

ESPI

**EUROPEAN SPACE
POLICY INSTITUTE**

Space for Prosperity, Peace
and Future Generations

Cooperation of the Republic of Korea and Europe in the Space Sector

Lina Pohl, Research Fellow and Relations Officer for Germany & Austria,
seconded by the German Space Agency to the European Space Policy
Institute (ESPI)

Europe-Korea Conference on Science & Technology (EKC) 2025
Aug 27th 2025, Vienna

The background of the slide features a view of Earth from space, showing the curvature of the planet and the dark void of space with stars. A complex network of white lines and nodes is overlaid on the Earth, representing a global network or satellite constellation. The lines connect various points across the globe, creating a web-like structure. The text is positioned on the left side of the slide, with the main title centered horizontally.

ESPI

**EUROPEAN SPACE
POLICY INSTITUTE**

Space for Prosperity, Peace
and Future Generations

ESPI Introduction

THE UNFOLDING SPACE REVOLUTION

Space for Prosperity, Peace and Future Generations

ESPI AGENDA

ESPI's mission is implemented through the ESPI Agenda, which is comprised of 3 lines of activity:



Research



Engagement



Education

ESPI RESEARCH STREAMS



Green & Sustainable Societies

Moving Towards a NetZero and Sustainable Future



Security & Defence

Protecting Europe and its Values



Exploration & Science

Inspiring Europe through New Frontiers



Space as an Asset

Securing Europe's Ability to Decide and Act



Industry, Innovation, Finance, Workforce

Fostering Europe's Competitiveness





EUROPEAN & GLOBAL POLICY ENGAGEMENT



**Vienna Space
Diplomat (VSD) Forum**



European Interparliamentary
Space Conference (EISC)

**European
Interparliamentary
Space Conference
(EISC)**

NEST | Network of European
Space Policy Think Tanks

**Network of European
Space Policy Think
Tanks (NEST)**

**ESPI Presence
in Brussels**



**European Centre for
Space Economy
(ECSECO)**



**CENTRE FOR
SUSTAINABILITY AND
RESILIENCE AT ESPI**

**Centre of
Sustainability and
Resilience at ESPI
(CSR)**

UPCOMING:

ESPI ties with TU Wien

ESPI x TU Wien EMBA Space Architecture - Space & Sustainability

In April 2024, ESPI provided a seminar on space and sustainability for students of TU Wien's Executive MBA Space Architecture, led by Dr. Sandra Häuplik-Meusburger, Academic Director of the EMBA Space Architecture Programme at TU Wien, and Dr. Man-Wook Han, Programme Manager of the Technology & Engineering Programme at TU Wien.

Topics:

- Space safety and Sustainability
- Frequency and Spectrum Management
- In-Orbit Servicing and Manufacturing
- Space for Sustainability on Earth



ESPI's Global Reach

North America

In May, we embarked on an engagement mission in Washington DC, meeting some of the key stakeholders in the U.S. space policy ecosystem, including the National Space Council, NASA, and the Department of State. Fostering transatlantic think-tank cooperation, we also reinforced collaborative activities with the Secure World Foundation and initiated discussions on a new collaboration with Aerospace Corporation's Center for Space Policy and Strategy.

Latin America

Building on the success of our inter-regional space dialogue initiative with the Asia-Pacific, we were thrilled to agree with the Argentinian Permanent Mission to UN in Vienna to initiate a similar framework for engagement between European and Latin American space stakeholders.

Africa

Acknowledging the growing African space sector, we sponsored and attended the NewSpace Africa Conference in April in Abidjan, contributed to activities of newly established African Space Leadership Institute (ASLI), and continued bilateral engagement with a variety of African public space stakeholders, including the African Union Commission and national space agencies.

Asia-Pacific

2023 reaffirmed our historically strong links to stakeholders in the APAC region. ESPI contributed to the annual APRSAF gathering in Jakarta. Next to reinforced cooperation with JAXA and visit to Japanese stakeholders (i.e. JAXA, Cabinet Office, University of Tokyo), we were privileged to be invited and contributed to the Seoul Defence Dialogue and sign a new MoU with KARI, which will be followed by joint projects from 2024 onwards. The year 2023 was also marked by India's presidency of the G20 and we were honoured to follow an invitation and contribute to the G20 Space Economy Leaders Meeting in April in Meghalaya. In the Middle East region, we maintained our regular presence at major space events with our Director's invitation to 2023 Dubai Air Show, following up on an earlier invitation to the Abu Dhabi Space Debate end 2022.

Australia

We contributed to the first Australian Cyber Space Forum in Adelaide, and increased collaborative efforts with our academic partners in Australia, in particular Flinders University. In 2024 we will host Australian students at ESPI for short-term research stays.

General highlights

Establishment of Vienna Space Diplomat: In the presence of 50 ambassadors and international representatives we inaugurated the ESPI Vienna Space Diplomat (VSD) initiative, a first-of-its-kind engagement platform for the space diplomatic community in Vienna. The VSD houses several complementary activities, including ESPI's trademark ESPI Evening Events aside UN COPUOS sessions.

Membership in ITU: Deepening our engagement in spectrum policy issues in 2023 we became a member of the International Telecommunication Union (ITU), in the form of academia membership and subsequently participated to ITU's quadrennial 2023 World Radio Conference, also facilitated by the Austrian delegation.

Broad European Engagement: We have engaged in bilateral exchanges with national authorities and joined the key space events in 23 of 30 ESA and EU member states.



ESPI International Engagement with APAC region



ESPI European Space Policy Institute
Full Report
New Space in Asia
Experts views on space policy and business trends in Asian countries

ESPI European Space Policy Institute
Full Report
Emerging Spacefaring Nations
Review of selected countries and considerations for Europe

ESPI European Space Policy Institute
Full Report
Securing Japan
An assessment of Japan's strategy for space



ESPI International Engagement with the Republic of Korea

- ESPI promotes European space policy at global level and provides a forum for exchange and dialogue
- ESPI – international engagement and global reach: Korea, and generally the APAC region, is a key partner of ESPI
 - ESPI and KARI have signed a MoU in 2023
 - ESPI is currently hosting a visiting researcher from KARI, Dr. Seorim Lee
- As part of **ESPI's Vienna Space Diplomat (VSD) Initiative**, ESPI has been conducting interregional dialogues between the APAC region and Europe during sessions of UN COPUS and the subcommittees (LSC, STSC)
 - **ESPI-APRSAF Inter-Regional Space Policy Dialogues** between the Asia-Pacific and Europe
 - ESPI conducted a study and workshop with KARI on STM
- ESPI participated in **Seoul Defence Dialogue 2023**
- ESPI aims at further strengthening ties between Korea and Europe and enhance cooperation in space activities by providing a forum for exchange and analysis.



ESPI-KARI Workshop on STM

KEY TAKEAWAYS OF ESPI-KARI REPORT ON STM COOPERATION



The European Space Policy Institute (ESPI) and the Korean Aerospace Research Institute (KARI) partnered to assess possible cooperation avenues between Europe and the Republic of Korea (ROK) in space safety and Space Traffic Management (STM), resulting in a joint research report.

The report is based on a joint in-house analysis, incorporating publicly available policies, declarations, and expert consultations. As part of the analysis, ESPI and KARI organised two workshops and a dedicated survey of key stakeholders, including representatives from government, industry and academia in Europe and ROK. The first workshop, held in February 2024 in Vienna, focused on the state of STM in Europe and Korea and sparked discussions on policy, regulatory, and diplomatic challenges related to STM collaboration. The second workshop was held in Seoul in October 2024, fostering exchanges on key cooperation avenues for programmatic, technical and regulatory level as well as strategies for engagement in bilateral and multilateral fora. The following takeaways summarise key findings and pathways for fostering Europe-Korea cooperation in STM.

KEY SURVEY RESULTS

The survey results revealed a clear convergence on the primary rationale for cooperation between Europe and ROK, including enhanced data sharing, joint capacity building, technological exchange in Space Situational Awareness (SSA) capabilities, and global regulatory harmonisation.

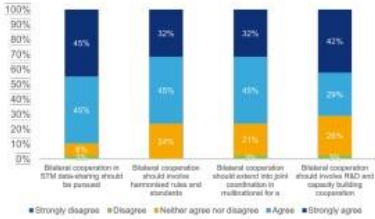


Figure 1: To what extent do you agree with the following statements?

Survey respondents strongly support fostering cross-national projects and innovative technologies to achieve STM objectives.



Figure 2: How can Europe-ROK industrial cooperation enhance STM?

Regulatory differences are seen as the most significant obstacle, with 37% of respondents citing them as a primary challenge to closer industrial ties.

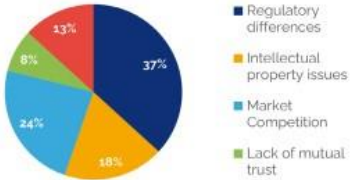


Figure 3: What are the main barriers to industrial cooperation between Europe and the ROK in STM?

Enhanced data sharing and security emerged as the most significant rationale, chosen by 23% of respondents.

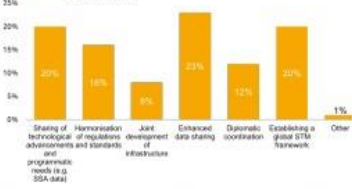


Figure 4: Overview of survey results on the primary cooperation reasons

KEY TAKEAWAYS

1 ENABLE TECHNICAL COOPERATION BY STANDARDISING AND VERIFYING DATA

The importance of technical discussions on data standardisation, verification, and interoperability between European and Korean SSA systems was emphasised. Effective bilateral data sharing and verification are fundamental first steps toward broader SSA cooperation. These efforts will not only enhance coordination between European and Korean systems but also serve as a catalyst for developing a broader multilateral cooperation framework for STM.

KEY TAKEAWAYS OF ESPI-KARI REPORT ON STM COOPERATION



2 FOSTER DATA SHARING AND CAPACITY BUILDING

Strengthening collaboration on collision avoidance and satellite operations data sharing is encouraged. There is potential for the Republic of Korea to take a more structured role within the EU SST framework as a third party. A proposed joint test project between KASA and EU SST could establish best practices for satellite data sharing, including orbital information, manoeuvre planning, and radio frequency usage. Such a project would serve as a stepping stone toward a joint SSA platform that could offer essential STM services, from conjunction avoidance to end-of-life planning and active debris removal feasibility analysis.

3 UNLOCK INDUSTRIAL COOPERATION OPPORTUNITIES

Collaboration between European and Korean SSA industries could strengthen the development of new services for both traditional activities, such as launch and re-entry operations, and emerging activities, such as in-orbit servicing (IOS) and active debris removal (ADR). Given the complementary roles of European and Korean companies in SSA—where European companies engage in both data generation and analysis while Korean companies focus more on analysis—there is strong potential for joint development of advanced STM services. However, regulatory harmonisation, particularly in licensing and data accessibility, will be necessary to fully realise industrial cooperation.

4 ENSURE A COMPREHENSIVE POLICY DIALOGUE INCLUDING THE SECURITY DIMENSION

Beyond technical cooperation, sustained institutional dialogue is crucial to address policy issues, priorities, and security considerations related to STM. The European Union and the Republic of Korea already collaborate in security areas such as maritime security and cybersecurity. Expanding this cooperation to STM will be vital for integrating STM into broader security strategies and ensuring the sustainability of space activities.

5 ADVANCE SPACE POLICY AND REGULATORY FRAMEWORKS IN EUROPE AND KOREA

With the establishment of KASA, Korea has laid the foundation for developing its own STM strategy. This initiative could benefit from leveraging existing best practices in European space policy, particularly in light of the upcoming EU Space Law. European and Korean institutions could collaboratively define common space traffic rules, particularly in areas such as collision avoidance, manoeuvring strategies, and satellite priority rules. Establishing regulatory coordination in these areas will support fair and sustainable space operations for both European and Korean operators.

6 COORDINATE POSITIONS IN MULTILATERAL FORA

International cooperation is essential for effective STM governance. Europe and Korea should work together within multilateral institutions like COPUOS and IADC to advocate for harmonised technical standards, transparent ADR protocols, and de-orbiting policies. A proposed European-Korean declaration on safe and sustainable space practices, alongside the establishment of a dedicated Study Group on Space Traffic Management within COPUOS, could significantly strengthen international commitment to responsible space governance. These efforts will help align operational norms and enhance global STM collaboration.

7 EXPAND EDUCATION AND OFFICIAL DEVELOPMENT ASSISTANCE (ODA) PROGRAMMES

With the establishment of KASA, Korea has laid the foundation for developing its own STM strategy. This initiative could benefit from leveraging existing best practices in European space policy, particularly in light of the upcoming EU Space Law. European and Korean institutions could collaboratively define common space traffic rules, particularly in areas such as collision avoidance, manoeuvring strategies, and satellite priority rules. Establishing regulatory coordination in these areas will support fair and sustainable space operations for both European and Korean operators.



7 Key Takeaways:

- Enable technical cooperation by standardizing and verifying data
- Foster data sharing and capacity building
- Unlock industrial cooperation opportunities
- Ensure a comprehensive policy dialogue including the security dimension
- Advance space policy and regulatory frameworks in Europe and Korea
- Coordinate positions in multilateral fora
- Expand education and official development assistance (ODA) Programmes



Korea-Europe Cooperation in the Space Sector

Cooperation between Korea and Europe in space (civil)

Cooperation between Korea and Europe in space has arisen mostly in the areas of **space safety** (incl. space weather, STM, space debris) and in **space application areas** (navigation, communication and EO) as well as in **space science/exploration**:

- **Space safety and science:**

Space weather and space science: ESA plans a mission to send a probe to the fifth Lagrange point or L5 to observe the space environment (Vigil space weather mission), and KASA will explore the L4 point. → This has raised anticipation over cooperation between both sides (currently discussed).

- **Space applications:**

- **Navigation:**

- European EGNOS technology has been sold to South Korea to serve its national equivalent system, the Korea Augmentation Satellite System (KASS) (2016) (TAS-KARI contract through ESA) (2016).
- KASA is developing the regional satellite navigation system, Korea Positioning System (KPS).
- Collaboration with ESA on LEO-PNT, expected to improve satellite navigation accuracy and stability, as well as enhance the mutual reinforcement and reliability of satellite navigation signals (currently).

- **Earth Observation:** South Korea is seeking to participate in the Copernicus program.

- **Communication:** ESA expanded 5G/6G Non-Terrestrial Network cooperation with South Korea (Satcom Forum of South Korea) (MoU, 2024)

Beyond ESA cooperation: bilateral cooperation with European countries, like France, Germany etc.

Korea and Europe in Space: Space Security & Defence

- **EU Space Strategy for Security and Defence (EU SSSD) (2023)**

Partnering for responsible behaviors in space (5th Pillar):

- The EU will strengthen its engagement in multilateral fora and **promote norms, rules and principles of responsible behaviours in outer space** through concrete and pragmatic steps.
- The strategy calls for **developing space security dialogues** with third (likeminded) countries.

- **EU-RoK Security and Defence Partnership Agreement (2024)**

- The EU and the ROK will explore **cooperation in areas of space security** with the aim to ensure a safe, secure, and sustainable space, including by launching a dedicated **Dialogue on Space Security**.
- The EU and the ROK will promote coordination of **external engagement in multilateral** (incl. at the UN) and bilateral fora, notably to jointly promote **norms, rules and principles of responsible behaviour in outer space**.

- **EU-RoK Space Security Dialogue (May 2025)**

- Decision: sharing assessments of threats in space and maintaining cooperation to further develop rules on space security, holding the dialogue regularly and seeking specific measures for cooperation in space security.



1, 22 May 2023) Joint Statement recognised the threats to global Russia's war of aggression against Ukraine and the Democratic (DPRK) nuclear and missile programmes. The Summit called to and establish a Strategic Dialogue at Foreign Ministerial level to



Outlook on future cooperation between Korea and Europe

In the light of an evolving geopolitical context (relations to the US), we can expect a boost in cooperation between Korea and Europe, as very recent developments demonstrate:

- **RoK-EU:**
 - Official inclusion in the EU Horizon Europe programme, which includes cooperation in research projects in space (July 2025)
 - Korea is seeking to participate in the Copernicus programme
 - 1st EU-RoK Space Security Dialogue (May 2025) (EU-RoK SDP - 2024)
- **RoK-ESA:** Republic of Korea's request for a non-member status in ESA
 - Korea can participate in space exploration programmes led by Europe.
 - Canada as non-member state of ESA serves as an example for KASA.
 - First next step: RoK must first become an ESA cooperating country
 - Currently MoU discussed with further areas of cooperation, eg more efficient space activities, incl.: deep-space communication, infrastructure development & joint utilization, EO and environmental monitoring for sustainable goals, space science and data analysis.



Outlook on future boost of cooperation between Korea and Europe

Space Safety

- Continued and enhanced cooperation in the established field of space weather and space traffic management and joint efforts in UN COPUOS

Space Security & Defence

- Following the 1st EU-RoK Space Security Dialogue (and in anticipation of future regular/annual editions): enhanced cooperation in sharing assessments of threats in space, joint efforts on developing rules on space security, and defining further specific measures for cooperation in space security.

Space R&D

- Enhanced cooperation in space R&D through Horizon Europe

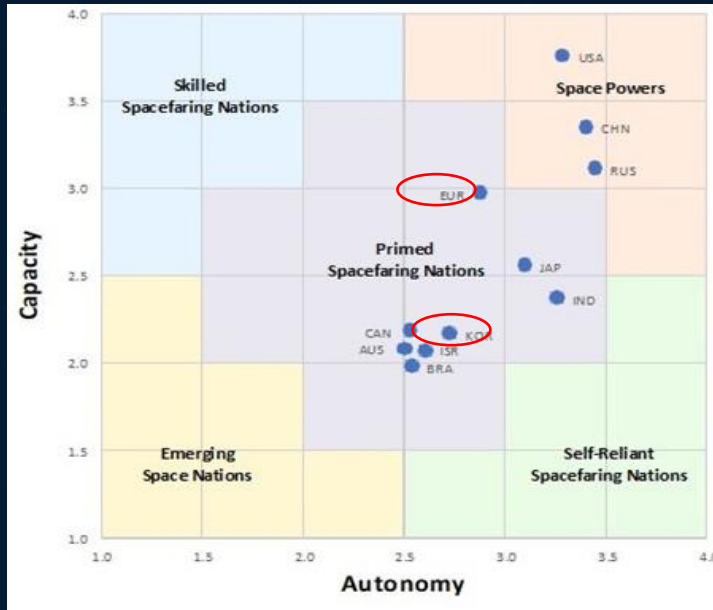
Space Applications:

- Enhanced cooperation in EO, PNT and SatCom once Korea will become ESA Cooperating State

Space Exploration:

- Enhanced cooperation in exploration, incl. joint missions and Korea's involvement in ESA missions, once Korea will become ESA Cooperating State
- Moon Exploration:
 - Europe and Korea are both signatories of the Artemis Accords and contribute to Artemis Programme
 - Korea aims new space exploration roadmap: plan to establish lunar base by 2045 → potentials for cooperation with Europe?

Europe as a space power and strong partner to the world



- In the light of an evolving geopolitical context and age of disruption (relations to the US), we can expect that the current bipolar space power dynamics (US vs. China) will break into more **multipolar power dynamic with increased cooperation between primed spacefaring nations (incl. Korea and Europe), which ensures cooperation at eye level, for mutual benefit, without one-sided dependencies.**
- Korea and Europe share common values, have a similar understanding of democracy and aligning objectives in foreign, security and defence policy (and both integrate space to reach them)
- Korea and Europe should (and will) enhance cooperation and intensify relations - as well as with other like-minded reliable partner, **seeking for diversification of partners and balanced cooperation at eye-level.**
- **ESPI will further advocate Europe's engagement and relations with like-minded partners, provide a forum for exchange, and promote European space policy globally.**

19th ESPI AUTUMN CONFERENCE:



EUROPE AS A SPACE POWER

Directionality & Priorities of Strategic Action

VIENNA RATHAUS

October 28-29, 2025





ESPI

**EUROPEAN SPACE
POLICY INSTITUTE**

Space for Prosperity, Peace
and Future Generations

Thank you!