Adapting to the UN COPUOS LTS Guidelines :RoK's experiences

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Challenges in a nutshell

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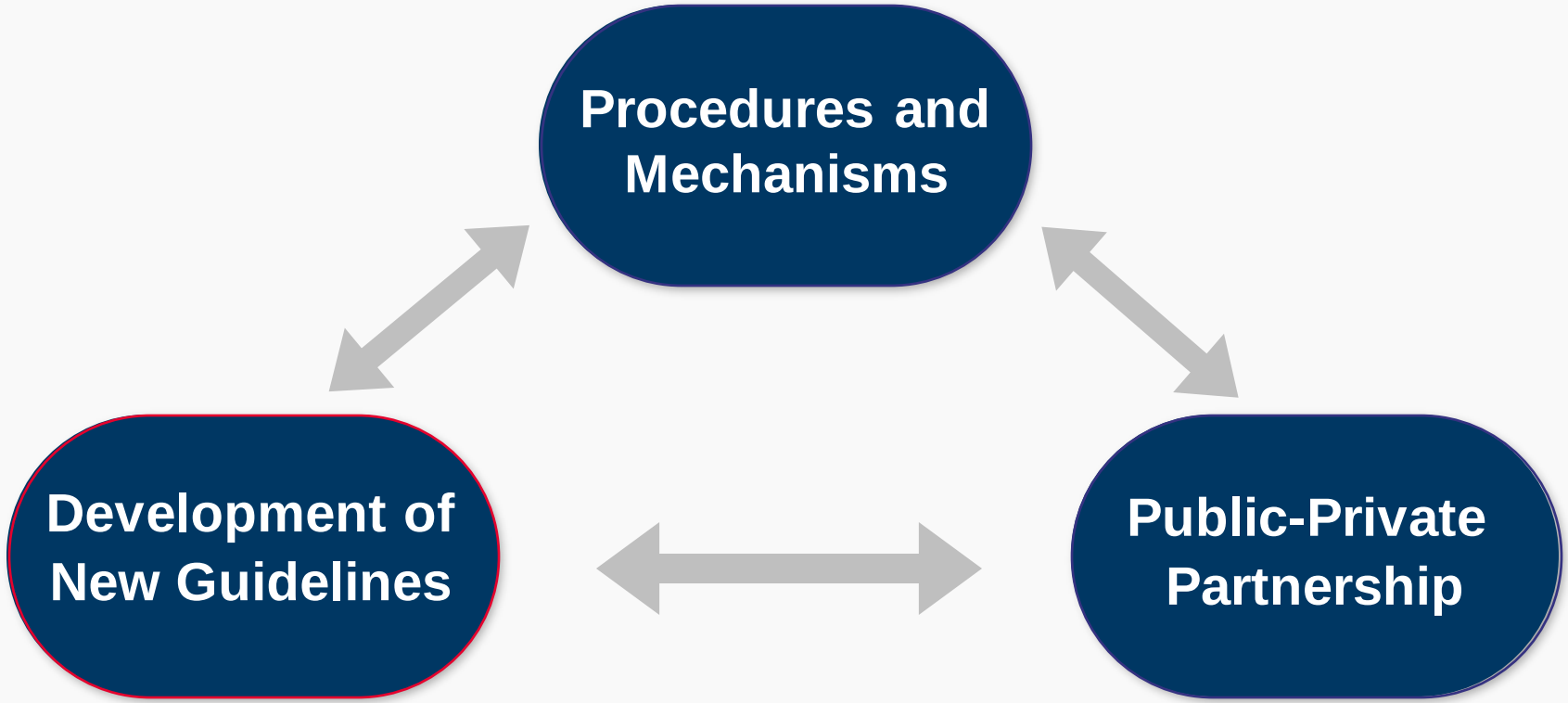

Present focus for RoK

❶ Threat detection and risk assessment

❷ R&D to enhance debris mitigation capabilities

❸ Engagement with the private actors

❹ Network observation facilities

❺ International cooperation

Implementation of LTS guidelines (A1~A5)

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A1	Adopt, revise and amend, as necessary, national regulatory framework for outer space activities
Approach to Implementation	• **Enacted the Space Development Promotion Act in 2005** • Regularly amended the Act to ensure responsible space activities
Current progress	• Defined Suborbital launch vehicles in the SDPA to regulate the private sector • Elevated the chair of the National Space Committee **(Prime Minister → President)** • Doubled the Committee members **(16 → 30)** • Established **legal framework** to improve industry competitiveness, by strengthening the functions of the space industry cluster
Challenges and lessons learned	• Facing challenges in incorporating **private sector** activities into new regulatory frameworks due to unprecedented circumstances

Implementation of LTS guidelines (A1~A5)

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A2	Consider a number of elements when developing, revising national regulatory framework
Approach to Implementation	• Considered and applied the LTS guideline, including those from UN treaties, in the process of amending the **SDP Act**
Current progress	• Adopted **spacecraft development and operation recommendations (July 2020)**, stating compliance with UN COPUOS Space Debris Mitigation Guidelines • Participating in **ISES, WMO, ICAO, ITU SG7** to monitor space weather guidelines • Incorporated expert opinions through conferences in the process of adopting and amending criteria/guidelines in the regulatory framework
Challenges and lessons learned	• Adapting regulations, criteria, guidelines to new technologies will involve a necessary **transition period** • **Timely integration** of measures from international organizations remains challenging

Implementation of LTS guidelines (A1~A5)

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A3	Supervise national space activities
Approach to Implementation	• The following plans must be established every five years, according to the SPD Act **- Master Plan for Space Development, Comprehensive Plan for Space Utilization** • The state has authority over private space activities by the SPD Act **- Registering space objects, Issuing launch vehicle permits**
Current progress	• The Master Plan is the top legal framework for national space policy • Designing the **"2nd Basic Plan on preparing for Space Hazards"** in alignment with UN treaties and LTS guidelines • Establishing a **Space Agency** is in progress to oversee the expanded objectives, encompassing space exploration, industry, security, and international cooperation
Challenges and lessons learned	• Overseeing the increasing space activities from public and private sectors poses a challenge, necessitating the creation of a **comprehensive supervision system**

Implementation of LTS guidelines (A1~A5)

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A4	The use of RF spectrum and the orbital regions used by satellites
Approach to Implementation	• Surveillance tasks to prevent interference between satellite radio waves are in effect under **the Radio Waves Act**
Current progress	• Operates the Satellite Radio Monitoring Center to prevent interference between countries in line with the ITU Constitution and Radio Regulations • Operates the ITU Study Group at national level - SG1 (Spectrum Management), SG3 (Radio Waves), and SG4 (Satellite Operations) • Established regulations and procedures for disposal of government-owned satellites - Disposal of expired GEO satellites - Separate fuel management
Challenges and lessons learned	• Facing a challenge to develop disposal measures for private satellites, including launch vehicles after mission completion

Implementation of LTS guidelines (A1~A5)

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A5	Enhance the practice of registering space objects
Approach to Implementation	• Mandatory Implementation of all Space Object Registration under SDP Act.
Current Progress	• **Registration stages:** **- Provisional registration: 6 months prior to the scheduled launch date** **- Formal registration: within 90 days of entering orbit** • In case of changes, such as the expiration of operational life, notification must be sent to UNOOSA for the registered information
Challenges and lessons learned	• **Enhancing authorization and supervision for the space object registration system is required** • Absence of a management system for additional generated debris - Remnants from launch vehicles - Other mission-generated debris

Thank you