National Federated Compute Services NetworkPlus

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Towards Federated Laboratory Data Management

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The Rosalind Franklin Institute

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UKRI

Federated Data Management

Most laboratory instrumentation does not support a common data acquisition or control system.

Siloed data within an organisation.

Not meeting (Open) FAIR standards.

Can we design a data management system that can be used across organisations to enable (Open) FAIR?

Project team

Project Leads

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The Rosalind Franklin Institute

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The Rosalind Franklin Institute

Technology innovation, transforming live science, improving human health

Hub and spoke institute

Centralised infrastructure

Single Business Entity

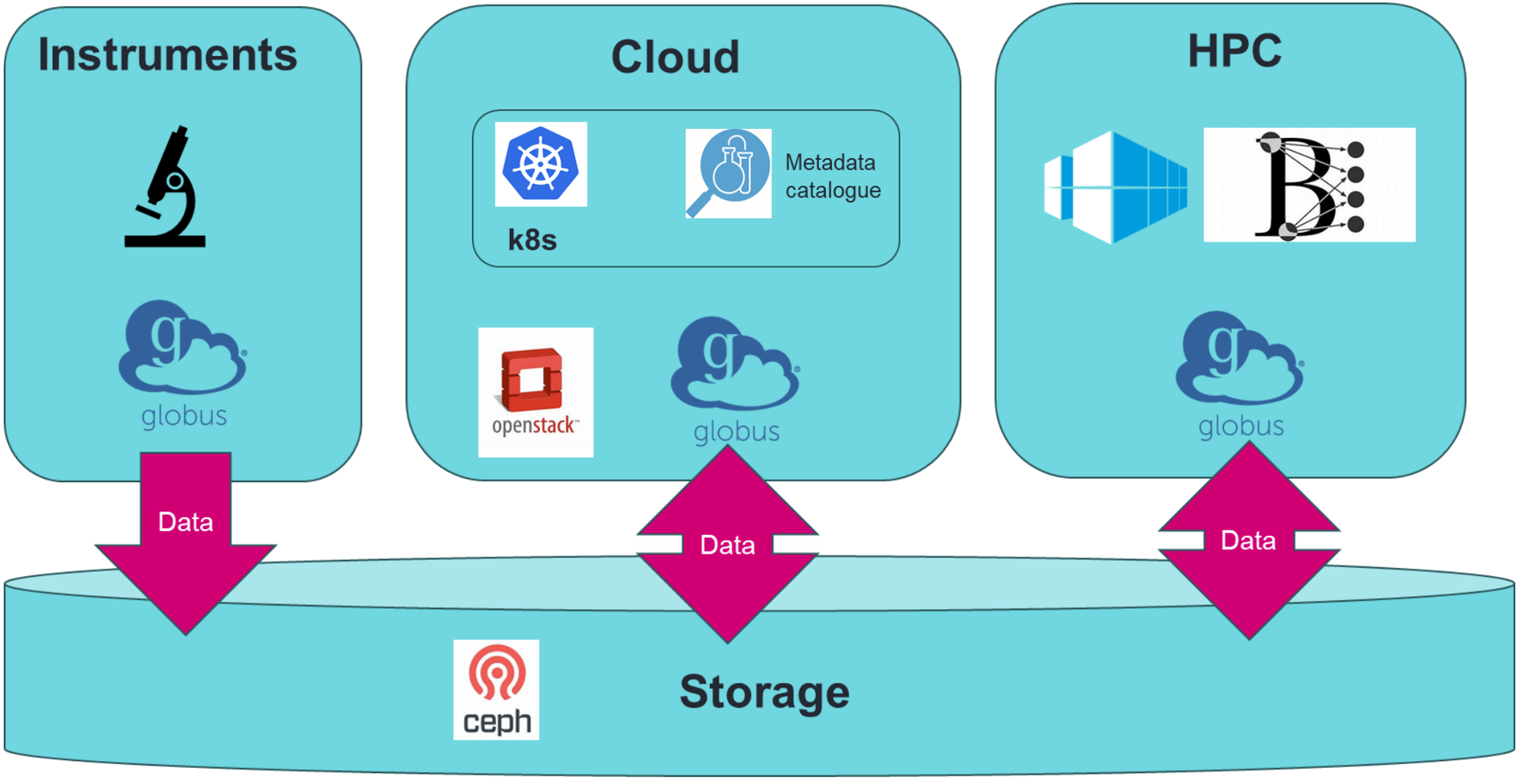
The Henry Royce Institute

National Institute for advanced materials research and innovation

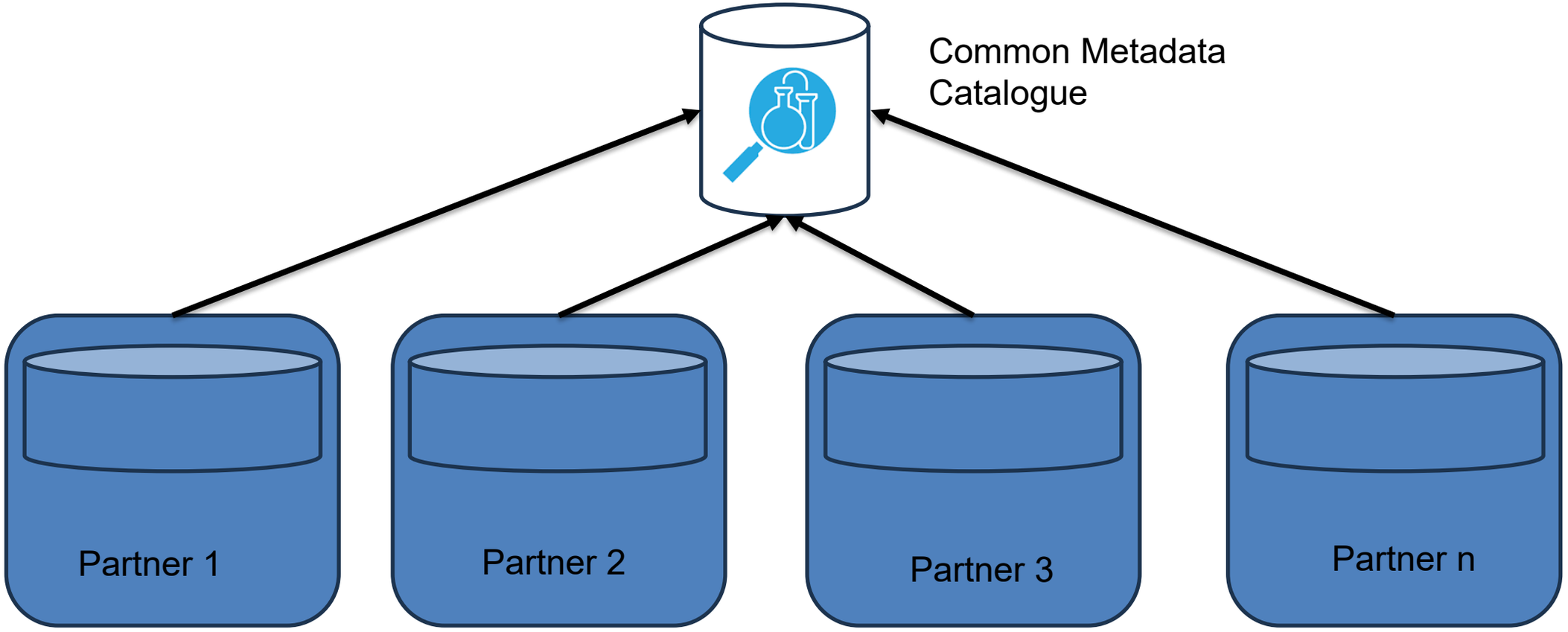
Consortium of Partners

Requires federated infrastructure

The Franklin Infrastructure



Scaling to a federated approach



Each partner holds their own storage

Federating through Metadata

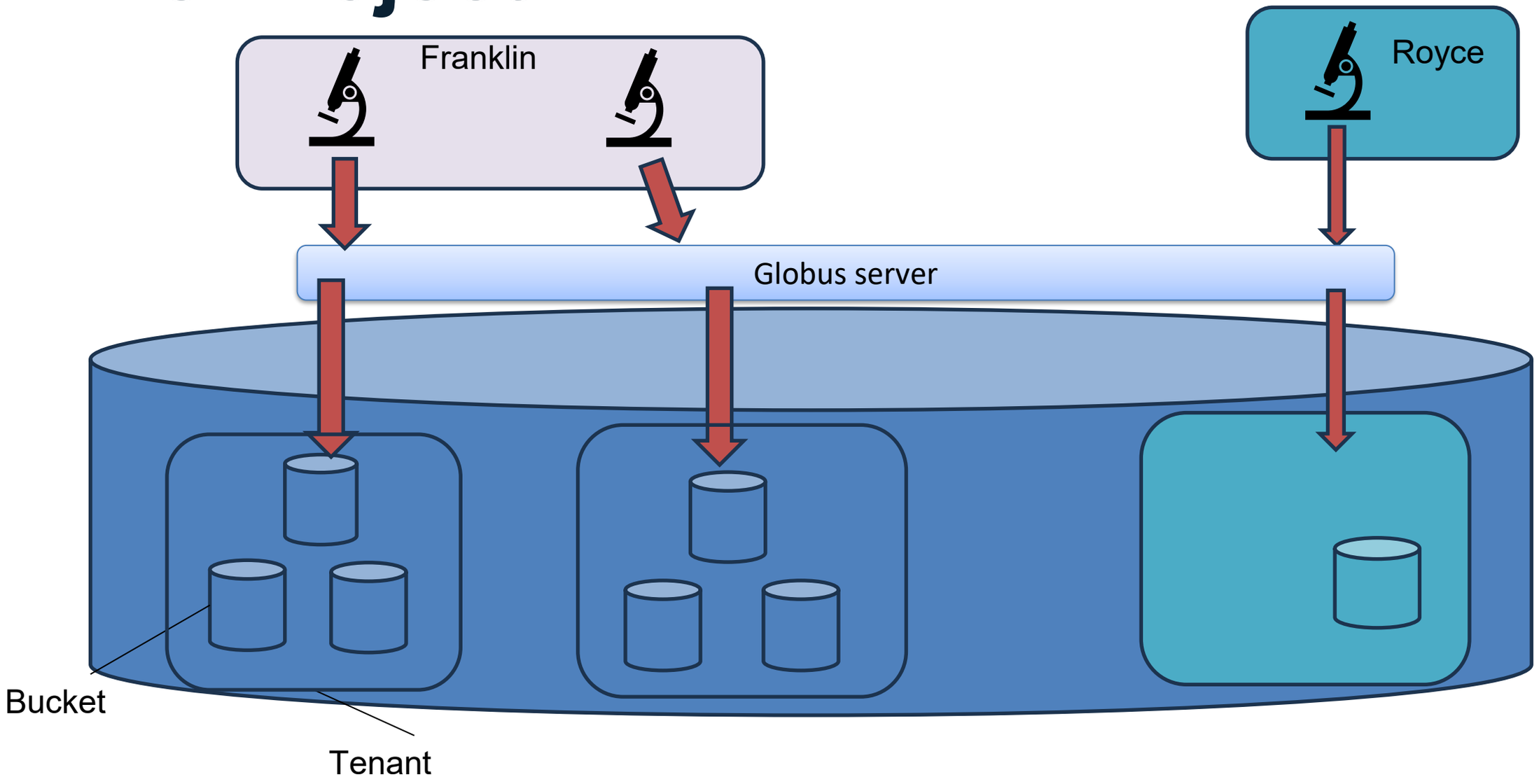
https://www.scicatproject.org/

Open-source metadata catalogue

Flexible metadata structure

Integrates easily into any architecture

The Project



Aims

Governance

• Establish a governance framework.
• Understand the advantages and barriers of an institute’s structure to adopting a data management platform.

Technology

• Develop a set of KPIs to assess the fitness for purpose of a common data architecture.
• Investigate and refine tools for data transfer and metadata extraction
• Test the suitability of the framework.
• Understand how curation of instrument data can affect downstream analysis

Community

• Foster collaboration between UK academic institutions to promote the adoption of federated data infrastructure and
shared best practices