

Navigation Innovation and Support Programme (NAVISP): a new ESA programme in Navigation to foster innovation and competitiveness of European industry

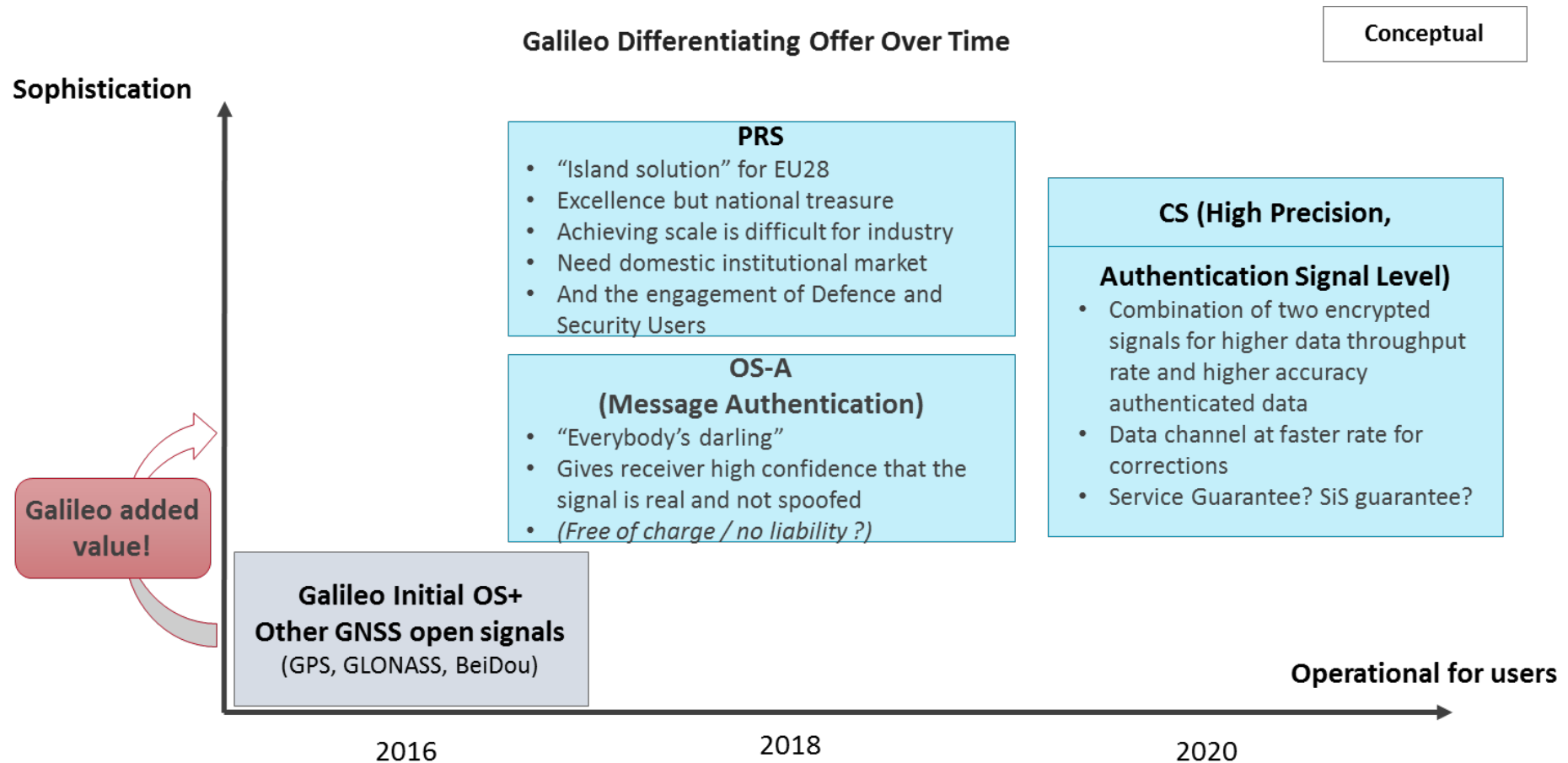
Context

The deployment, operation and evolution of the European Union's Galileo and EGNOS programmes are now funded from the EU budget. This political support secures the long-term future of these important programmes. In particular, H2020 will finance the technology development for the next evolution cycle of Galileo and EGNOS.

The challenges for satellite navigation however are going beyond Galileo and EGNOS and include the development of competitive industrial capacities, the development of complete new and innovative technologies for possible consideration under future evolution approaches, the integration of satellite navigation with other space and terrestrial application areas, etc..

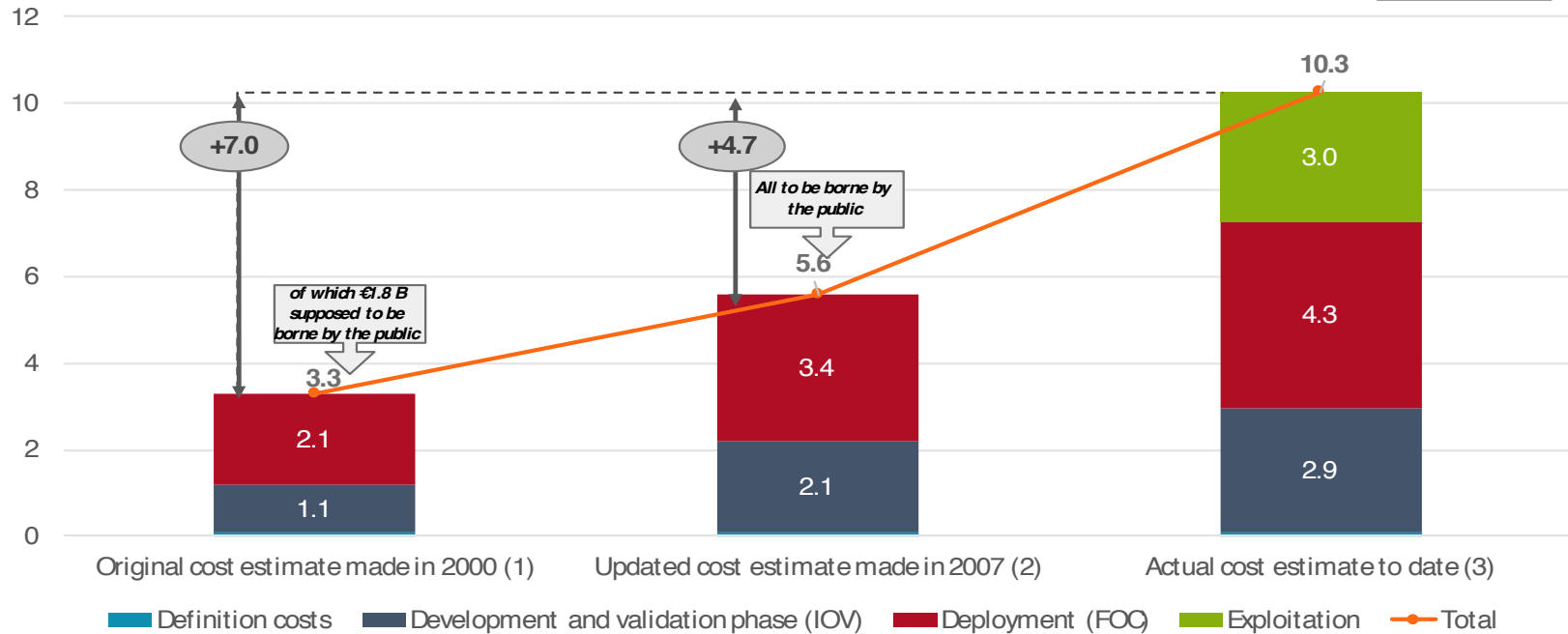
This landscape has provided an important opportunity to develop a complementary programme using ESA expertise in Galileo, EGNOS and navigation to undertake innovative work and to support ESA Member States' national objectives in upstream and downstream navigation.

Galileo has key potential to offer best-in-class positioning and timing information with some key differentiators...



Galileo's Budget Revisions over Time and Delta vs Original Cost (€Billion)

Indicative



(1): COM(2000)750; (2): COM(2007)261; (3): Regulation 1285/2013, and STP analysis on actual Galileo's IOV costs

Note: Figures included in the graph are the ones reported by the mentioned documentation and have not been either inflated or recalculated at present economic conditions

An infrastructure of this key importance has to generate European champions!

A new ESA programme in Navigation

To leverage these upcoming opportunities, European GNSS industry will need:

- To develop cutting-edge technologies & effective products & services;**
- To maintain & increase competitiveness of the manufacturing sector to keep it competitive w.r.t .existing and emerging non-EU solutions.**

ESA answer  **NAVISP**

A new ESA programme in Navigation (i.e. NAVISP) to foster innovation and competitiveness of European industry

NAVISP Programme Structure



	ELEMENT 1 [Innovation in Satellite Navigation]	ELEMENT 2 [Competitiveness]	ELEMENT 3 [Support to Member States]
Content	Analyses and developments linked to new and emerging design and operational concepts, techniques and technologies related to satellite navigation systems	Ad hoc technological & product developments and pre-operational activities along the whole satellite navigation value chain in support of the competitiveness of the industrial sector in the participating Member States	Support to MS national Programmes & Activities in satellite navigation and along the whole value chain
General principles for implementation of the activities	Competitive tender, 100% ESA funding on the basis of yearly work-plan adopted by PB NAV (fully coordinated with EC/GSA)	Continuous open call, unsolicited proposals, ESA co-funding, MS support letter	On request by MS, ad-hoc mechanism to be established on a case-by-case basis that ensures ESA's full costs are met
Lead for the definition of the activities	ESA	Industry	Member States



1. The creation of a innovation pole with satellite navigation as a core, embedded and integrated in the broader services and applications domain;
2. Targeting industrial innovation and competitiveness across Europe at all industrial levels and all industrial sizes, and driving growth and jobs;
3. The programme is flexible, allowing MS to target investments to support national objectives, under MS control;
4. Uses best practice in terms of responsiveness and fast contracting procedures;
5. Uses ESA expertise on satellite navigation technology services and applications for MS benefit and for the benefit of the Galileo and EGNOS programmes;
6. Designed to avoid any duplication with work funded by the EU (H2020);
7. Enables ESA MS to invest to develop industrial capacity along the whole value chain, for example to compete in future for EU GNSS contracts (can support development of new entrants to the market.

Internal ESA coordination on the applications side

NAV (through operating in the pre-commercial phases) have and will continue to have direct interaction with the Scientific, Institutional (including Public-sector) and Private-Sector user communities in order to initiate and take-forward the developments necessary to ensure that the long-term strategic requirements of these communities are met in terms of marketable, satellite-based data products & services.

Internal coordination mechanism will be reinforced to enhance the overall ESA effectiveness in the downstream sector.

