

# National Labs

Tuesday, Dec. 5, 2023

12:15 - 1 p.m. ET



**Leah Chapman**  
National Physical  
Laboratory



**LaRico Treadwell**  
Sandia National  
Laboratories



PostGraduate Institute  
for measurement science

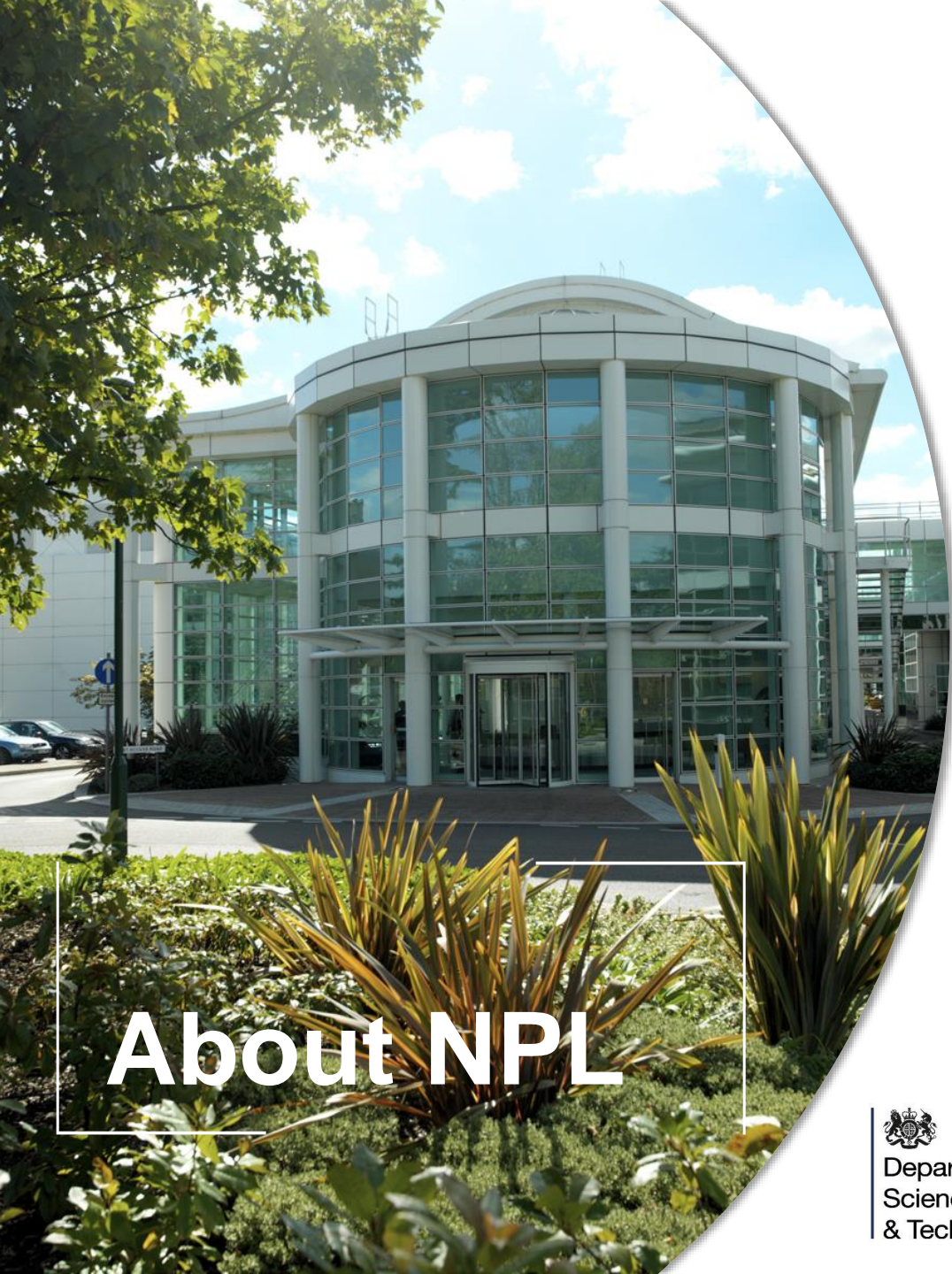
# Cultivating the Power of three

Leah Chapman

*University Liaison Managers , National Physical Laboratory*



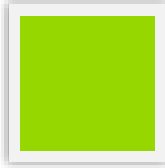




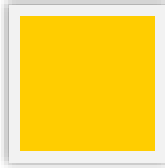
# About NPL



UK's National Measurement  
Institute founded in 1900



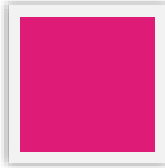
Public Corporation owned by Dept  
for Science, Innovation &  
Technology



1200+ staff, 200+ visiting  
researchers



Independent & Impartial advice



World-leading breadth and  
depth of metrology expertise



Department for  
Science, Innovation  
& Technology

# 5 Critical Technologies

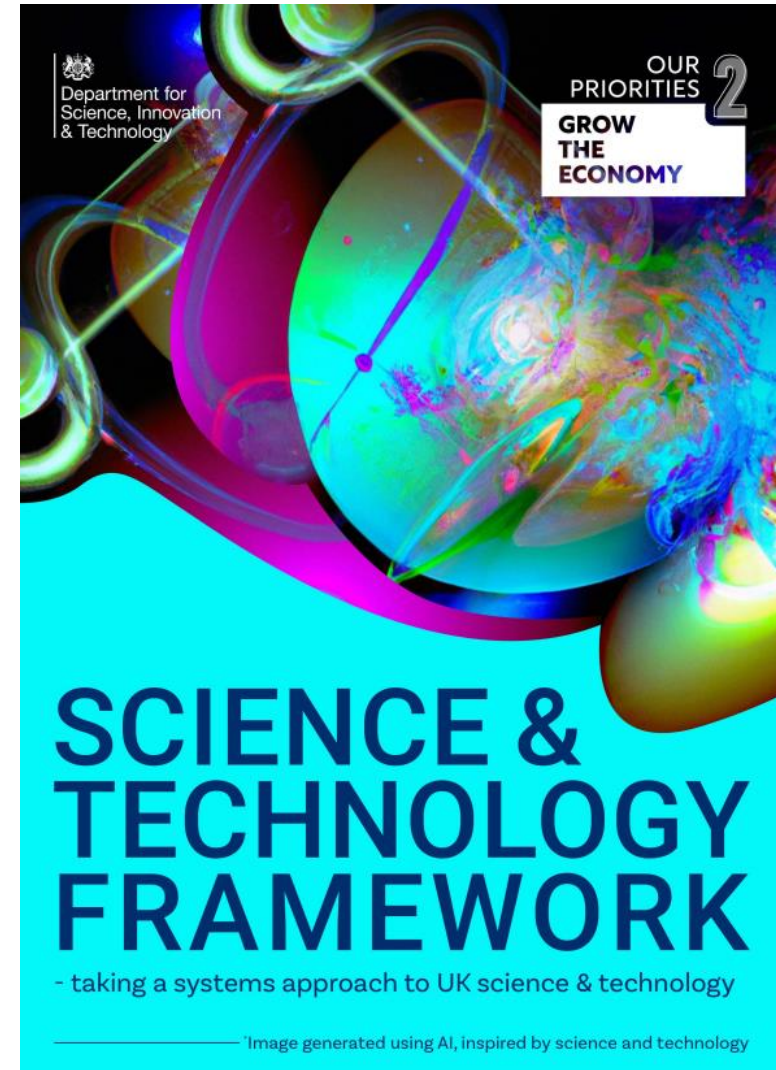
**Artificial Intelligence (AI)** – machines that perform tasks normally performed by human intelligence, especially when the machines learn from data how to do those tasks.

**Engineering biology** – the application of rigorous engineering principles to the design of biological systems.

**Future telecommunications** - evolutions of the infrastructure for digitised data and communications.

**Semiconductors** – a class of electronic materials with unique properties that sit at the heart of the devices and technology we use every day.

**Quantum technologies** – devices and systems which rely on quantum mechanics, to provide capabilities that ‘classical’ machines cannot.





# Businesses accessing our unique capabilities\*

NPL helps innovative UK businesses at all stages of their journey, from start-up to scale up to access its world leading expertise and facilities through a variety of business support schemes which currently includes:

- Analysis for Innovators, A4I (partnership with Innovate UK)
- Measurement for Recovery, M4R
- Measurement for Business, M4B



# Measurement for Recovery (M4R)



Created and led by NPL, M4R brings together the UK's top measurement science experts and specialist laboratory facilities to address problems for UK companies with new approaches, to help drive growth and recovery with up to 20 days support and advice at no charge.



The programme was conceived to support UK industry in its recovery from COVID-19 with access to cutting-edge R&D, expertise and facilities to help solve analysis or measurement problems that couldn't be resolved using standard technologies and techniques.



The idea was to help boost productivity and competitiveness in UK industry, unleashing innovation and making the UK a great place to work and do business.



National Engineering Laboratory

 NPL Regional Offices

 Strategic Partners

 Key Partners

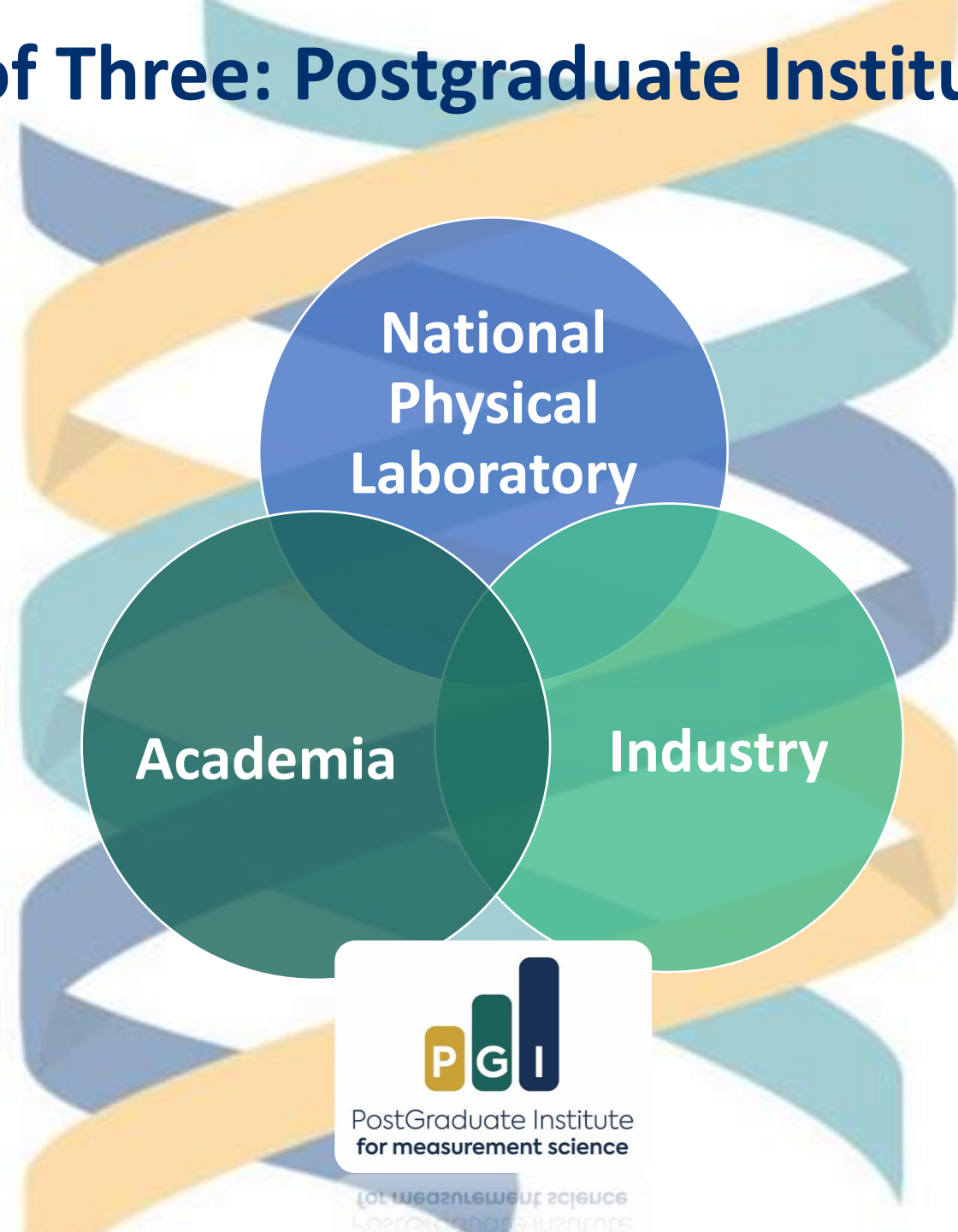
 Affiliate



# Working with academic institutions



# The Power of Three: Postgraduate Institute (PGI)



for measurement science  
Postgraduate Institute



# How does the power of three operate in your organisation?

ACADEMIA

INDUSTRY

THIRD PARTY



# Challenges and barriers

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Lack of awareness of expertise, facilities and services available

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Perception of too much red tape

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Unaligned expectations of outcome, such as IP etc.

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Not understanding the funding structure and fees

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Changing political environment

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Finding the right people to speak to

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Not keeping it simple



# Summary of practical tools and insights are needed to translate research and innovation concepts into trilateral collaborations?

## ACADEMIA

### Culture

Porosity  
Clear definition of impact  
Community engagement

### People

Business Engagement  
teams/leads  
'Boundary spanners'

### Knowledge

Knowledge and Tech transfer  
Innovative ideas/concepts

## INDUSTRY

### Culture

Incentives/Access to funding  
Open to engagement  
Entrepreneurial

### People

Innovators/risk takers  
Connections/use of  
networks

### Knowledge

Application of research  
Commercial know-how

## THIRD PARTY

### Culture

Societal impact/awareness  
Links to government agenda  
Access to funding

### People

Engagement team leads/  
Business Development  
managers

### Knowledge

Specialist knowledge  
Service providers

## Legal

Agile and flexible approach to IP

