Emerging Technologies: Promise, Peril, and Towards a Comprehensive Strategy

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Emerging Technologies: Why? Why Now?

• U.S context

• EU proposal: “in order to enable the Union to react rapidly to serious misuse of existing technologies, or to new risks associated with emerging technologies, a mechanism should be introduced enabling Member States to coordinate their responses when a new risk is identified. Such coordination should be followed by initiatives to introduce equivalent controls at the multilateral level in order to broaden the response to the identified risk.”

• Export Control Regimes

• The 1540 Committee “took note of the increasing risks of proliferation in relation to non–State actors arising from developments in terrorism and in relation to the potential for misuse arising from the rapid advances in science, technology and international commerce and the need for States to pay constant attention to these developments to ensure effective implementation of the resolution.”
Emerging Disruptive Technologies: Conceptual Outreach Challenge

Traditional Technology Export Control Model

Weapon → Components → List(s) → Producers/Exporters

Emerging Technology Control Model

"The Cloud of Unknowing" → Components → ? → Producers/Exporters → List(s) → ? → Weapon

Credit: Scott Jones, 2020
Emerging Technologies: Implications

Are current structures and tools effective to balance trade and security?

- Laws
- Regimes
- Communication
- Research
Emerging Technologies: Implications

How do we define and evaluate threats?

- State
- Non-state
- Risk assessments
- End-uses
- Security v. economy
- Human rights
Emerging Technologies: Implications

• Inter-agency
• Information sharing
• Coordination
• Public–private
• Impact

How can we develop, define, and measure effective policy?
Emerging Technologies: Implications

- New actors
- Lack of controls
- End-use
- Buy-in
- Resources

How should outreach be adapted?
Emerging Technologies: Challenges

RESEARCH

• Gaps in research
  – Mapping
  – Threat
  – Technology

• Expand and document technical, analytical, and practical knowledge related to emerging technologies and connect that knowledge to key decision-makers
Emerging Technologies: Challenges

SPECIFIC TECHNOLOGIES

• Identifying "chokepoints"
• Speed of innovation
• Foreign availability
• Human rights considerations
• Implications of control – what is the best policy?
Emerging Technologies: Challenges

WEIGHING FACTORS

• Security vs. economic development
• Innovation vs. closure
• Benefits of emerging technology applications:
  - Blockchain Applications for Export Control Processes
  - AI Applications for Managing Export Control and Sanctions Risks
Emerging Technologies: Challenges

OUTREACH

• Incentives
• Tools
• Adapting strategies to new environments
• The proprietors of emerging technologies include small and medium-sized companies, research institutes and academia, and smaller, informal groupings in maker, DIY, equity and investment, and other communities.
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<tr>
<th>Best Practice</th>
<th>Description</th>
<th>Advantages</th>
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| Specific Targets            | Assess stakeholders according to risk and threat; organize resources accordingly. | • Better use of resources  
• More effective outcomes                                                |
| Calibrated Approach         | Adapt outreach strategies and communication differently to different private sector groups | • Increased buy-in, understanding, and overall impact                        |
| Flexibility and Preparedness| Preparation and planning to adapt outreach methods, messages, and tools to evolving circumstances | • Governments can quickly deploy new outreach resources to new targets, adapt strategies to new threats, and stay prepared for changes. |
| Variety of Tools            | Use of diverse set of tools and adapting them based on private sector audience | • Effective targeting, incorporating innovative communication and messaging tools, increases success |
| Inclusivity                 | Including the private, academic and research sectors in policy decisions   | • Better relationships  
• Higher level of interest, awareness, and compliance  
• Better information available to government authorities on impacts |
Emerging Technologies: Road Ahead

- Technology strategy
- Whole-of-government
- International cooperation
- Further research avenues

### Merging Areas

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<tr>
<th>Export Controls</th>
<th>Sanctions</th>
<th>FDI Controls</th>
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<tbody>
<tr>
<td>STRATEGIC TRADE CONTROLS</td>
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