



The Galileo Programme and the Return of Public Investment

Carlo des Dorides

Head of Programmes Department

European GNSS Supervisory Authority

WORKSHOP SULLA FINANZA PER L'INNOVAZIONE, Moncalieri, 30-31
October, 2008

European GNSS Supervisory Authority



Table of Content

- ◆ Galileo/EGNOS Program Status
- ◆ Galileo Competitive Positioning
- ◆ Galileo Value Creation
- ◆ Conclusion



Galileo Program Status (1/2)

- ◆ Formal announcement about termination of the Galileo Concession tendering process (Official Journal, September 2007)
- ◆ Transport Council/ ECOFIN approval on availability of funds – 3,4 B€ and Program Governance (November 2007)
- ◆ GNSS Regulation approved by the Council (April 2008)
- ◆ Start of the Galileo tendering procedure (publication on the Official Journal) on 1st July 2008



Galileo Program Status (2/2)

- ◆ Contract awarding for the six major segments is actually envisaged by mid 2009
- ◆ Full Operation Capability is expected by end 2013/2014
- ◆ EGNOS Program time-plan :
 - ESA ARTES 9 conclusion on 31st March 2009 and corresponding start of operational phase
 - Contract award to the identified operator is envisaged by end 2008/early 2009
 - SoL certification in accordance to Single European Sky Regulations is expected by end 2009



Galileo Competitive Positioning (1/2)

	OS	SOL	SAR	PRS	CS	Signal Availability
Galileo	✓	✓	✓	✓	✓	Five signals offer expected to become the widest available
GPS	✓	(✓)		✓		No SAR signal planned within GPSIII and free of charge signal
GLON	✓	?		✓		2 signals: standard precision and encrypted high precision
COMP	✓	?		✓		Current Beidou signal is military only, since 2008 COMPASS will offer OS



Galileo Competitive Positioning (2/2)

Non-satellite based

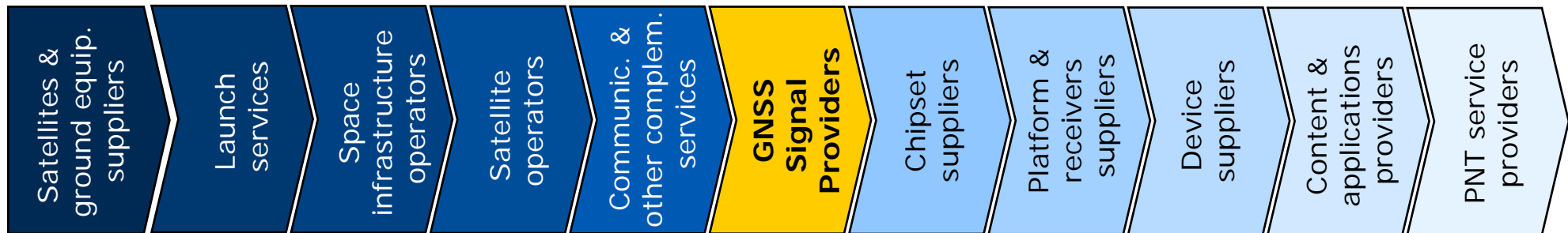
- **Wi-Fi may represent a potential substitute or complementary solution to GNSS (cold start less than 1s and 20-30 m accuracy)**
- **Integration with telecom network provider (e911 service) and digital map providers (Skyhook provides for street navigation, geocoding and location database)**
- **Cell-site technology for mobile positioning (MyLocation by GoogleMaps)**

Still limited accuracy but quick start

Better coverage in urban areas, including indoor, independent by GPS



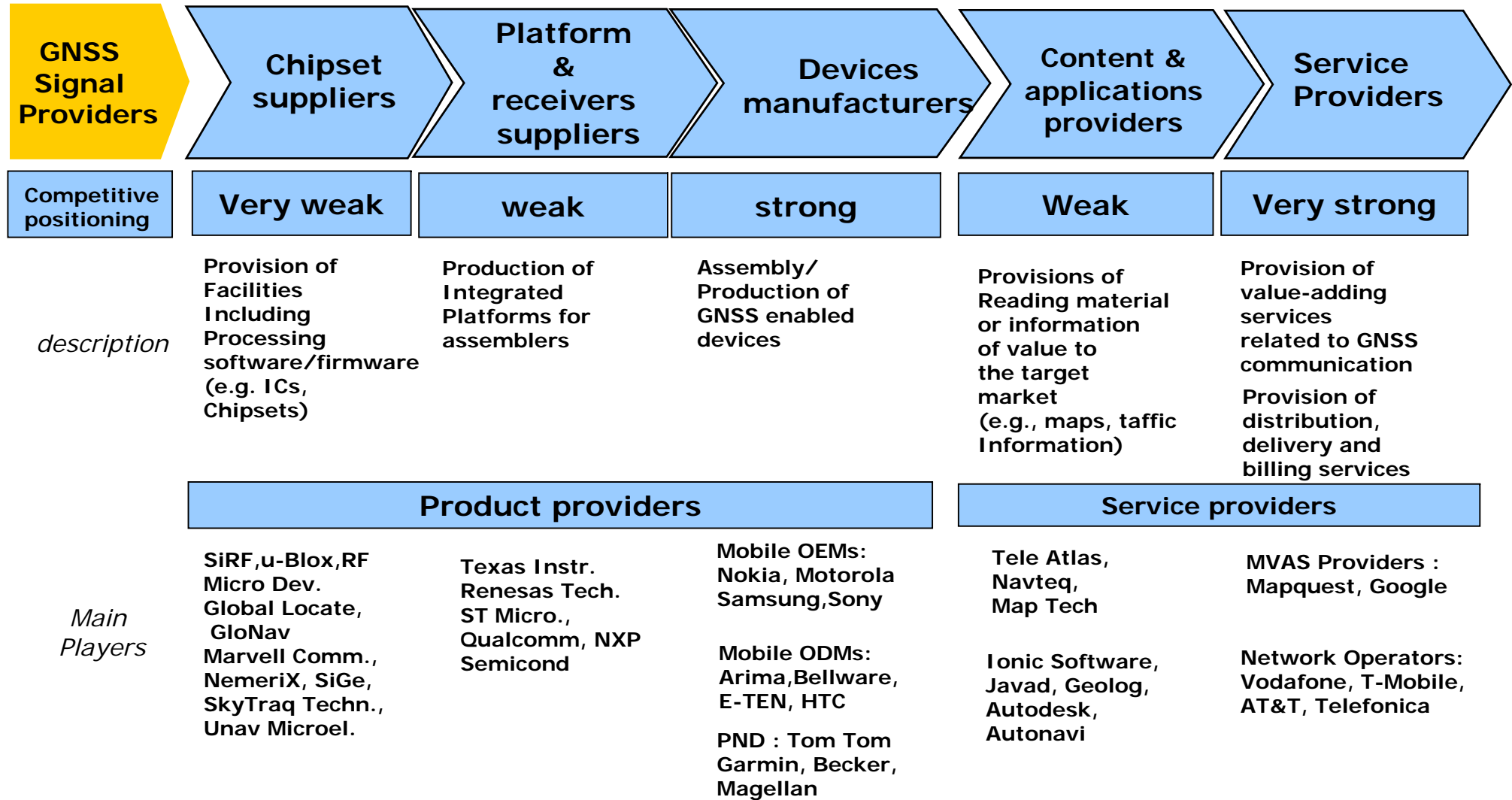
Galileo Value Creation (1/5)



The GALILEO VALUE CHAIN



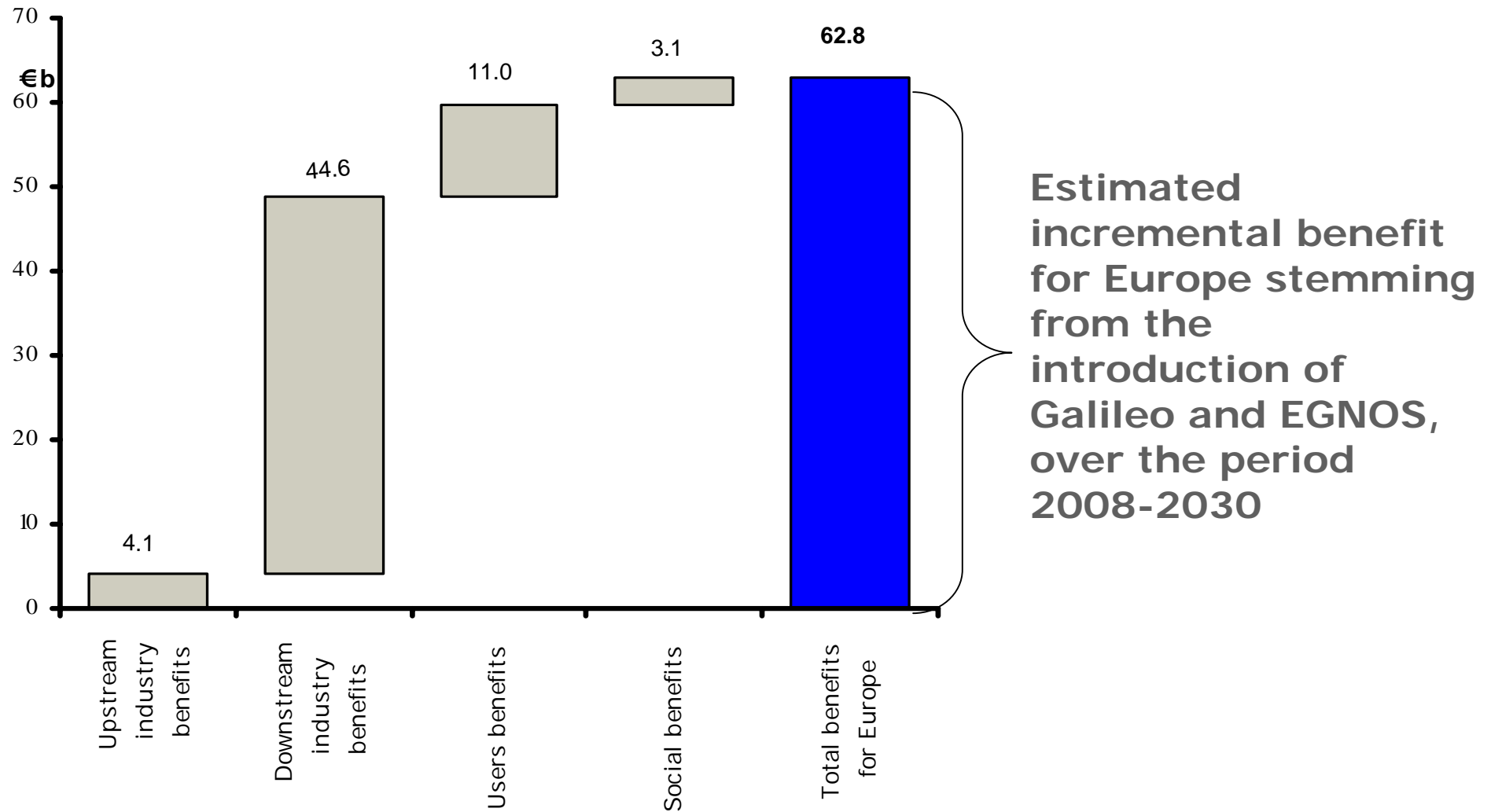
Galileo Value Creation (2/5)



Source: L.E.K. analysis



Galileo Value Creation (3/5)



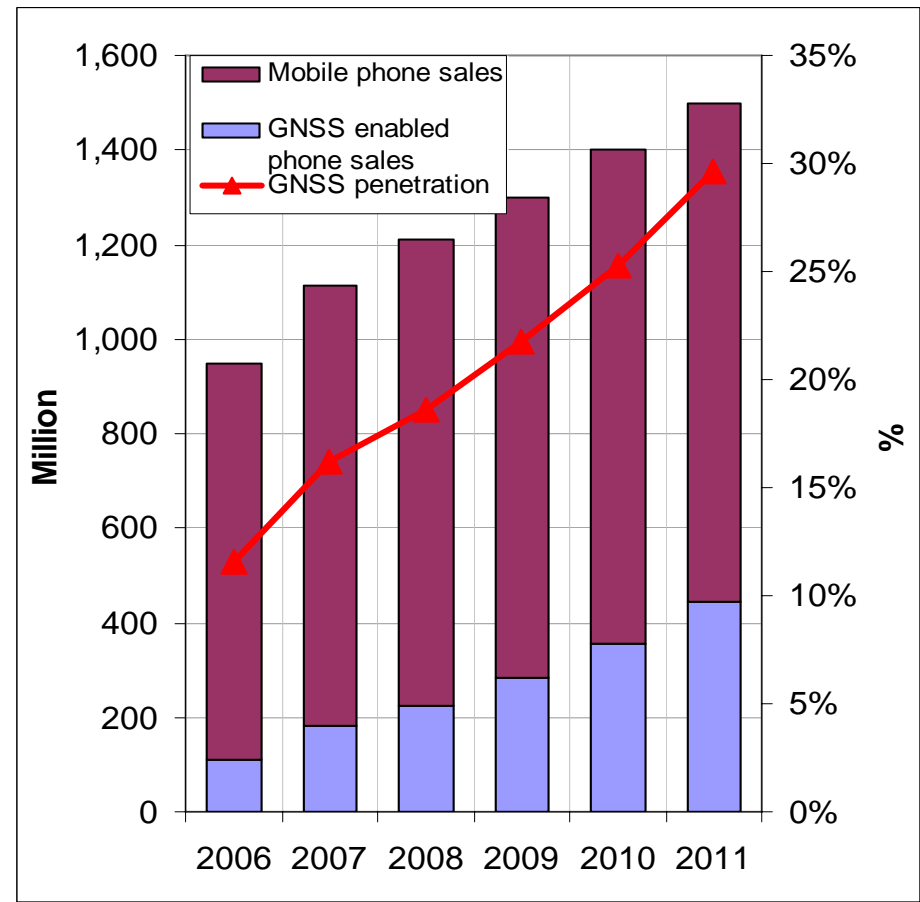
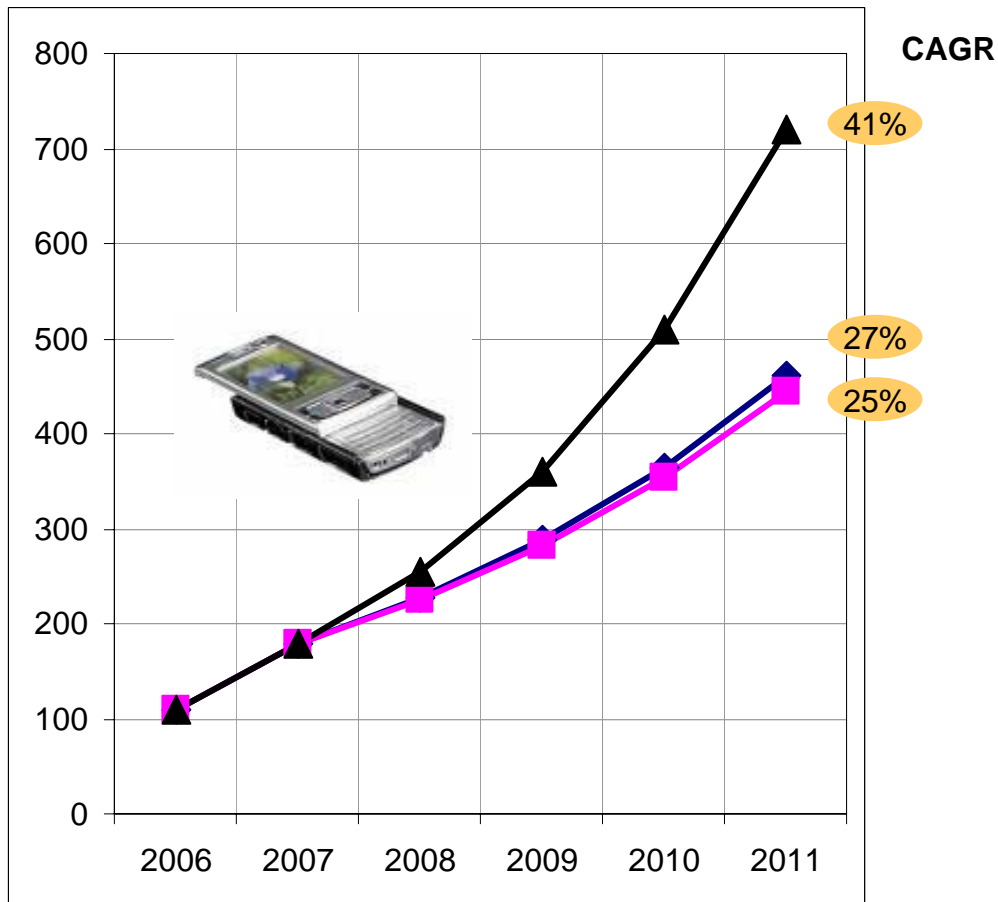
Source: L.E.K. analysis



Galileo Value Creation (4/5)

Forecasts GNSS enabled mobile phones sold 2011
Millions per year

Forecasts personal navigation devices sold 2011
Millions per year



Note: graphs have been extrapolated based on published data from sources, colours refer to different sources
Sources: Berg Insight, iSuppli, in-stat



Galileo Value Creation (5/5)

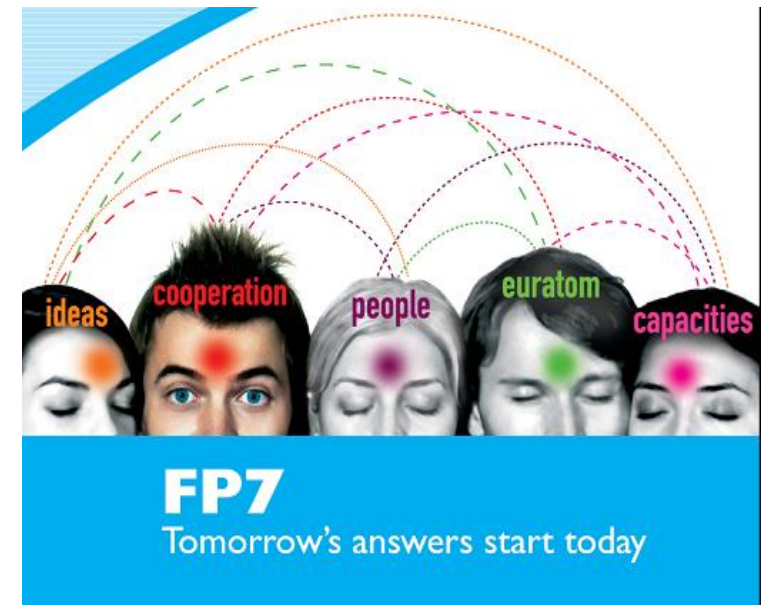
FP7 – the R&D programme for satellite navigation

◆ Main characteristics

- Focus on applications, user equipment and market enablers
- Priority to promotion of EGNOS and to more mature market segments
- Capitalisation on FP6/FP5 results through knowledge dissemination
- Incentives for SMEs

◆ Budget

- 350M€ for period 2007-2013
- 40M€ in 2007, 40M€ in 2008





Conclusion



- Galileo Program has “turned” from a Project Financing approach to an infrastructure fully financed by the public sector in about one year
- To reap the benefit, it is necessary to ensure that the systems will reach Full Operational Capability in time
- Galileo will face the concurrent competition of other systems further to GPS on 2013
- Galileo and EGNOS will bring a substantial benefit to European industry, users and society
- GSA/EC is contributing to the development of the market through a structured approach using FP7 as the main instrument