



Workshop “EGNSS Innovation procurement opportunities within Horizon 2020 and Horizon Europe”, 11 April 2019, Prague

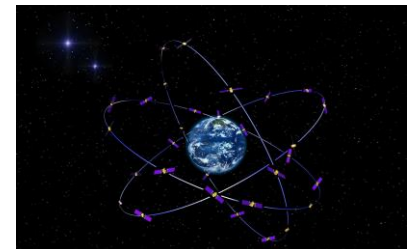
Introduction from the European Commission

Tina Mede, European Commission, DG GROW J.3

Outline



- I. Where are we on Galileo/ EGNOS ?
- II. EGNSS applications of benefit for public authorities
- III. Why are we looking into innovation procurement ?
- IV. What are PCPs and PPIs - and what is the EGNSS benefit ?
- V. Activities on innovation procurement in Horizon 2020 and Horizon Europe for EGNSS
 - Study
 - Pilot call on Pre-commercial procurement envisaged
 - Innovation procurement in Horizon Europe



I. Where are we on Galileo/ EGNOS ?



- Galileo is in operation since 2016; EGNOS fully operational since 2011
 - 26 Satellites in orbit
 - Full constellation by 2020
 - Initial services beyond expectations
 - By 2020 all Galileo differentiators there (high accuracy service, authentication)
 - Towards Galileo 2nd Generation
 - Market uptake progresses rapidly
 - More than 700 mio phones use Galileo
 - First cars with eCall using EGNSS
 - Main car makers are testing Galileo in view of the first highly autonomous cars (~ 2021)
 - 59 drones receiver models from 14 manufacturers with EGNOS/Galileo in the market
- OS Navigation**
Good ranging signals (2 m 95% accuracy, more than 87% availability)
Excellent timing performance (30 ns, more than 87%)
- SAR Forward Link**
Contribution to COSPAS/SARSAT with shorter detection times (10min) and better localization accuracy
- PRS Access**
Good ranging signals
Access Management

II. EGNSS applications of benefit for public authorities - some examples -

Areas	Applications and technologies	
Public safety	 A photograph showing two individuals wearing orange safety vests and helmets on a boat, likely engaged in a search and rescue or maritime patrol activity.	<ul style="list-style-type: none">• Drones for Search and Rescue , firefighting, police, urgent medicine• Border management• Earthquake warning systems• Professional mobile radio
Road	 An aerial photograph of a multi-lane highway with several cars driving, illustrating intelligent transport systems.	<ul style="list-style-type: none">• Cooperative intelligent transport systems (ITS)• Management of public transport• Emergency vehicle location• Autonomous shuttles
Maritime	 A photograph of a large container ship docked at a port, with a crane visible in the background, representing smart ports and container tracking.	<ul style="list-style-type: none">• Management of autonomous/unmanned vessels• Smart ports• Navigation in IWW• Container tracking
Aviation	 A photograph of a white commercial airplane in flight, illustrating EGNSS applications in aviation.	<ul style="list-style-type: none">• EGNOS to plan helicopter approaches to hospitals• Navigation for firefighting aircrafts
Rail	 A photograph of a red and white train moving along tracks, representing driver advisory systems and asset management.	<ul style="list-style-type: none">• Driver advisory systems• Asset management• Command & control system, train integrity

USE GALILEO.EU

FIND A GALILEO-ENABLED DEVICE TO USE TODAY

Galileo is Europe's Global Satellite Navigation System (GNSS), providing users with improved positioning and timing information.

Click on the icons to find Galileo-enabled devices.



ON THE ROAD



ON THE WATER



ON THE TRAIN



IN THE AIR



GOING MOBILE



ON THE FARM



ON THE MAP



DURING AN
EMERGENCY

III. Why are we looking into innovation procurement ?

- Galileo and EGNOS produce a wealth of **positioning, navigation and timing** data, information and services

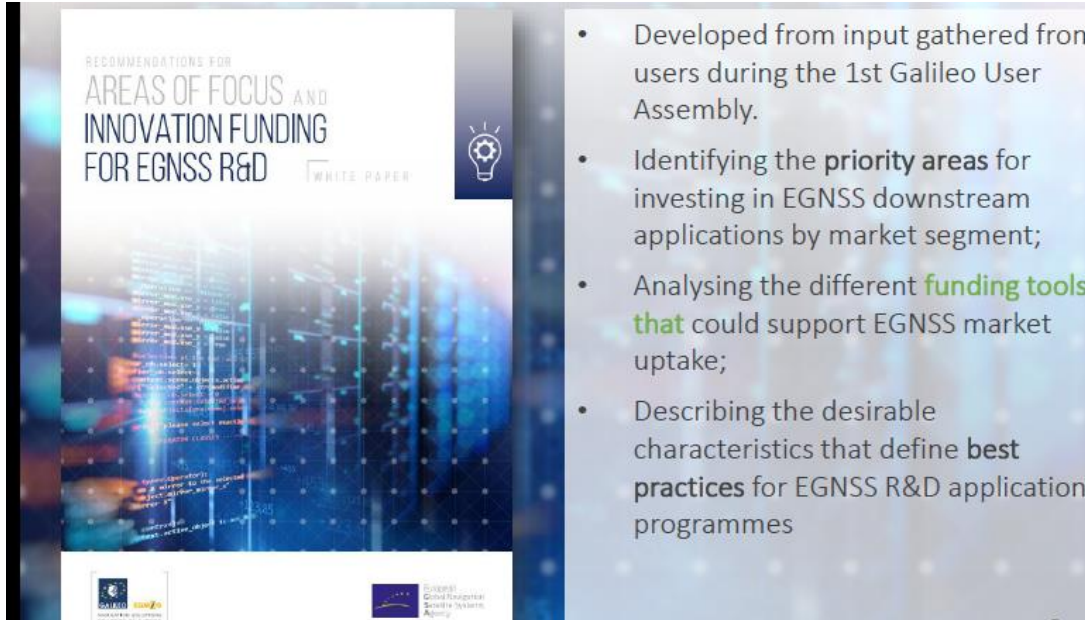
WIN - WIN

- **Public sector important user for EGNSS applications:** Via pre-commercial procurement, EGNSS applications can be adapted to the specific needs of public authorities: Better/ cheaper products, reduced supplier lock-in.
- **Suppliers:** interested in public sector as “first customer” for innovative EGNSS products

GOOD
EXPERIENCE

- **Growing impact/ importance of innovation procurement in Horizon 2020**
 - Increased use of innovation procurement instruments in ICT, security, transport, health etc.
 - Increased funding for PCP/ PPIs in Horizon 2020
 - 2019: PCP/PPI calls in a value of 83 Mio EUR
 - 2020: PCP/PPI calls more than 100 Mio EUR
 - Positive results (new players, SMEs, universities, research etc.)

Recommendations from Galileo User consultation platform



- Developed from input gathered from users during the 1st Galileo User Assembly.
- Identifying the **priority areas** for investing in EGNSS downstream applications by market segment;
- Analysing the different **funding tools that** could support EGNSS market uptake;
- Describing the desirable characteristics that define **best practices** for EGNSS R&D application programmes

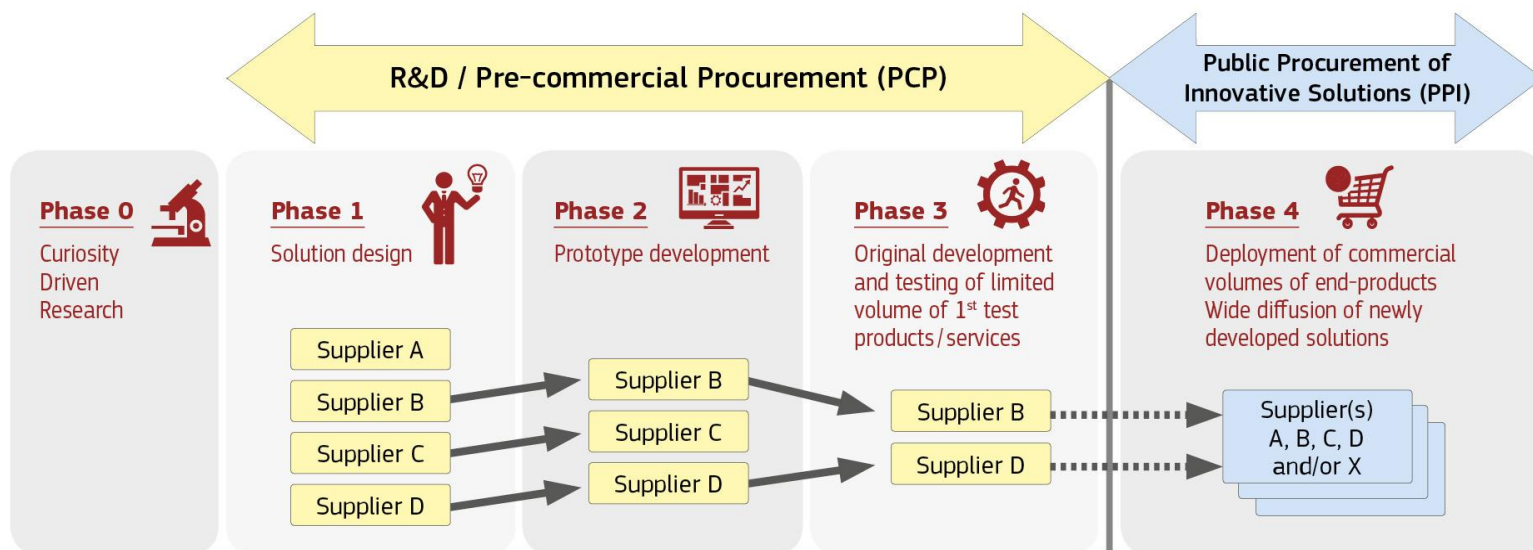
Pre-Commercial Procurement (PCP) and Public Procurement of Innovation Solutions (PPI) have been trialed in several domains within the H2020 framework, but not yet for EGNSS applications. Nevertheless, these may be promising methods for fostering EGNSS market penetration, supporting EU public buyers and contributing to EU policies. They may create a critical mass, which leads to price reduction/cost savings, and could provide an opportunity for SMEs to commercialise their innovative applications and services. In particular, PCP/PPI initiatives could foster the uptake of EGNSS in many domains, such as fleet management of public vehicles and border control mobile radios. They could be particularly beneficial for PRS market uptake. However, the administrative burden of PCP/PPI projects can discourage applicants. This could be offset by launching preparatory actions to promote PCP and/or PPI initiatives to public procurement agencies or buyer's groups from different countries and creating networks of public stakeholders ready for coordinated procurements.

- Strengthen the use of innovative procurement schemes to stimulate the demand-side of innovation and explore new ways to leverage private sector investments and industry partnerships;

IV. What are PCPs and PPIs - and what is the EGNSS benefit ?

Innovation procurement can deliver solutions to challenges of public interest and digital technologies, and may be an interesting new instrument for European GNSS:

- **Pre-Commercial Procurement (PCP)** can be used when there are **no near-to-the-market solutions yet and new R&D is needed**. PCP can then compare the pros and cons of alternative competing solutions approaches, enabling to de-risk the most promising innovations step-by-step via solution design, prototyping, development and first product testing.
- **Public Procurement of Innovative solutions (PPI)** is used when challenges can be addressed by innovative solutions that are nearly or already in **small quantity in the market and don't need new R&D**.



How does supply / demand side benefit



Suppliers

- Shorter Time to market
- Faster company growth
- Economies of scale
- Wider market

- New lead markets
- Increase export
- Global competitiveness

Politicians

- Implement political priorities
- Modernize public services
- Improve innovation climate
- Attract foreign investment
- Create growth and jobs

- First customers
- Shared risks & benefits

- Cheaper / better products
- Lower risk of modernization

**Win-win
for all**

Get the 'Best Product'...

- Shape product development to public needs
- Increase technology knowledge
- Reduce risk in commercial tendering
- Reduce supplier lock-in
- open up market to smaller players

... at the 'Lowest Price'

- Economies of scale
- Usage / Licensing rights
- 'First time right' product
- 'EU interoperable'
- Attractive to venture capitalists
- Reduce unforeseen expenditure

Procurers

V. Activities on innovation procurement for EGNSS in Horizon 2020 and Horizon Europe

1. Study “Potential use of Innovation Procurement (PCP/PPI) within H2020 and Horizon Europe EGNSS market uptake calls” (VVA,GMV,LS)

PCP/PPI

To be concluded

- ✓ Review the **impact** of PCP/PPI implementation in other R&D initiatives
- ✓ Analyze **interesting EGNSS applications** for the introduction of PCP/PPI
- ✓ Define list of **relevant public institutions and mapping of needs** that can be responded by EGNSS application and PCP/PPI
- ✓ Select **PCP/PPI pilot cases** and draft recommendations for EGNSS innovation procurement implementation strategy
- ✓ Organize a **workshop** with interested stakeholders to rise awareness



Study on EGNSS PCP/PPI initiative
launched by EC with GSA cooperation

2. 5th call EGNSS – Pilot on Pre-commercial procurement of EGNSS applications for public authorities

Launch of demand-driven innovation actions by public authorities aiming at development and adoption of EGNSS applications that meet their needs

Open call. Non-exhaustive list of possible applications



Budget: EUR 3 million

- Mobility as a service, cooperative ITS, public transport and smart cities
 - Helicopter emergency medical services with EGNOS capabilities (operations and equipment)
 - EGNSS to support port operations
 - Integration of EGNSS into U-Space concept
 - Public rescue services with Galileo SAR capable helicopters, boats and drones
 - Monitoring of infrastructure with EGNSS (rail, road, critical infrastructure)
 - Others
- The main challenge of this topic is to deepen user integration and thus foster exploitation of EGNSS applications to match the needs of public authorities at national, regional or local levels.
 - Proposals should be building on procurement needs of the participating organizations.
 - The proposals should support the EGNSS market take-up across Europe and demonstrate a sustainability of solutions beyond the lifespan of the proposed project.
 - The choice of EGNSS market segment and application is left to the proposer.

3. Innovation procurement in Horizon Europe

- **Promotion of PCP call at various events/ via various means**
 - Horizon 2020 Info Days
 - Sector specific events
 - Webinars to explain the instrument
 - European space week in Helsinki, December 2019
- **Assessment of study results, and first experience with PCP call**
- Discussion of using PCP/PPI more widely, in the framework of **EGNSS Horizon Europe stakeholder consultations.**



Thank you for your attention

Tina Mede

**Galileo and EGNOS – Applications, Security and
International Cooperation Unit (J3), DG GROW
European Commission**

Tina.Mede@ec.europa.eu

