



# The European **Commission's** science and knowledge service

## Joint Research Centre

# Complying with export controls in an industry & research context

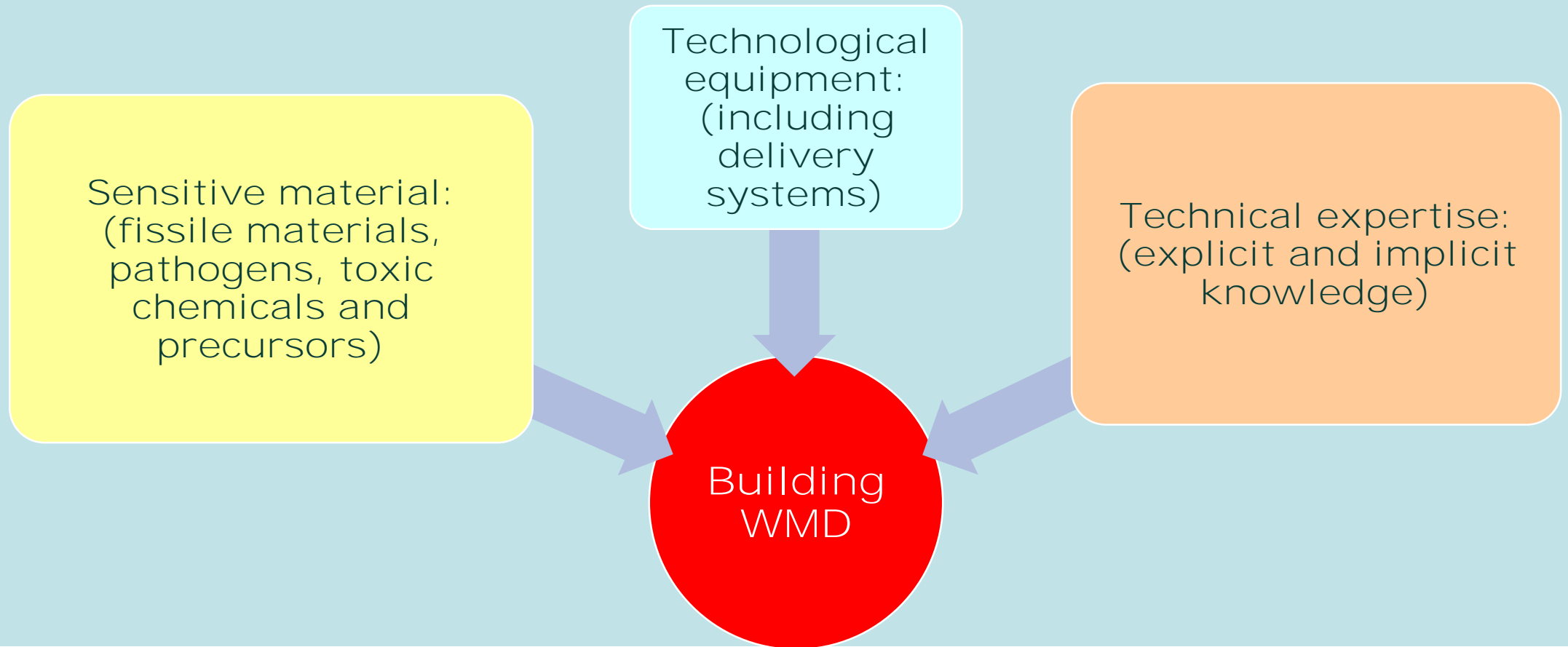
Seminar on the Export Control of Dual-use Materials and  
Technologies in GUAM Countries  
Kiev, 14-15 March 2018

Dr. Christos Charatsis  
EC JRC, Department of Nuclear Security and Safeguards,  
Nuclear Security Unit

# A fundamental question

- Is it really possible for a system of norms, rules and decision making procedures to avert the diffusion of sensitive knowledge and safeguard it from misuse?

# Technology controls: Fine but why?



# Technology controls: Cont'd

- ❖ **“Unlike raw materials technology provides the recipient with an enduring improvement in capabilities”**

Mastanduno, M., Economic Containment: COCOM and the Politics of East-West Trade, Cornell University Press, New York, 1992.

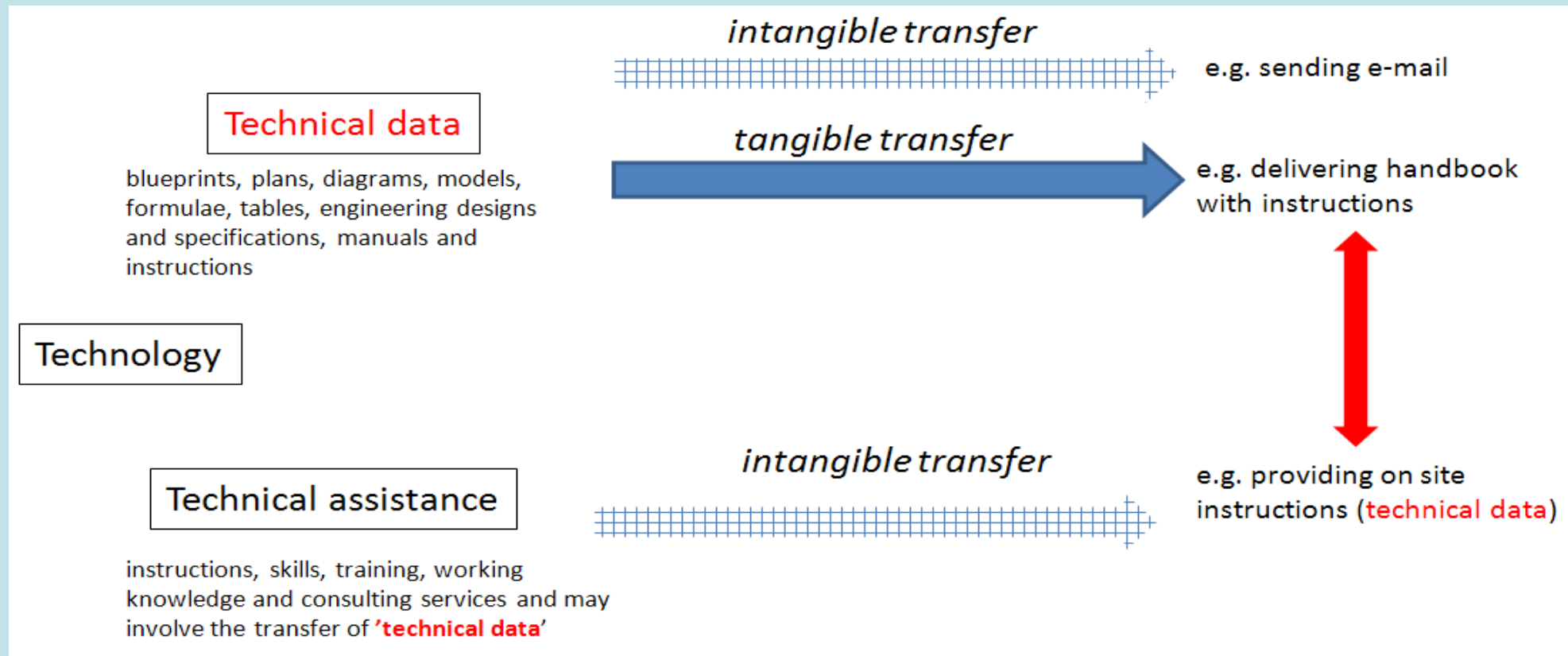
- ❖ **“The real acquisition of Western technology was accomplished one graduate student at a time”**

Reed, C.T., Stillman, B. D., The Nuclear Express: a political history of the bomb and its proliferation, Zenith Press, Minneapolis, 2009.

- ❖ **“The nature of nuclear problem confronting mankind is in its fundamental sense, a problem of knowledge”**

Smith, K.R., Explaining the Non-proliferation Regime: Anomalies for Contemporary International Relations Theory, International Organization, Vol. 41, No2 pp.266, MIT Press, 1987.

# How is technology transferred?



# Technology Controls: challenges

- ❖ Pace of tech. changes
- ❖ Limited role of customs (no borders, end-users etc.)
- ❖ Irrelevance of traditional XC concepts
- ❖ Towards a system of monitoring

# Industry as first line of defence





# Science and Export Controls

Research Community and Academia



Provider  
of expertise  
to decision-  
makers



Technology  
holder and  
potential  
**“exporter”**

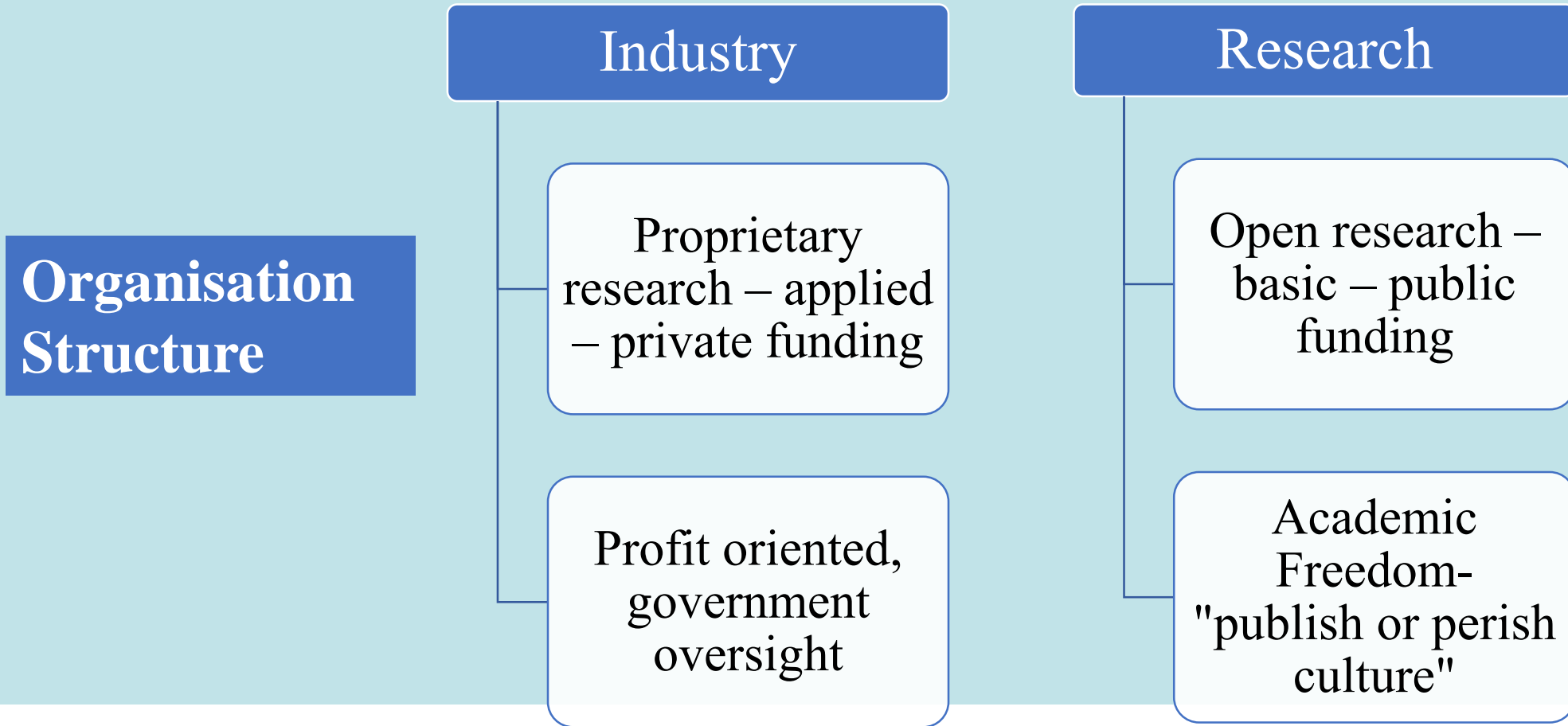
# Science and Export Controls: Cont'd

Scenarios in the EU context					
<i>I. Transfers of equipment and materials</i>		<i>II. Transfers of technical data and software</i>		<i>III. Provision of technical assistance</i>	
<i>Tangible means</i>	Provision of equipment, materials (e.g. under a multilateral contract)	<i>Tangible &amp; intangible means</i>	Sharing data/software by electronic means (e.g. e-mail, upload on web-sites) or by post	<i>Intangible means</i>	Teaching/ Providing assistance in third countries (e.g. in trainings & conferences)
			International research projects and exchanges		
Decommissioning of reactors and dismantling of labs (e.g. selling or giving away used equipment)	Publishing scientific research (in printed or e-versions)		Oral provision of assistance by e-mail/ phone from the EU (e.g. consulting services)		

# The internal compliance cycle



# Export Compliance in different settings



# Sensitivity-Processes-Obligations Method



**Sensitivity of research**



**Institutional Processes**



**Legal Obligations** (e.g.  
*national law, internal  
commitments*)

**Correlating**

# Sensitivity-Processes-Obligations: Cont'd

- ❑ 0 phase: risk assessment at macro-level:
  - ✓ Key competencies & scope
  - ✓ Type of research
  - ✓ Main partners and funding sources
  - ✓ Governance model & level of awareness
- ❑ 1<sup>st</sup> phase: risk assessment at micro-level:
  - ✓ Sensitivity of research- institutional Processes in place - Obligations
  - ✓ Design an ICP (mitigating measures)
- ❑ 2<sup>nd</sup> phase:
  - ✓ Implementation, review and adjustments

# A method for implementing internal controls: the JRC case

Type of Activities	JRC Institutional Processes
<i>I. Exporting and importing</i>	Internal Customs Office
<i>II. Contracting with international partners: Staff employment contracts: Procurement:</i>	Approval and risk assessment of projects Approval procedures Centralised procedures
<i>III. Patenting:</i>	Specific procedures and advice
<i>IV. Publishing:</i>	PUBSY publication system
<i>V. Electronic exchanges:</i>	ICT security procedures
<i>VI. Foreign visits:</i>	Security procedures for EU and non-EU visitors, employees etc.
<i>VII. Travels abroad:</i>	Mission approval scheme (MIPS)

# Export compliance in practice: lessons learned

- Legal & technical expertise
- Threat perception
- Clear mandate
- Structure vs. integration
- Good management ↔ good compliance practice



# What is the added value of ICPs?


- ❖ A way of doing business responsibly
- ❖ Increase the awareness within companies & infusion of an export control culture
- ❖ Improvement of the communication between the competent authorities and the exporters
- ❖ Assurance of the safe delivery of commodities to lawful end-users (contributing to non-proliferation)
- ❖ Saving exporters from contraventions of export control law (**...and subsequent penalties**)
- ❖ Effective tool to anticipate and cope with the most intriguing cases (e.g. intangible transfers of technology)

# Can we ever address everything?


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# Sources of information:

UNIVERSITY OF LIEGE  
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JOINT RESEARCH CENTRE

**Doctoral thesis**  
**Interferences between non-proliferation and science:  
'exporting' dual-use know-how and technology in  
conformity with security imperatives**

« Conscience sans science et science sans conscience sont mutilées et mutilantes »

*Edgar Morin*

**Thesis Jury:**  
Promoter: Prof. Dr. Q. MICHEL  
External Supervisor: Dr. F. SEVINI  
Member: Dr. S. BAUER  
Member: Dr. A. L. DURVIAUX  
Member: A. LOPES

**PhD Candidate:**  
C. CHARATSIS





**Strategic Trade Review**

Spring 2017

Issue **04**

Illicit Nuclear Procurement Networks  
A Resilience Framework  
Chemical and Biological Control Manufacturing Services  
Proliferation Concerns and Impacts  
Dual-Use Research and Strategic Trade Controls  
Evaluating Trade Controls as a Governance Instrument  
Export Control Compliance and Academia  
Implications for American Universities  
Cyber-Surveillance Technologies  
Challenges and Prospects for Strengthened Export Controls  
Cryptography Export Controls  
Testing the Dual-Use Concept

**Higher Education Guide And Toolkit  
On Export Controls  
And  
The ATAS Student Vetting Scheme**

Drafted in partnership by the Association of University Legal Practitioners and Project Alpha of King's College London

In partnership with the Export Control Organisation and the Foreign and Commonwealth Office.

Version 1 2<sup>nd</sup> April 2015

European Studies Unit

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**Publications**

- Incentives of Europe for Non-Proliferation Outreach Activities
- Introduction to International Strategic Trade Control Regimes
- Public thesis : Interferences between non-proliferation and science: 'exporting' dual-use know-how and technology in conformity with security imperatives, C. CHARATSIS
- De Lisbonne à Rome / From Lisbon to Rome
- Controlling the trade of strategic goods

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