



Overview of the Project and First Results

1st MENTORE Expert Workshop

16 November 2007

Antonella Di Fazio

Telespazio

email: antonella.difazio@telespazio.com

Agenda

- ▶ **Welcome (TPZ)**
- ▶ **Overview of the Project and First Results (TPZ)**
- ▶ **Questions and discussion (ALL)**
- ▶ **The MENTORE Observatory (HiTec)**
- ▶ **Questions and discussion (ALL)**
- ▶ **Conclusions and next steps (TPZ and HiTec)**

Contents

- ▶ **Project Overview**
- ▶ **Methodology**
- ▶ **Outcome**
- ▶ **Regulated applications and grouping**
- ▶ **Priorities and common technological platforms**
- ▶ **Way forward and next steps**

Project General Information



- ▶ **MENTORE: iMplemENTation of GNSS tracking & tracing Technologies fOR Eu regulated domains**
- ▶ **GJU 6FP - third Call**
- ▶ **Project duration: 24 Months (starting from July 2007)**
- ▶ **Project Structure: Baseline + 2 pilots**
- ▶ **Project Team including 17 EU Partners (+2 for optional pilots)**



The MENTORE project is managed by the European GNSS Supervisory Authority (GSA) through EU FP6 funds



MENTORE target: the Regulated market



▶ EGNOS and Galileo for Regulated T&T services

- ✓ Commercial and public interests

- ✓ Application domains: transport, freights and goods, animals and persons

▶ Main reference: the Commission's Green Paper on Satellite Navigation Applications

Objective



▶ Definition of a roadmap for GNSS technologies and services in the T&T Regulated market, to:

- ✓ Support the application of regulations already in place
- ✓ Accelerate the process of set-up of regulations presently under development/discussion
- ✓ Trigger the development of new regulations

▶ EU and Member States trends

▶ From the initial introduction of EGNOS, towards Galileo

Main project work drivers

- ▶ Focus: **T&T services**
- ▶ **Technological assets** (heritage of the Consortium partners) capable to implement different services through **common architecture elements**
- ▶ **“Low-cost preoperative” services**
- ▶ **Standardisation**
- ▶ Flexibility to be “in-line” with **evolving scenarios**: Galileo, Regulations, Projects, User and Institution needs (National and EU),...
- ▶ Combination and **integration of “partners” basic competences and heritages**
- ▶ **Avoiding repetitions** of what already in progress and under investigation in other projects
- ▶ **Coordination and cross-fertilisation with related experiences**

Consortium



T&T community value chain:

- ▶ End-user/ stakeholders
- ▶ User associations
- ▶ Regulatory bodies
- ▶ Manufacturers, operators, technology developers
- ▶ Service providers
- ▶ Competent authorities and Institutions
- ▶ Market experts, and...
- ▶ ...Including “very-specific” knowledge (University of Parma and ISPRO)
- ▶ ...External expertises to avoid big Consortium while guaranteeing all necessary competencies/heritages (Observatory and Pilots)

Methodology



1. Analysis
2. Classification & ranking
3. Implementation in complete “feasibility cases”
4. Synthesis: actions and plan definition

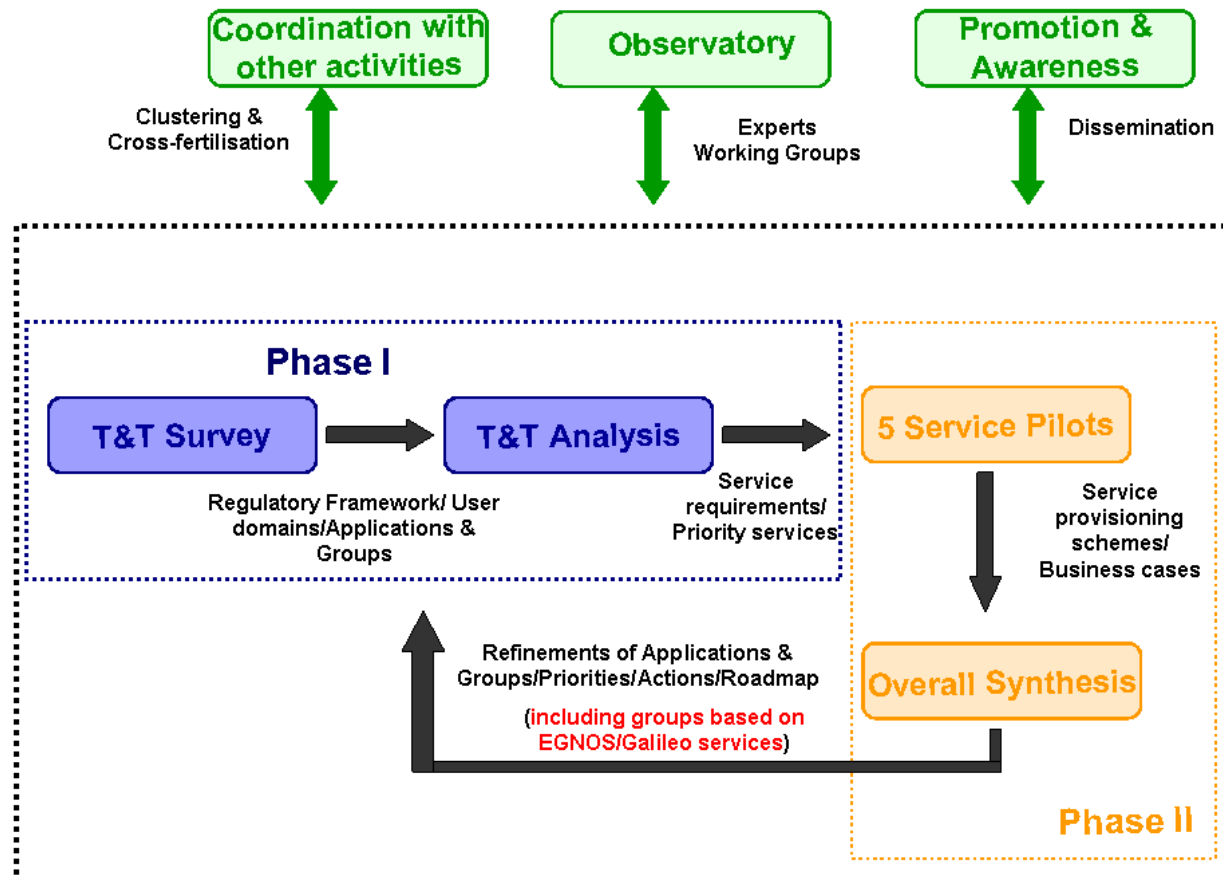
Implementation of 5 pilots of T&T regulated services, potentially representing a “class” of services (“sister services”):

- ✓ Fissile/Nuclear/Radioactive materials (extension to sensitive materials)
- ✓ Livestock (extension to special classes of road vehicles)
- ✓ Social interests (extension to regulated personal mobility)...
- ✓ ...Two additional cases to be selected during the project

Methodology



- ▶ T&T (no HPPS or route guidance, etc.)
- ▶ Regulation or Recommendation or policy/best practise
- ▶ Heritages
- ▶ GP



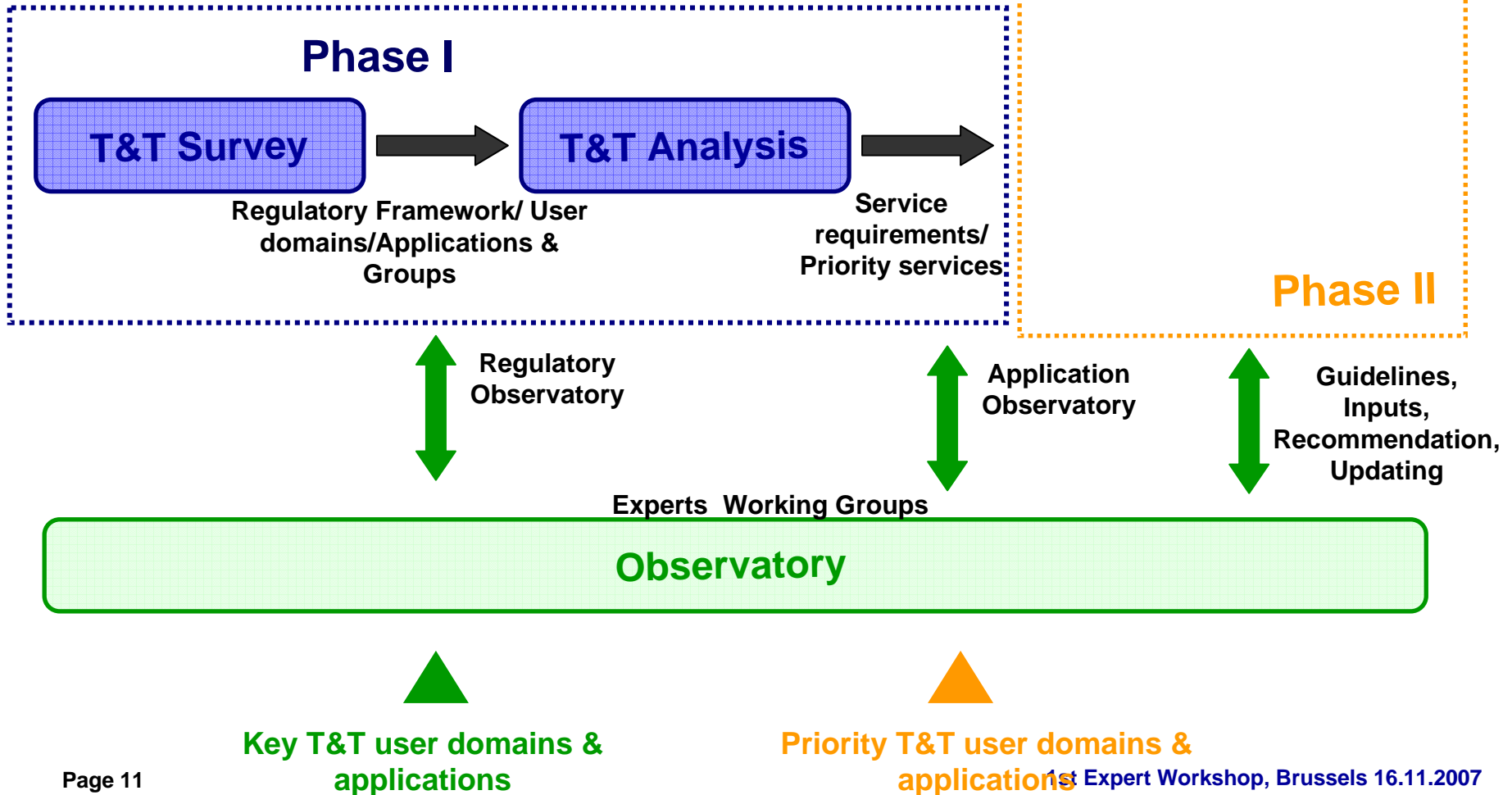
Oriented to Regulators and users

Oriented to Technology and Service Providers

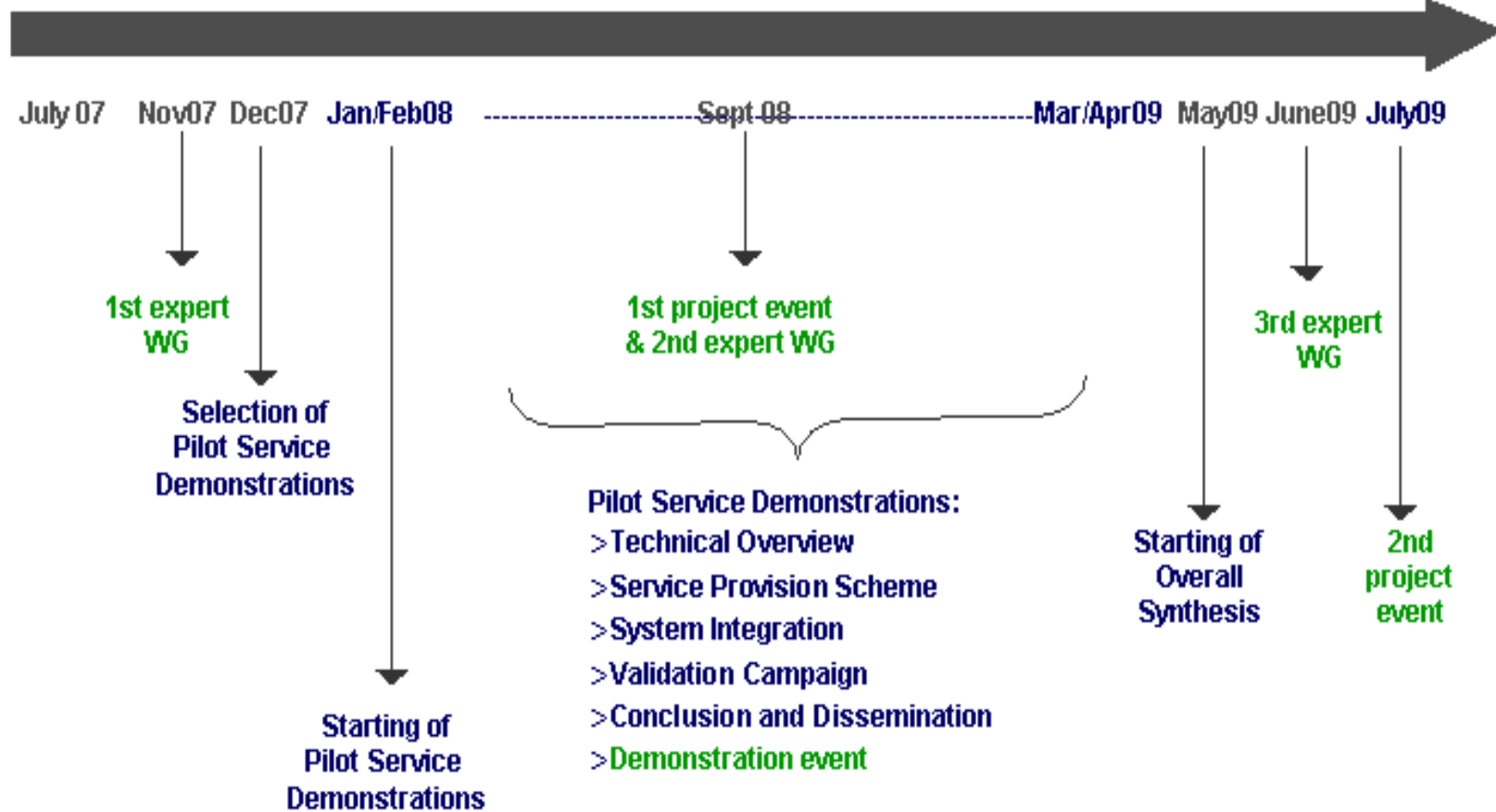


Focus: Regulations & user domains + operation scenarios + existing solutions (GPS-based or not) + analysis whether GPS/existing technologies fulfil operation needs

Focus: User requirements + State of the art (looking to EGNOS/Galileo) + Service Platforms + Markets



Timeline



Criteria for T&T services ranking



- ▶ Interesting **class of services/common platforms**
- ▶ **Maturity of the laws and of the market readiness** (driven by needs)
- ▶ Maturity of **technology** → low-cost services
- ▶ Economical **benefits** & “social interests”
- ▶ **Not replication**
- ▶ EGNOS (and in particular the **full Galileo features**) **differentiators**
- ▶ Capability to set-up a **complete service provision scheme**, thus including main actors of the chain (ex. Rail nuclear movement)
- ▶ In line with **priorities** set by the Green Paper and EGNOS/Galileo evolving scenarios
- ▶ ...**others** to be defined by experts

Outcomes



A first operational plan for the set-up of a EU policy for T&T
Regulated services:

- > To **ease the introduction of GNSS**
- > To give **feedbacks on present definition of EGNOS/Galileo** business models, service provision schemes and commercialisation strategy
- > To **support the EU GNSS market**, and...
- > ...possibly adjacent markets
- > To possibly outline **recommendations and guidelines for the GNSS T&T use towards regulatory process** (refinement of present regulations, driving and/or triggering the establishment of new regulations,...)

Inputs to slow processes!

Pilot services list



Baseline

Number	Title	Regulated Service	Application Group	Pilot Leader	Pilot Team	Remark
Baseline Pilot Services						
01	Tracking and tracing services for fissile and radioactive/nuclear transport (Road)	Fissile Material Transport by road	Dangerous goods transport	TPZ	AAS Elsacom COTECNA MIITT Telespazio-France	10 k€ provision for MIT (Transport Operator specialised in fissile shipment)
02	Tracking And Tracing Services for Livestock management	Transportation of live animals	Freight Trade /Multimodal Transport	GMV	ERF Hitec UNIPR IBERTEC	50 k€ for a livestock (pig) transport operator
03	Tracking and tracing services for Dependant Person Assistant	Public Interest	Personal Mobility	AAS	JP GEO LAIPAC	30 k€ provision for AXA Assistance (call centre)
Optional Pilot Services						
04	Tracking and tracing services for Border Control	Cross Border/ Supply Chain Security	Freight Trade /Multimodal Transport	COTECNA	AAS TPZ I-BO ITC	

Pilot services list



Number	Title	Regulated Service	Application Group	Pilot Leader	Pilot Team		Remark
05	Tracking and tracing services for Urban Distribution/City Logistics	City Logistics/ Urban Traffic Planning	Freight Trade /Multimodal Transport	TPZ	AAS I-BO Elsacom		
06	Tracking and tracing services for Law Enforcement/Custom Clearance	Customs Clearance/ E-Customs	Freight Trade /Multimodal Transport	TPZ	COTECNA I-BO ITC Elsacom		60 k€ provision for Customs and Insurances
07	Tracking and tracing services for Food Chain	Food Traceability/ Cold Chain	Freight Trade /Multimodal Transport	TPZ	COTECNA I-BO ITC Elsacom		10 k€ provision for perishable goods Transport Operator
08	Tracking and tracing services for Lone Worker protection	Public Interest	Personal Mobility	AAS	JP GEO LAIPAC		30 k€ provision for Suez Group (staff and support centre)
09	Tracking And Tracing Services for Fisheries & Fishing Inspection	Fisheries Tracking and Inspection	Specific Transport Sector	GMV	ERF Telespazio-France Elsacom		45 k€ provision for Spanish Secretariat of Fishing

Pilot services list



Number	Title	Regulated Service	Application Group	Pilot Leader	Pilot Team	Remark
10	Tracking and tracing services for Inland Waterways	Harmonised River Information Services (RIS) on Inland Waterways	Traffic Management	Via donau	TPZ Hitec Telespazio-France	
11	Tracking and tracing services for fissile and radioactive/nuclear transport (Road)	Fissile Material Transport by road	Dangerous goods transport	TPZ	RFI TI Elsacom Telespazio-France	
12	Tracking and tracing services for Rail Infrastructure Charging	Rail Infrastructure Use Tracing/Charging	Infrastructure Use Tracing/Charging	TPZ	RFI Elsacom Telespazio-France	30 k€ provision for Rail Undertaking to be involved during the pilot

Regulated applications and grouping



Regulatory survey and census: “Regulated T&T user domains” and applications

- ▶ T&T and Green Paper umbrella
- ▶ In user domain, applications are identified and analysed for the Regulatory framework:
 - ✓ **Regulations (compulsory)**
 - ✓ **Recommendations (not compulsory)**
 - ✓ **Policies (best practises)**
- ▶ **Three cases** are considered:
 - ✓ GNSS tracking is specifically mentioned (compulsory or recommended)
 - ✓ Traceability is mentioned without mentioning the technology (and GNSS)
 - ✓ Traceability can be an “enabler” for the considered regulation/recommendation/policy

Regulated applications and grouping



- ▶ **Regulated by compulsory laws:**
 - > **GNSS T&T** Pilot 2: Livestock transport
 - > **No specific technology**
 - > **T&T enabler** Pilot 1: Radioactive material transport

- ▶ **Recommended:**
 - > **GNSS T&T**
 - > **No specific technology**
 - > **T&T enabler**

- ▶ **Best practises/Policies:**
 - > **GNSS T&T**
 - > **No specific technology**
 - > **T&T enabler**

- ▶ **“To do”, trends and practical local/national experiences:**
 - > **Based on GNSS T&T** Pilot 3: Dependant persons assistance
 - > **GNSS (EGNOS/Galileo) has opportunities**

Regulated applications and grouping



APPLICATION	USER DOMAIN(S)									USER PROFILES				
	Road	Maritime	Rail	Civil Aviation	Inland	Freight Transport	Agriculture	Person Tracking	Civil Protection	Mass Market User	Business	3rd Party/Insurer	Authority	Infrastructure
Road Charging	X									X	X		X	X
Heavy Good Vehicles	X					X					X		X	X
Livestock	X					X	X				X		X	
Pay per use insurance	X									X	X	X	X	
Travel and Traffic Information (TTI)	X									X	X		X	X
Nuclear Transport	X	X	X			X					X	X	X	X
Dangerous Goods	X	X	X		X	X					X	X	X	X
Food tracking	X	X	X			X	X				X	X	X	
(Automotive) e-call	X								X	X	X	X	X	
Congestion charging/Limited Traffic Zones (LTZ)	X									X	X	X	X	X
City logistics	X										X		X	
VTM/AIS (Vessel Traffic Management / Automatic Identification System)											X		X	X
SAR (Search & Rescue)		X											X	
Fishing vessels		X									X		X	
Short sea shipping/Freight transport		X				X					X		X	X
Maritime transport security		X									X		X	X
Rail Interoperability and Infrastructure Charging			X								X			X
ADS - Automatic Dependent Surveillance				X							X		X	
A-SMGCS (Advanced - Surface Movement Guidance and Control Systems)				X							X		X	X
Inland Waterways Navigation and guidance support					X						X			X
Inland Waterways Traffic management					X								X	X
Inland Waterways Tracking and surveillance					X						X		X	
AEO (Authorized Economic Operator)/e-Customs						X					X		X	X
Container tracking security						X			X		X	X	X	X
E-call/emergency services								X	X	X	X	X	X	
Offender tracking								X					X	
Prisoner tracking								X					X	
Lone worker tracking								X			X	X		
Value/sensitive/"double use" goods tracking	X	X	X		X	X					X	X	X	
Animal Tracking							X		X				X	
Blood/Organs tracking						X			X		X		X	
Medical products tracking						X					X		X	
S&R mobile assets tracking	X										X	X		
Car sharing	X									X	X		X	
Regulated fleets in urban areas	X					X					X		X	X
Humanitarian Aid Tracking									X				X	
Ambulance Tracking	X								X		X		X	
Kids Tracking								X		X	X	X		

Priorities → Key applications
→ Pilots selection

Criteria for selection
 1) Each of them can be provided by a technological platform "common" to other "sister" applications
 2) those applications already covered by other projects non selected

Key application selection: criteria

▶ Primary social interests and needs:

- > Safety and security (persons and goods)
- > Welfare and quality of life
- > Quality of transport

▶ EGNOS/Galileo possible differentiators

▶ Preliminary inputs for the roadmap/overall synthesis:

- > Need to re-organise/re-structure existing laws + coordination for new laws establishment
- > In most cases:
 - ✓ From local/National needs to EU
 - ✓ Member States ratification is different state by state

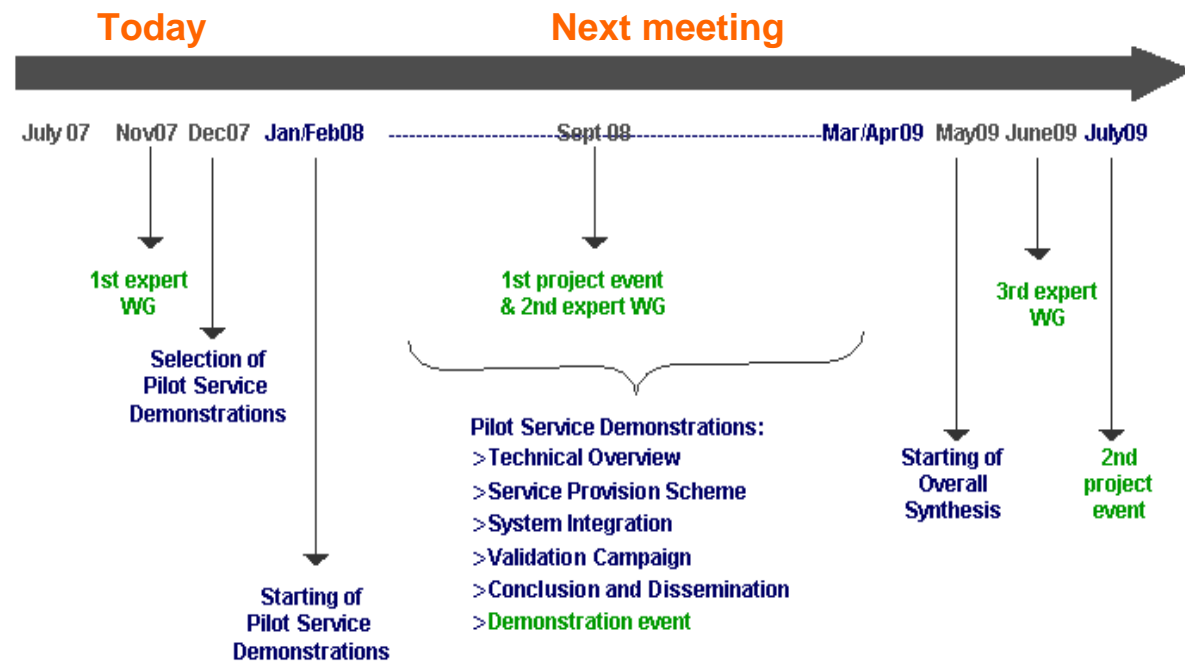
MENTORE expectations from today WG



- ▶ **Establish the WG**
- ▶ **Experts feedbacks on work done so far**
- ▶ **Gaps identification**
- ▶ **Support to priorities identification → Pilots selection**
- ▶ **Suggestions and recommendations**
- ▶ **Contributions for the on-going activities:**
 - ✓ User needs
 - ✓ Technology state-of-the-art
 - ✓ Common platforms
 - ✓ Market and CBA
- ▶ ...

Way forward and next steps

- ▶ Elaboration of WG feedbacks
- ▶ Consolidation of service bundling/common platforms
- ▶ CBA
- ▶ Pilots selection, and
- ▶ Starting





Thank You

www.gnsstracking.eu