

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.

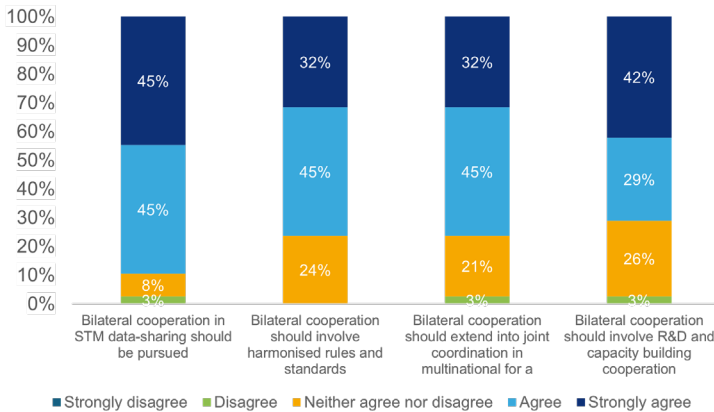


Figure 1: To what extent do you agree with the following statements?

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

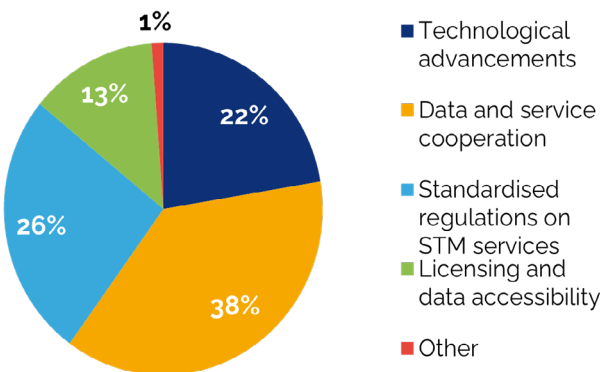


Figure 2: How can Europe-ROK industrial cooperation enhance STM?

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

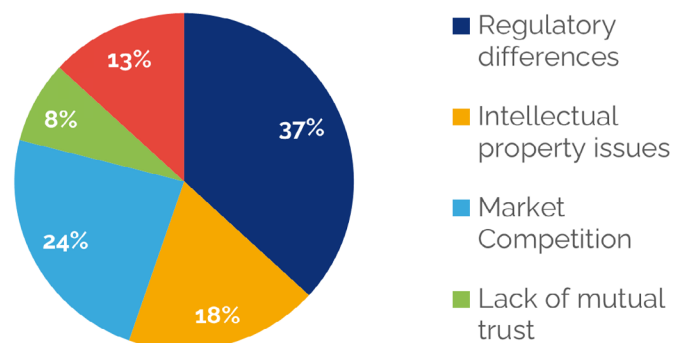


Figure 3: What are the main barriers to industrial cooperation between Europe and the ROK in STM?

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.

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, maneuvering 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

STM may not be sufficient if only a few countries abide by the established rules, making it crucial to enhance the capabilities of developing countries to encourage their participation. In this context, Korean (Ministry of Foreign Affairs and KASA) and European (European Commission, European External Action Service, EUSPA) stakeholders should consider joint support to capacity building programmes in developing countries by expanding their Official Development Assistance (ODA) programmes. Such support can serve as a foundation for maintaining space safety, security and sustainability and can serve as an example of practical cooperation.

