



# THE 10TH JOINT INDUSTRY OUTREACH SEMINAR ON STRATEGIC TRADE MANAGEMENT - SINGAPORE 2022

**Regulatory Environment in Korea and Challenges of Managing Emerging Technology**  
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# Regulatory Environment in Korea

- Korea maintains export licensing system in accordance to the international arrangements
  - Three major agencies in Korea control items by type for export licensing
  - MOTIE is in control of strategic items of dual-use
  - Relevant Acts: Foreign Trade Act, Public Notice on Trade of Strategic Items, etc.
- Non-“Strategic items” controlled by ‘situational permission’ (catch-all controls)
  - Looking into end-use, final destination, expertise gap, deviation from any ordinary transactions, etc.
  - Often used to comply with UN sanctions on non-strategic items





# Management of Technology in Korea

- Other ways to secure technology in Korea
  - “National Core Technology” under the Act on Prevention of Divulgence and Protection of Industrial Technology needs approval by MOTIE for exports
  - Certain “Strategic Technology” assigned by MOTIE may need further approval in case of exports or takeover by foreign entities, etc.
  - Also ongoing discussion to consider management of “Critical Strategic Technology” in liaison with “National Core Technology” for any control
- Recent geopolitical tensions triggered many countries to expand their regulatory basis for technology protection





# Regulatory Challenges of Emerging Technology

- Unpredictability in the rapid development of technology
  - Quantum computing, biotechnology, etc.
- Identifying the boundary of controls can be challenging
  - E.g. AI technology
    - Controllable items? (Data sets, algorithms, AI SW, AI chips, AI-applied final goods (e.g. AI robot, autonomous vehicles, etc.))
    - Tangible and intangible transfer of technology can happen
    - Not only how AI technology is used/applied but how it is governed in the development stage can also be a subject of concern





# Regulatory Challenges of Emerging Technology

- Non-proliferation v. Industrial Competition?
  - E.g. AI technology
    - Only a narrowly and specifically targeted AI control would be adequate to meet non-proliferation objectives
- Effectiveness of controls can be elusive
  - E.g. AI technology
    - Inherently based on open literature, open source, big data
    - Matured vs. early stage technology
    - Cannot directly control R&D projects (private and public) of other nations
- Risk of counter-productive impact





# Industry Participation and Support

- Resilient and sound domestic industry necessary for effective control
  - Importance of SMEs and start-ups on emerging technology
- Industry participation in supply chain security
  - In the process of technology development/acquisition/application/transfer, etc.
  - Implementation of cybersecurity guidance and framework
  - Trustworthy global industrial network
- Development and adoption of technical and ethical standards
- Public-private partnership on monitoring the most recent trends in technology development and feasibility of controls

