



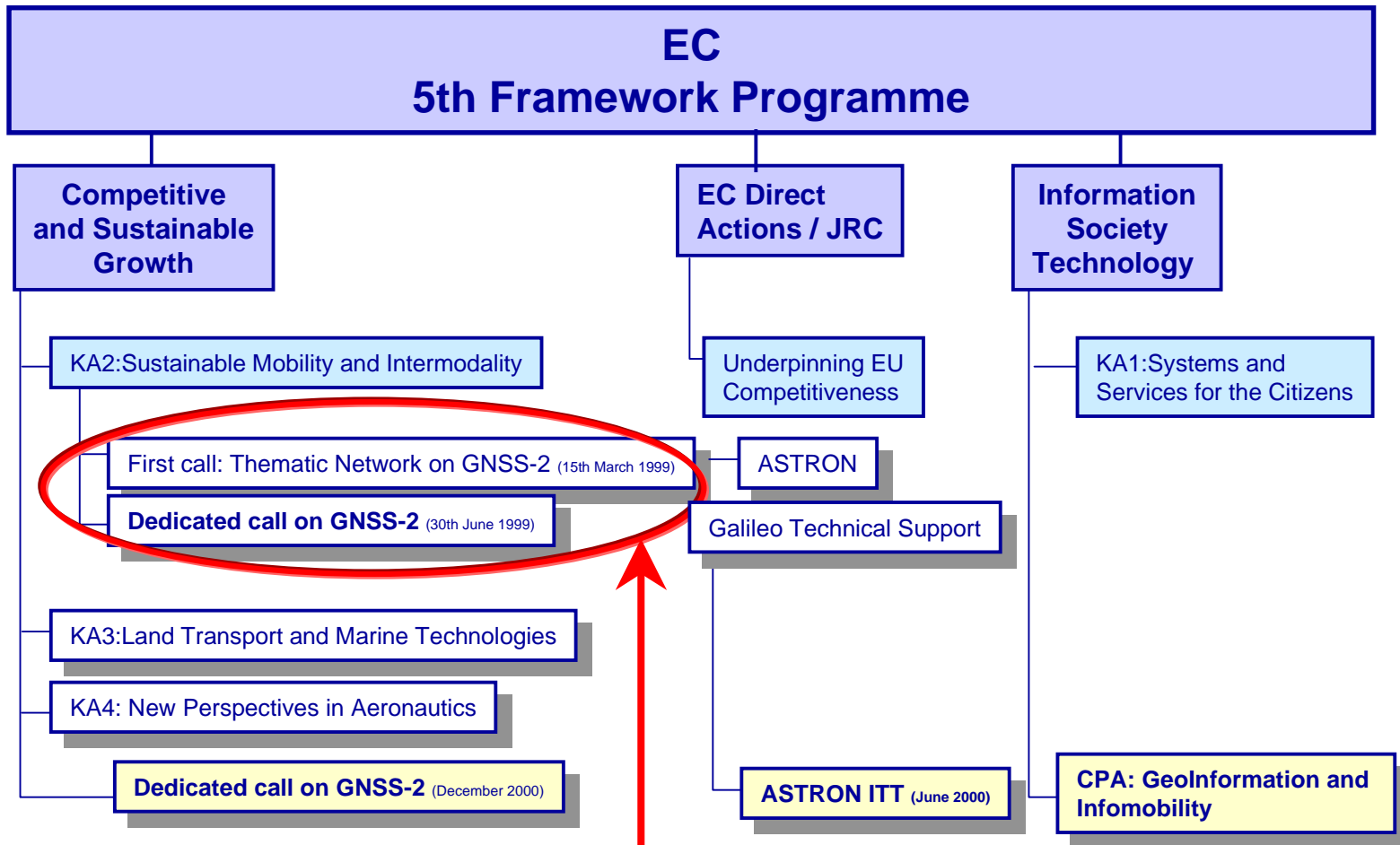
OREGIN WORKSHOP

February 27, 2001

Pilot Projects



EC FPV Organisation for GNSS / Galileo



= GENESIS, GALA, GEMINUS, SAGA, INTEG

Other calls are relevant to GNSS applications and services

GALA Pilot Projects

8.1.1/2 Fleet Management. - Precision agriculture

Specified with EC, developed by *Racal (UK)*



8.2.1 Road Safety and Mobility

Specified with EC, developed by *Centro Ricerche Fiat (I)*



8.2.2 Intermodal Freight Transport

Specified with EC, developed by *Telespazio (I)*



8.2.3 Train Protection and warning system

Specified with EC, developed by *Indra (E)*



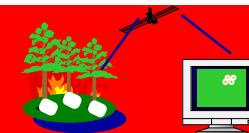
8.2.4 Road Traffic Monitoring

Specified with EC, developed by *OHB (D)*



8.2.5 Crisis Management System

Specified with EC, developed by *Thales (ex Thomson-CSF) (F)*

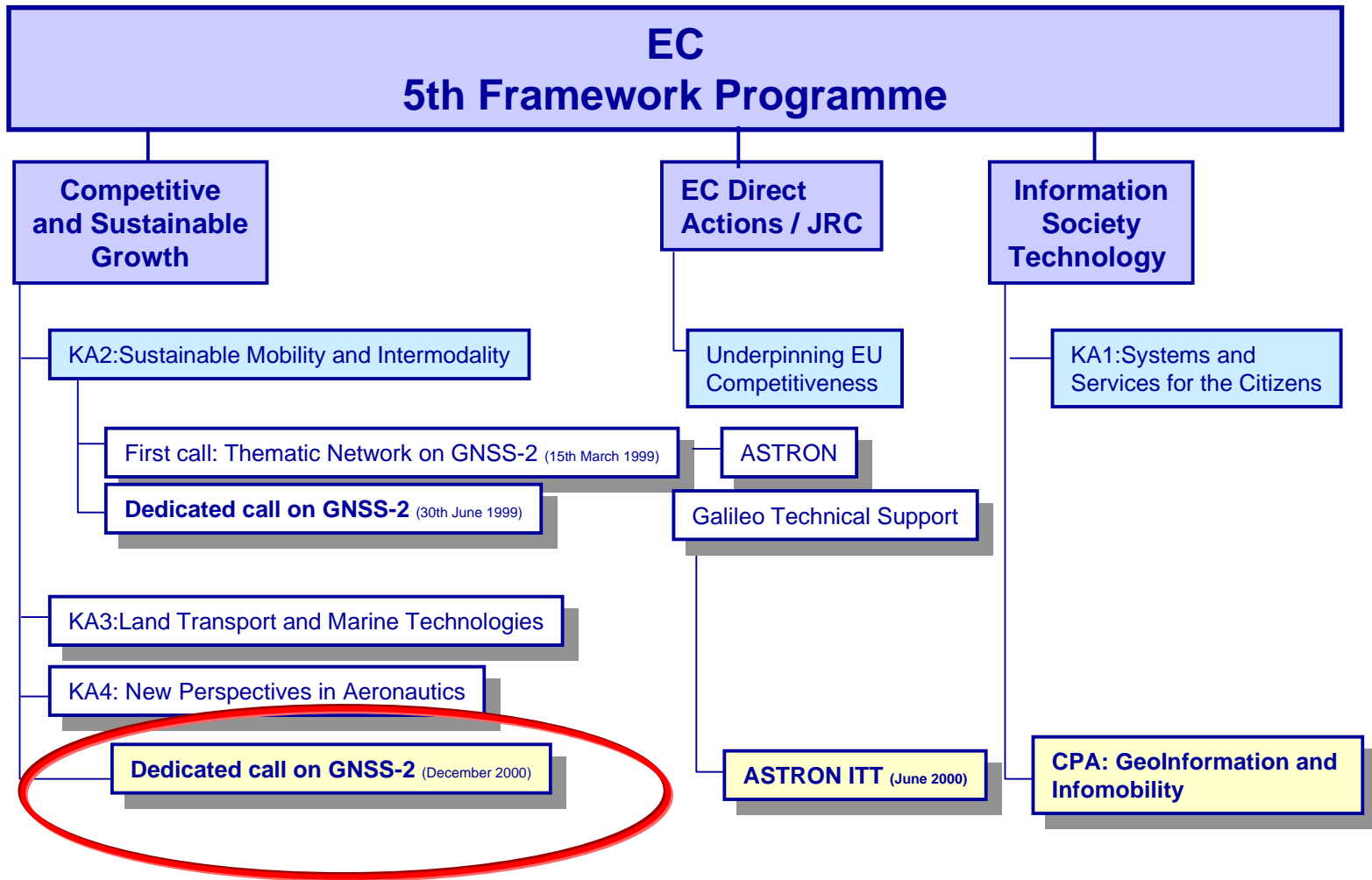


8.2.6 Maritime application

Specified with EC, developed by *KTI (GR)*



EC FPV Organisation for GNSS / Galileo



Dedicated Call Galileo (5 May 2001)

1. Local Elements Definition
2. Impact of Interoperability on system definition
3. Frequencies allocation and protection, Certification and Standardisation
4. Development and optimal use of satellite navigation for all modes of transport
5. Detailed Service Analysis
6. Legal, Institutional and Regulatory framework

- 1 Local
- 2 Interoperability
- 3 Freq. Std. Certif.
- 4 Pilot projects
- 5 Services
- 6 Framework



4. Development and optimal use of satellite navigation for all modes of transport

- Capitalise on year 2000 results
- Early mobility applications (Pilot projects)
- Prove commercial viability
- Use existing testbeds (EGNOS)
- Sea, urban, air, rail, road, safety-of-life, intermodal

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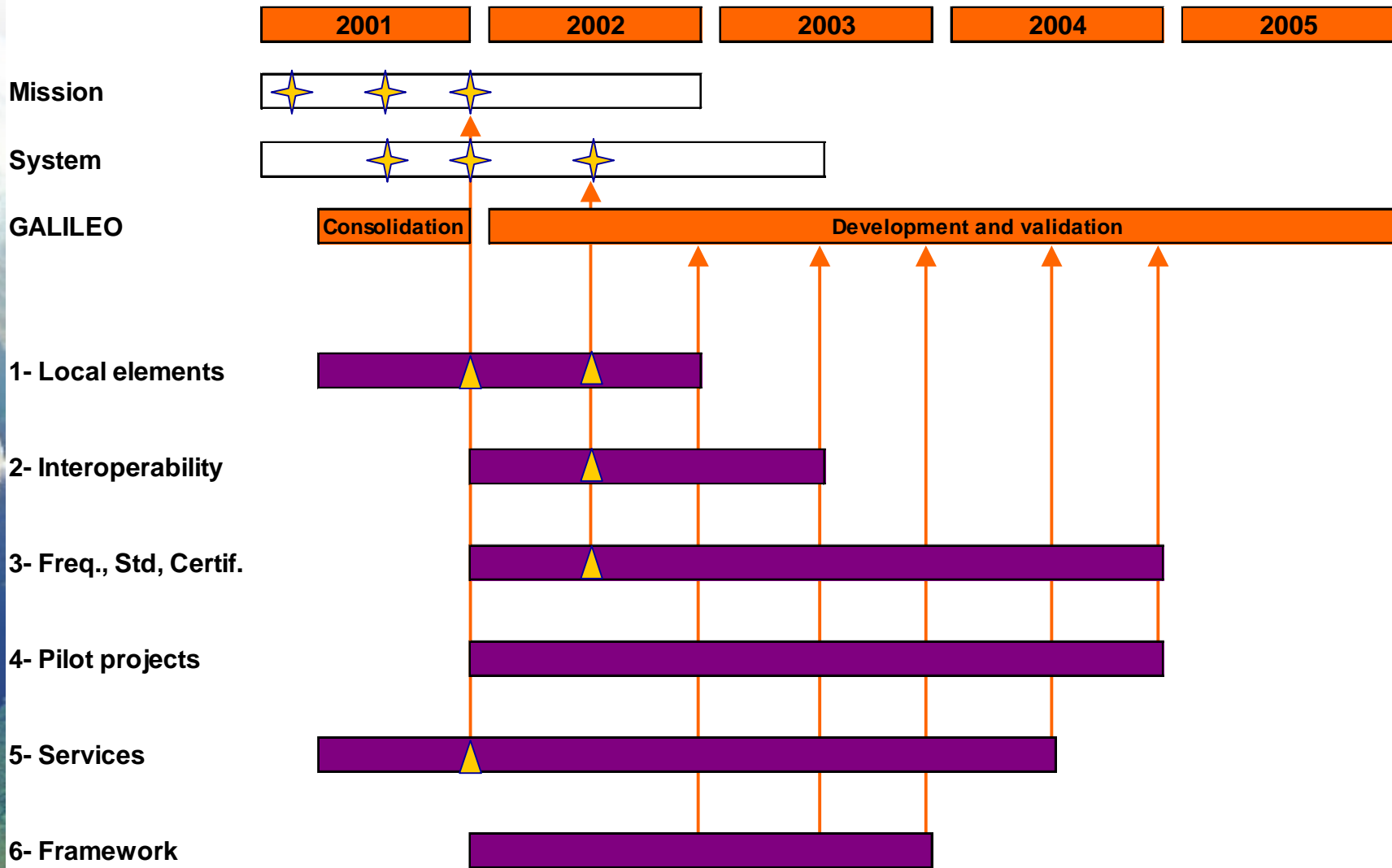
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1. Local Elements Definition
AM, 18 months, mid-2001
 2. Impact of Interoperability on system definition
AM, 18 months, end-2001
 3. Frequencies allocation and protection, Certification and Standardisation
AM, 36 months, end-2001
 4. Development and optimal use of satellite navigation for all modes of transport
SC, 36 months, end-2001
 5. Detailed Service Analysis
Sub-Task 1: AM, 36 months, mid-2001
Sub-Task 2: SC, 36 months, mid-2001
 6. Legal, Institutional and Regulatory framework
AM, 24 months, end-2001

- 1 Local
- 2 Interoperability
- 3 Freq. Std. Certif.
- 4 Pilot projects
- 5 Services
- 6 Framework

AM: Accompanying Measure
SC: Shared Costs



Fifth Framework Program: Roadmap Logic



Objectives

To build on results of Definition Phase

GALA pilot projects

GEMINUS case studies

To set up navigation applications before Galileo becomes operational

To accelerate its use by the transport sector

To evaluate benefits and analyse economic viability from synergies with 'typical local components' (ground infrastructure/services that can improve the performances at a local, urban or in-door level); terrestrial mobile communication / positioning; inertial sensors

To exploit the GNSS test beds

To use the readily available EGNOS signal

To feed into the planning of the Galileo System Test Bed

To feed into standardisation efforts

To follow the following aspects

To validate the mission concept through simulation and participation of users

To assess opportunities for Galileo from requirements for certification, legislation

To demonstrate EGNOS / Galileo through addressing mobility needs for specific context of high visibility (e.g. the 2004 Olympic Games in Athens)



Expected Results and Links

Expected Results include:

Demonstration of improved performance in different environments (cities, tunnels, in-door)

Creation of Awareness in Europe and beyond

User involvement

Evidence of opportunities from synergies with terrestrial mobile communication / positioning networks

Demonstration of the added value of Integrity Information

For local components: validation of the design definition, creation of awareness for the improved performances and promotion / support measures for market acceptance

Links with other Galileo work:

EC past Galileo programme activities: GALA, INTEG, GEMINUS, etc

ESA projects: Detailed Definition, Development and Validation; EGNOS Test Bed Activities

EC parallel Galileo programme activities: Tasks 2.3.3/6 (Local Component), /7 (Interoperability), /8 (Standardisation, Certification and Frequencies)

Links with relevant activities

Other thematic programmes of FPV with particular emphasis on the developments made under key action 'Systems and Services for the Citizen' of the IST programme

The ASTRON project of the Joint Research Centre

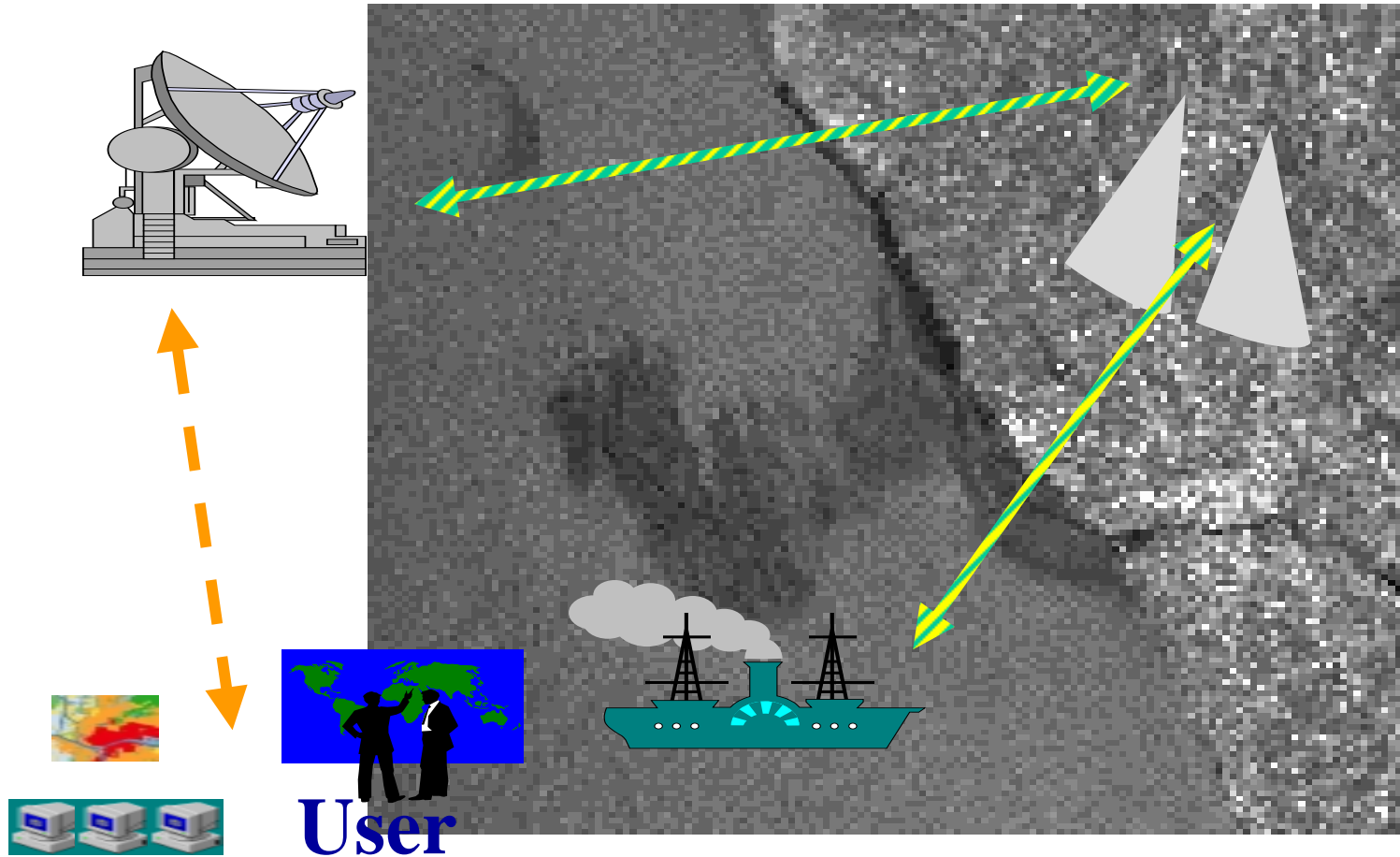


Application areas

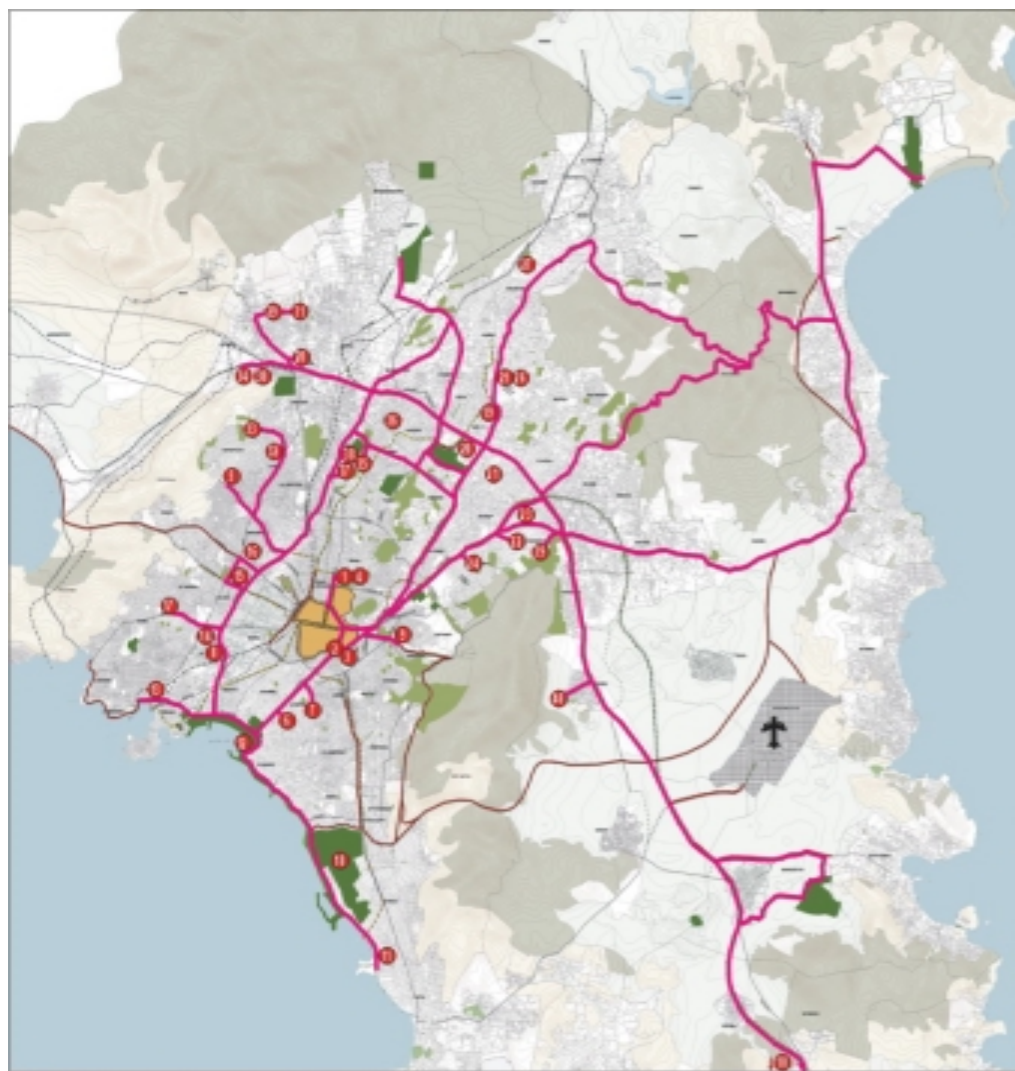
Including (but not be restricted to):

- **Mobility at sea** (e.g. maritime monitoring, harbour entrance)
- **Urban mobility modes**
- **Air mobility** (e.g. civil aviation, private flight air safety, etc.)
- **Rail Mobility** (e.g. train control, train supervision, etc.)
- **Road mobility** (e.g. dynamic route guidance, electronic tolling / cost recovery mechanisms, emergency and breakdown call and stolen vehicle services, travel and traffic information, road regulatory support and enforcement, etc.)
- **Safety of Life-related transport**
- **Intermodal mobility** (e.g. freight transport between all modes, inland waterways, transport of nuclear waste, etc.)

Example (a Policy Priority: Oil Spills)



Example (a market opportunity: Olympic Games)



ALLOCATION OF TRAINING VENUES FOR THE ATHENS 2004 OLYMPICS

- CITY CENTRE
- MAIN COMPETITION VENUES

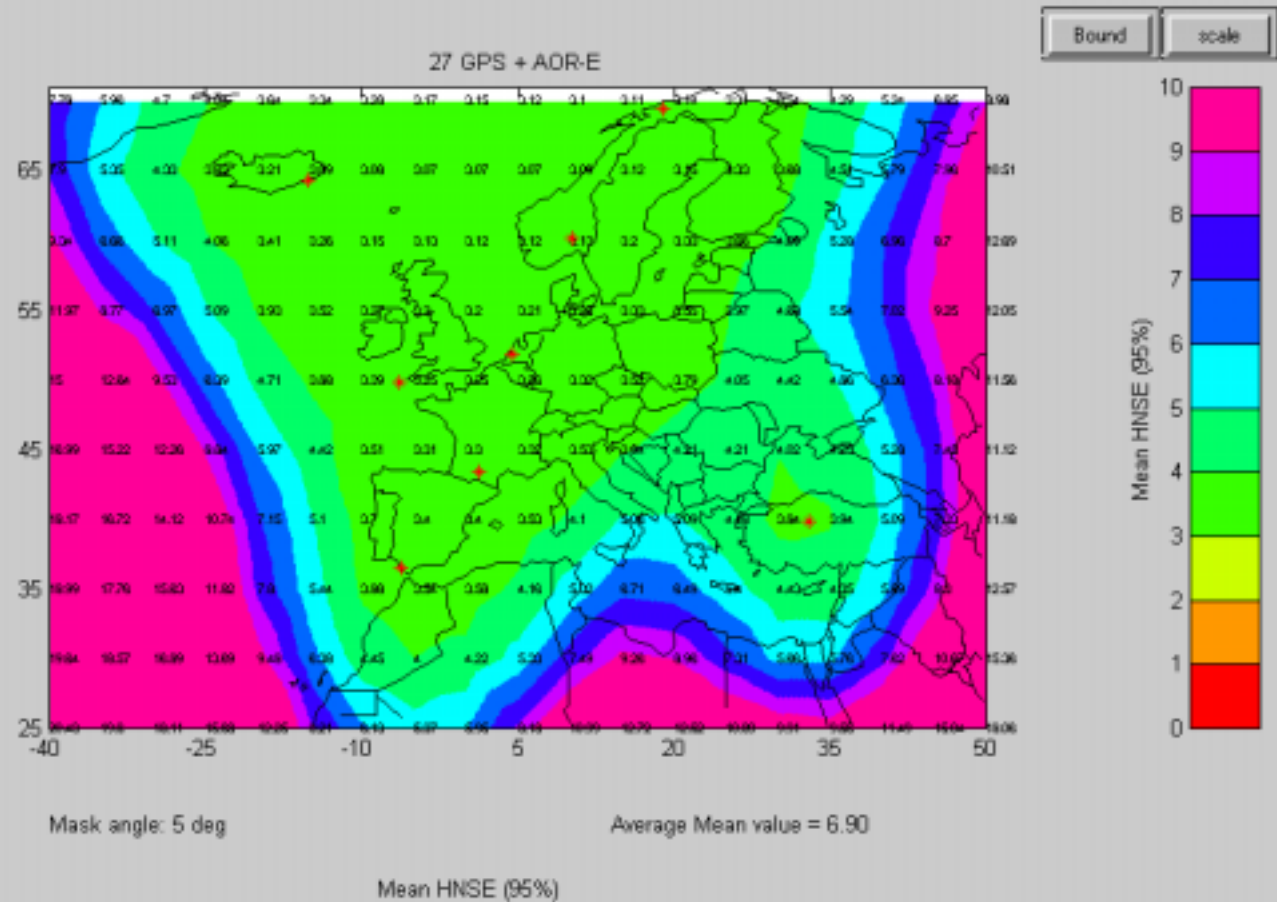
TRAINING VENUES

1. PANELLINOS TRACK & FIELD
2. ETHNIKOS TRACK & FIELD
3. METS INDOOR HALL (I.H.)
4. PANELLINOS I.H.
5. PERISTERI SWIMMING CENTRE
6. MILON I.H.
7. A.N. SMIRNI I.H.
8. AG. I. RENTIS I.H.
9. IUSSIA I.H.
10. GEITONAS HOCKEY FIELD
11. GUYFADA I.H.
12. P. FALIRON SWIMMING CENTRE
13. PAPASTRATIO I.H.
14. PLATON - NIKRA I.H.
15. EGAELO SWIMMING CENTRE
16. PERISTERI I.H.
17. KORYDALLOS I.H.
18. HELLENIKON SOFTBALL FIELD
19. MAROUSI TRACK & FIELD
20. MAROUSI I.H.
21. CHALANDRI I.H.
22. AG. PARASKEVI I.H.
23. AG. PARASKEVI I.H.
24. CHOLARGOS I.H.
25. ZIRNO I.H.
26. ZIRNO FOOTBALL GROUND
27. N. ERYTHRAI I.H.
28. ZEPHYRI I.H.
29. DROSOUPOU I.H.
30. ZOFRA I.H.
31. LUSIA I.H.
32. IUON I.H.
33. PETROUPOU I.H.
34. ZOFRA SWIMMING CENTRE
35. N. IOANNI I.H.
36. N. ERAKLION I.H.
37. IONIKOS I.H.
38. AEK I.H.
39. AG. PARASKEVI COLLEGE I.H.
40. PRO TRAINING CENTRE

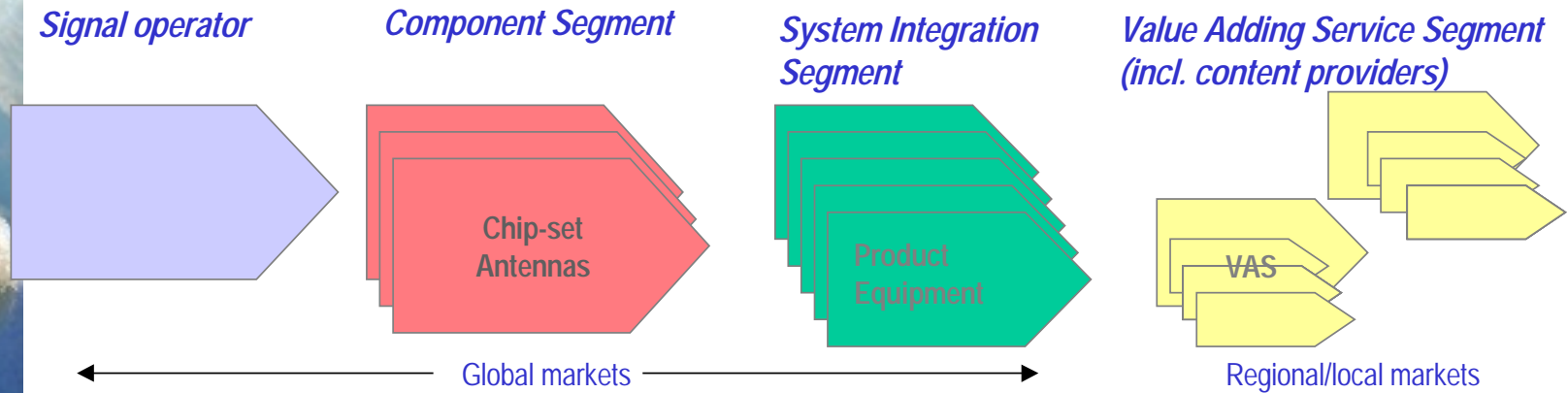
OLYMPIC ROUTES NETWORK



EGNOS System Test Bed



The Satellite Navigation Supply chain



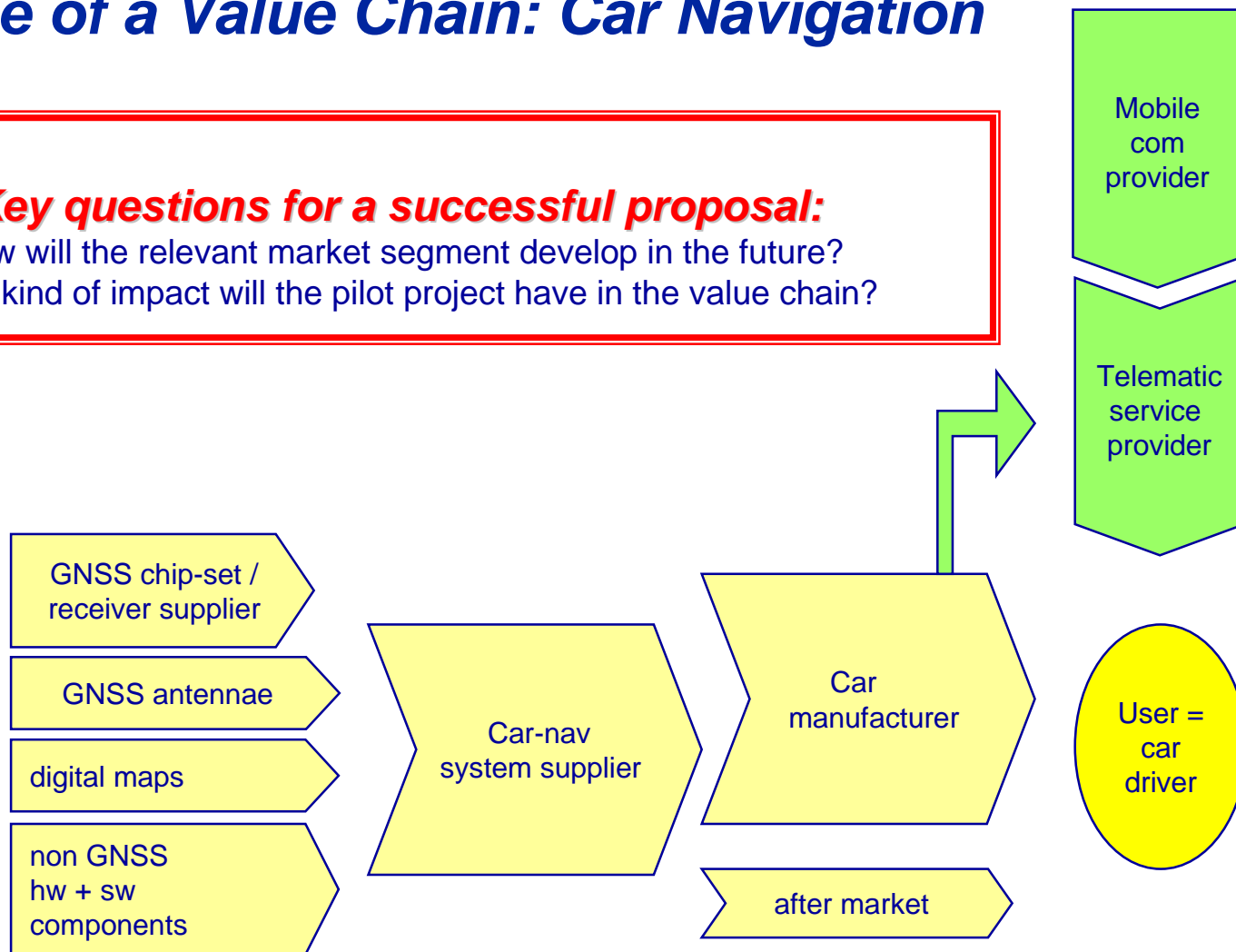
Key questions for a successful proposal:
Which level of the supply chain does the pilot project address?

Example of a Value Chain: Car Navigation



Key questions for a successful proposal:

How will the relevant market segment develop in the future?
What kind of impact will the pilot project have in the value chain?



Source: Structural Analysis of the Satellite Navigation Applications Segment, Technomar GmbH, November 2000



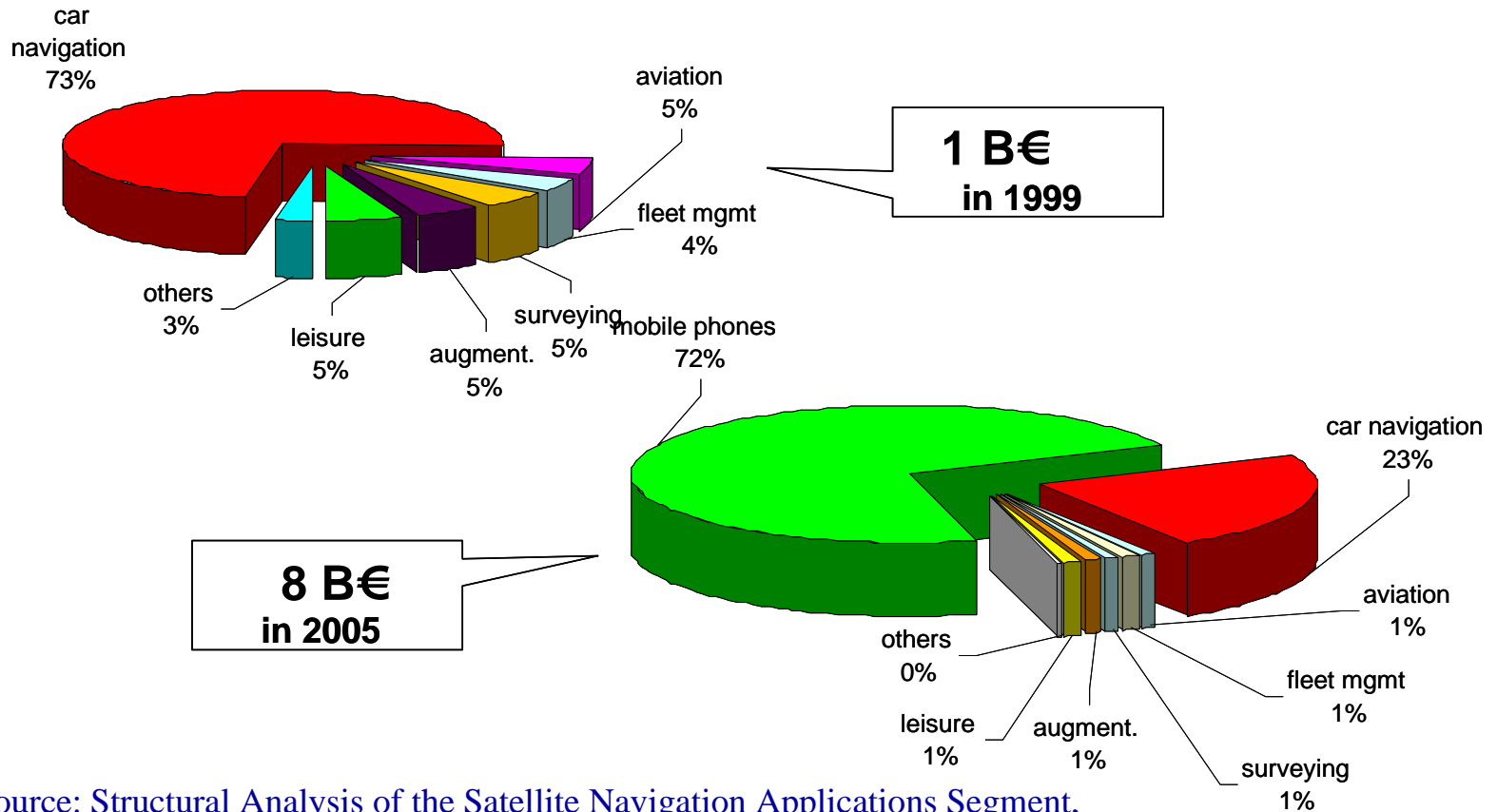
European GNSS Market



Key questions for a successful proposal:

Which market segment does the project address?

Is it growing or saturated?



Source: Structural Analysis of the Satellite Navigation Applications Segment, Technomar GmbH, November 2000



And announcing...

EC/ESA Workshop on GNSS Applications

EC and ESA plan to organise Workshop on GNSS Applications and Services in May 2001, in Sevilla. With this workshop they aim to:

provide an initial forum for all parties interested in GNSS services, applications and user equipment;

present the ongoing activities in GNSS receivers, terminals, applications and services demonstrating the strong interest and support for innovative satellite navigation solutions;

create awareness on current and planned European programmes;

publicise opportunities arising from the readiness for use of the EGNOS System Test Bed

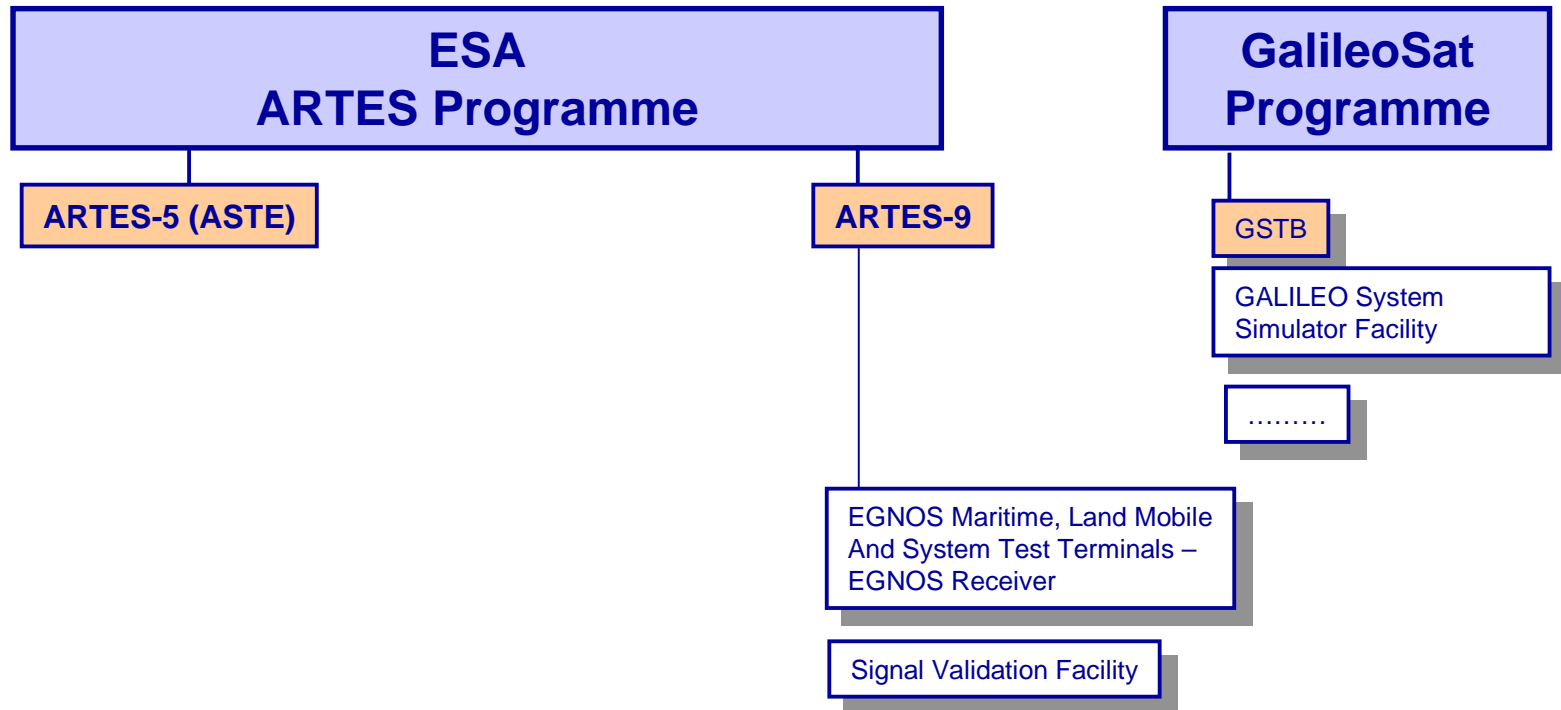
pave the way to the preparation of the Galileo System Test Bed

discuss with service providers, terminal manufacturers and other stakeholders the priorities, challenges and obstacles for future work in this area.

The exact dates and venues will be announced at the web-sites: www.galileo-pgm.org and www.esa.int/navigation



ESA ARTES Organisation for GNSS applications (1999 – 2001)



ESA ARTES Organisation for GNSS applications (1999 – 2001)

