



# Responsible Behaviour of Business and Civil Servants in export Dual- Use Goods and Technologies

The Good, The Bad and  
the Ugly

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# About me....

- Mixed academic training in politics, law, biotechnology and ethics
- Long term interest in the role of technology in war, security and disarmament....
  - Practical
  - Intellectual
- Lecturer (Associate Professor) at the University of Bath



About you.....

# Talk Outline

Introduction

Current  
Governance  
Regime

Case-studies (  
and  
discussion)

Thinking  
beyond  
implimentation

# Introduction

- To give a sense to the contemporary multi-level export control regime
  - Key Principles and Practices
- Examination of case-studies of export control rule violation
- Discussion: reflection on case-studies

# The contemporary CBRN dual-use export control institutional landscape....

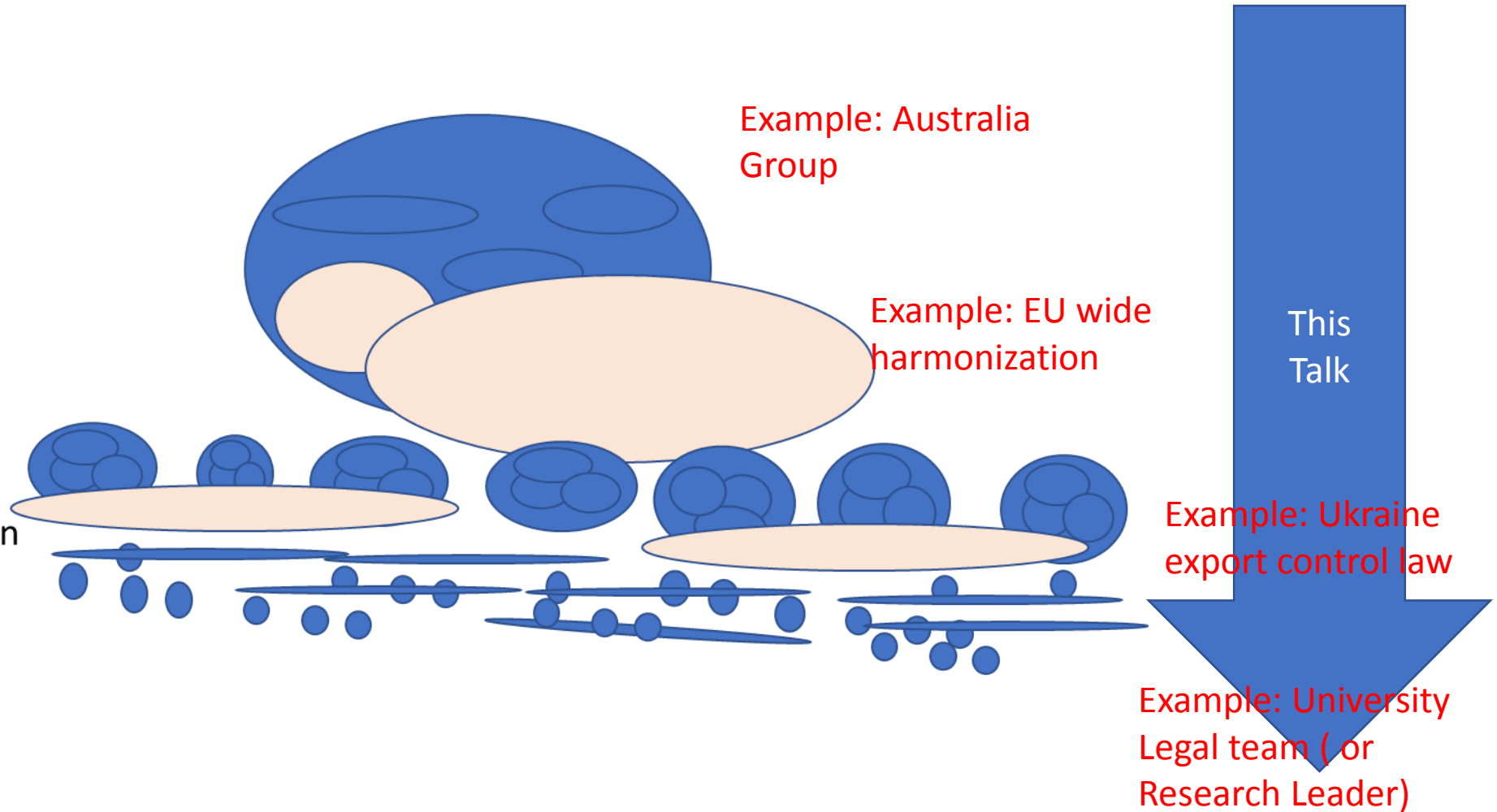
-International

-Regional

-National Legislators

-National Implementation systems

-Local Implementing Bodies



The background of the slide is a photograph of the United Nations Secretariat Building in New York City. The building is a large, modern structure with a prominent curved facade. In front of the building, a long row of flagpoles holds the national flags of various member states. The sky is clear and blue. The text "The international level: Treaties and Agreements" is overlaid in white, sans-serif font across the center of the image.

# The international level: Treaties and Agreements

# Early History and Emergence of Agreements

1945

Today

Coordinating Committee for Multilateral Export Controls ( CoCom) ( 1945/50- 1994)

Agreement

- Maintained lists of controlled technology which informed future treaties
- Competitive/ strategic character

Treaty on the Non-proliferation of Nuclear Weapons (NPT) (1965/68-)

- East/Western Bloc bi-lateral negotiation
- Shared concern about preventing Nuclear proliferation
- No specific guidance on how to implement

- Focused on development of shared guidelines
- But India still acquires by 1974!

'Zangger Committee' (1971/4-)

Nuclear Suppliers Club/Group (NSG) (1974/5-)

Australia Group (AG) (1984-)

Missile Tech' Control Regime (MTCR) (1987-)

Wassenaar Agreement (WA) (1995-)

Broadening scope and depth of agreements in Conventional, Nuclear, Biochemical technologies



The characteristics of today's global export control agreements.....

# Each international agreement is associated with....

- Distinct membership
- Distinct lists of controlled goods...
- Distinct legal/ political agreements between states...
- Distinct mechanisms of decision making, dispute resolution and review
- Distinct (but often integrated) systems of implementation at the national level

	Nuclear Suppliers Group ( 1974/5)	Australia Group	Missile Technology Control Regime	Wassenaar agreement
Prevents the proliferation of....	Nuclear Weapons	Chemical and Biological weapons	Ballistic and Cruise Missiles	Advanced conventional weapons and WMD relevant technologies
Coverage/scope	Fissile material, nuclear weapons, technology, related dual-use materials and technology, nuclear power plant equipment  <a href="#">List based</a>	Chemicals, plant, animal and human pathogens, and industrial and laboratory equipment used for manufacturing these  <a href="#">List based</a>	Missiles. satellite launch vehicles, missile components, composite materials  <a href="#">List based</a>	Weapon systems from air, land and sea. WMD related materials.  <a href="#">List based</a>
Character of Export licence system	Export licences granted for qualified end-users, and under certain conditions	Export licences granted for qualified end-users, and under certain conditions	Export licences granted for qualified end-users, and under certain conditions	Export licences granted for qualified end-users, and under certain conditions
Membership	48 <a href="#">State governments</a>  Including NATO states, Russia and China	<a href="#">43 state governments</a>  Western led- ( China, Russia are not members)	<a href="#">35 state governments</a>  Russia, Western states. China is not a member	<a href="#">42 State governments</a>  Russia, Western states. China is not a member
Organization	Informal forum	Informal forum	Informal forum	Informal forum

Adapted from Joyner ( 2007)

# Export control agreements support, and supported by...

- UN agreement on export control (UN1540)
  - More inclusive, requires national regulation
- Disarmament treaties
  - Prohibits certain types of weapon development entirely ( e.g Chemical and Biological Weapons)

What this tends to look like at national level....

# What this tends to look like at the national level...

- Constitution
- Legal frameworks
- Government agencies
  - Issues licences



This includes an increasing range of physical and intangible technologies

Increasingly effects research institutions



# Implementation level.....

I need to export this to a customer....

Do I need an export licence?

Can I export *this item* to *this customer*?

**Who will do the paper work?**

# Case-studies





# The Illegal Export of Dual- use Chemicals to Syria

Belgium, 2014-2016



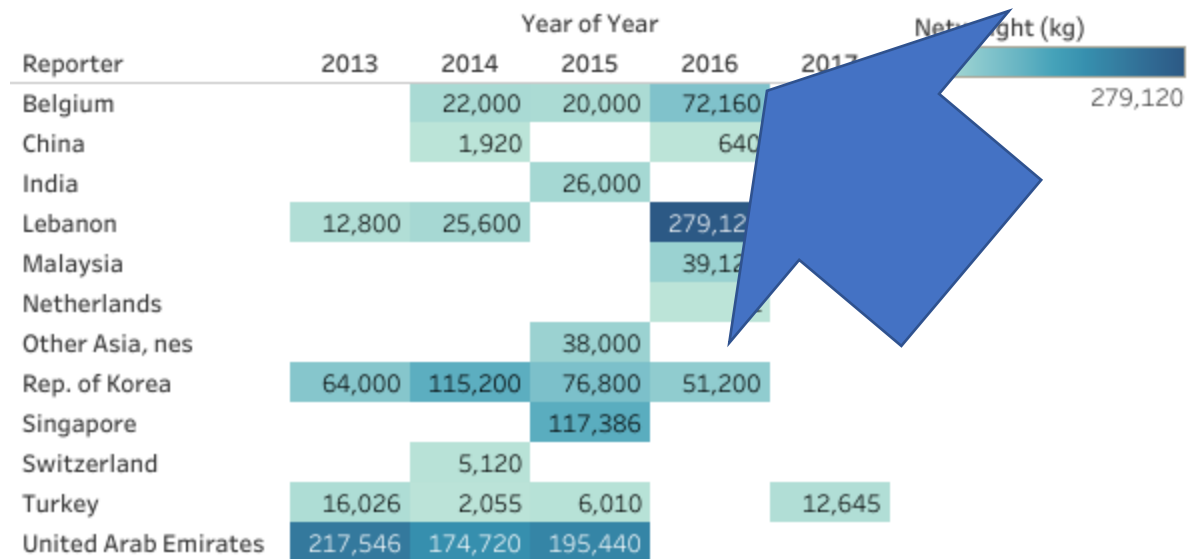
## Context...

- Arab Spring and Syrian Civil War (2011-)
- [EU adopts a number of restrictive measures towards Syria,](#)
- Reports of Chemical weapon use ( 2012-)
  - Syria known to have large active programme
- Western states warn Assad against using chemical weapons ( 2012-)
- EU [prohibits](#) dual-use technology exports to Syria ( including chemical weapon precursors)... ( May 2013)
- Ghouta attack ( August 2013)
- Syrian disarmament and continued use of Chlorine gas.

# The Incident.... ( from Jeff Deutch, 2018)

- [Investigative Journalists](#) interested in where Syria is getting it's Sarin ( nerve agent) precursor from (isopropanol)
  - Had destroyed stocks in 2013
  - Suggests they may have been importing
- Journalists look up information on [UN Export/Import](#) data base....

Reported exports of isopropanol and propanol to Syria in kilograms (2013-2017)



*Source: UN Comtrade. Reported exports of isopropanol and propanol to Syria in kilograms (2013-2017)*

# The consequences....

- Belgian Authorities notified
- Criminal proceedings opened against three Belgian Companies
- Companies argued
  - they had not been warned customs officials
  - They had been exporting to Syria for ten years
  - Belgian government website not up to date
- Still found to have broken the law
  - Conviction of three companies
  - Conviction of two managers
    - Included 12 month prison sentence



# The Illegal Export of Dual-Use Biological Research to China

US, 2018 ( [Source](#) )

- Chinese national Zaosong Zheng entered the United States on a J-1 visa and conducted cancer-cell research at Beth Israel Deaconess Medical Center in Boston.
- Zheng stole vials of biological research, hid the vials in his luggage, and attempted to take them out of the United States aboard a flight destined for China.
- Zheng was arrested on December 10, 2019, at Logan International Airport in Boston after an outbound search discovered the vials hidden in a sock inside one of Zheng's bags, and not properly packaged.
- When asked by federal officers whether he was traveling with any biological items or research, Zheng lied and answered "no." Zheng later admitted he had stolen the vials from a lab at Beth Israel. Zheng stated that he intended to bring the vials to China to use them to conduct research in his own laboratory and publish the results under his own name.
- On December 3, 2020, Zheng pled guilty to making false, fictitious or fraudulent statements in connection with his theft of 19 vials of biological research. This case resulted from an investigation conducted by OEE's Boston Field Office, the BI, and U.S. Customs and Border Protection (CBP). The Penalty: On January 6, 2021, Zheng was sentenced in the U.S. District Court for the District of Massachusetts to time served in prison, three years of supervised release, a \$100 special assessment, and removal from the United States.



# The Illegal Export of controlled nuclear related technologies

US, 2013 ( [Source](#) )





- On two occasions during 2013, MHz Electronics, Inc. of Phoenix, Arizona, violated the EAR when it exported pressure transducers classified under ECCN 2B230 and controlled for nuclear nonproliferation reasons to China and Taiwan without the required BIS export licenses.
- MHz Electronics, Inc. sold the pressure transducers, which have nuclear explosive applications, through eBay.
- The company did not have a program in place to ensure its compliance with U.S. export control laws or regulations despite a visit from FBI Special Agents prior to the exports, wherein the Special Agents expressed concern to company officials that a different item MHz Electronics was selling on eBay would have required an export license if shipped to customers outside of the United States.
- This case resulted from an investigation conducted by OEE's Los Angeles field Office. The Penalty: On January 11, 2018, MHz Electronics, Inc. agreed to pay a \$10,000 civil penalty, all of which was suspended provided no violations occur during a two-year probationary period. The company was also ordered to complete an external audit of its export compliance program, to be conducted by an unaffiliated third-party consultant.



# The Illegal Export of controlled Nuclear Related Materials

US, 2006-7 ( [Source](#) )

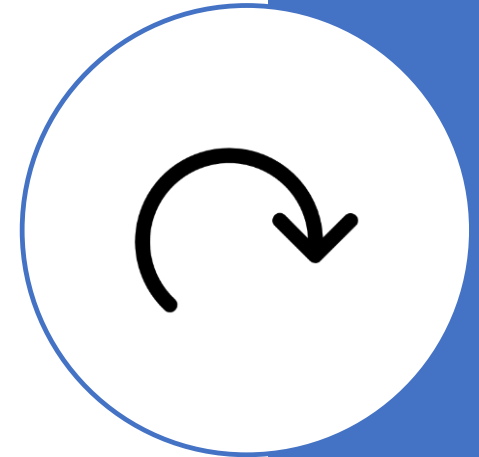
# Discussion

- Why do export control violations happen?
  - Motivations?
- How might they be caught?



# Thinking about 'good policy development and design'

- The difference between issues and policy problems....
- It is difficult to get problems on to the political agenda
  - Timing
  - Political Will
- Problems often become defined by their solutions.....
  - Scope
  - Cause
  - Solutions
- Problem definitions are always political and historically situated...
  - Problem ownership
  - Expertise
  - Public engagement
- Adaption is as important as consistency!



International regimes  
and policy design.....

International Organizations can help....

- Establish that there is a need
- Raise professional interest in an issue
- Provide institutional forums for best-practice sharing
- Provide resources (sometimes!)
- Help establish joint programmes
- Help generate ideas!

Contexts relevant to  
improving export  
control....

## Relevant Communities....

- Who are they?
- How might they be reached?
- How might they Help?
  - Implementation
  - Agenda raising
  - Design

# Academia.....

## Who...

- Historically low levels of awareness of dual-use issues and regulation ( varies between sectors)
- Have historically worked under 'basic-research' exceptions ( but there are increasing ambiguities in different national contexts)
  - Increasingly applied nature of scientific work
  - Increasingly international nature

## Reaching academia...

- Addition of dual-use teaching to ethics and other professional training
- Incentivisation of 'problem solving' technical work in this area

## How can they help?

- First line of defense
- Increasingly public understanding
- Helping to design sensible policy

# Government agencies...

## Who?

- Dedicated Export control agencies
- Co-operating Agencies
  - Border Control
  - National Security/intelligence agencies

## Reaching government agencies...

- International export control forums and regional/global outreach initiatives
- National level outreach initiatives between government and stakeholder

## How can they help?

- Improving efficiency of implementation
- Significant structural reform!





## Media and Policy Shapers.....

Who?

- Civil society and press ( especially technical/scientific press)

Reaching them?

- The right story, at the right time!

How can they help?

- Pressuring governments to prioritise conforming to domestic law and international agreements
- Helping make press coverage of breaking stories about dual-use innovation and export control issues more sensible!
- Raising awareness!



Industry

## Who?

- Large companies, and trade associations
- Reaching them?
  - Numerous government outreach schemes ( domestic and international level)
- How can they help?
  - They know the sector
  - They can help normalise good practice
  - They can raise awareness !

A case in  
point: EU P2P  
Export control  
Programme (  
[website](#))



The EU P2P export control programme includes projects in all three main areas of export controls:



[Dual-Use export controls](#)



[Arms Trade Treaty implementation](#)



[Conventional Arms export controls](#)

# EU P2P export control programme for dual use goods

The programme's objectives are to transfer EU best practises regarding dual-use trade controls and support third countries to meet their international obligations, most notably the 1540 UN Security Council Resolution's requirements.

- The programme strengthens national and regional capacity, taking into account the balance between security and economic considerations.
- Examples of cooperation activities include:
  - support in the drafting of relevant export control legislation
  - provision of training for customs and licensing officials
  - train-the-trainer seminars
  - exchange of good practices
  - general awareness raising among industry
  - case studies and table top exercises
  - The programme further operates on the basis of peer-to-peer consultations.

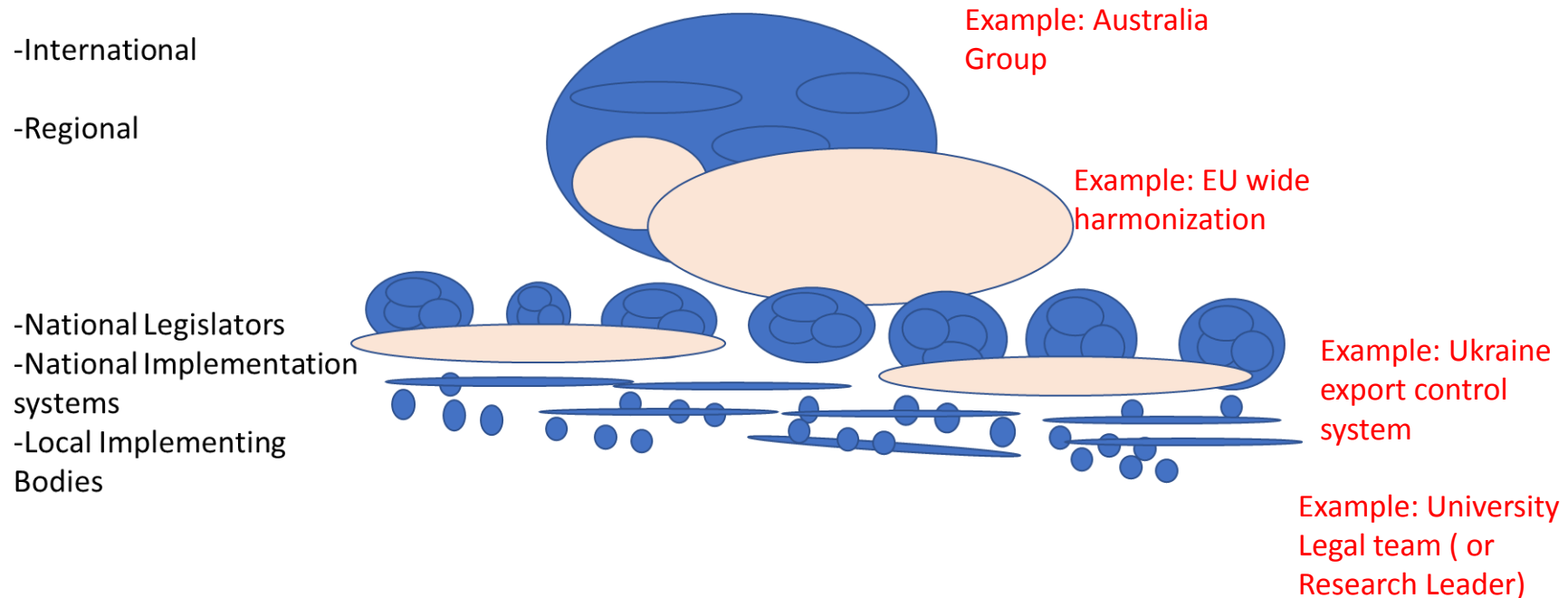
# Case Study: A recent review of key challenges and Opportunities in Ukraine in relation to biotechnology and biosecurity ( [Report](#) )

- Sector in need of rejuvenation and investment
  - Training of scientists
  - Support of private investment
    - Has led to longer term planning from government....
- Around 15 major research institutions
- Significant investment into regulatory reform in the area of biosecurity
- A lot of attention to international harmonization
  - Perhaps space for some more domestic review/ outreach processes?
  - Perhaps increasing Ukrainian expertise can help neighbours in the future?



Class exercise- Ideas for new types of imitative to review and develop....

# Recap: Export control regimes as a Target for improvement....



Three key  
categories of  
initiative and  
basic design  
considerations



Data/ informational



Education



Institution building



1)  
Data/Information  
generation and  
collation



- Who for? Wide range of community's wide range of needs –
- What information?
  - Sourcing and collation- how and at what cost ?
  - Reliability and review- how to make 'accurate' information and maintain trust?
  - How to tailor presentation of data for user needs?

- Great example! UN [Comtrade data base](#) and projects using this data!

## 2) Educational!



- Who for? Wide range of communities wide range of needs –
- Course content ?
  - Sourcing and collation- how and at what cost ?
  - Reliability and review- how to make 'accurate' information and maintain trust?
  - Delivery and integration into existing educational structures?
- One time thing, or sustainable impact?

Great example of increasing public awareness in relation to emerging technology!

<https://www.youtube.com/watch?v=-7QpuEKsKx4>

### 3) Institution building



- Who for? Wide range of communities wide range of needs –
- What type of expertise ?
  - Which type of expert?
  - Political neutrality?
  - Transparency oversight?
- Function?
  - Decision making
  - Advise generation
  - Public understanding/debate
  - Forward planning ( technology foresight and assessment?)
    - What methodology

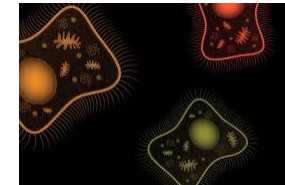
Example! New pre-emptive global risk identification and management system for dual-use issues?

# Some key policy trends for inspiration....

Open-source movement!



Industry and university based policy/ scientist collaborations !



Ukraine as a regional expert hub!



