

# GOVERNING SECURITY CONCERNS BEYOND LISTS AND DUAL-USE

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## OUTLINE

1. Limitations of list-based security governance
2. Pitfalls of dual-use as a term
3. Charting a path forward

### Main recommendations:

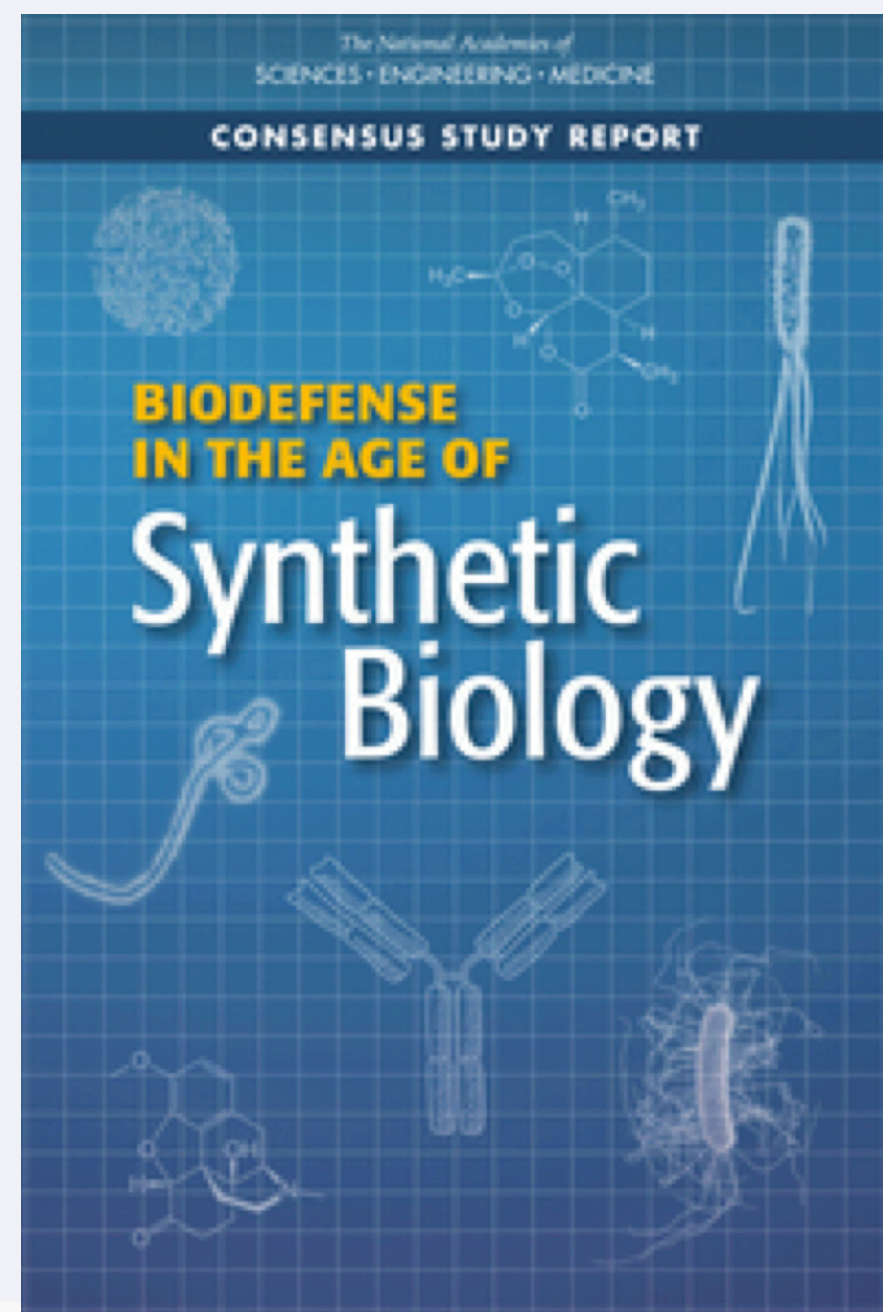
1. Need high level policy support for standing committee(s) to address emerging security concerns
2. Need learning system for the practice of biosecurity



# 01

## LIMITATIONS OF LIST-BASED SECURITY GOVERNANCE

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“An **over-reliance on the Select Agent list** is a systemic **weakness** affecting many aspects of the United States’ current biodefense mitigation capability.”

“Several presenters noted that the result [of the development of **DURC**] is policy that **is simultaneously too broad and too narrow**—not all research that involves the identified pathogens and experiments is research of concern and experiments outside of those on the listed experiments may raise dual use concerns.”



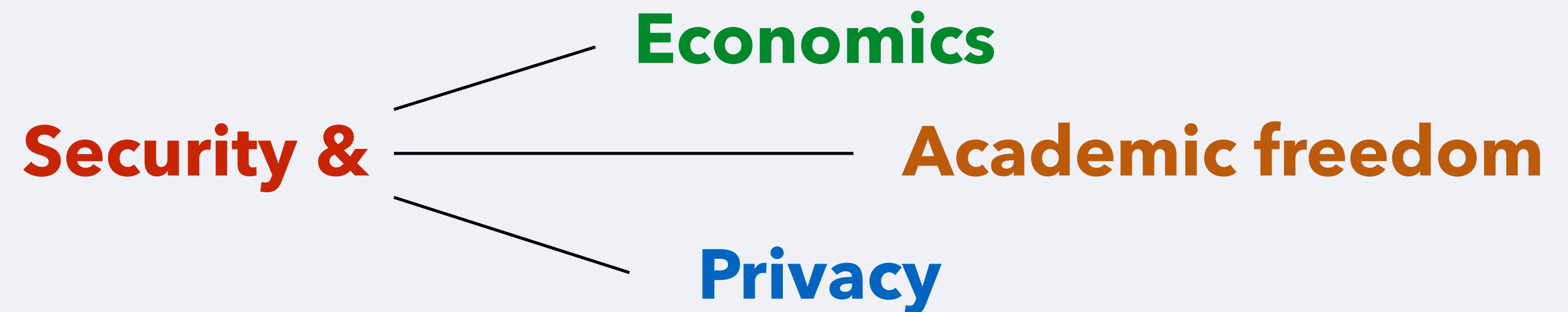


# 02

PITFALLS OF 'DUAL-USE'  
AS A TERM

# PITFALLS OF 'DUAL-USE' AS A TERM

PEOPLE ASSUME THERE IS ONLY ONE OTHER THING TO BE BALANCED WITH SECURITY



**malicious/benevolent (bio)**

**offensive/defensive (cyber)**

**military/civilian (conventional)**

**bomb/energy (nuclear)**

THE SECURITY SIDE OF THE DUAL MEANS VERY DIFFERENT THINGS IN DIFFERENT TECHNICAL AREAS

# PITFALLS OF 'DUAL-USE' AS A TERM

'DUAL-USE' USUALLY FOCUSES ON IN/TANGIBLE OBJECTS OR (MORE RECENTLY) RESEARCH, BUT BIOLOGY CAN BE MANY THINGS

**Biology as**

**Tangible Objects**

**Research**

**Infrastructure**

**Data**



# 03

CHARTING A PATH FORWARD



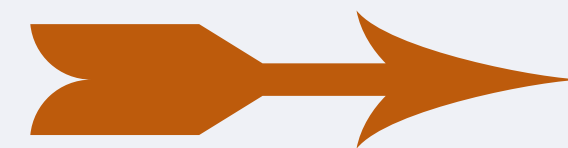
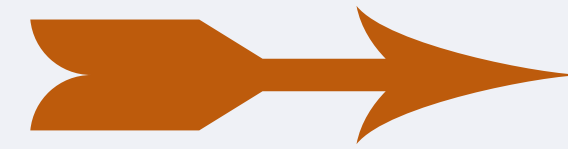
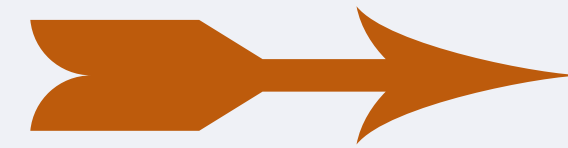
# UNHELPFUL AND HELPFUL SECURITY ASSUMPTIONS

## UNHELPFUL

We must maintain US leadership in biotechnology

Security governance should be limited to select agents

We know what security means



## HELPFUL

Govern as if the US were not the leader in biotechnology

Security, like ethics, is an inseparable part of any biological research and innovation process

The **process** of deciding security concerns should be a subject of debate

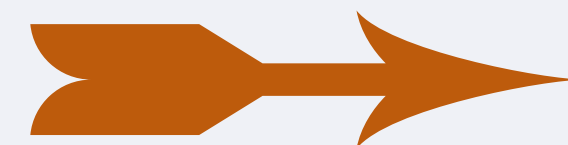
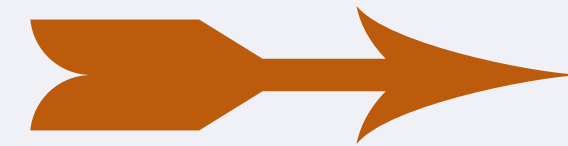
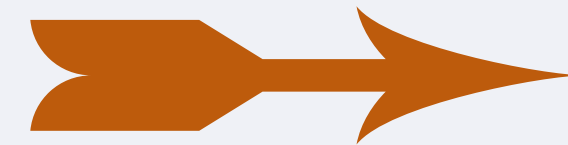
# HOW NEW ASSUMPTIONS CHANGE STRATEGIES FOR PROTECTING THE BIOECONOMY

## NEW ASSUMPTION

Govern as if the US were not the leader in biotechnology

Security, like ethics, is an inseparable part of any biological research and innovation process

The **process** of deciding security concerns should be a subject of debate



## GOVERNANCE STRATEGIES

International collaboration on governance is essential from lab bench to head of state

Train scientists/engineers not to “do good” but to “know who to call, and when”

Understand the limitations of “biology as data” metaphor and how that shapes ability to see security concerns

## BUILD/MAINTAIN WORKING GROUPS BETWEEN BUSINESS, GOVERNMENTS, SOCIETY, AND ACADEMIA



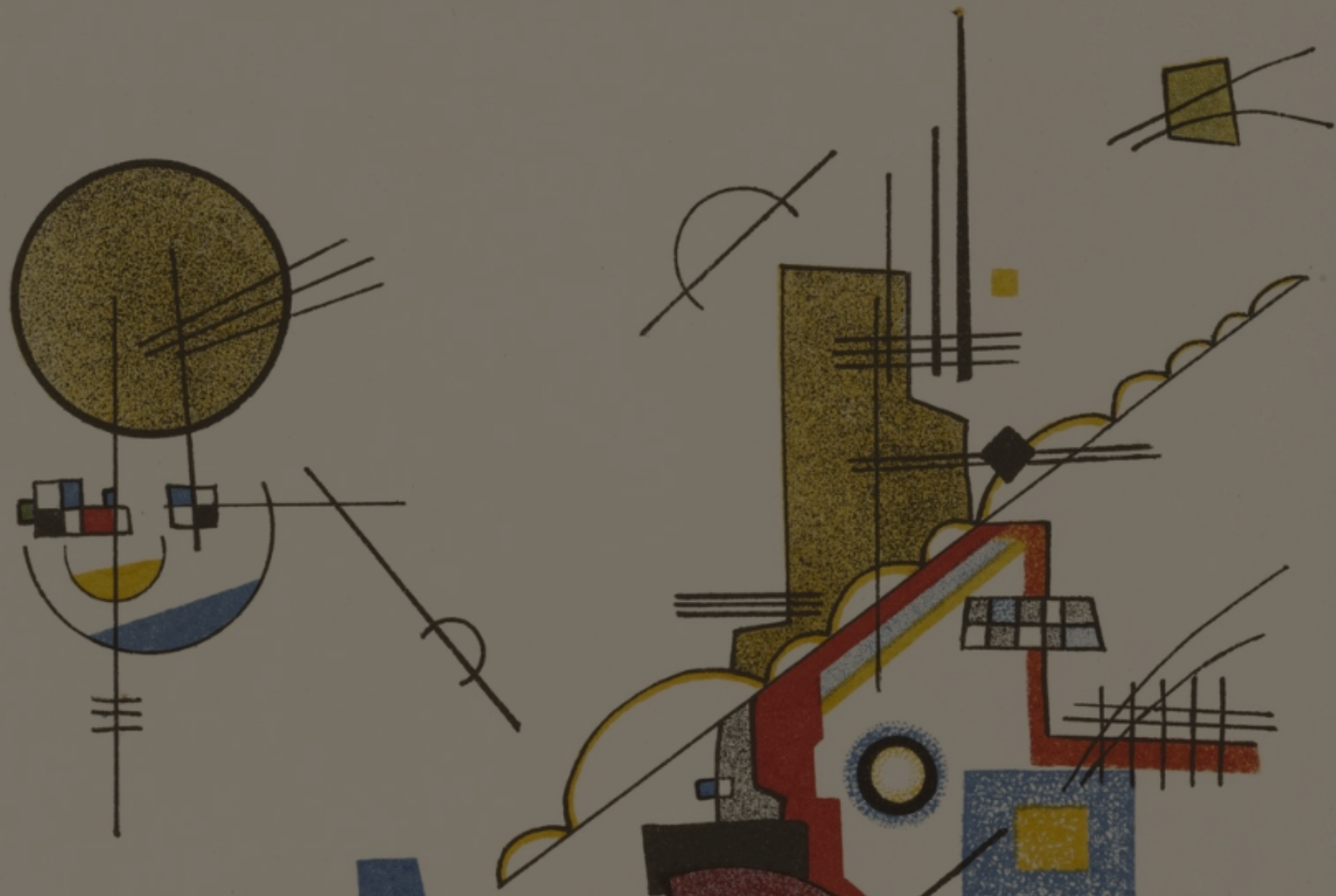
- \* Emerging Technology Technical Advisory Committee (ETTAC)
- \* National Science Higher Education Advisory Board (NSHEAB)
- \* National Science Advisory Board for Biosecurity (NSABB)
- \* Jason

## LEARN FROM THE PRACTICE OF GOVERNANCE, NOT JUST POLICY FAILURE



- \* HHS 2016 Stakeholder engagement workshop on DURC
- \* NASEM Reports
- \* Need a system for those engaged in the daily practice of bio security governance to learn from each other and feed back into policy

# QUESTIONS



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