

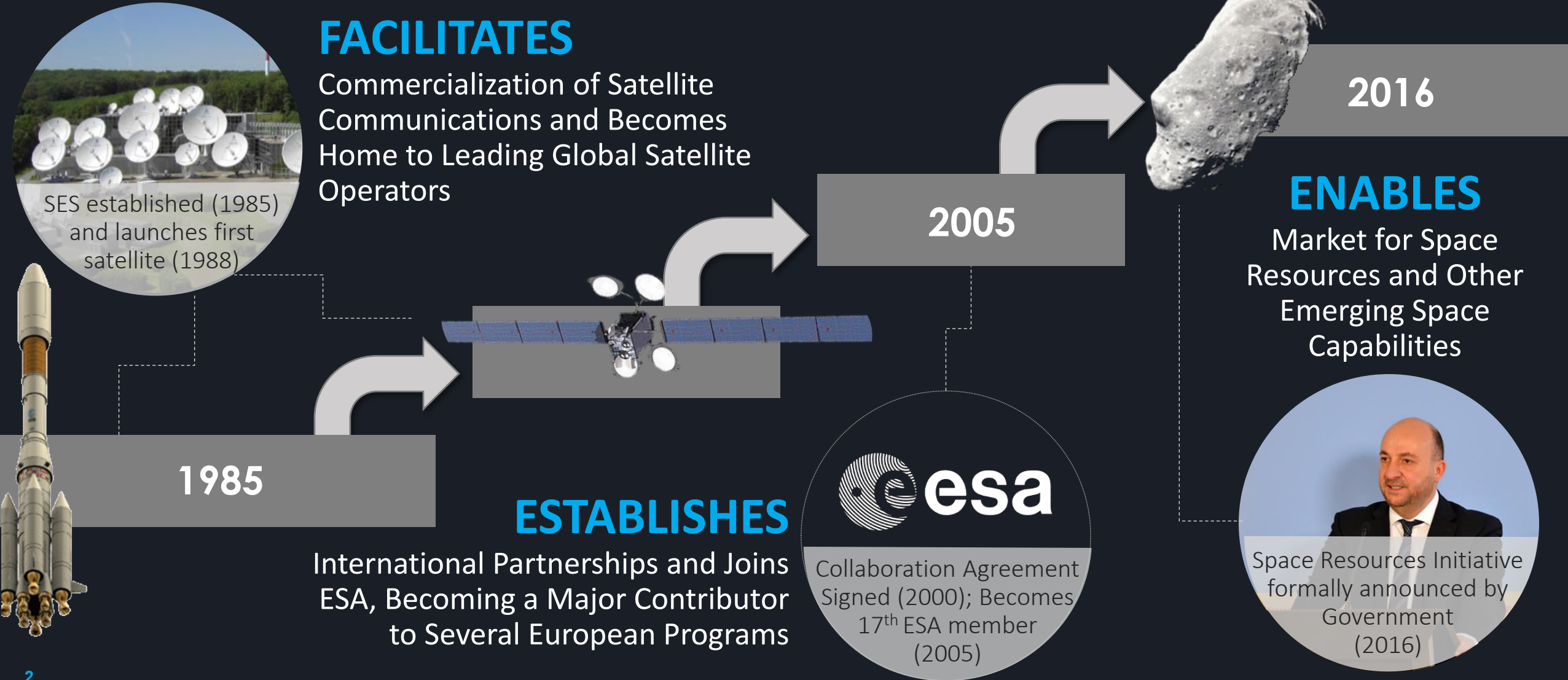


SpaceResources.lu

Vision, Goals, Challenges, Actions

LUXEMBOURG:

Pioneering Space for 30+ Years



Luxembourg's NATIONAL SPACE POLICY GOALS

Primary Goals

- ① **Generate New Economic Value**
- ② **Increase International Collaboration**
- ③ **Continue SATCOM Leadership**



“The efforts to put in place the necessary measures to support the continued strengthening of Luxembourg’s space sector clearly demonstrate the long-lasting commitment of the Government”

– Etienne Schneider, Deputy Prime Minister, Minister of the Economy

INVESTING IN KEY CAPABILITIES

Enabling Future Markets

Priority Space Capabilities for Luxembourg



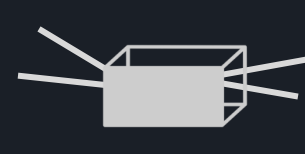
Space-Based
**Value-Added
Services**



**Ground
Segment**
Equipment



Critical Satellite
**Sub-Systems and
Components**



Microsatellites and
Miniaturized
Payloads, Systems,
and Structures



Systems and
Enablers for
**Space Resource
Utilization**

Strategic Mindset: Luxembourg has identified at least five capabilities that it believes to be critical in particular **high growth commercial space markets**

Forward-Looking Approach: Luxembourg is always looking for the next critical space capabilities and has **the flexibility and openness to evolve and adapt its priorities**

NATIONAL VISION

Luxembourg's Space Resources Initiative



SPACE
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“ Luxembourg aims to contribute to the **peaceful exploration and sustainable utilization** of space resources for the benefit of humankind ”

DEMAND IS GROWING

And Capabilities Are Rapidly Improving

Blue Origin

Plans Lunar
Exploration



SpaceX

Plans Mars
Settlement



UAE

Plans Mars
Exploration
& Settlement

ESA

Advocates for
Moon Village

Bigelow

Plans Habitats
in Cislunar Space

PIONEERS

Are Enabling Space Exploration
and Will Require Space Resources



Advanced Materials



Miniaturization



Additive Manufacturing



Data Processing

TECH ADVANCEMENTS

are Enabling Commercial
Exploration

SPACE RESOURCES

Luxembourg's Next Big Bet in Space

WHY?

Promote Space
Resource Utilization

Space Resources Are Available and Valuable

Space Resources Part of the Future Space Economy

Space Resources Will Enable Deeper Space Exploration

Space Resource Tech Has Near-Term Terrestrial Value

CHALLENGES



Technical

Capabilities to prospect, extract, transform and utilize resources in space still must be developed, tested, and matured



Regulatory

International & domestic legal frameworks need to be developed/established to promote and protect investment, and ensure responsible activity and behavior



Financial

Significant financial resources with long-time horizons must be leveraged to enable private industry to develop and field critical systems



Business

Need for understanding the value chain and for identification of opportunities and business cases with near-term potential to ensure incremental growth in a nascent market

Luxembourg seeks to engage globally to address these challenges

LUXEMBOURG'S SPACE RESOURCES PLAN

Establishing Itself as the European Hub for Space Resources



To unlock the vast potential of the space resources market, Luxembourg established a space resources strategy working along five pillars

Five Pillars

Pillars Defined

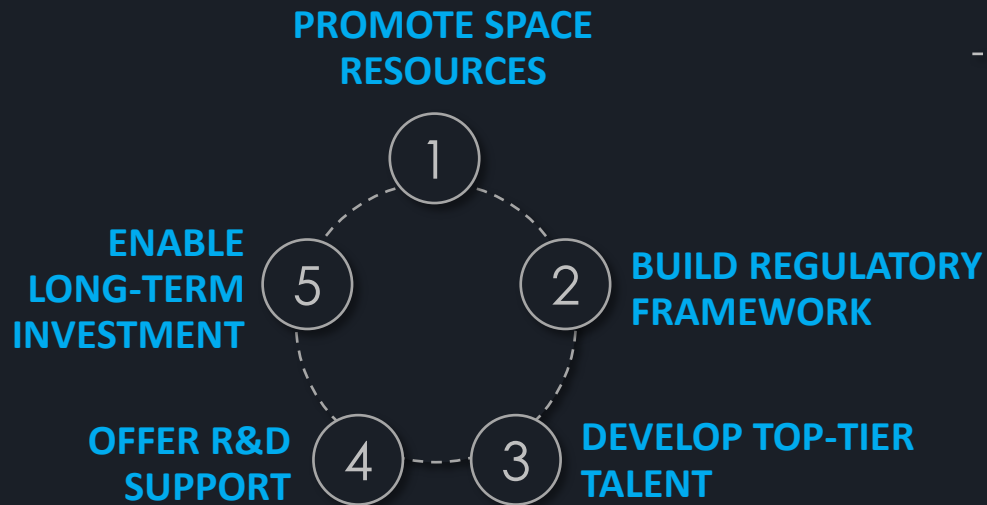
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|---|------------------------------------|--------|--|
| ① | PROMOTE SPACE RESOURCES | -----> | <i>Ensure national support and promote international cooperation</i> |
| ② | BUILD REGULATORY FRAMEWORK | -----> | <i>Build clear legal framework and engage internationally</i> |
| ③ | DEVELOP TOP-TIER TALENT | -----> | <i>Promote long-term public support and workforce engagement through education and R&D</i> |
| ④ | OFFER R&D SUPPORT | -----> | <i>Provide dedicated support for industrial research and development activities</i> |
| ⑤ | ENABLE LONG-TERM INVESTMENT | -----> | <i>Develop investment Instruments focused on commercial space</i> |

Significant Results To Date

Implementation of Space Resources Framework...



Several companies have begun operations in Luxembourg



Five Pillars of Luxembourg's Space Resources Initiative





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Let's Make It Happen!