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Intangible Technology Transfer (ITT): Policy Challenges

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Background context

- Understanding the bigger picture: policy considerations
- Understanding obligations: multilateral export control regimes, national legislation.
- Understanding technology: opportunities and risks

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The Challenges

- Controls on ITT are more difficult to enforce than for tangible items.
- Emerging and Novel Dual-Use Technologies are increasingly being transferred through ITT.
- Collaborative models in an increasingly global environment.
- Policy challenge of sustaining intellectual freedom and prosperity against a diffuse and diverse proliferation threat

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Use of End-Use Statements

- Increasing fusion of Military and Civilian dual-use sectors
- Assessments must therefore use a variety of non-traditional tools
- Assessments must also reflect the end user State national policies

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Dual-Use Technology

• Concept of “dual use” technologies now well established – but not well defined or understood.

• Effective risk assessment of dual use requires detailed understanding of **declared** intended use.

• Alternative mechanisms required to assess implications of new technologies beyond traditional concept of dual use.

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Emerging and Novel Technology

- Speed and diversity of exploitation is unprecedented, and unpredictable
- Established mechanisms too slow to understand, adapt or respond to emerging technologies and their potential threat
- Legislative response must be adaptable and coherent across like-minded states, mutually supportive and reinforcing

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UK Case Study: Graphene and foreign students

- Graphene developments are being spearheaded by academic institutions
- Potential energy storage capability for Directed Energy Weapons, Electro-Magnetic Launch Systems for aircraft and UAVs on warships
- High thermal-stability and low weight for commercial hypersonic aircraft, or missile technologies
- Technology break points for Graphene not fully understood

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What are we doing about it?

•We will re-look at guidance published to universities around UK Strategic Export Controls.

•We will revisit all UK Counter Proliferation policies to ensure that they are effective at controlling both tangible and intangible technology.

•Awareness raising, including through King's College London Project Alpha

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Tools Available

- Policies must be adaptive, changing when required as the threat develops.
- Technical assessment units must have up to date knowledge on evolving and novel technology.
- Multi-lateral regimes (MTCR, NSG etc.) should ensure enough focus is placed on ITT and Emerging Technology.
- Early outreach to institutions can ensure they are aware of the threat from ITT

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Questions?