



**“A recipe for creating
400 000 new jobs”**

by

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Chairman of Galileo Services

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“Recipe for creating new jobs”



For 400 000 new jobs by 2025

Preparation : 2016/2017

Cooking : 2017-2025

Ingredients

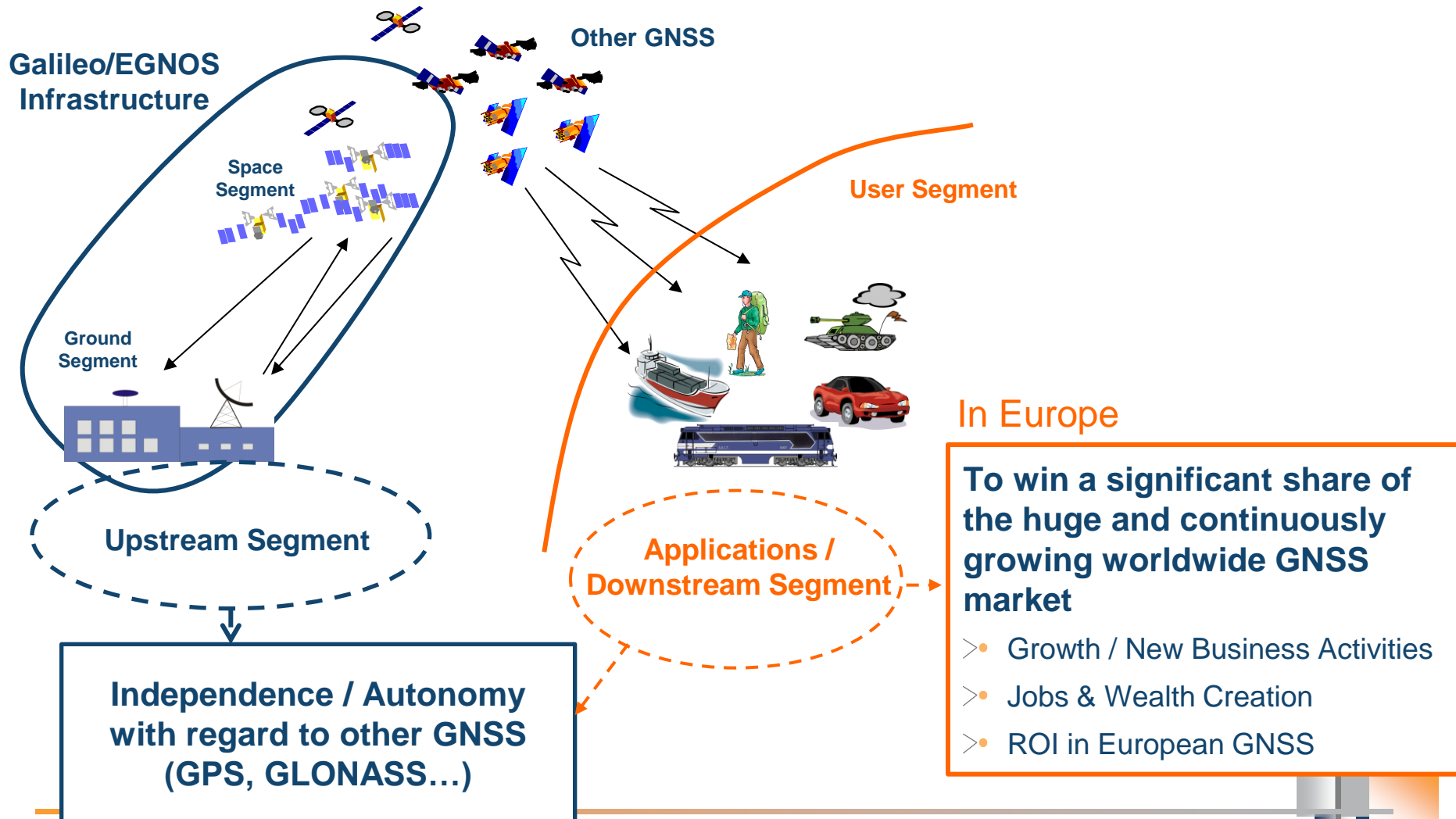
- Market Intelligence
- Awareness
- Regulation
- Public Procurement
- Research & Development
- Education
- Manufacturing Capabilities
-

Preparation

1. Analyze Market and Industry trends
2. Analyze Opportunities
3. Establish a Strategic Plan with available ingredients
4. Sprinkle with substantial funding
5. Implement the Strategic Plan from 2017 to 2025
6. Serve the 400 000 new jobs hot on a silver plate in 2025



Galileo Programme Main Objectives



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Market & Industry Trends

PROMISING GNSS SERVICES AND APPLICATIONS MARKETS

> GNSS applications and services market

- Global market 2013 : **200 B€** *
- Annual growth rate : **+7%** *
(until 2023)

> European market share: **< 20%**

- Usual Europe Market share in other High-Tech Sectors : **33%**



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...

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Opportunities ahead

- GNSS applications and services markets in which European Industry must position itself, including:
 - Most promising markets in terms of growth potential
 - Strategic markets
- Strong reputation for quality and reliability of European equipment and industries
- 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

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A European Strategic Plan

- 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

- A 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” *

- Socio-economic benefits of Galileo, i.e. growth and employment, mostly expected from the success of the European industry in the growing worldwide multi-constellation GNSS downstream market

- EU's effort to gain its independence as regards GNSS by building its own infrastructure pointless if it is dependent on foreign applications, receivers and devices

A European Strategic Plan

- To 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
- Including massive R&D funding, support to the development of manufacturing capabilities, regulations, public procurement, education, awareness...

The objective is for Europe to win



33%

**of the global GNSS
downstream market by
2025**

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European Investment Paradox

- In the years 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 job creation is)

“EU” Ratio of 40 to 1

Need for an additional 2 B€ to support the development of value-added applications and services

- In comparison – US spent similar amounts on space infrastructure and user equipment development

“US” Ratio of 1 to 1

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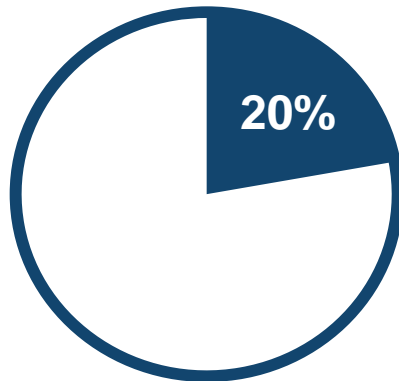
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400 000 New Jobs in 2025

2013



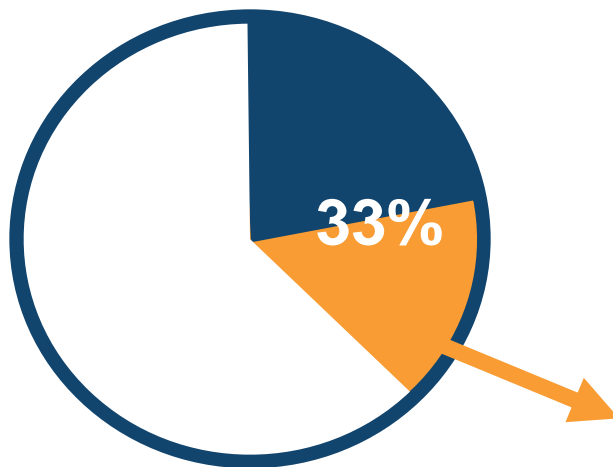
Global GNSS market in 2013 : 200 B€ *

European market share : 20%

40 B€ ~ 400 000 jobs

Average annual man cost 100 k€

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€]

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400 000 New Jobs in 2025

- A European Strategic Plan is crucial to reap the socio-economic benefits of Europe's investments in space infrastructure
- Much more public incentives to unleash the SatNav downstream potential
- The time to act is now !



**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

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Ansaldo STS

CGI



Honeywell



indra



KONGSBERG



QinetiQ



THALES



ESA certification of Galileo Fixes



**70% of Companies
recognized by ESA as
Galileo pioneers
belong to
GS/Oregon Community**