

CRITICAL MASS UK: LARGE INFRASTRUCTURE BID PROPOSAL Town Hall Meeting ★ 20th January 2022



zoom



A once in a
generation
opportunity!

CRITICAL
MASS UK
LARGE INFRASTRUCTURE BID

HOUSEKEEPING

- Please keep **camera's off and microphones muted** unless speaking to the breakout group
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MEETING AGENDA

10:00 Plenary Session #1

Introduction & overview – Alison Ashcroft

UK MS bid background & update – Jackie Mosely/Peter O'Connor

UKRI Infrastructure Funding Process – Luke Davies

Meeting objectives – Alison Ashcroft

10:20 Break Out Sessions #1:

Bioscience & Biotechnology: (1) General (2) Clinical & Medical

Climate Change & Environmental Research

Advanced Structural Characterization & New Materials

Spatially Resolved Mass Spectrometry

Next Generation Mass Spectrometry

11:15 Pause/Coffee Break

11:30 Break Out Sessions #2:

Summarizing conclusions & distilling proposed actions

11:45 Plenary Session #2

Summaries from break out sessions Including 21st Century MS data challenges

Summary from break out sessions on Agreed Actions & Agreed Outcomes

13:15 Close

BID BACKGROUND...

THE BRITISH MASS SPECTROMETRY SOCIETY

**Delivering World-Class
Science with British
Mass Spectrometry...
Looking to the Future!**

A Community Vision for Mass Spectrometry



Barcoding Molecular Diversity

2020

The World's First Mass Spectrometry Society!



BRITISH MASS SPECTROMETRY SOCIETY

The background of this slide features a complex network of chemical structures and molecular diagrams, including various rings and functional groups, overlaid on a light blue gradient.

THE BRITISH MASS SPECTROMETRY SOCIETY

**Delivering World-Class
Science with British
Mass Spectrometry!
*A Community Vision for
British Mass Spectrometry***

Statement of Need

2021

The World's First Mass Spectrometry Society!



BRITISH MASS SPECTROMETRY SOCIETY

The background of this slide features a light blue gradient with abstract, flowing wavy lines in shades of blue and green, suggesting a dynamic and forward-looking theme.

FIT FOR PURPOSE TECHNOLOGY & DATA



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DIGITAL INTEGRATION & OUTREACH



A once in a
generation
opportunity!

UK PLC



NURTURING & MAINTAINING TALENT



DRAFT VISION & PROPOSED STRUCTURE

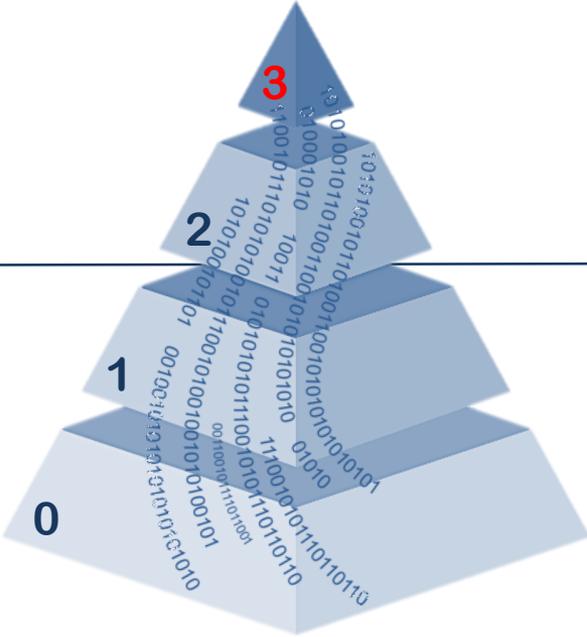
OUR VISION ♦ CASCADING EXCELLENCE & BEST PRACTICE

TIER3: *Advanced MS National Research Facilities. Providing access to world-leading specialists, technology and knowhow.*

TIER2: *Regional MS Research facilities. Collaborative research and development of innovative MS approaches. Supporting the lower tiers.*

TIER1: *Targeted MS Research Groups. Tightly focusing on a specialist area of study. Providing specialised and in depth advice within the MS cascade landscape.*

TIER 0: *Remote Access MS Facilities. Supported on-line by staff in the higher tiers with an experiment design and data interpretation advice service.*



WORLD-LEADING RESEARCH ♦ KNOWHOW ♦ ACCESSIBILITY ♦ TRAINING ♦ ANALYTICS ♦ BEST PRACTICE



DRAFT VISION & PROPOSED STRUCTURE



*SUSTAINABLE
INFRASTRUCTURE*

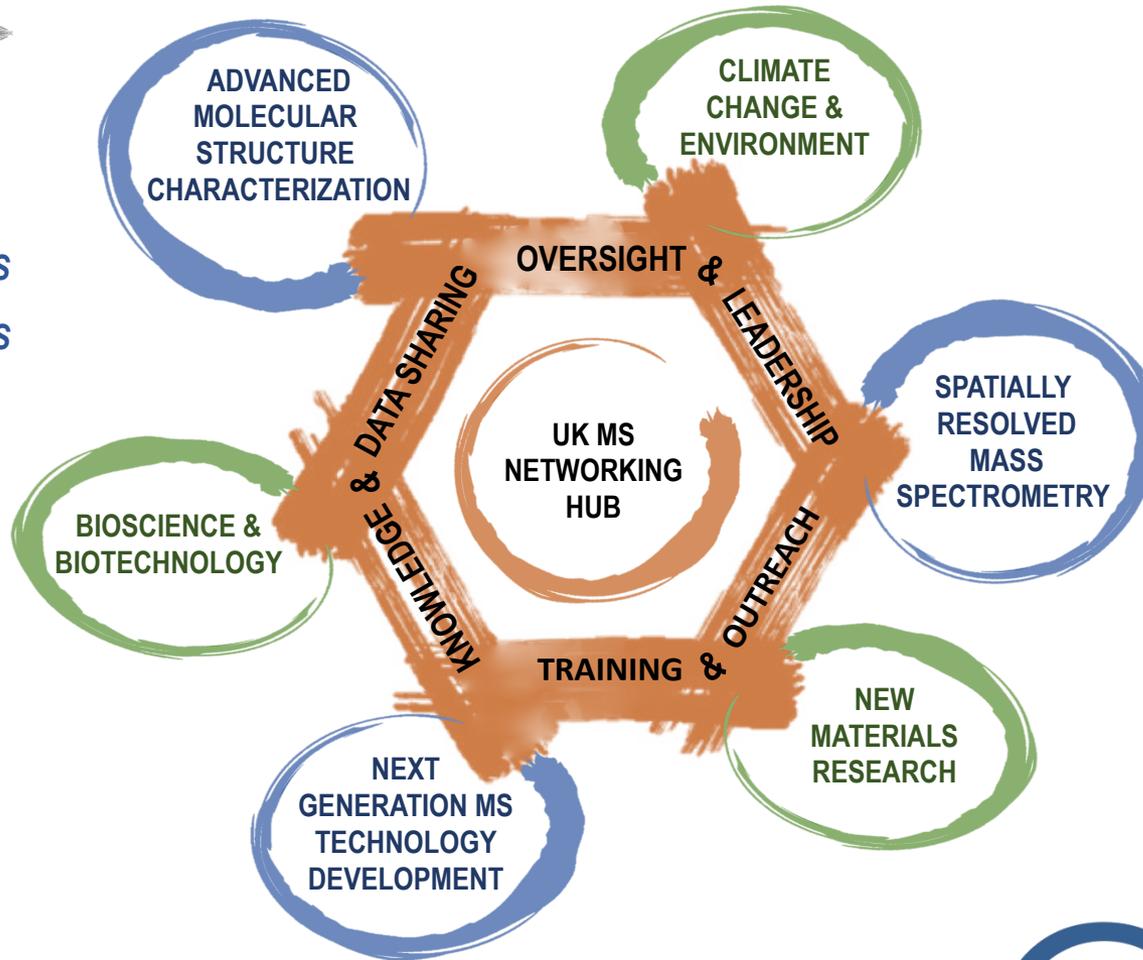
*INNOVATING
MS TECHNOLOGIES*

*STRATEGIC UK MS
TRAINING
PROGRAMME*

*DRIVING BEST
PRACTICE AND
STANDARDS*

*LEVERAGING THE
UK MS ESTATE*

*ENABLING THE UK
RESEARCH BASE*



*RESEARCH
ACCELERATION*

*TECHNOLOGY
TRANSLATION*

*CRITICAL MASS OF
MS PRACTITIONERS*

*IMPROVED HEALTH
OUTCOMES*

*CLIMATE &
FOOD SECURITY*

*INTERNATIONAL
OUTREACH &
LEADERSHIP*

GROWTH IN UK GDP



GOALS FOR THIS MEETING

- Identify compelling arguments to convince UKRI and BEIS to strategically invest **an additional Ca £100M** in UK mass spectrometry infrastructure.
- To hear the views of the widest possible ‘MS Stakeholder Community’ about the potential impact of this proposal, identify risks and drive forward a consensually agreed bid proposal.

FOCUSING ON THE BIG PICTURE



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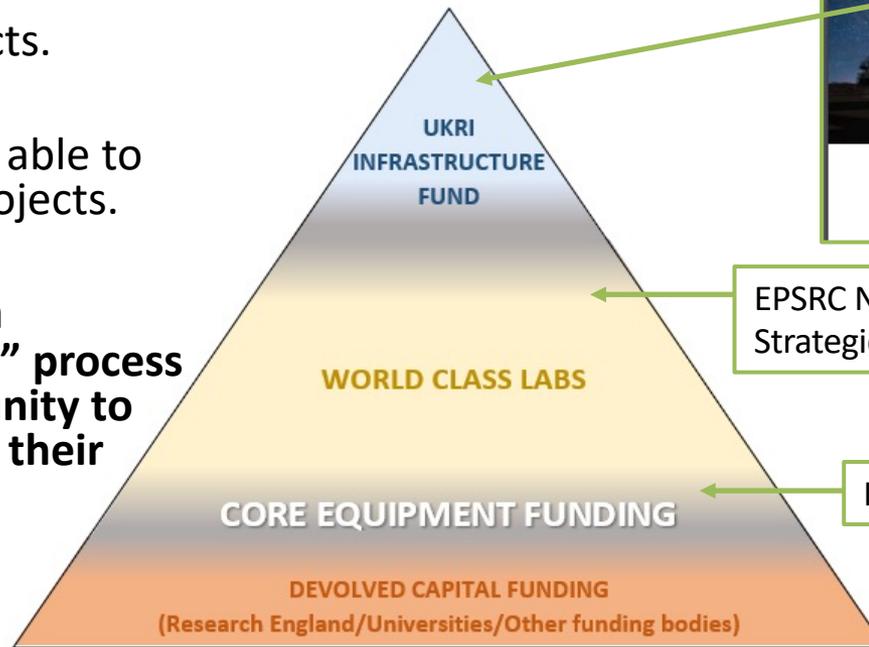
UK Research
and Innovation

UKRI Infrastructure Fund - EPSRC Perspective

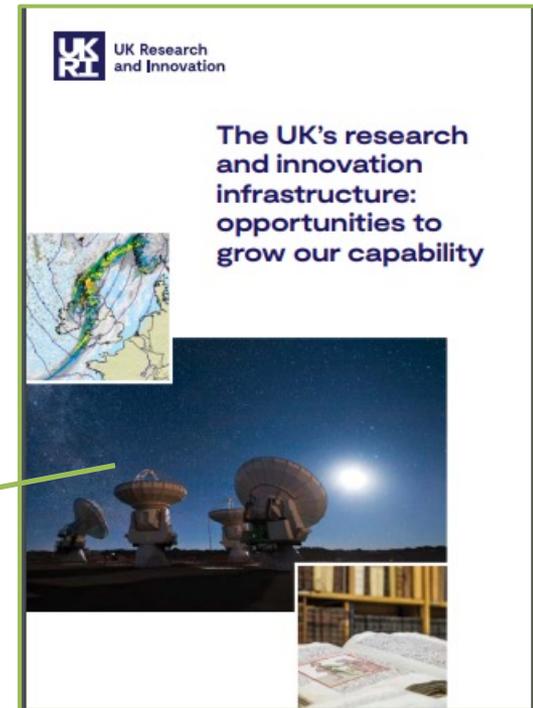
Luke Davis
Joint Head of Research Infrastructure
EPSRC

Why are we here today?

- There is now a UKRI-wide approach to identifying and supporting major infrastructure projects.
- Each UKRI Council is able to submit their own projects.
- **EPSRC has opened a “Statement of Need” process to allow the community to develop and submit their ideas to us.**



Capital Funding Pyramid



EPSRC National Research Facilities Strategic Equipment

Institutional Awards

So what is the Infrastructure Fund?

- The Infrastructure Fund is a pan-UKRI budget to support step-changes in infrastructure capability and/or capacity in addition to individual Councils' investments.
- Supports investments right across the disciplinary spectrum, from fundamental research to innovation focused activities in a network of internationally competitive, high-quality and accessible research and innovation infrastructure.

So what is the Infrastructure Fund?

- Does not issue open calls for proposals. Opportunities for investment will be identified by each of UKRI's Councils using existing community engagement mechanisms.
- Anticipated annual cycle for submission of proposals
- These are assessed by the IAC who use a portfolio approach to make recommendations to UKRI's Executive Committee and Board

Large Research Infrastructure SoN Process

- Community develop Statements of Need (Now)
- EPSRC present the breadth of interest to EPSRC Council (March 2021)
- EPSRC panel assess the SoNs and provide recommendations to EPSRC Council (March/April 2021)
 - **We are here** – *Anticipated Round 3 timeline*
- Independent Review and prioritisation (September 2022)
- EPSRC Council sign-off EPSRC applications to UKRI (Oct 2022)
- UKRI submission deadline (November 2022)
- UKRI Infrastructure Advisory Committee (IAC) considers all applications Winter 22/23)
- IAC meeting (March 2023)
- UKRI Executive Committee (Spring 2023)
- UKRI Board (Spring 2023)
- Ministerial Approval
- Then Business Case writing begins...

QUESTIONS FOR BREAKOUT SESSIONS

1. What do you need mass spectrometry to do over the next 5 years. What is lacking in your field of work right now? Are current instrumentation and techniques adequate for your work?

Including expertise and personnel, sample prep, introduction, capabilities, workflows and data, etc.

2. What 21st century data challenges can you foresee in the next decade?

1. What kind of infrastructure is needed to deliver the developments needed in your field of work? What would happen if this infrastructure is not funded?

1. What are the big questions that you would be able to answer with this infrastructure? How do you want mass spectrometry to contribute to society in the next decade?

What is **your** 'Moonshot' idea?

BREAKOUT SESSIONS

**Bioscience & Biotechnology
General**

**Bioscience & Biotechnology
Medical & Clinical**

**Climate Change
& Environmental
Research**



**Advanced Structural
Characterization
& New Materials**

**Spatially Resolved
Mass Spectrometry**

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