

# **The rise of the private actor in the Space Sector**

Alessandra VERNILE  
Resident Fellow, ESPI

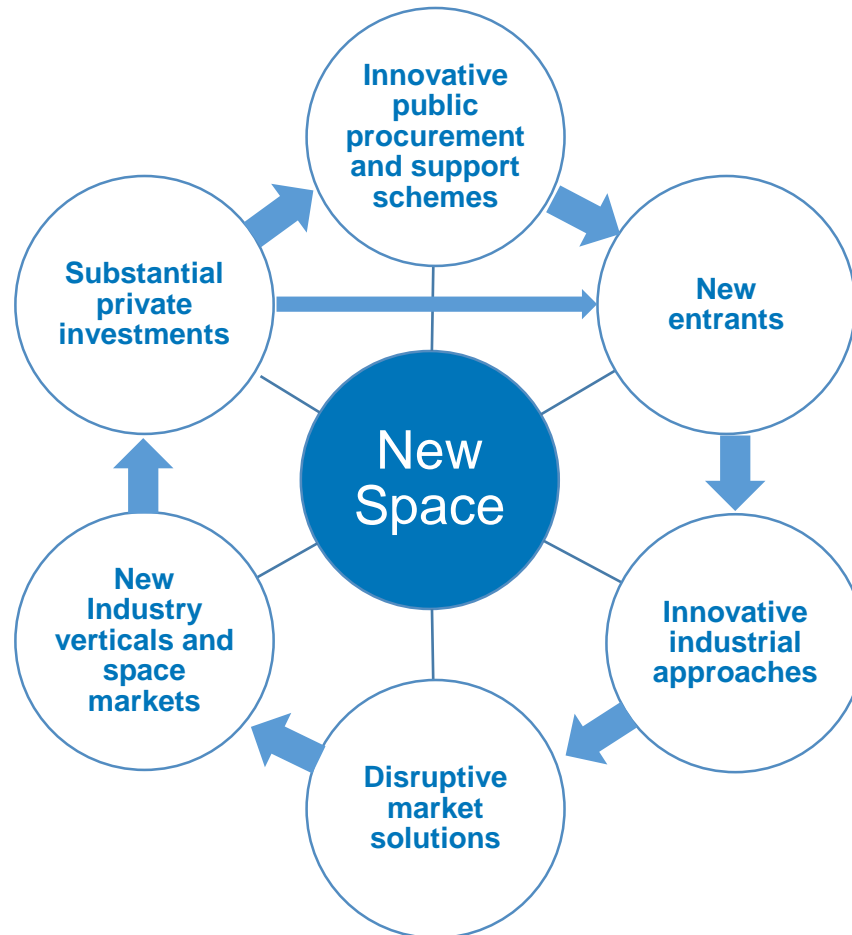
**ESPI 11<sup>th</sup> Autumn Conference**  
**“Innovation in the New Space Economy”**  
**12 September 2017**  
**Vienna**

## ESPI definition of New Space

- Today there is no broadly accepted definition of New Space
- ESPI definition of New Space is the following:

New Space is a disruptive sectorial dynamic featuring various end-to-end efficiency-driven concepts driving the space sector towards a more business- and service-oriented step.

# Key trends driving the New Space sectorial dynamic



## Innovative public procurement and support schemes

- Public policies were instrumental in the emergence of New Space:
  - **Regulatory framework** enabling commercial activities
  - **New procurement schemes** enabling radical optimisation of industrial organisation
  - **Public demand** creating sustainable markets for businesses
- NASA COTS has been highly effective and paved the way for more ambitious “Public-Private Partnerships”
- The future of New Space, although commercially driven, cannot be disassociated from public strategies

## New entrants

- A large number of new actors have recently entered or emerged in the space sector:
  - Non-space companies (e.g. ICT companies)
  - New actors (entrepreneurs, start-ups, SMEs)
- New entrants challenge the historical approaches to the space sector in various ways.

## Innovative Industrial Approach

- New Space actors implement new industrial methods as part of their innovative business models:
  - industrial organisation optimization
  - supply chain rationalization
  - vertical integration
  - proven technologies re-use
  - economies of scale
  - automation and digitization...
- The main driver is cost-effectiveness to create the conditions to disrupt existing markets or to address emerging markets

## Disruptive market solutions

- Focus on solutions with the capacity to disrupt existing markets or address new markets with specific value propositions:
  - Lower prices
  - Integrated solutions
  - Adapted solutions
  - ...
- These solutions are not necessarily based on new technologies but rather on revisited concepts giving way to an alternative innovation dynamic

## New industry verticals and space markets

- New Space creates/builds on new verticals and markets
- Two kinds of applications for downstream and upstream:
  - Existing markets but radical solution improvements
  - New visionary solutions and markets
- Economic viability of new markets has yet to be proven



## Substantial private investment

- Private investment in space increased in line with the growing number of new companies and start-ups
- In average nearly \$1.5 billion was invested annually in space start-ups during the period 2010-2015. (Source: Start-Up Space, Bryce)
- Private funding is substantial when compared to the €6.56 billion of the European governmental budget in 2015 (higher than available European funds to support industry competitiveness and innovation)
- Private investment complements well public support by addressing short-term industrial objectives and supporting scale-up

## Conclusions

- New Space is an opportunity and a challenge for the space sector
- The USA has taken leadership in providing a fertile ecosystem for New space
- Future public policies will be instrumental for New Space durability

## New Space: An opportunity and a challenge

- New Space offers an opportunity for governments to leverage **more ambitious partnerships** with private businesses
  - Risks and costs sharing
  - Industrial organisation optimisation
  - Socio-economic impacts maximization...
- The emergence of new private actors with aggressive strategies is a **competitive challenge** to be taken up by the European space industry

## The USA, a fertile ecosystem for New Space

- The USA is a leader of the New Space dynamic
  - Development of space commercial ventures has been a long-standing strategic objective in the USA
  - Large American ICT corporations have been important players
  - Leadership from esteemed tycoons likely fostered the emergence of other endeavours in the USA
- New Space is also hitting China and India
- Europe must continue its effort to foster the dynamic
  - Europe has a long history of successful commercial space ventures
  - Continue effort to foster investment and entrepreneurship in the European space sector
  - Structure European public markets to avoid fragmentation and position institutions as principal customers of space applications

## A future intrinsically related to future public policies

- Durability of New Space will depend on two complementary components: **Business success and Public willingness**
- Profitability and sustainability of new markets and business models still to be demonstrated
- Public actors have a key role to play to support New Space:
  - Partial transition from a role of ordering customer and industry overseer to **business sponsor and consumer** of products and services developed independently by industry

## Thank you for your attention

“Old Space is slow, bureaucratic, government-directed, and completely top-down. Old Space is NASA, cautious and halting, supervising every project down to the last thousand-dollar widget. Old Space is Boeing, Lockheed, and Northrop Grumman. Old Space coasts on the glory of the Apollo era and isn't entirely sure what to do next. New Space is the opposite of all that. It's wild. It's commercial, bootstrapping, imaginative, right up to the point of being delusional.”

*J. Achenbach, The Washington Post*