ARTES 33
ESA Telecommunication
Public Private Partnership

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1. What is a PPP?
   a. The Public-Private Partnership is a “business driven” venture funded through a partnership between a public /governmental authority and a private sector company.
   b. PPP provides partners with a better value for money and transfers risks to the entity that is best positioned to manage it

2. Why PPP is a suitable model for ESA telecom projects?
   a. Private sector (Operators / Service Providers) tend to be risk adverse: PPP helps to bring into market innovative satcom products /system concepts and services by including them in an operational commercial mission (based on a business case).
   b. ESA deals mainly with the Technology Innovation Risk
   c. Private Sector deals mainly with Market Risk
Two types of ESA Commercial PPP models are implemented:

a. **ESA originated**: This is the case when **ESA offers assets** that enable a business case for Industry.
   - A dedicated programmatic framework is required for each PPP
   - An Announcement of Opportunity is issued to select the private partner

a. **Industry originated**: Operators/Service providers approach ESA in order to **de-risk their business case** (mainly technological risk) when introducing innovative services and/or system concepts
1. There is a higher appetite for ESA telecom Industry Originated PPPs
   a. Discussions with Operators/Service providers confirm the needs to introduce innovative products and system solutions at low cost in order to be more competitive in the Telecommunication highly competitive market arena.
   b. ESA has become a credible PPP partner

2. A new ARTES element (ARTES 33) was set up to respond to Industry Originated PPPs
   a. The programmatic framework is finalised
   b. 1-3 PPPs are planned to be presented to CMIN 2012 for funding
1. The ARTES 33 element is a new programme conceived to provide an efficient framework for future Industry-Generated Public Private Partnership

2. It aims at introducing innovative telecommunication technologies as enabling elements of commercial-driven missions proposed by Industry or Operators/Service Providers

3. ARTES 33 will contribute to boost ESA MS Industry competitiveness, reduce time-to-market for their innovative solutions and create new downstream services, thus achieve ESA programmatic strategic objectives in the satcom domain

4. It leverages on successful implementation of ESA Telecom PPPs programmes (e.g. Alphasat, EDRS, Small GEO, Hylas)
Eligibility: Pre-conditions

**ARTES 33 PPP project proposal must:**

1. Be based on a partnership between ESA and the private partner (Operator / Service provider) where the private entity is expected to implement a business case and, consequently, **co-fund and take the market risks**

2. Introduce **innovation** (technology, system concepts and/or service) as functional part that is essential for the realisation of the private partner’s business case
   - a. The introduced technology/system concepts does not necessarily be developed in previous ARTES programmes.
   - b. The innovation will need to be aligned with ESA (high-level) strategic objectives
Key programmatic aspects

1. Every new PPP project will be created as a new Sub-Element of ARTES 33 with its own specific Implementing Rules

2. Each PPP Sub-element will require the contractual and financial commitment of the involved parties for the mission design, development and validation phases (Phases B/C/D/E1).

3. The private partner takes the responsibility for the full project phases and will manage the Industrial consortium

4. There might be cases where preparatory activities are required before engaging into a new PPP project: a common ARTES 33 Sub-Element (I) is defined to allow the Industrial team to implement such preparatory activities (e.g. Phase 0/A).
1. Funding level from ESA is up to 50% of the total eligible costs.
2. Eligible costs:
   a. End-to-End telecom system engineering and validation activities,
   b. Satellite and Ground Segment level engineering and AIV activities related to the innovative elements,
   c. Activities as required for the pre-development of innovative Space and Ground Segment technology,
   d. PFM development incurring mainly engineering, H/W and/or SW item, AIT tasks for the innovative space technology equipment,
   e. Innovative Ground Segment equipment incurring mainly engineering, H/W and/or SW item, AIT tasks,
   f. IOT and early routine operation phase for testing and validation of function and performances related to the innovative elements.
1. Electra is a first Public Private Partnership project under the new ARTES 33 element as a new Sub-element (II) that will be initiated and presented to the next CMIN 2012 for funding.

2. Satellite telecommunication market clearly shows a trend to move towards increased efficiency of total cost of satellite capacity in orbit.


4. **SES, the Satellite Operator**, have proposed ESA a telecommunication mission based on a **full EP small satellite (3t range)**, selecting **OHB-System (D)** as the Prime Contractor.

5. OHB leads an industrial team in charge of developing and qualify the innovative technology as required for the full EP Small GEO platform.
The main project objectives are:

1. to Design, assemble, integrate, test, launch and operate the Electra satellite in compliance with its mission requirements,

2. Develop and qualify new key technologies that will allow OHB to expand its Small Geo platform product range

3. Validate the satellite during its first years of operations

4. Introducing innovative technology elements at ground control segment level to adapt and optimise the capabilities for the new platform, in particular during the transfer phase,
Electra a first PPP project under ARTES 33 (3/3)

Key Industrial benefits:

1. Provide in-flight heritage and in-orbit demonstration of the platform and associated new technologies in a representative telecommunication satellite mission -> essential to gain market acceptance for a new platform product and equipment and, therefore, lead to future recurring exploitation,
2. Build-up a stable core industrial structures in charge of the commercial production,
3. Provide all the benefits implicit in a PPP model and optimise the use of public funding.

Electra will increase European MS competitiveness and complement the existing European offer in other platform market segments, providing a capability for which demand exists and building flight heritage in the most credible and representative environment.