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Securing Europe's Cosmic Commons: A Strategy for Autonomy in the New Astropolitical Age

Securing a sustainable and autonomous European space environment is an imperative that transcends mere policy, demanding a strategic response to a complex synthesis of astropolitical, technological, and conceptual challenges. The contemporary space domain is defined by escalating geopolitical competition, aggressive militarization, and the disruptive velocity of commercialization, necessitating an immediate and cohesive European strategy. The required outline of European action could be divided into these domains:

I. The Strategic and Geopolitical Imperative: Defining Autonomy

The core challenge for Europe is to solidify its space autonomy while strategically navigating the existing web of international security relationships.

- **Sovereign Geopolitical Positioning:** Europe must establish true sovereign capacity in space security policy. This involves carefully balancing strategic interdependence with key allies (e.g., the U.S. and NATO) against the absolute necessity of maintaining autonomous decision-making. This dual imperative is crucial given the major power rivalries (U.S.-China-Russia) and the ascendancy of influential non-state actors (e.g., SpaceX).
- **Independent Space Domain Awareness (SDA):** Strengthening the European Space Surveillance and Tracking (EUSST) framework is paramount. Achieving a robust, independent SDA capability eliminates critical strategic reliance on non-EU actors for essential situational intelligence, fortifying European sovereignty.

- **Legal Harmonization and Technological Sovereignty:** National fragmentation in space regulations must be resolved through the harmonization of EU Space Law, thereby creating a unified, predictable regulatory ecosystem.
- **EU-NATO Coordination:** The relationship with NATO requires delicate calibration. Deepening cooperation on space defense must be managed to ensure the EU retains its distinct autonomous decision-making capacity and the ultimate freedom to act independently.

II. The Conceptual Shift: Securitization of the European Space Enterprise

The transition from a purely civilian space policy to one that fully incorporates defense and security requirements is a fundamental conceptual and structural change for the Union.

- **Prerequisites for Independent Security:** Developing a fully independent European Space Situational Awareness (SSA/SST) capability is the foundational prerequisite for security. This capacity is vital for the **protection and resilience of critical space infrastructure** against evolving hybrid and kinetic threats.
- **Cyber Resilience and Redundancy:** Defending European space assets against sophisticated cyber threats is a core security function. This demands investments in high levels of resilience and operational redundancy to safeguard essential services, including Global Navigation Satellite Systems (GNSS), communications, and Earth Observation (EO) systems.

- **Integration of Dual-Use Systems:** This paradigm shift entails the integration of existing heritage systems (e.g., Sentinel and Copernicus) into Common Security and Defense Policy (CSDP) missions.

III. Counterspace Vulnerabilities and Risk Mitigation

Europe must proactively address the full spectrum of direct and indirect threats challenging its operational capabilities in orbit and beyond.

- **ASAT Threat Mitigation and Industrial Reinforcement:** Addressing the immediate threat posed by foreign Anti-Satellite (ASAT) capabilities (kinetic, cyber, directed energy) mandates a dual approach: **strengthening the European industrial base** and drastically reducing external supply chain dependencies for mission-critical components.
- **The Innovation-Security Nexus:** A critical challenge is the reconciliation of the open, dynamic nature of the European **NewSpace** ecosystem with the necessity of imposing strategic controls to protect vital national and European security interests.
- **Commercial Securitization and Risk Management:** The growing involvement of private operators in providing security services signals a trend toward **commercial securitization**. This requires the EU to develop robust frameworks for governance, liability, and risk management when delegating sovereign functions.

IV. The Economic and Industrial Base: Sustainability and Expansion

The long-term sustainability of European space operations hinges upon a competitive, resilient, and future-proof industrial base, capable of operating across all spatial regimes.

- **Integration and Industrial Champions:** The successful integration of European "New Space" companies is essential. This integration must specifically emphasize their role in **Access to Space** (launch services) and Earth Observation (EO) across all orbital regimes (LEO, MEO, GEO).
- **Ground Segment Resilience:** Securing the geographically dispersed European ground infrastructure against cyberattacks, jamming, and physical



sabotage is vital for maintaining command and control and continuous data downlink capabilities.

- **Secure Connectivity and Autonomy:** The utilization of the EU's secure connectivity initiatives is critical to ensure the provision of resilient, encrypted communications for governmental and security users, further cementing **operational autonomy**.
- **Defining the Cislunar Domain:** Given the increasing strategic importance of the space between Earth and the Moon, the EU must preemptively **define the spatial perimeter of its security interests** within the cislunar domain and allocate the necessary resources for future protection and governance.

The pursuit of a sustainable and secure European space environment demands nothing less than **full Technological Sovereignty** and substantial, targeted investment in **resilient industrial capacity**. Future security efforts must strategically extend Europe's strategic presence into new domains such as the cislunar realm, while simultaneously reinforcing Europe's foundational role as a principled actor promoting responsible international norms for the peaceful use of the cosmos.

This article was written **before** the publication of the space strategy documents in Germany and France - and after they were published, a key part of the opinions presented at the Bonn meeting in October - received an official seal of approval. This is the case with France's space strategy - which emphasizes the area of Resilience and Defense, and with the German strategy - which emphasizes the need for close cooperation between Germany and NATO but emphasizes the strategic importance of developing independent German capabilities - including access to space.