ITERATE project can contribute to the understanding of such behaviour in complex driving situation, in particular with increased automation and increased driver information load.

The main aim is to integrate the output of the research efforts in previous work, with specification and implementation of new train driver cab systems and training procedures. The model developed in ITERATE will be a useful tool to assess train driver workload in new train cab design.

5.4 An Agenda for Sustainable Future in European Surface Transport Safety

The rate of accidents in Surface Transport Safety has slightly decreased in the last years, but its rate of improvement in terms of fatalities and severe effects on citizens seems to be still far from the EC expectations and plans. There is an obvious need that the number of accidents, their causes and potential means of reduction are developed at EU level in the near future.

5.4.1 The European dimension and other domains of citizen concerns

The European dimension of the problem is obvious. In other domains, primarily the Process and Chemical Industry and Civil Aviation Transport, the need to develop measures for improving and ensuring the achievement minimum standards of safety has been recognised since several years. The EC has issued a number of regulations and Directives oriented to the harmonisation and improvement of safety standards amongst member countries. As an example, the Directive 82/501 and amended over the years (also known as Seveso directive, from the catastrophic event that dramatically brought the issue to the attention of the media and general public) and its improved and modernised revisions (Directive 96/82/EC, Seveso II), as well as the more recent Directive 43/2003, are two critical examples of action implemented at EC level in the domains of Chemical and Civil Aviation. In particular, in the chemical domain, in the light of recent industrial accidents (Toulouse, Baia Mare and Enschede) and studies on carcinogens and substances dangerous for the environment, the Seveso II Directive 96/82/EC was extended by the Directive 2003/105/EC.

These actions have been followed, at a National level, by the development of follow-up laws and regulations to comply with the directives, which have established the adequate infrastructures and bodies dedicated to improving safety and analysis of potential hazards. Moreover, the establishment of European Agencies aimed at sustainable and harmonised safety within EU countries has been the natural follow up of such initiatives.

At EC level, major bodies have been created to sustain the implementation of such directives. In the domain of chemical industries, the Major Accident Hazards Bureau (MAHB) is dedicated to give scientific and technical support to other services of the Commission and also to the European industry to comply with norms. In the domain of aviation, the European Aviation Safety Agency (EASA) has been created which expands over the whole of the European sky space and included more countries than those of the EU.

In the domain of surface transport, the implementation of specific Agencies dedicated to safety has generated the European Rail Agency (ERA) established to provide the EU Member States and the Commission with technical assistance in the fields of railway safety and interoperability. This involves the development and implementation of Technical Specifications for Interoperability and a common approach to questions concerning railway safety. The European Railway Safety Directive, introduced in 2004 (2004/49/EC) supports the development of open and transparent access to the European rail market. The Directive establishes a common regulatory framework designed to ensure that safety does not present a barrier to the establishment of a single market for railways. The key requirements of the Directive have been implemented, as an example, in Great Britain by the Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGS). At the end of 2008 the Railway Safety Directive was amended, and the revised Railway Safety Directive (2008/110/EC) must be transposed into national law by 24 December 2010.

In the domain of maritime transport, the EMSA assists the Commission in preparing EU legislation in the field of maritime safety and prevention of pollution by ships and in the effective implementation of EU legislation on maritime safety and maritime security, in particular by monitoring the overall functioning of the EU port State control regime. Moreover, the EMSA organises training activities, develop technical solutions and provide technical assistance related to the implementation of EU legislation and helps develop a common methodology for investigating maritime accidents and provide data on maritime safety and on pollution by ships and help improve the identification and pursuit of ships making unlawful discharges. In doing so, EMSA closely cooperates with the Member States' maritime services.

The major instruments that the directives associated to chemical industries and civil aviation have originated, in addition to the European bodies such as EASA and MAHB, are the European data

collection systems on accidents and incidents, called MARS (Major Accident Reporting System) and ECCARIS (European Coordination Centre for Accident Reporting System) which are dedicated to the repository of data relative to all occurrences that generate certain consequences. In this way it is hoped that the assessment of root causes and generation of safety recommendations for the national Authorities can occur well before these minor events combine in unfortunate circumstances generating serious accidents.

Such initiatives are being planned but are not yet implemented in the rail and maritime domains.

5.4.2 Potential of ITERATE in contributing to a European initiative on transport safety

In the domain of transport safety the European dimension is obvious, even to a major extent that the domains of chemical industry and aviation. Even though the number of persons involved in a single accident is normally very limited and usually limited, the accidents has been recognised as being the cause of a very high number of deaths every year throughout Europe, as well as the whole world.

The starting condition of such development is the availability the information and data which enable the evaluation of trends, analysis of root causes and assessment of hazards and risk. Data can be collected and analysed only if a valuable and validated model and taxonomy of the involved phenomena and interactions are available. This initial basis of data and information is the overall general essential instrument that harmonises the overall goal of a possible EC initiative in the direction of transport safety. The actual means for improving safety and implementing it in the field are the secondary steps that would naturally follow the availability of the data and information systems and would grant the actual implementation of safety improvements.

The results of the ITERATE project, in particular the availability of a share model of human machine interaction at the level of the drivers and helmsmen involved in an accident, represent the appropriate framework in which to place the collection of data about non-conformity events and incidents and the effort of development of a realistic classification means (a taxonomy and associated database). The domains are mature for the establishment sound and major initiative at EC level for the collection of information at EU level of such type of data and the relative evaluation of hazards.

As a natural follow up of an initiative aimed at establishing the availability of data and information about surface transport safety, a possible directive can be imagined establishing the fundamental principles governing the investigation of related accidents and incidents.

In addition to the fundamental principle that a high general level of safety should be maintained in surface transport safety in Europe and all efforts should be made to reduce the number of accidents and incidents, it has to be firstly stated that the expeditious holding of investigations of accidents and incidents would improve safety in helping to prevent the occurrence of such accidents and incidents.

Investigation of accidents and incidents which have occurred should be carried out by or under the control of an independent body or entity in order to avoid any conflict of interest and any possible involvement in the causes of the occurrences being investigated; the body or entity should be suitably equipped and its tasks could include prevention activities.

6. CONCLUSIONS

The revised strategic and functional plan for Dissemination and Exploitation of the results of ITERATE has been defined. All partners have become acquainted with the proposed approaches and rules for dissemination.

The results obtained so far are encouraging and the premises for valuable and innovative results exist. This is particularly clear from the list of already published material, and the quality of the publications. The HAMT-2010, to be held in the coming period mid 2010 in collaboration with two other EU funded projects in the area of transport safety, has been able to collect qualified participation from US and Japan as well as from European countries. Therefore, it can already be considered a success, at least from the participation viewpoint. The scientific and technical advances and the potential spin off that will result from the venue can only be assessed in the fore coming months. However, the first success indicator (qualified participation) has already been successfully achieved.

The next phases of work and research activity will be focused on the production of the planned products and preparation of new events and dissemination moments, such as the second ITERATE Workshop to be held at the end of the Project. It will be the responsibility of the dissemination management team and project leadership to ensure that the rules and regulations defined in this first deliverable are actually implemented into practice. Their application will very probably lead to successful feedback and visibility to ITERATE.

7. APPENDIX A: DISSEMINATION AND EXPLOITATION QUESTIONNAIRE

7.1 Dissemination

Dissemination activities include:

Participations to events (conferences, workshops, seminars...) in which ITERATE project is mentioned and described.

Publications (journal, magazines, books ...) of papers and articles dealing with ITERATE.

Internal dissemination activities (university courses or seminars, company training courses...) on the basis of ITERATE results

Cross fertilisation, Other EU, or not EU, project related with ITERATE field in which partners are involved and that could be used for a mutual exchange of information/resources.

7.1.1 Events

Events are divided into National and International. Both these categories are further divided according to nationality.

Please list ITERATE related events (conferences, workshops, seminars...) to which you have participated or you plan to participate. For each event fill the following fields

Title of Event:

Name of participant:

Date:

Venue:

Website:

Sponsor / Organiser:

Additional notes:

7.1.2 Publications

Please list magazines, newspapers and journals that are close to ITERATE domain and that can be interested in our work.

Title	Publisher	Website

Papers are divided into two categories: published or accepted and planned paper. For both of them please complete the following voices:

Title:

Authors:

Type: (Name and number of the magazine/newspaper, title of the conference...)

Additional notes:

Published/Accepted papers

Please list ITERATE related papers and articles that you have published or that have already been accepted by publisher

Planned papers

Please list ITERATE related papers and articles that you plan to published

7.1.3 Internal dissemination

Please list ITERATE related internal dissemination activities you plan to perform. For instance universities can organise some courses or internal seminars, while commercial companies can have training courses for their employees.

For each activity please complete the following field:

Title:

Type:

Target:

Timing:

Additional notes:

7.1.4 Cross fertilisation

This section is aimed to list other projects related with ITERATE and from which it could possible to get mutual profit. Projects are divided into two categories: EU and not EU projects.

For each of them please complete the following fields:

Name:

Title:

Topic:

Contact:

e-mail:

Additional notes:

EU Projects

Please list other EU project to which you participate having correlations with ITERATE suitable for information and result exchanges.

Not EU Projects

Please list other not EU, project to which you participate having correlations with ITERATE suitable for information and result exchanges.

7.2 Exploitation

Exploitation section will include an overview of the current status of market and research in the countries of ITERATE partners and will explain how our project will support them. According to the application domain of partners their contributions for the following sections will focus on some aspects. In particular we expect industrial partners to provide major input in the Market Analysis section, while academic ones on the Research section. However we ask you to provide as many inputs as you can.

7.2.1 Market Analysis

Here we focus on the possible applications on the market of the project results and how companies can derive benefit from them. Partners are required to describe the status of their national market for commercial application and industrial activities concerning modelling in transportation. Numbers and graphics are welcome.

Market domain

Please describe the market domains suitable for ITERATE in which you operate:

National market

Please describe the situation of your national markets

7.2.2 Research

Here we focus on the research aspects of our project describing the contribution it will provide. Partners are required to describe new models / technology / methodology they are going to develop and how it is linked to their current activities.

Activities

Please describe here the current activities related to ITERATE you have performed or you are currently performing:

Developing

Please describe here what you are going to develop in ITERATE and how it is linked with the activities previously listed:

7.2.3 Partners objectives

According to what has been previously mentioned what are Partners objectives? I remind that this chapter focus on business issues and these are the motivation and aspects that should be dealt in this section. This section is also used to summarise the motivations for partners to be part of ITERATE consortium.

Please describe your objectives and how you plan to reach inside the project: