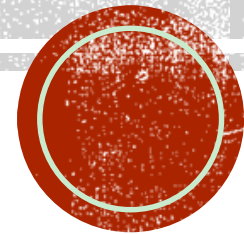# KEY CONCERNS ON EMERGING TECHNOLOGY

EU P2P Summer University, Porvoo, Finland
23 August 2019

Armenia, Taiwan, Iran, Pakistan, Philippines,
Ukraine, Cambodia, Malaysia, UAE

EMERGING TECHNOLOGY

- latest development in science and technology

- that poses security threats/risks, including the production, development and use of strategic goods (military and dual-use),

- that have not been controlled yet by existing Multilateral Export Control Regimes (MECRs)

EXAMPLES OF EMERGING TECHNOLOGY

1. Artificial Intelligence
2. (i.e. Deep-Learning)

Cyber-surveillance

Bio and nanotechnology

(e.g. Smartdust)

Additive Manufacturing

(3D Printing)

Quantum computing and encryption

Robotics and Microelectronics

Cryptocurrency

Cloud computing

et al.

KEY PLAYERS

Producers	Consumers	Controller
• Scientific/academic community • Makers Community • Manufacturers, including multinational companies	• Customer or End-User (Good or Bad)	• International (MECRs, Int'l Org) • Regional (EU, ASEAN, etc.) • National Authorities (Customs, Export Organization, etc.)

CHALLENGES

- Identifying the border on when not to impede the development (scientific and economic) and when to limit due to security concerns

- Difficulty in controlling the movement of scientists

- Crafting the controlled text and setting the parameters

CHALLENGES

- Difficulty in reaching MECRs' consensus to deal with emerging technology

- Difficulty in conducting End-use/End-User Checks because emerging technology goes beyond the tangible commodities

- Foreign direct investments in emerging technology (e.g. presence of international non-government organizations)

APPROACHES

1. Awareness Initiatives

   - Outreach Program to the Producers
   - Awareness for young people on threats pose by existing and emerging technologies

2. Government Initiatives

   - Mapping emerging proliferation threats based on the companies, research institutions, and technologies
   - Utilize catch-all provisions for emerging technology (short-term)

3. International information sharing and inter-agency cooperation esp. on the use of emerging technology

4. Guidelines on Emerging Technology Transfer

   - Guidelines on the Transfers (internet, cloud transfer and storage, etc.)
   - Rule for foreigners to access new technology (?) (e.g. ICP Requirement)