



New Space and Public Procurement: Contract Models, Risk Allocation, and Strategic Perspectives

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In summary / Key Takeaways:

- **Key shifts.** New Space sees public entities moving from “project authorities” to partners or customers, with greater costs, risks, and responsibilities allocated to private actors.
- **Instruments.** This transition is supported by the adoption of innovative procurement and contractual models to support research, innovation, and competition, such as Pre-Commercial Procurement (PCP), Public Procurement of Innovative Solutions (PPI), and Public-Private Partnerships (PPP).
- **EU/ESA Opportunities:** The EU vision of July 2025 and the ESA Strategy 2040 aim to promote New Space approaches and establish public-private partnerships, including cross-sectoral and financial ones.
- **Critical issues:** Collaborations between the public and private sectors, however, require proper structuring, considering success (or failure) factors such as risk allocation and management, and intellectual property.

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Summary

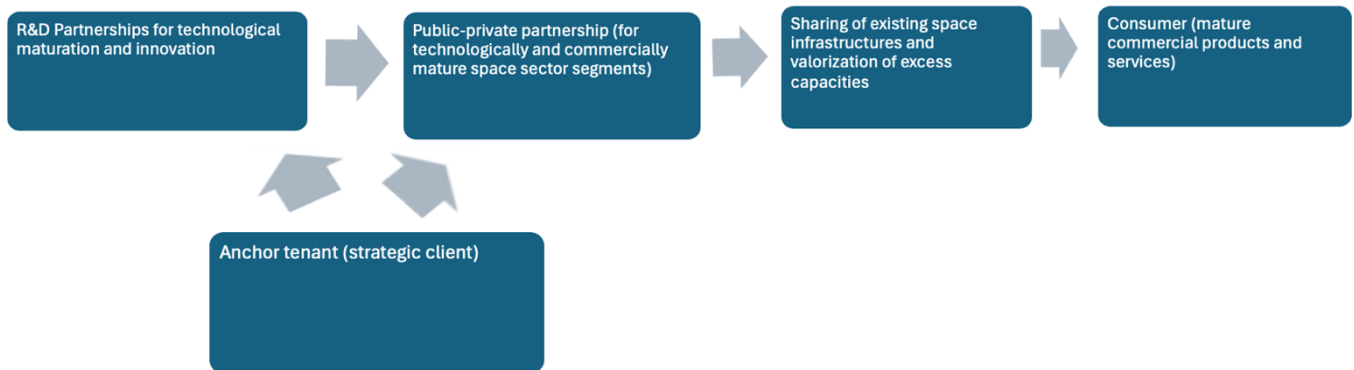
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Recently, **New Space** shifted public-private relations. The traditional model (Old Space) had government agencies as “project authority”, with programs funded only by public investment. Now, private entities take on more costs and risks, while public entities evolve toward the roles of **partner**, **anchor customer** (strategic customer), or simply **consumer**.

1. The new models: general overview

Depending on market maturity and demand, the public entity today assumes various key roles, as illustrated in the following diagram.



- **Consumer.** The opposite extreme of Old Space. The public entity is a mere purchaser of commercial (“off-the-shelf”) products and services at a fixed price. Costs, technical risks, and liabilities remain with the private entity.
- **Anchor Customer (Strategic Customer).** The public entity supports demand by guaranteeing the purchase of specified quantities of products or services from the private partner, thereby enabling technology development and attracting investments.
- **Partner.** Public and private sectors co-finance and jointly develop projects through (see also OCSE report “Evolving public-private relations in the space sector”, 2021):
 - *Co-financing of R&D* (for example, *pre-commercial procurement*), for the development of highly innovative products or raising the technological capabilities of private partners.
 - *Public-private partnership* (PPP), through long-term agreements and services.
 - *Infrastructure sharing or leveraging of excess capacity* (for example, hosted payloads, public payloads on commercial satellites, or *condominium satellites*, co-ownership of satellites).

2. The European Landscape and Models

In Europe, institutions remain the main funders and customers, with differentiated approaches:

- **European Union (EU):** the 2021-2027 programs (Space Reg. 2021/696 and IRIS² Reg. 2023/588) are managed by EUSPA in relation to the aspects of the development and promotion of markets for space services.
 - **Rules:** competition rules are applied, and procurement models are defined in the Space Reg. and IRIS² Reg.
 - **IP:** typically, IP rights belong to the EU (especially for the governmental infrastructure of IRIS²). For works developed with grants or co-financing, IP may remain with the funding beneficiaries (see Space Reg.).
 - **Start-ups and SMEs:** involvement is provided for through minimum subcontracting obligations (Space Reg.) and participation in PPPs (see in particular IRIS² Reg.), as well

as initiatives dedicated to supporting growth and access to risk capital (such as the Cassini initiative).

- **ESA (European Space Agency):** manages its own programs and EU ones (Galileo and Copernicus) regarding design and development.
 - **Rules:** except for EU programs, ESA applies the principle of geo-return (geographical return) and its own procurement rules (see ESA Contracting Regulations and related Implementing Instructions, General Clauses and Conditions for ESA Contracts, and Best Practices for the Selection of Subcontractors by Prime Contractors in the Frame of ESA's Major Procurements).
 - **IP:** unlike the EU, IP generally remains with the private contractor, with ESA retaining the right of access and use.
 - **Start-ups and SMEs:** ESA also provides for direct involvement or subcontracting mechanisms for major programs. An example of the new approach (service purchase) is the awarding to a consortium led by ClearSpace SA (a Swiss start-up) of a strategic mission for orbital safety (removal of space debris).
- **Member States:** use procurement systems harmonized at the EU level, with national specificities or intergovernmental agreements.

Innovative Procurement Instruments. Beyond traditional tenders, more flexible instruments are spreading, such as:

- **ESA Contests for innovative solutions:** awarding prizes and, at ESA's discretion, execution of a contract or a cooperation agreement.
- **Pre-Commercial Procurement (PCP):** exempted from rigid public procurement rules, PCP covers R&D activities up to the prototype (but not commercial development and/or purchase of final products) and provides for co-financing and sharing of risks and benefits (IP rights cannot be for the exclusive use of the public entity).
- **Public Procurement of Innovative Solutions (PPI):** the public entity acts as a first buyer of solutions not yet on the market, with a phased process (milestones) and co-financing. The applicable IP rights regime is defined by the contracting authority.
- **Public-Private Partnerships (PPP):** long-term agreements for the supply of goods and services in technologically and commercially mature segments, which provide for co-financing, a significant decision-making role for the private entity, and risk transfer also to the private party (there are various models, e.g., "build-own-maintain", "design-build-operate", etc.).

3. Proper Structuring: Feasibility Analysis

Structuring a collaboration between public and private sectors is a critical aspect (as demonstrated also by cases of failure). Before launching a partnership, proper and careful preparation, evaluation, and structuring are necessary, taking into consideration:

- project risks and their allocation.
- industry characteristics and possible competition level.

- incentives for private actor participation and capital attraction (allocation of IP rights is also particularly critical).

The following chart summarizes the partnership preparation process.



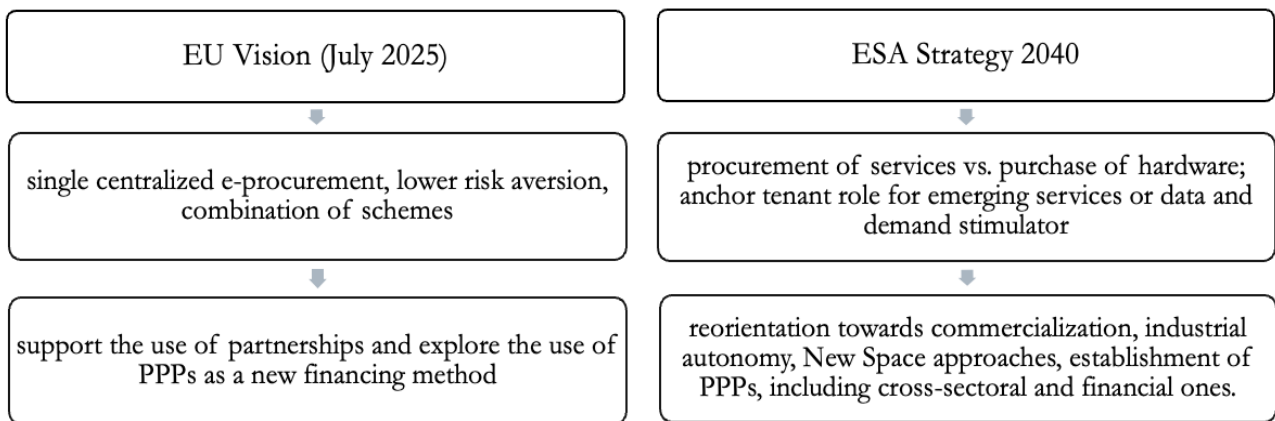
For proper **project governance**, it is also essential to evaluate the model's *ex ante* applicability using a “decision matrix”.

Table: decision matrix for PPP usage

Scenario	Competition	Risk allocation	Benefits/costs/skills	Innovation/flexibility
Favorable conditions 	Realistic competition exists both in the tender process and in the market.	Endogenous risks (construction, delivery, etc.) can be effectively transferred to and borne by the private entity.	- The public partner can monitor the project but lacks skills to build/manage. - Products/services are clearly defined (in quantity and quality) and linked to payments. - Adequate future cost savings (deriving from the combination of construction and operational phases).	The public partner leaves technical design to the private partner .
Unfavorable conditions 	Absence of realistic competition in the tender process and in the market.	Only one type of risk is transferred (or none): the PPP may not make sense.	- The public partner lacks qualified personnel to monitor the project. - Products/services cannot be clearly defined and/or linked to performance payments. - No future cost savings.	The public partner can and wants to prescribe detailed technical specifications . Traditional procurement is more appropriate.
Critical factors 	Insufficient competition in the tender process and in the market.	Risks are exogenous or difficult to identify and quantify.	- The public partner already has the skills to build/manage. - Quantity and quality of products/services not adequately defined and/or adequately not linked to performance payments. - Uncertain future cost savings.	Technology subject to rapid changes (obsolescence risk in long contracts) or excessive contractual rigidity regarding the possibility of modifying specifications.

4. Conclusions and future perspectives

New Space has introduced models that increasingly involve private entities as key players. This direction is also confirmed by the recent EU vision and ESA strategy, the content of which steers towards the following.



However, as highlighted in the concluding key findings, success is not guaranteed. Careful evaluation of the specifics of the sector, market, and structural requirements is required.

Key Findings: public-private partnerships (aspects to monitor)

- require correct and adequate assessment and structuring.
- usage is not always adequate in certain areas and sectors.
- require clear definition, from the outset, of relevant conditions and purposes.
- require adequate risk allocation and balancing with incentives and remuneration of the private partner.

