



A Euro-Mediterranean Regional Plan for GNSS

MEdiTerranean Introduction of GNSS Services

Euro-Mediterranean Transport Forum - 9th Meeting

Brussels 12 December 2008

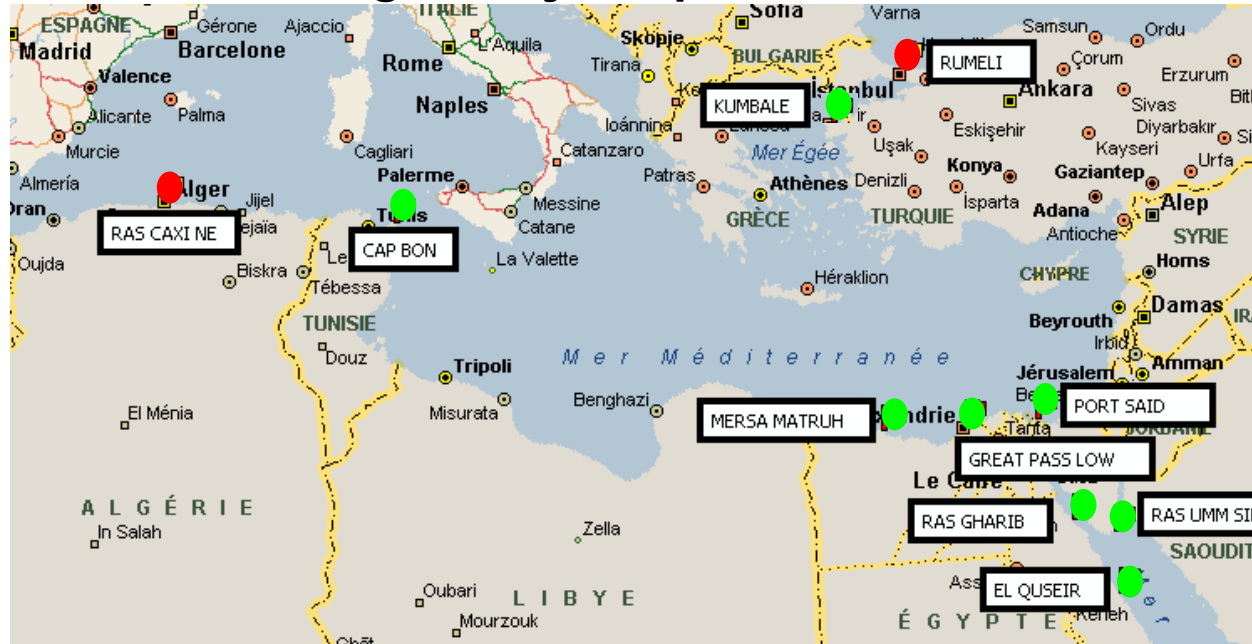
Outline

- ▶ State of play for GNSS in MEDA
- ▶ Opportunities for GNSS in MEDA in the next decade
- ▶ Key actions
- ▶ Initial implementation and next steps



State of play - GNSS infrastructures

- ▶ DGPS stations to support maritime navigation (and also for geodesy, maps, land uses)



February 2008 :

Operational

Not-operational

**Others are in plan
(ex. Turkey)**

- ▶ 7 EGNOS RIMs in MEDA

December 2008:

Operational

In plan



State of play - GNSS services markets (regulated)



▶ Maritime:

National-basis regulations, in the frame of IMO

GNSS services delivered by Maritime Authorities (DGPS stations)

▶ Civil Aviation:

Different Conference/Commissions, ICAO Regions and Regional Groups

ICAO Regional Groups responsible for strategies for GNSS

Each State responsible for implementation

	Civil Aviation Conference/Commission		ICAO Region		Regional Group (planning and implementation)		
	ECAC	ACAC	EUR/NAT	MID	MIDANPIRG	APIRG	EANPG
Algeria							
Egypt							
Israel							
Jordan							
Lebanon							
Morocco							
Pal. Authority							
Syria							
Tunisia							
Turkey							

State of play - GNSS services markets (commercial)

- ▶ **GIS/Precise Positioning (Geodesy/Mapping/Hydrography/Survey):**

 - Regional services provided by global SatNav

 - Local services provided by local entities

- ▶ **Land/transport/remote asset tracking:**

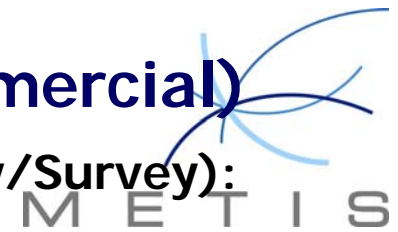
 - Local solutions

 - Regional services provided by global SatCom

- ▶ **LBS:**

 - Local solution providers selling contents (traffic info, PoI, tlc)

 - Emerging markets (slowing down in some countries)



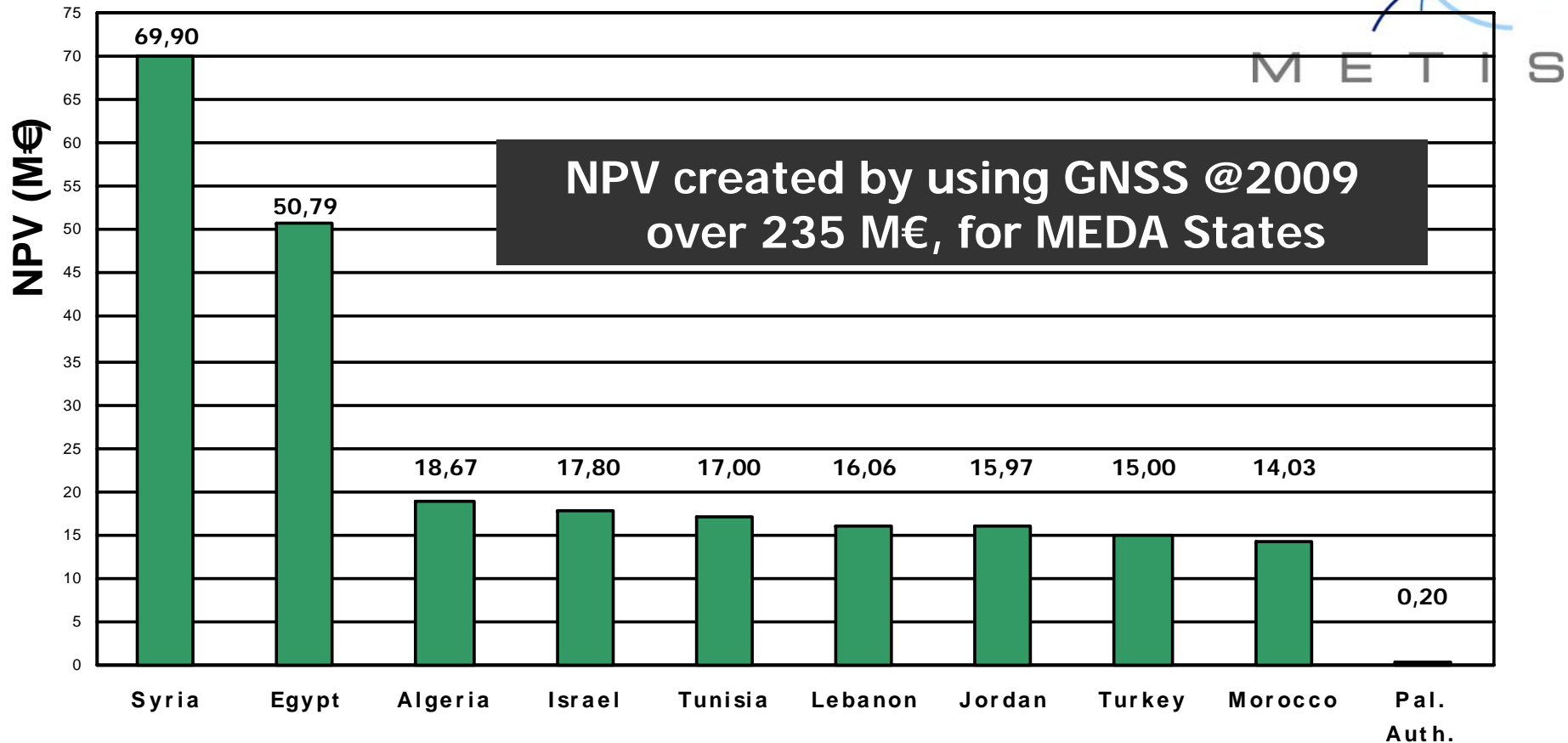
Opportunities for GNSS/EGNOS (decade 2009-2019)



- ▶ Priority markets
- ▶ Key markets (after 2019)
- ▶ Number of users @ 2019

	Civil Aviation (commercial flights and general aviation)	Maritime safety (crossing vessels)	Maritime freight (containers)	Road (trucks)	Rail (freight wagons)	Inland waterways	LBS	GIS / Precise Positioning
Algeria	307.800	17.680	1.820					
Egypt	576.000	70.100	577.280					
Israel	315.500	7.100	10.050					
Jordan	10.200	3.800	912	141.000				
Lebanon	70.800	1.800	430	53.300				
Morocco	347.300	31.200	8.600	19.800	4.760			
Pal. Authority	10.200	3.800	30					
Syria	58.400	3.800	460	785.000				
Tunisia	22.800	13.800	1.620					
Turkey	811.600	39.200	31.220		15.900			
Total	2.530.600	192.280	632.422	999.100	20.660			
Application/ EGNOS services	APV/SoL	Safety/SoL	OS+CS	OS+CS	OS+CS	SoL	OS+CS	OS+CS

Benefits created by using EGNOS over the 10 years



- ▶ Quantification of economical and social benefits for each MEDA State
- ▶ Key drivers: socio-economic status, market size and introduction time
- ▶ Fundamental strategic benefits (participation to the European GNSS, harmonisation with EU policies, preparation to Galileo)

Institutions' actions for enabling GNSS services (1/2)



Joint EU-MEDA Institutions' actions:

- ▶ **EGNOS service coverage**
- ▶ **GNSS (EGNOS/Galileo) policy**
 - Commitment "in the short-term for the long-term"
 - Regulatory framework towards a EU-MEDA harmonisation
- ▶ **Research effort for technology and service standardisation**
- ▶ **Promotion & Training**

Institutions' actions for enabling GNSS services (2/2)

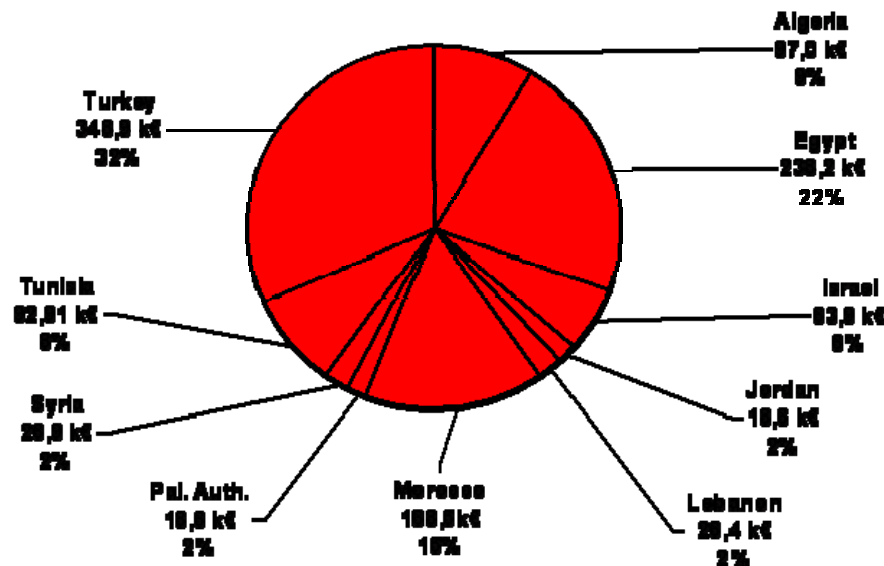


MEDA countries Institutions' actions:

- ▶ Creation of market favourable conditions
- ▶ Incentives programmes
- ▶ Support the GNSS policy, especially in priority markets (Civil Aviation and Maritime and freight transport)
- ▶ Appropriate regulatory framework development
- ▶ Investment in terms of economic and human resources

Establishment of permanent GNSS team and appointment of a National Delegate

Participation to EGNOS service costs



Maximum amount of EGNOS service costs for MEDA: 1,1 M€/year

Cost allocation per country tuned on the safety-of-life markets demand

Initial implementation: The METIS project



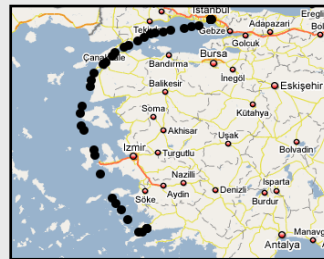
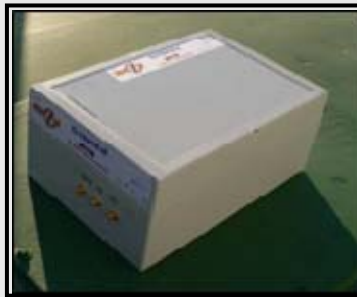
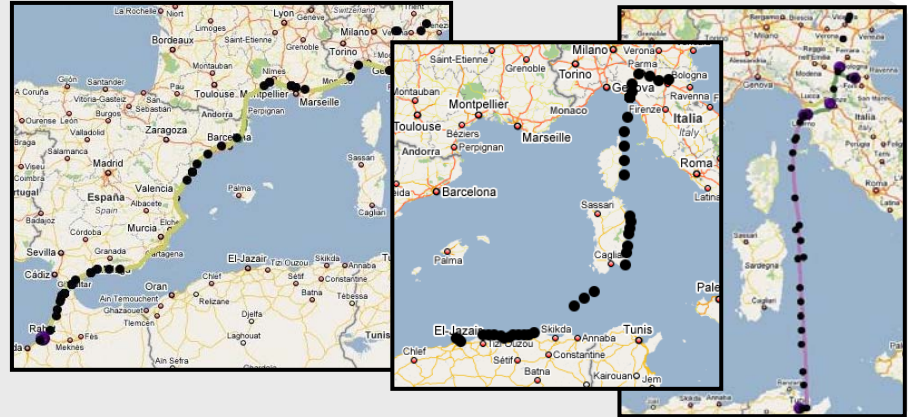
	Countries	To be done in 2009	Recommendations for EU & MEDA effort
Participants in	EU and 6 MEDA countries (Mor/Tn/Tr/Al/Pa/Is)	Continue	Involvement of all MEDA countries
GNSS Regional Plan	10 MEDA countries	Under finalisation	Follow-up
2 Workshops	2 MEDA countries (Egy/Mor)	Completed	Follow-up
GEMCO	Egypt		EC/GSA/MEDA to enhance
Decision Makers	10 MEDA countries	MEDA support to finalise	To be involved in follow-up
Network of stakeholders	420 stakeholders/10 MEDA countries	Continue	Backbone for follow-up
Network of Euro-Med projects	Euro-Med Transport Project, MEDIGATE, Euro-Med Info Centre, HERIMED	Continue	Clustering and synergies
9 Demos	6 countries (Mor/Tn/Tr/Al/Pa/Is)	Start 2 Demos, 1 on going	Customised demo plan Cover all MEDA countries
2 Regional trainings	2 MEDA countries (Egy/Mor)	2 Demo trainings	GNSS team in MEDA countries Customised training plan/Trainings in EU/Demos
12 Promotion events	5 MEDA countries (Egy/Mor/Tn/Tr/Sy)	Continue	Targetted promotion plan

Next promotion event: Istanbul 29.01.2009

Initial implementation: The METIS demonstrations



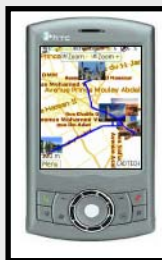
Freight multimodal transport



Maritime vessel monitoring



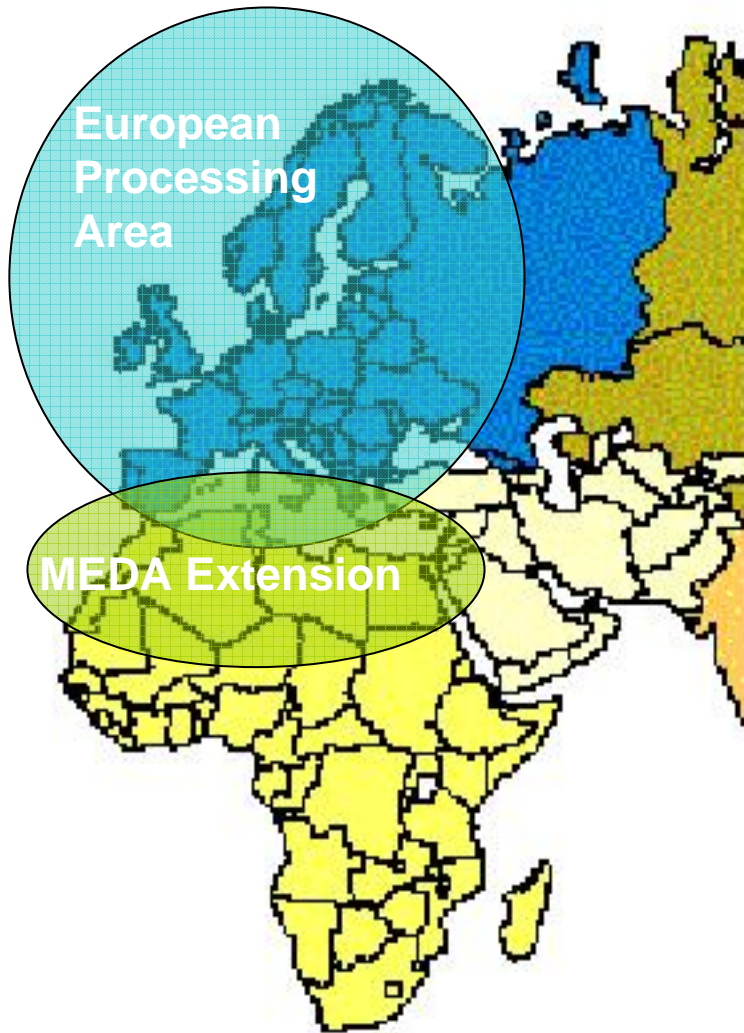
Rail fleet management



LBS eTourism

September 2009

Initial implementation: EGNOS service extension 1/2



Key dates for EGNOS in Europe:

- ▶ 2009: EC to become owner of the system
- ▶ March 2009: System and Operator final qualification
- ▶ Q109: EDAS test
- ▶ Dec 2009: EGNOS SP certification for SoL
- ▶ Mid 2010: First EGNOS LPV procedures in ECAC









Key dates for EGNOS in MEDA:

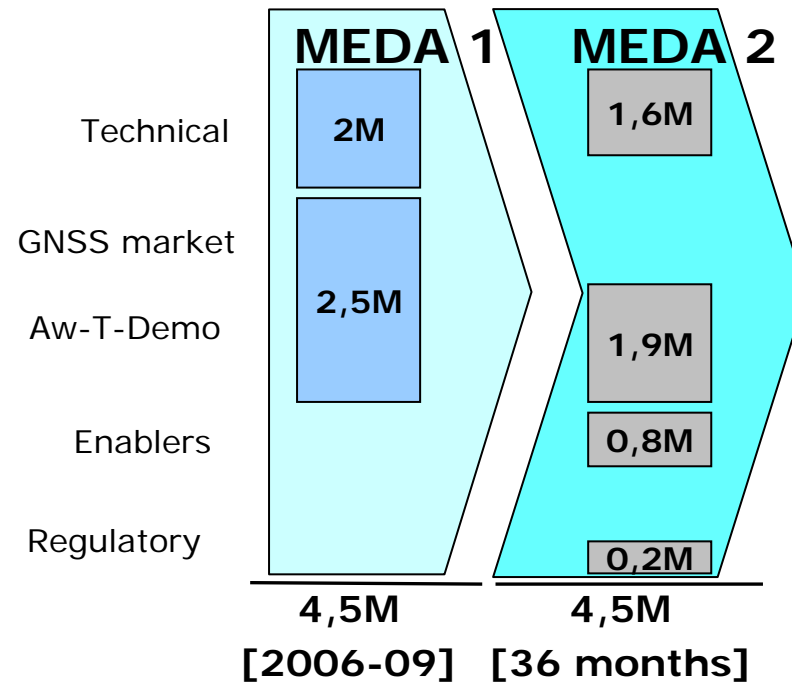
- ▶ Present status (RIMS):
 - Djerba, Golbasi operational
 - Agadir, Alexandria operational in 2009
 - Tel Aviv, Tamanarasset, to be finalized
 - Abu Simbel work-in-progress
- ▶ Timing for service operational 2011

Initial implementation: EGNOS service extension 2/2



EGNOS is relevant to many user sectors

			
	General Aviation	Mobile LBS	Road navigation
			
Road charging & safety critical	Professional	Maritime & multi modal	Rail
25M		40M	
[First Call FP7]		[Second Call FP7]	



MEDA partners can join EU consortia



Thank you

METIS project

www.aui.ma/GNSS/metis

Back-up



I S

	Implemented by METIS
Participants	EU-MEDA Core Team: 7 EU industries, 1 EU end-user, 1 EU ANSP, 6 MEDA research institutes, 1 MEDA end-user, 3 MEDA industries, 2 MEDA ANSPs + tens of MEDA Authorities and end-users involved in demonstrations, trainings and events
GNSS Regional Plan	Regional Plan for GNSS services exploitation in the ten MEDA countries
Workshops	2 workshops/2 countries for the GNSS Regional Plan consultation
GEMCO	Support to Galileo Euro-Med Cooperation Office start-up
Decision Makers	Initial list of National Delegates for GNSS
Network of stakeholders	420 PoCs interested to GNSS identified and involved (Agriculture, Civil Aviation, Defence, Institutions, Maritime, Rail, Freight Transport, Science, Space, Survey/Geodetic, Research and Technology)
Network of clustered projects	Euro-Med Transport Project, MEDIGATE, Euro-Med Info Centre, HERIMED
Demonstrations	7 Demonstrations/6 countries
Regional Trainings	2 Trainings/2 countries (40 + 40 trainees)
Promotion events	6 organised by METIS in MEDA/different markets 10 participation in MEDA 7 participation in EU