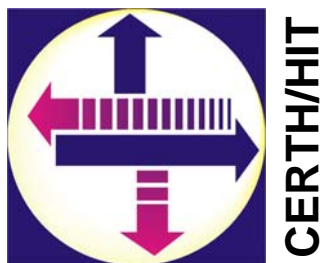




## SAFERIDER Overview

*Issues related to safety of PTWs*

**Stella Nikolaou**  
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**Project Full Name:** Advanced telematics for enhancing the **SAF**ety and comfort of motorcycle **RIDER**s

**Project Acronym:** SAFERIDER

**Overall budget/  
funding:** € 5.370.379/ € 3.500.000

**Start/ end date:** 01/01/2008 - 31/12/2010

**Coordinator:** Dr. Evangelos Bekiaris,  
CERTH/HIT



■ 20 partners from 9 European Countries:



CERTH/HIT Greece



PIAGGIO Italy



UNIMORE Italy



UNIPD Italy



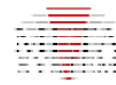
INRETS France



CIDAUT Spain



MIRA United Kingdom



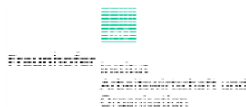
Metasystem Italy



BAST Germany



AvMap Italy



FhG / IAO Germany



UNIFI Italy



CS Switzerland



IBEO Germany



FEMA Belgium



Yamaha Netherlands



PERCRO Italy



NZI Spain



UNITN Italy



ERT France



- HUMANIST NoE reviewed the human-centered design of ITS technologies in several research areas, such as evaluation, modelling, impact, training.
- Workshops, Forums and Training Seminars of HUMANIST addressed the high risk and accident rate of riders.
- SAFERIDER idea came out from several brainstorming sessions between HUMANIST members and external experts on the need to adapt and implement the ITS technologies in PTWs.
- Human-centered design is the focus issue on the implementation of ITS technologies for PTWs, since the riding environment is much more limited and susceptible to accident risk (due to loss of control) than the driving one.



- Riders are an extremely susceptible road user group.
- Motorcycles are very sensitive vehicles and any unexpected change in their motion may lead to loss of control and potentially to an accident.
- Riders' fatalities account for 17,8% of the total number of road accident fatalities in Europe and, compared to a passenger car occupant, a motorcycle rider is 26 times more likely to die in a crash, as riders are among the vulnerable road users.
- ITS technologies implementation in motorcycles for safety and comfort enhancement, is currently lacking behind.
- The implementation of appropriate ITS technologies in PTWs might contribute to the significant enhancement of riders' safety.
- **BUT**: should be designed in a way that will not interfere with the riding task.



- To study the potential of ADAS/IVIS integration on motorcycles for the most crucial functionalities and develop efficient and rider-friendly interfaces and interaction elements for riders comfort and safety.

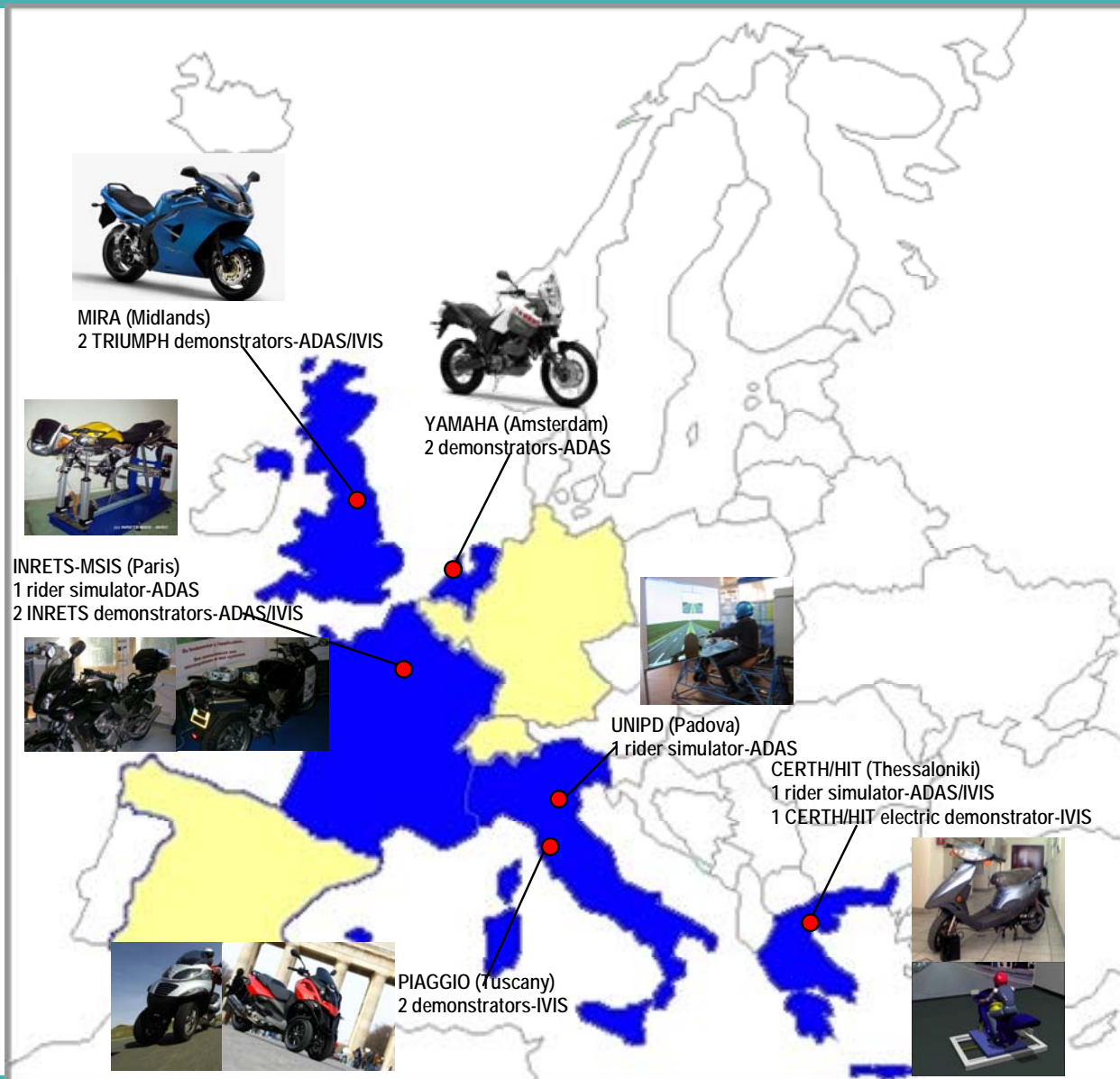


- To develop priority Use Cases for ADAS/IVIS implementation on PTWs.
- To define the functionalities of the prioritised ADAS/IVIS for PTWs of different levels (small, medium, high), based on accident analysis data and naturalistic driving studies.
- To design & develop ADAS/IVIS prototypes for the selected functionalities.
- To design an optimal HMI concept and develop warning/ information provision elements for the developed ADAS/IVIS prototypes, as well as for potential combinations of their output.



- To technically verify the developed ADAS/IVIS and integrate them to different motorcycles and motorcycle simulators.
- To estimate the safety impact and user acceptance of the prototypes in a series of pilot applications.
- To develop a Design Guidelines handbook for ADAS/IVIS integration and HMI design for motorcycles.
- To develop riders training tools for optimal ADAS/IVIS usage.

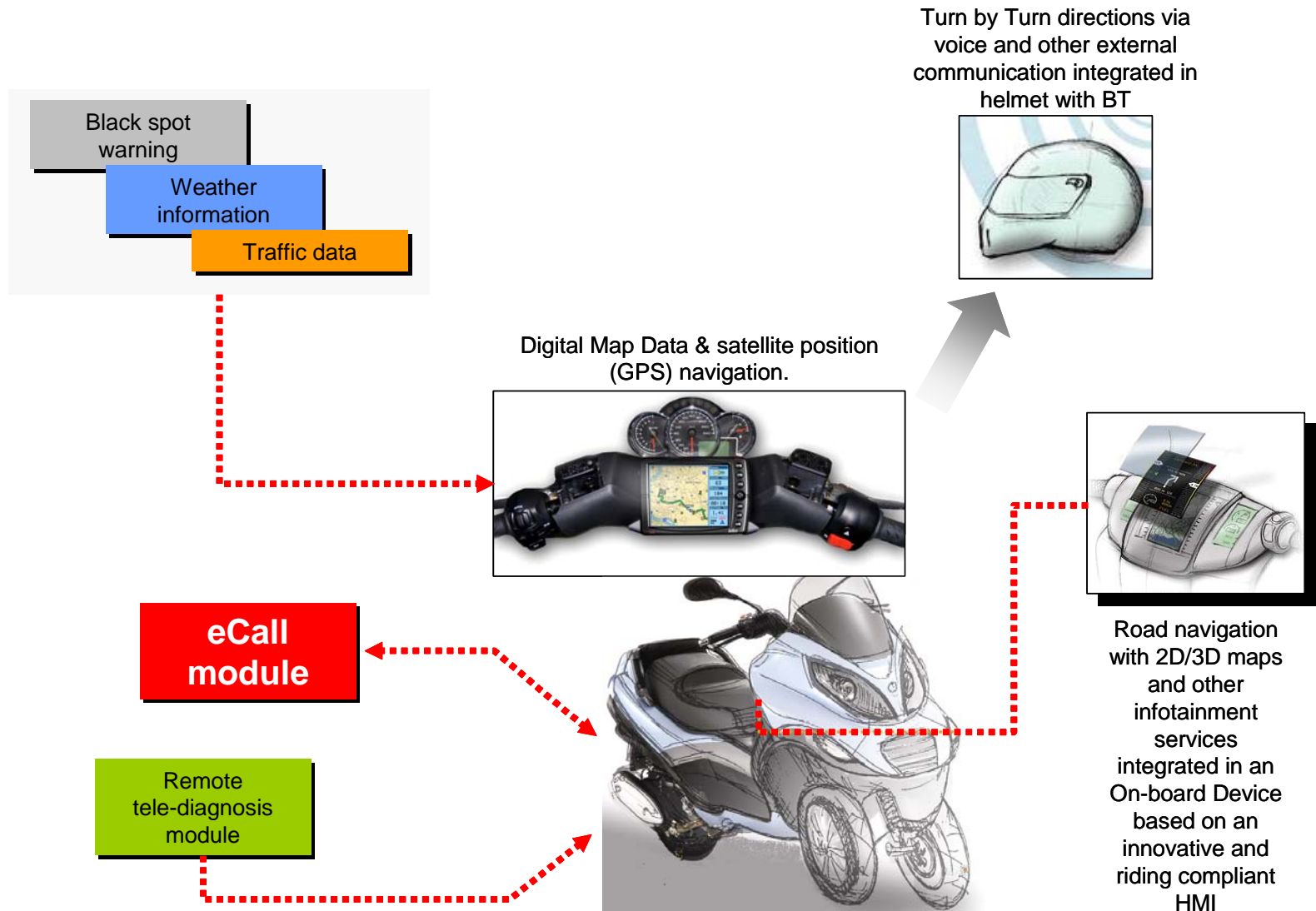
# SAFERIDER Pilot Sites & Prototypes



CERTH/HIT

SAFERIDER

# Integration Example for IVIS





- **Accidentology**
  - TRACE
  - SAFETYNET
  - APROSYS SP4
  - SIM
  - MAIDS
  - PISA
  - SAVE-U
- **Technical**
  - PREVENT - PROFUSION SP: s/w architecture layer
  - WATCHOVER: use cases and obstacle detection sensors
  - PISA: Human-Machine Interaction concepts and elements
  - MYMOSA: Laser scanner
- **Expert Support**
  - OEM's expertise: ACEM
  - Users' expertise: FEMA



## ■ Current Offers

- Accident analysis on existing data of past projects and national databases in relation to identification of scenarios where ADAS/IVIS may have positive impact.
- Benchmarking and ergonomic inspection of selected prototypes.
- Identification of Use Cases in relation to ADAS/IVIS integration on PTWs.

## ■ Current Needs

- Experts review on accident causes (results of accidentology) and scenarios definition.
- Experts opinion on draft Use Cases to be presented in the ITS Congress and 1<sup>st</sup> User Forum on OEM's and users' side respectively.



## ■ SAFERIDER Use Cases Round Table Discussion

- When: Thursday, June 5, 2008, 16h00-17h30
- Where: ITS Europe Congress, Geneva, Switzerland
- Session: Special Interest Session SS24 'ADAS/IVIS for powered-two-wheelers'
- Organiser: CERTH/HIT – ITS Organising Committee

## ■ SAFERIDER 1<sup>st</sup> User Forum Meeting

- When: Wednesday, June 25, 2008, 09h30-13h30
- Where: AutoWorld Brussels Museum, Belgium
- Organiser: FEMA, in conjunction with the Annual MEP Ride (Members of the European Parliament )



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- **SAFERIDER Web site**
  - [www.saferider-eu.org](http://www.saferider-eu.org) (to be launched by March 31, 2008)