ORganisation of European GNSS INdustry

Galileo Information Day
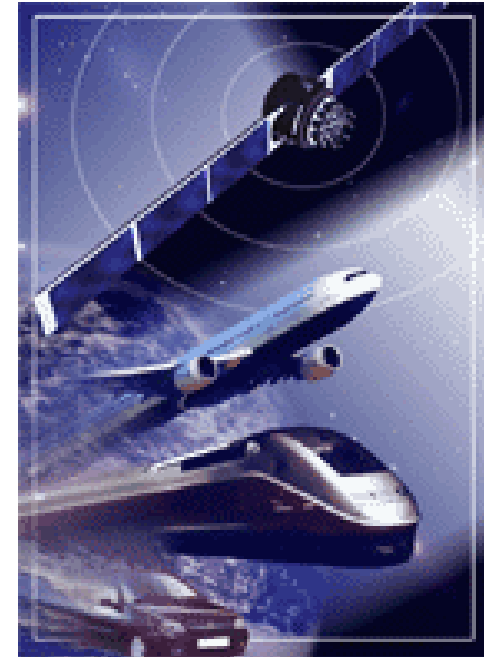
Mexico

28 June 2004

WHAT IS OREGIN ?

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The **OR**ganization of **E**uropean **G**nss **IN**dustry of equipment and services, has been created in Feb 1999 for:

- information exchange

- cross-fertilisation of expertise

- point of contact/industry voice for the European Institutions

- publicity and lobbying

- fostering co-operation with non-European industries creating opportunities in overseas and global market

MEMBERS

- **More than 130 members
  including international industry organisations and national groups
  (close to 250 industrialists represented)**

- **Industries from 15 European countries**

- **From SMEs to biggest groups**

- **Associating Universities
  Research labs since 2003**

MEMBERS PROFILE (1/2)

- **Chip producers, Equipment manufacturers, Software developers, Service providers, Integrators, Telecom and Car manufacturers, …**

Source: OREGIN Members websites

MEMBERS PROFILE   (2/2)

- **Experienced in all kinds of applications:**

    - **Safety of Life, Governmental, Professional, Mass markets**

    - **Air, Maritime, Rail, Road, Intermodal, Pedestrian, Leisure, Geodesy, Scientific, Agriculture, Space, …**

Source: OREGIN Members websites

OREGIN MEMBERS LIST (1/4)

- **ACSA** (FRANCE)
- **ADVANCED AVIATION TECHNOLOGY** (UK)
- **ADVETO AB** (SWEDEN)
- **AERODATA F.** (GERMANY)
- **AGROCOM** (GERMANY)
- **ALCATEL/SEL** (GERMANY)
- **ALENIA** (ITALY)
- **ALGONET** (GREECE)
- **ALGOSYSTEMS** (GREECE)
- **ALL COMM** (FRANCE)
- **ASTRIUM** (UK)
- **BMW-AG** (GERMANY)
- **BOMBARDIER TRANSPORTATION** (GERMANY)
- **CAA** (GERMANY)
- **CAP GEMINY ERNST & YOUNG** (FRANCE)
- **CARLO GAVAZZI SPACE** (ITALY)
- **CLARITI Technologies** (FRANCE)
- **COM DEV Europe** (UNITED KINGDOM)
- **CRYPTOLOG INTERNATIONAL** (FRANCE)
- **CS Communication & Systèmes** (FRANCE)
- **DAIMLER CRYSLER GROUP** (GERMANY)
- **DIGINEXT** (FRANCE)
- **DIGIUTOPIKA** (PORTUGAL)
- **DORNIER CONSULTING** (GERMANY)

- **EADS** (FRANCE)
- **EADS** (GERMANY)
- **EDISOFT** (PORTUGAL)
- **EGERY** (FRANCE)
- **ELNA** (GERMANY)
- **ERICSSON TELECOMUNICAZIONI** (ITALY)
- **ERTICO** (INTERNATIONAL)
- **EURO-TELEMATIK** (GERMANY)
- **EUTELSAT** (INTERNATIONAL)
- **FASTRAX** (FINLAND)
- **FAUCON ROBOTIQUE** (FRANCE)
- **FDC** (FRANCE)
- **FIAT** (ITALY)
- **FINMEK SPACE** (ITALY)
- **FUTURASPACE SARL** (FRANCE)
- **GPV TECHNOLOGICAL INOVATIONS** (GREECE)
- **Grupo GMV SA** (SPAIN)
- **HELIOS TECHNOLOGY** (UK)
- **HELLENIC AEROSPACE INDUSTRY** (GREECE)
- **HIGH TECHNOLOGY ASSOCIATES** (UK)
- **HÖGEL & PARTNER** (GERMANY)
- **IFEN** (GERMANY)
- **IMEC** (BELGIUM)

OREGIN MEMBERS LIST (2/4)

- **INDRA ESPACIO** (SPAIN)
- **INECO** (SPAIN)
- **INFORMATION TECHNOLOGY SERVICE** (ITALY)
- **INSYST** (FRANCE)
- **INTECS SISTEMI** (ITALY)
- **I-SPACE** (FRANCE)
- **KONGSBERG** (NORWAY)
- **LABEN** (ITALY)
- **LEICA GEOSYSTEMS** (SWITZERLAND)
- **LNR GLOBALCOM** (THE NETHERLANDS)
- **LOGICA** (UNITED KINGDOM)
- **LOPOS TECHNOLOGIES** (GERMANY)
- **M3 SYSTEMS** (FRANCE)
- **MAN TECHNOLOGIE** (GERMANY)
- **MANNESMANN VDO** (GERMANY)
- **MARCOSOFT** (ITALY)
- **MLR Electronique** (FRANCE)
- **MORS** (FRANCE)
- **MUNICH ORIENTATION CONVENTION** (GERMANY)
- **N2C** (FRANCE)
- **NATIONAL PHYSICAL LABORATORY** (UK)

- **NATS** (UK)
- **NAVIGATION TECHNOLOGIES** (BELGIUM)
- **NAVIONICS** (ITALY)
- **NAVOCAP** (FRANCE)
- **NEMERIX** (SWITZERLAND)
- **NEXANS** (BELGIUM)
- **NEXT** (ITALY)
- **NOKIA** (FINLAND)
- **NORDNAV TECHNOLOGIES** (SWEDEN)
- **OMNISTAR BV** (THE NETHERLANDS)
- **ORMSTON** (UK)
- **PIONEER TECHNOLOGY** (BELGIUM)
- **POLE STAR** (FRANCE)
- **PRAXIS CRITICAL SYSTEM** (UK)
- **Q-SYSTEMS** S.A.
- **RAYTHEON** (UK)
- **ROBERT BOSCH** (GERMANY)
- **ROKE MANOR RESEARCH** (UK)
- **SAGEM** (FRANCE)
- **SATCON** (GERMANY)
- **SATPLAN** (FRANCE)

- **SCHLUMBERGER SEMA** (SPAIN)
- **SENA GPS** (SPAIN)
- **SENER** (SPAIN)
- **SEPTENTRIO** (BELGIUM)
- **SKEYE** (GERMANY)
- **SKYSOFT** (PORTUGAL)
- **SOCRATEC** (GERMANY)
- **SOCRATEC NAVSAT** (SPAIN)
- **SPACECHAKER** (BELGIUM)
- **SPACE SYSTEM FINLAND** (FINLAND)
- **SPIRENT COMMUNICATIONS** (UK)
- **ST MICROELECTRNICS** (UK)
- **STA** (ITALY)
- **SURREY SATELLITE TECHNOLOGY** (UK)
- **TECHNIUM** (FRANCE)
- **TECHNOMAR** (GERMANY)
- **TEKELEC Systèmes** (FRANCE)
- **TELE ATLAS** (BELGIUM)
- **TELECONSULT** (AUSTRIA)
- **TELEMATICA** (GERMANY)
- **TELECONSULT** (GERMANY)

- **TELESPAZIO** (ITALY)
- **TELIT** (ITALY)
- **TERRAFIX** (UK)
- **THALES** (FRANCE)
- **THALES AIBORNE SYSTEMS** (FRANCE)
- **THALES AIR DEFENCE** (FRANCE)
- **THALES ATM** (GERMANY)
- **THALES ATM** (UNITED KINGDOM)
- **THALES AVIONICS** (FRANCE)
- **THALES AVIONICS** (UNITED KINGDOM)
- **THALES COMMUNICATIONS** (FRANCE)
- **THALES NAVIGATION** (FRANCE)
- **THALES RESEARCH** (UNITED KINGDOM)
- **THALES TRACKS** (UNITED KINGDOM)
- **TTTC Ltd** (HUNGARY)
- **TWENTE INSTITUTE FOR WIRELESS AND MOBILE COMMUNICATIONS** (NETHERLANDS)
- **VITROCISET** (ITALY)
- **ZENITEL** (BELGIUM)

OREGIN MEMBERS LIST (4/4)

NATIONAL GNSS INDUSTRY ORGANIZATIONS

· **ASA - Austrian Space Agency** (Austrian Industry)
· **Navigate Consortium** (Italian Industry)
· **SGIC - Scandinavian GNSS Industry Council** (Scandinavian Industry)
· **GSS - Galileo Sistemas y Servicios** (Spanish Industry)

EUROPEAN UNIVERSITY RESEARCH CENTER

·**Centre for Communication Systems Research**, University of Surrey (UK)
·**GIS Research Centre**, University of Glamorgan (UK)
·**Institute of Engineering Surveying and Space Geodesy**, University of Nottingham (UK)
·**Lulea University of Technology** (Sweden)

MISSIONS AND OBJECTIVES

- To support the development of GALILEO users segment equipment and services,

- To provide public authorities with technical and marketing expertise and support in analysing the impact of GALILEO architecture on user equipment and services,

- To support the necessary efforts on standardisation and certification for the development of user segment equipment and services,

- To foster the identification of business opportunities and define the necessary actions to ensure their success,

- To foster partnership between industrialists and in particular between large corporations and SMEs,

- To rapidly and efficiently circulate relevant information,

- To promote EUROPEAN industry, technology, products and services,

- To encourage participation of universities and research centres in R&D activities related to GALILEO developments.

STATUS OF THE INITIATIVE

- **Foundation meeting on 16 Feb. 99**

- **6 Plenary meetings**

- **2 Workshops**
  (with the EC Vice-president and ESA Director of applications)

- **Active participation in PPP and Joint Undertaking initiatives**

- **Presentations to Transport Council Working Group, European Parliament, Sky and Space Intergroup…**

- **Briefing to the Belgian Senate 2nd Seminar on Current Space Issues**

- **Presentation made in US, Japan, China, South Korea, apologies for Israel**

- **Interest expressed by Non European industry to cooperate (Canada, Chinese, Israel, Japanese, US, …)**
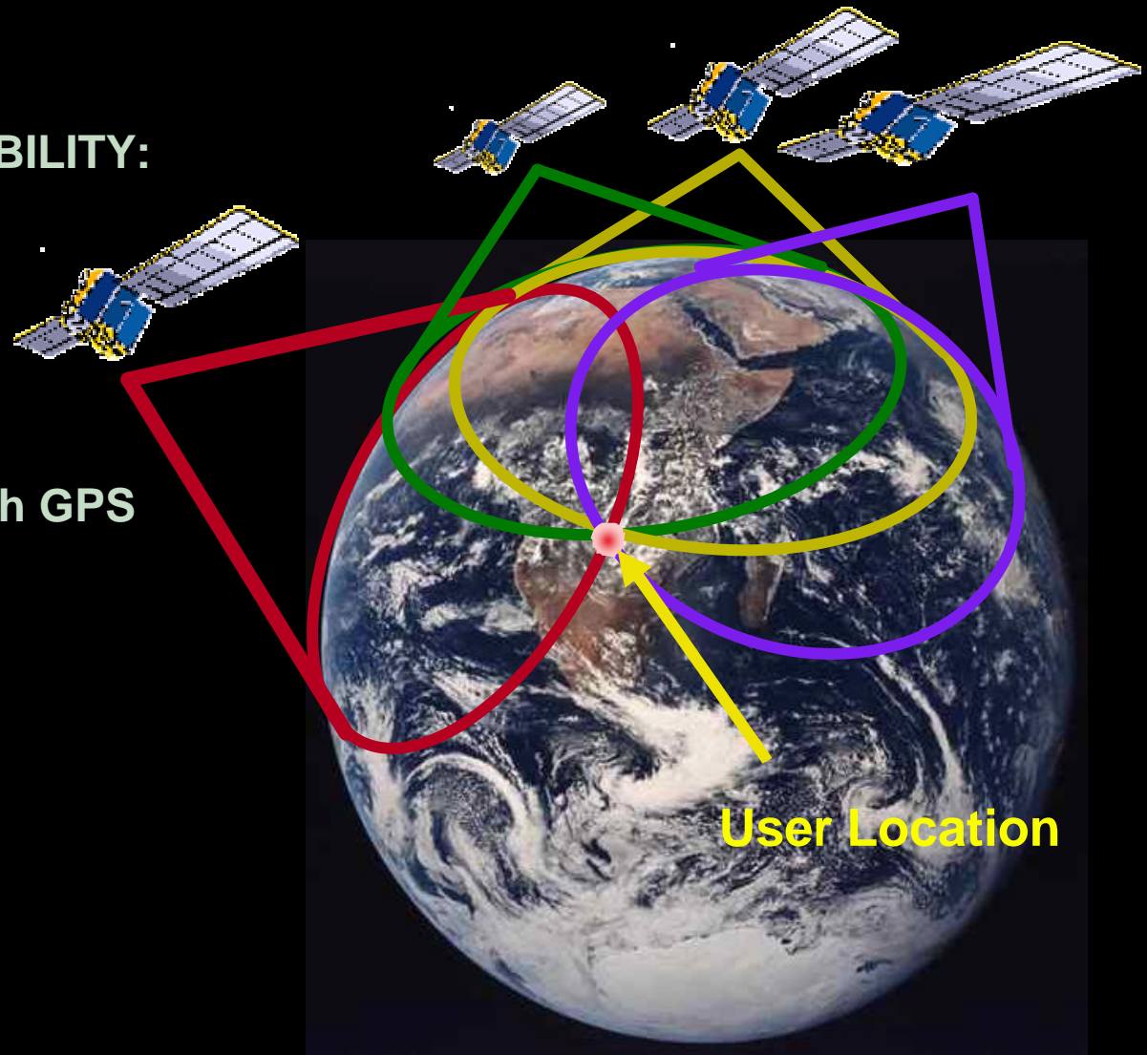
What do we expect from Galileo?

GALILEO TECHNICAL ASSETS

Galileo will offer optimum
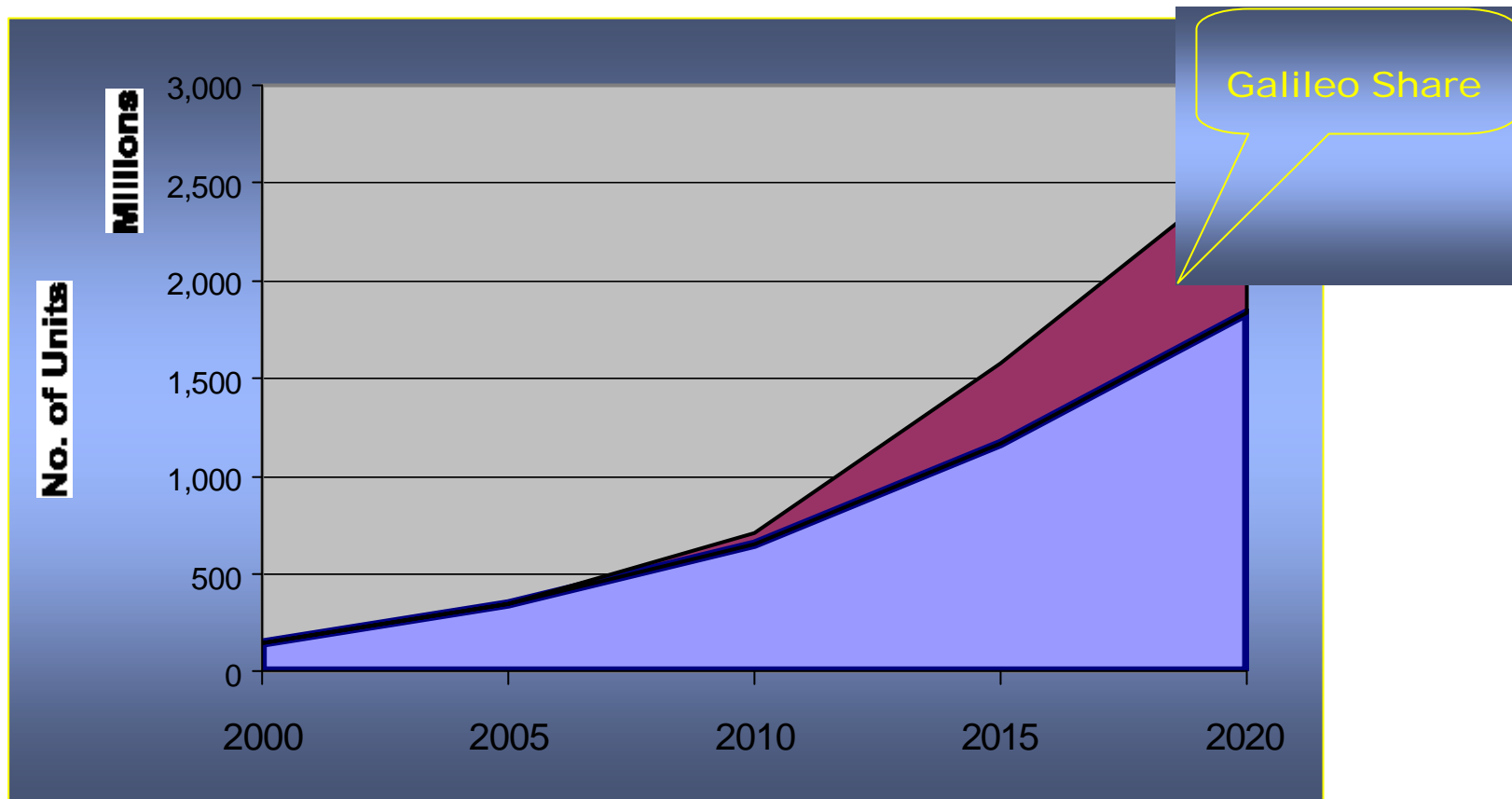
PERFORMANCES and RELIABILITY:

- **a high level redundancy with GPS (technical & political)**

- **integrity**

- **availability**

- **continuity of service**

- **accuracy**

- **security**

User Location

GALILEO MARKET

GLOBAL GNSS MARKET SIZE

Source: EC Galileo Definition studies

GALILEO ASSETS FOR INDUSTRY

- Galileo Public-Private Partnership is creating a Market Pull rather than a Technology Driven system

- Galileo, as a European System, already motivated the European Industry to make up for lost time in Satellite Navigation market

- GALILEO will generate Brand-New Markets, in which European Industry is expecting to play a leading role

- Galileo will provide Global services, generating a Global Market,

➡ **Market optimisation requires inter-Region cooperation on both Institutional and Industry sides**

EUROPEAN INDUSTRY OFFER
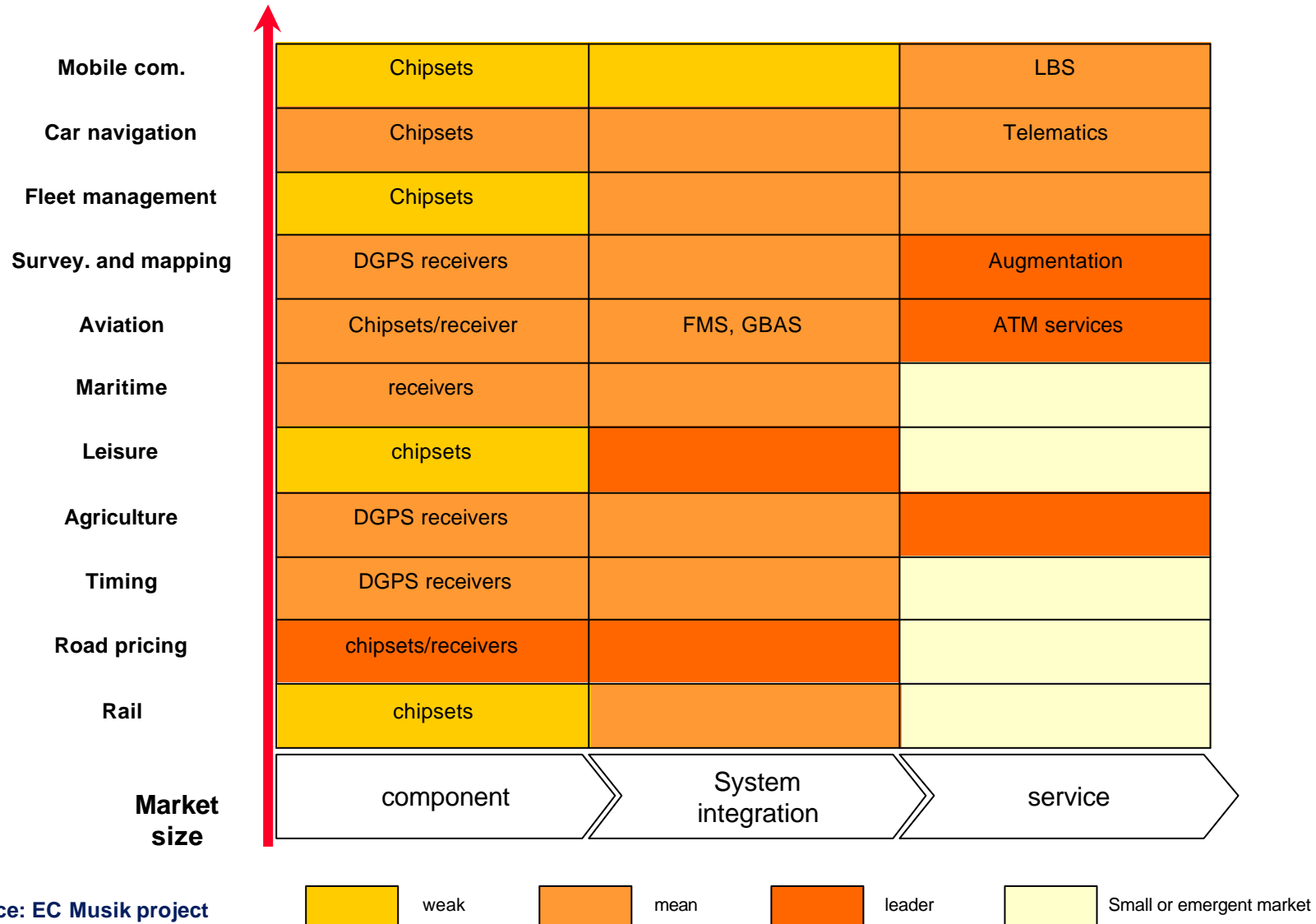
EUROPEAN INDUSTRY

- **EU Industry is leading the world in many areas of technology**

- **EU Industry, through its active participation, is well aware of latest Galileo's infrastructure (signal and services) development**

- **It is capable of the complete range, from chipset design to manufacture, integration and certification of major systems and provision of innovative services**

EUROPEAN INDUSTRIAL CONTEXT

	component	System integration	service
Mobile com.	Chipsets		LBS
Car navigation	Chipsets		Telematics
Fleet management	Chipsets		
Survey. and mapping	DGPS receivers		Augmentation
Aviation	Chipsets/receiver	FMS, GBAS	ATM services
Maritime	receivers		
Leisure	chipsets		
Agriculture	DGPS receivers		
Timing	DGPS receivers		
Road pricing	chipsets/receivers		
Rail	chipsets		

Market size

Legend: ▮ weak ▮ mean ▮ leader ▮ Small or emergent market

SLIDE   19

NEED FOR COOPERATION

- **Cooperation is obviously the best way to increase cost efficiency and competitiveness of Industry**

- **Combining our Competencies and our Markets, is a key to increase both markets and generate huge benefits for both Regions and Industries**

CONCLUSIONS

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- **OREGIN has been created to back up Public efforts, with the ultimate objective to jointly pave the way to the success of Galileo**

- **Cooperation between European and Mexican Industry must be pursued and could generate huge mutual benefits**

  - **Combination of our skills**

  - **Complementary markets**

- **OREGIN would be pleased to facilitate the creation of partnership and could, as of today, help Mexican industry to find their European partners**

INFORMATION

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