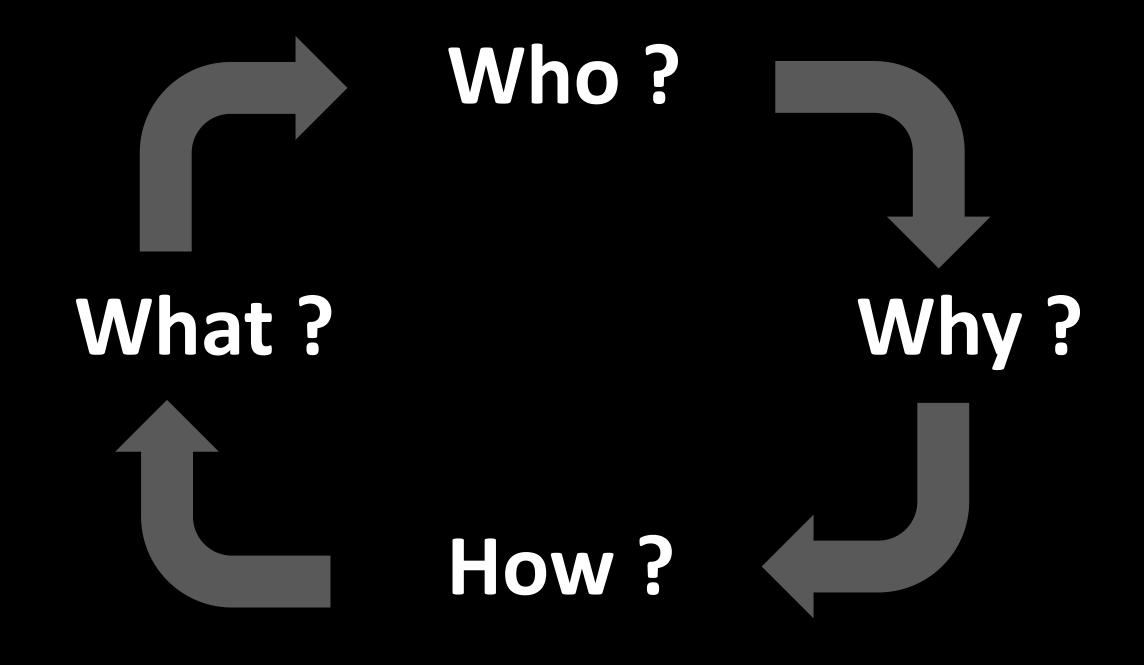


Seminar on the Challenges of the Scientific and Technological Evolution for the Export Control System

15–16 October 2018, Tbilisi, Georgia

Dr Kai ilchmann



What is technology?

Notions of technology

Disentangling complex and dynamic inter-dependencies

Allows conceptualisation of points to interdict and **identify barriers to acquisition** and or **proliferation**

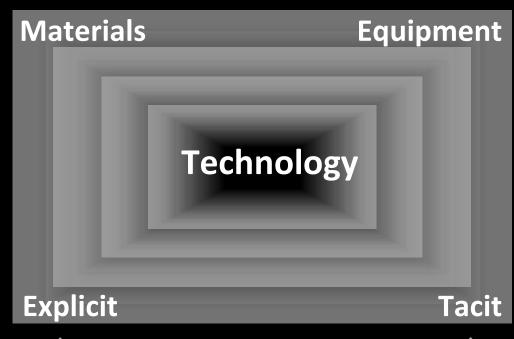
Much more complex characterisations of technology possible - STS & innovation

ITT is ostensibly **about controlling** the **knowledge** component of technology

and is an **essential and integral** part of an export control regime

Generic model of technology





most of the relevant knowledge resides in **people**

Knowledge

What?

To complement traditional ITT controls such as export licensing and visa vetting...

Outreach

Education

to engage with

Raising awareness

Industry, private sector

Universities, research facilities

national laboratories

international partners





Relevance raising

Soliciting buy-in & eliciting expertise

....to deal with technological complexity & change

Building a network ...

of relevant actors



Those who are engaged in relevant research and development

users and producers of science & technology can be seen as 'constrainers' as well as 'enablers'

Those who are engaged in relevant research and development are often

...are often characterized as the "problem"

...however, they are

...excluded from discussions about them

...but

...often lack wider appreciation of security context

...at least as discussed in

fora similar to this one

...can make valuable contributions to discourse

...can act as a conduit to transfer awareness

...can act as barriers to entry for nefarious appropriation

...can raise alarms

...can provide back channels and confidence building ...think scientific working groups mechanisms in regional and international contexts

during cold war disarmament discussions or the space programme



Again?

Science and technology is not conducted and produced in a social vacuum.

...have a transformative impact on society

...inherently directed by society.

Conduct of science can be shaped by changing social and societal attitudes.

... for example, the practices around the treatment of human subjects.

It is not realistic to expect education measures or network building to stop transgressions, or transgressors

these measures can, however, provide warning, enable intervention, and provide an additional layer of checks and balances



... but only if the community is on-board !!!

...there is some resistance in the scientific community

"... there are still considerable difficulties in convincing some members of the academic community that oversight and awareness ... are issues deserving attention and action."

"JACKSNNZ", and Kenya, Pakistan, Sweden, Ukraine, the UK and the USA (2010) "Possible approaches to education and awareness-raising among life scientists"

BWC/CONF.VII/WP.20

"One of the most significant obstacles is overcoming the impression – generally held by bioscience researchers who are not accustomed to security procedures – that biosecurity is intrusive, counterproductive, restrictive, or insulting.

Creating a "biosecurity culture" by illustrating how biosecurity can be useful and not overly burdensome is one of the primary tasks to be accomplished by biosecurity system designers."

Salerno. R (2004) "International Biosecurity Symposium: Securing High Consequence Pathogens and Toxins" Symposium Summary, p.16

Wait!

...as well as in the policy community

"Governments do not always welcome sharing what has traditionally been their preserve. Many increasingly challenge the numbers and motives of civil society organizations in the United Nations — questioning their representivity, legitimacy, integrity or accountability"

F.H. Cardoso (2004) "We the peoples: civil society, the United Nations and global governance Report of the Panel of Eminent Persons on United Nations—Civil Society Relations", UNGA A/58/817

In other words, there is considerable tension in <u>either</u> "community", there is reluctance to engage, to contribute, to listen and to receive

Self interest driven

Relevance

...to inform & avoid overly zealous regulation

...to avoid misdirected regulation and restrictions

...to engage in regulatory discussions and decision making

...don't underestimate the appeal of an invite to capital

How?

Interest driven

Attractiveness

... needs to be an interesting venue and opportunity

aim is to get scientists interested enough to want to come back, or to develop a desire to participate.

- (a) increase buy-in and impact,
- (b) ensure sustainability of the format.



CONDENSE COnference on Non-proliferation and Dual-use awarENEss

Rationale of the event.

The aim is to get people talking about societal impact

and dual-use challenges

to challenge and refresh thinking

to build a network

Format of the event.

Short, snappy, presentations About their work and their societal impact

'walkshop' Get out, network, flatten hierarchies, informal

2-day regional workshop

practicing scientists with teaching responsibilities or managerial positions

(primary investigators, laboratory heads)

mix of seniority is important, with an emphasis on mid career scientists

restricted to one or two people from the same institution to avoid cliques and increase networking amongst participants



Thanks!

Network and Event for Scientists

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Questions for the Research Community working group

How does the research community engage meaningfully?

Who should be involved?

What sort of input is useful to policy makers?

Where should these events be held?

How does the policy community find a common position?

What are your top (three) preferences for topics to be covered?



Subjects, specific areas, novel technologies, advancements, etc.