



European
Global Navigation
Satellite Systems
Agency

GSA PRS USER SEGMENT PROCUREMENTS ACTIVITIES

Galileo Services Meeting
Prague, 25 November 2015

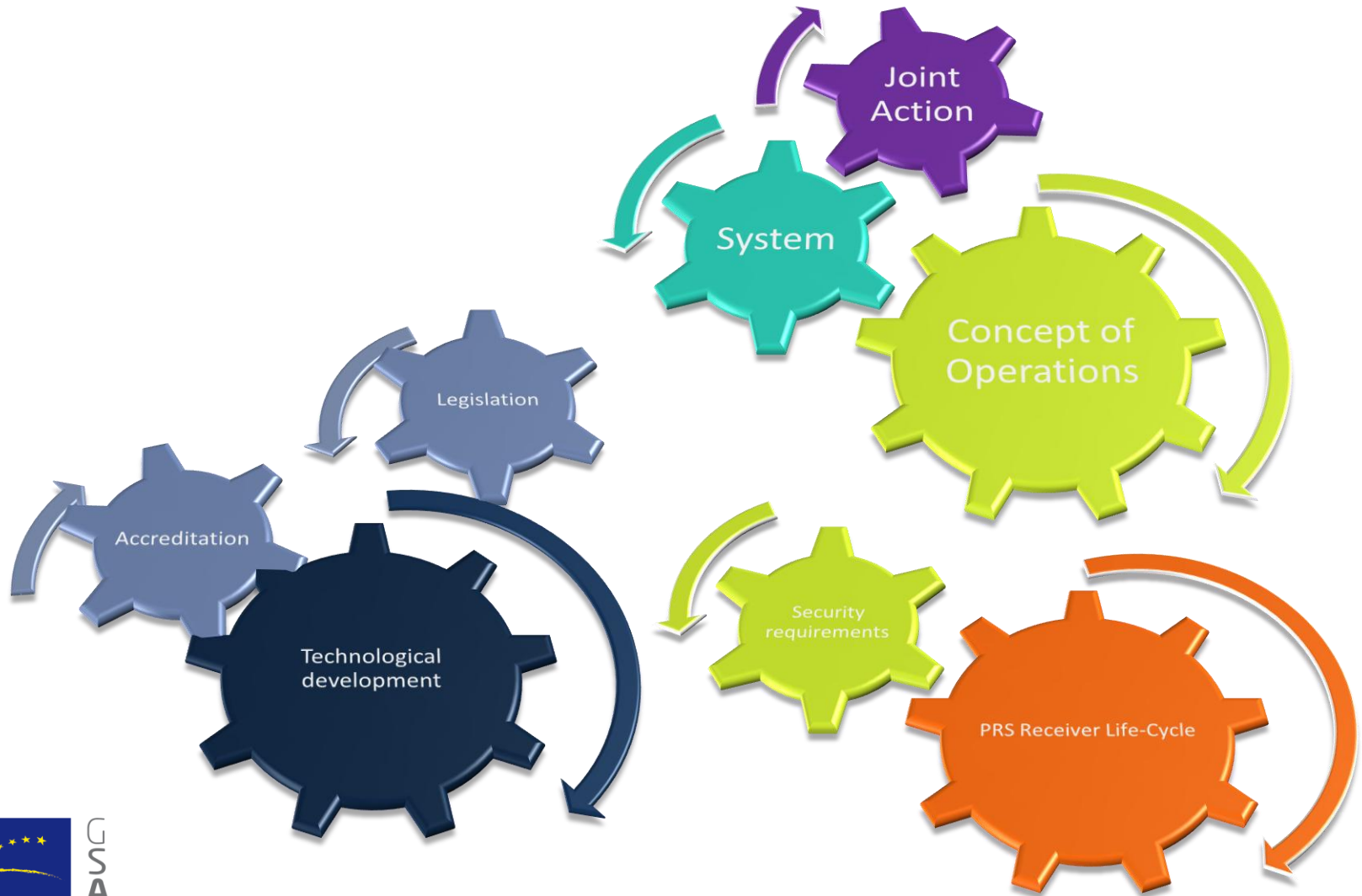
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PRS adoption drivers

- ☑ PRS access is regulated by PRS Decision 1104:
 - ☑ PRS users authorisations and management is under the responsibility of the MS/CPA
 - ☑ PRS applications development shall be in compliance with the applicable security regulations (including CMS)
 - ☑ PRS technology development is authorized and controlled by MS
- ☑ Performance: robust service capable to grant unlimited and uninterrupted access worldwide to MS (PRS decision 1104 Art 3.1)
 - ☑ System Level
 - ☑ Equipment
- ☑ Cost/Weight/Classification: Achieve « marketable » user equipments (in compliance with regulatory framework and matching end-user expectations);
- ☑ Build trust towards:
 - ☑ users → schedule (including user segment) and interfaces;
 - ☑ Industry → building a sustainable market and a solid business case



PRS User segment development... ...a difficult subject...



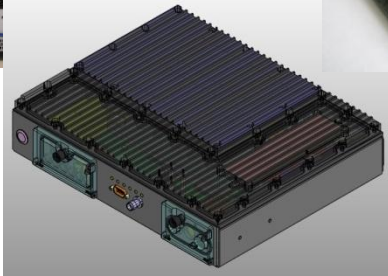
...with some challenges ahead...

Development of a technology suitable for its operational use within the “low-end” PRS user segment (GSA main target today)

A threefold challenge:

- Security
- Limited SWaP (Size-Weight-and-Power) and Price
- Regulatory/security/operational constraints

The low-end PRS receiver is the biggest challenge in the three domains



GSA PRS User Segment procurements and grants

☑ On-going/closed procurements

☑ PRS tenders:

- P3RS2 : Procurement of first generation of pre-op RX (11M€) → ongoing
- PRS4PMR (FP7): Proof-of-concept of PRS integration into Professional Mobile Radio (900k€) → completed

☑ Foreseen procurements & grants

- H2020 (procurements)
- Fundamental Elements (procurement and grants)
- Pilot Project grants

P3RS2: Overview

- Development of Pre-operational equipment
 - No longer a laboratory equipment /test tool
 - Use in operational environment (under specific conditions: Pilot Projects)
- 20 Receivers and Security Modules
- Dual-sourcing: 1 RX, 2 SM manufactured by different independent legal entities with pin-to-pin compatibility / inter-changeability
- Completion expected in 2016

What's next towards adoption:

Additional work required to reach the operational equipment status and enter into production (→ See H2020 Prisma)



PRS4PMR: Overview

- First technological approach to a potential PRS application
 - Integration of PRS with PMR
- Mai Goals:
 - Prove that PRS-PMR integration can be achieved in such way that the essential security requirements of both PRS and PMR are maintained.
 - Develop laboratory demonstrator prove of proposed concept (*no-PRS signals*).
- Completed with success (July 2015)

What's next towards adoption:

Additional work would be needed for the implementation of a real prototype and an operational solution



PRS user segment funding: planned activities

- H2020 space :
 - H2020 topics
 - Item 1 - Development of enabling technologies for PRS
 - Item 2 - Development of low-end PRS enabled technologies

- Fundamental Elements
 - First PRS ITT (FRAME)
 - Additional PRS activities under definition

- PRS Pilot Project grants

Fundamental Elements: FRAME

FRAME (Framing the definition and development of new PRS use cases based on innovative technologies) (20 M€ financial envelope)

The FW Contract has the following objectives to be implemented through specific contracts:

- Establish a framework for ensuring that any PRS user segment developments meet Galileo and PRS security objectives
 - Address in particular potential new use cases of PRS ensuring the co-existence of the new use cases with “traditional” use of secure GNSS
 - Ensure a common framework in which a large representativeness of PRS stakeholders in Europe, covering all the areas of the PRS user segment, is gathered, such that all the relevant point of views are properly captured
- Fundamental tool to support a wide, secure and sustainable PRS application developments

FRAME ITT has been published on the 20th of February 2015. About to Start

<http://www.gsa.europa.eu/gsa/procurement>



H2020 Topic 1: DISPATCH

- DISPATCH (Development of Server based PRS TeCHnologies to support future applications) (4M€):
 - PRS service provision based on a client-server architecture (i.e. new PRS use case)
 - This will provide a complementary tool which will, together with FRAME contract, will allow converging on this type of new PRS use cases.
 - Will result in the development of an end-to-end prototype

What's next towards adoption:

Additional activities would be required to deliver a commercial solution/service matching the PRS applications requirements identified in FRAME

DISPATCH Evaluation On-going. Expected start 2016



PRS Procurement Topic 2: Development of low-end PRS enabled technologies

- PRISMA (development of low end operational PRS Receivers including Security Modules) (20M€)
 - First step (following P3RS2 and the entry into force of the CMS) towards the delivery of market-ready low-end PRS receivers and security modules.

What's next towards adoption:

Additional effort would be required for the completion of the commercialization/exploitation path

PRISMA Evaluation ongoing. Expected start in 2016



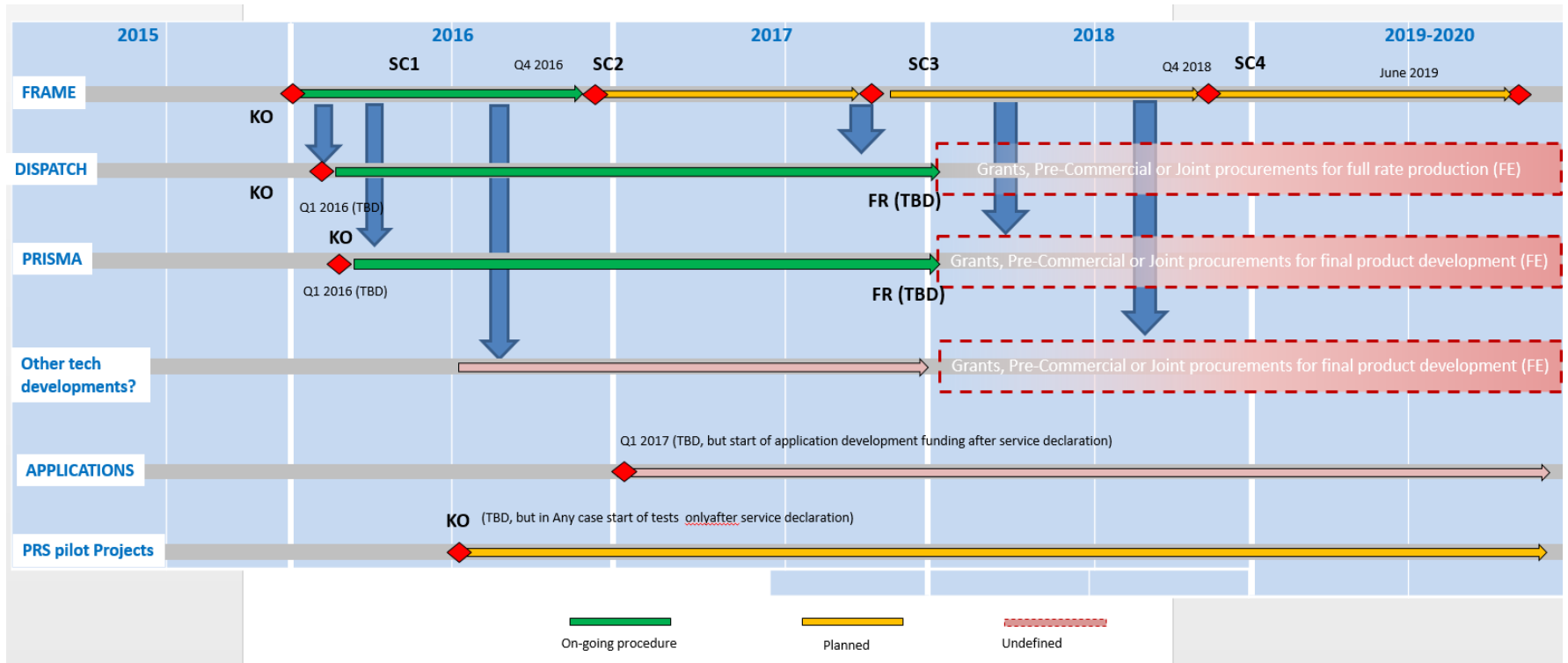
PRS Pilot Project call for Grants

- Goal establish a framework involving the relevant MS authorities (notably the Competent PRS Authorities, CPA) to support the implementation of the PRS Pilot Project tests
 - Evaluate the Galileo PRS in a representative (e.g. by using real Galileo signals) and suitable testing environment (E2E)
 - Preparation and Execution of joint test performed by MS using PRS
 - Demonstrated performance for given test case using the Galileo PRS
 - Evaluate and promote the common use of the PRS Service by several PRS Participants and/or stimulate cross fertilisation among PRS participants
- Target: up to 10 pilot projects, 2.5M€ (indicative, co-financing around 50%)
- Participation: Liaise with MS/CPA

<http://www.gsa.europa.eu/sites/default/files/Updated%20Galileo%20Exploitation%202015%20Annual%20Grant%20Plan.pdf>



GSA PRS user segment funding: current overview



GSA PRS User Segment funding Activities

Questions?

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