



**“Grasping the opportunities
offered by GNSS
downstream market”**

by John Pottle

*on behalf of Axelle Pomies
Galileo Services*

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Galileo Services Overview



- Non-profit Making Association aiming at developing, promoting and maximizing the potential of the GNSS applications' market
- Comprising key GNSS Downstream Industry players
- Representing all elements of the value chain and covering the different application sectors (aviation, maritime, road, rail, telecom...)
- Missions:
 - Voice Industry concerns & expectations toward the institutions
 - Share market experience and knowledge of user needs
 - Support the implementation of the European GNSS Programmes

Galileo Services Community

Galileo Services and Oorigin

federate the most Active and Representative players
of GNSS Industry and Research supporting the European GNSS Programmes



Ansaldo STS

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septentrio



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Oorigin

GS & Oorigin
represent a
community of
almost **180**
organisations

ORganization of European GNSS equipment and service INdustries

Introduction

- GNSS Market & Industry Trends and Opportunities ahead
- Why and How European Institutions support is vital to enable the downstream industry in grasping the opportunities
- The Reward for Europe

GNSS Market & Industry Trends

- > GNSS applications and services market *
 - Global market 2013 : **200 B€**
 - Annual growth rate by 2023 : **+7%**
- > European market share: **< 20%**
 - Usual Europe Market share in other High-Tech Sectors : 33%
- > Markets in which European industry must position itself include:
 - Most promising markets in terms of growth potential
 - Strategic markets
- > Strong reputation for quality and reliability of European equipment and industries

PROMISING GNSS SERVICES AND APPLICATIONS MARKETS



Road

e.g. Connected vehicles and autonomous / automatic driving vehicles



Agriculture

e.g. autonomous vehicles



Maritime

e.g. autonomous vessels / Intelligent ships / sensor fusion



Civil Remotely Piloted Aircraft Systems (RPAS)



M2M & Internet of Things

e.g. smart grids / energy management / smart cities



Indoor navigation



Big data

e.g. data position and time stamping



Rail

e.g. GNSS into ERTMS-ETCS railways train control system



Timing & Synchronization for Critical Infrastructure



Protection and efficiency of critical transport network infrastructure



Multimodal logistics

e.g. fleet and asset management



Offshore infrastructure, Defence and many other GNSS applications and services markets...

Opportunities ahead

- The potential and capabilities of all global constellations – leveraging in particular the key European GNSS differentiators also in a multi-constellation environment – offer opportunities that Europe must not miss:
 - Opportunity to develop new GNSS-based positioning, navigation and timing applications and services
 - Opportunity to create new industrial activities in Europe and, with them, hundreds of thousands of jobs

- Strong interest from European industry to provide solutions for European GNSS applications globally
 - Notably, GS and **Oregon** Members already have or are developing technology for a broad range of applications, in particular building on Galileo differentiators

GS Communication Campaign - I

- September 1st, 2015 : Publication of GS Position Paper 2015
Europe Must Succeed in the Global Navigation Market Race
A European Strategic Plan is Crucial to Unleash Satellite Navigation Downstream Potential
- September/October : Series of meetings with EC Cabinets
 - President Juncker's Cabinet, FVP Timmermans' Cabinet, VP Katainen's Cabinet, VP Šefčovič's Cabinet, Commissioner Bieńkowska's Cabinet
- Achievement : On October 27th, the EC adopted its 2016 Work Programme
 - 23 key initiatives under 10 political priorities
 - Key initiative 13 : A Space Strategy for Europe



The Strategy will coordinate the different strands of EU space activities, including a roadmap for concrete actions enabling targeted sectorial applications and further developing the EU space programmes to benefit the economy, public authorities and society as a whole.

A European Strategic Plan (1/2)

- Increased focus from European institutions with the coming Space Strategy for Europe
 - Optimism for an increased presence of European players in the future

- Dedicated national strategies in the US, Russia, China, and Japan to support competitiveness of their industry & to enhance GNSS market take up, including:
 - Massive funding from R&D to manufacturing capabilities
 - Regulation
 - Massive Public Procurement

- *Space Strategy for Europe* : European Strategic Plan
 - Crucial to restore a level playing field
 - Crucial to “reap the economic and societal benefits of Europe's investments in space infrastructure” *

- In summary : The Space Strategy for Europe is Crucial to achieve the main objectives of the European GNSS programmes
- Socio-economic expectations :
 - i.e. Growth and Employment (ROI in Europe)
 - mostly expected from the success of the European industry in the fast growing worldwide multi-constellation GNSS downstream market
- Europe's GNSS autonomy/independence:
 - EU's effort to gain its independence as regards GNSS by building its own infrastructure is devalued if it is dependent on foreign applications, receivers and devices

European Investment Paradox

- 2014 – 2020: US plans to spend similar amounts on space infrastructure and user equipment development
- 2014-2020, the Union will invest around
 - **8 B€** in the European GNSS infrastructure
 - **200 M€** in the development of value-added applications and services (where new job creation is)

“US” Ratio of 1 to 1

“EU” Ratio of 40 to 1

Galileo Services is calling for an additional 2 B€ to support the development of value-added applications and services

http://www.galileo-services.org/news_events/R87_11033_GS%20Position%20Paper_Web.pdf

Industry Main Message

- Space Strategy must
 - Support the development of a competitive GNSS downstream industry in Europe
 - ➔ Building on competitive advantages offered by the European GNSS
 - ➔ Recognizing multi-constellation opportunities for European industry
 - By considering several support actions/instruments
 - ➔ R&D funding, public procurement (e.g. PCP/PPI), education, support to the development of manufacturing capabilities, regulations, awareness, etc....
 - Be supported by funding at a strategic level to grow Europe's share
 - ➔ Recommended Union investment in the development of value-added GNSS applications and services : EUR 2 billion 2014 - 2020

The objective is for Europe to win

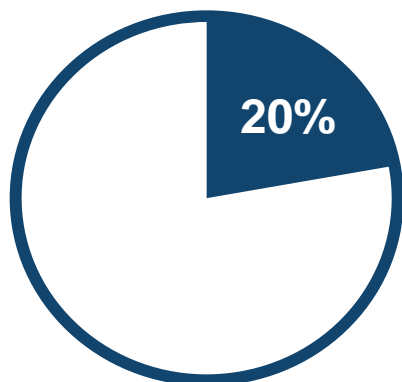


33%

of the global GNSS
downstream market by
2025

33% European market share by 2025

2013

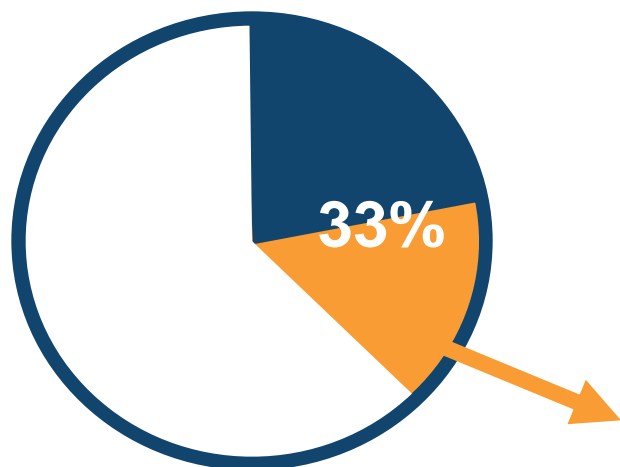


Global GNSS market in 2013 : 200 B€ *

European market share : 20%

40 B€ ~ 400 000 jobs

2025



Global GNSS market in 2025 : 300 B€ *

European market share : 20%

60 B€ ~ 600 000 jobs

European market share : 33%

100 B€ ~ 1 000 000 jobs

+ 400 000 jobs



* GSA Estimates [2013; 200B€ - 2023; 290B€]

GS Communication Campaign - II

- Adoption of the Space Strategy for Europe at EC level : Sept/Oct 2016
 - Then text sent to the Council (Transport) and the European Parliament

- GS pursuing its proactive communication campaign
 - European Parliament
 - ➔ VP MEP Mr Tajani, MEP Mr Cramer, MEP Ms Hohlmeier, MEP Mr Marinescu, MEP Ms Niebler, MEP Mr Riquet, MEP Mr Telička...
 - European Commission
 - ➔ VP Šefčovič (in charge of the strategy), Commissioner Bulc's Cabinet, Commissioner Moedas' Cabinet, ...
 - Many specific inputs wrt the Space Strategy (to both EC & EP)
 - *To be continued...*



Conclusion

**The time to act
is Now !**

- The potential and capabilities of all global constellations offer opportunities that Europe must not miss:
 - Development of new value-added GNSS applications and services
 - Creation of new industrial activities and 100 000s jobs in Europe
- Strong interest from European industry to provide solutions for European GNSS applications globally
- Crucial need that Institutions offer more support the European industry to achieve the downstream potential
- Space Strategy for Europe give Optimism for an increased presence of European players in the future

**For 14 years, ensuring the benefits from
European GNSS Programmes in Europe
has been the Raison d'Être of Galileo Services**

For Further Information



Satellite Navigation Applications realizing the Ambitions of EU2020 - Position Paper of Gali

Permanent Representative :

Axelle Pomies

Phone: +33 1 53 66 11 11

axelle.pomies@galileo-services.org

www.galileo-services.org



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