



# Funding infrastructure that is used and delivers value

Neil Jacobs



■ “OSI e-infrastructure report”

Benefits – A national e-infrastructure will:

- Support the entire data and information lifecycle, accelerating the research process itself
- Support the massive amounts of data both created and re-used by researchers
- Ensure that vital and otherwise irrecoverable time-based studies continue to be available for future research
- Allow for the re-use and re-purposing of digital data in all their forms

### ■ “Dealing with data”

- The JISC should work in partnership with the research funding bodies and jointly commission a cost-benefit study of data curation and preservation infrastructure

### ■ “To share or not to share”

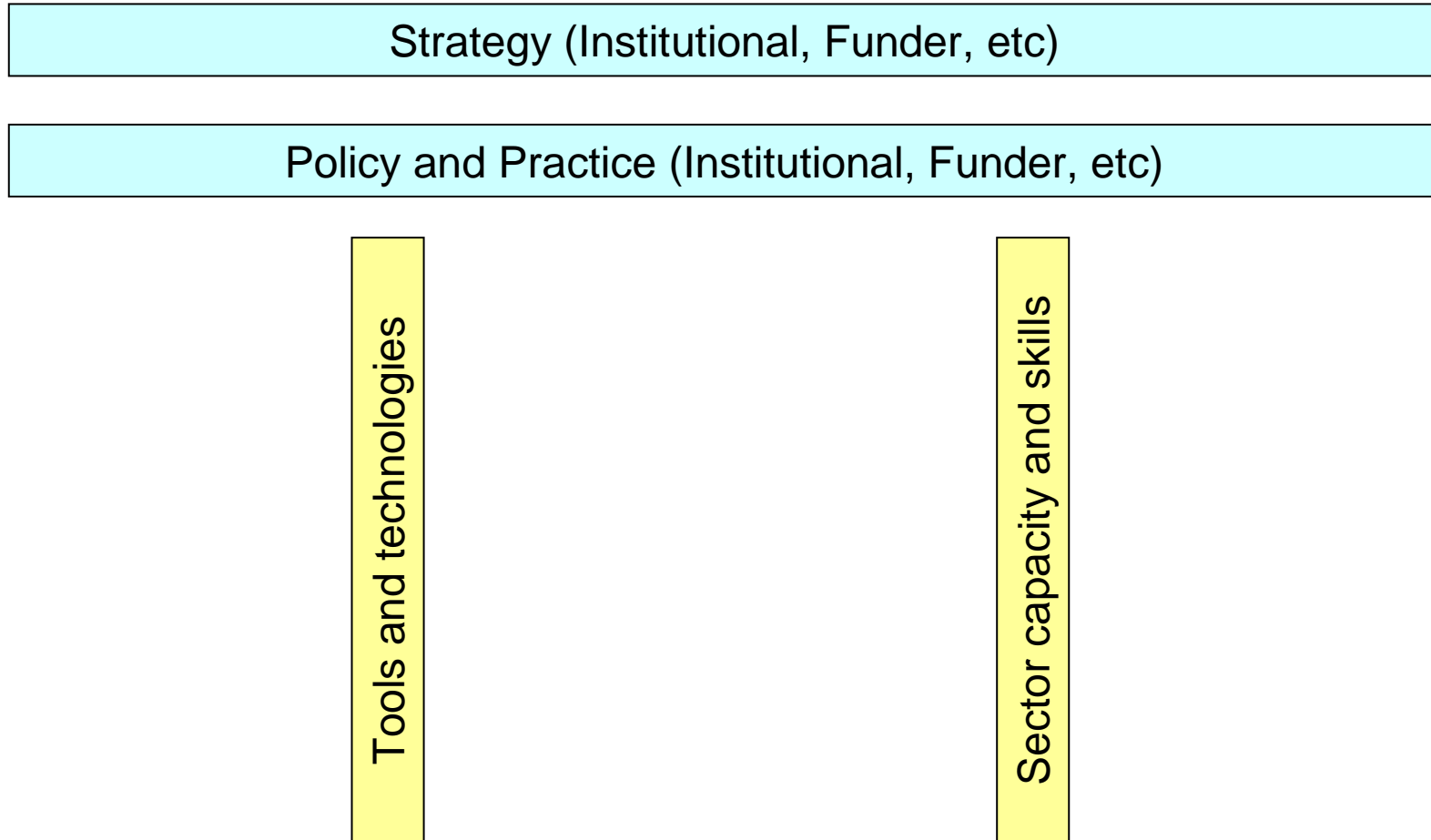
- Research funders and institutions should seek more actively to facilitate and encourage data publishing by promoting more actively through the use of case studies the benefits and the value to researchers of data publishing

### ■ “Keeping research data safe”

- JISC and/or other funders should consider funding further work on quantifying the benefits of research data preservation



***The business case is not yet made***



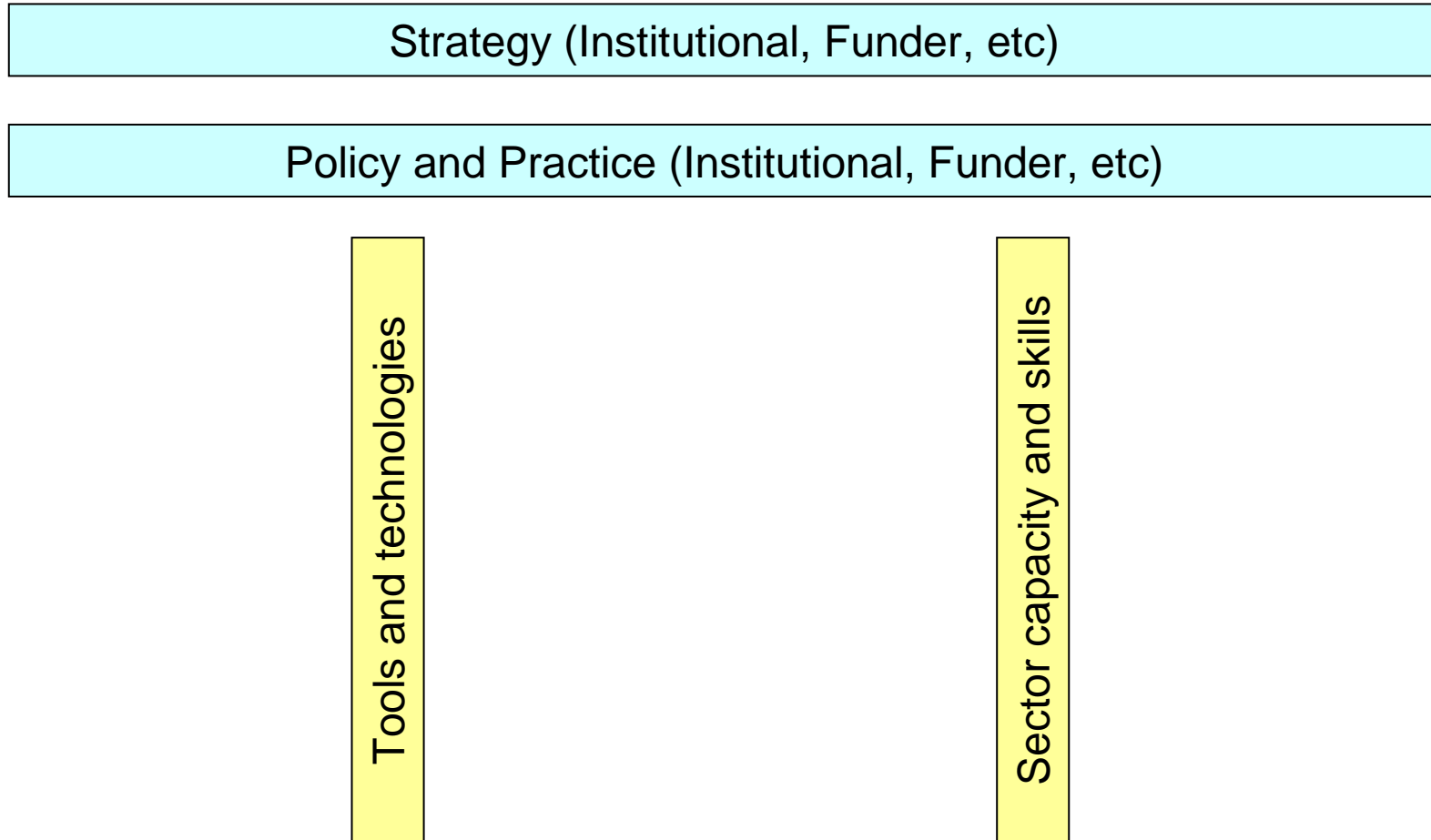
- A **business case needs to be made** at the (inter)national level in support of data sharing and curation.
- The **business case needs to be acceptable** to, and **actively accepted** by, all relevant national bodies including – but not limited to – HEFCE, JISC, research funders, data archives, HEIs, researchers, research libraries and institutional computing services.
- This then needs to form the common purpose around which national **coordination mechanisms** are set up, covering such issues as policy for researchers, an appropriate and viable legal framework, and technical infrastructure.
- A **roadmap / forward planning** function is also relevant at this point. There are specific recommendations for particular partners in this process, including learned societies, research funders, and publishers.

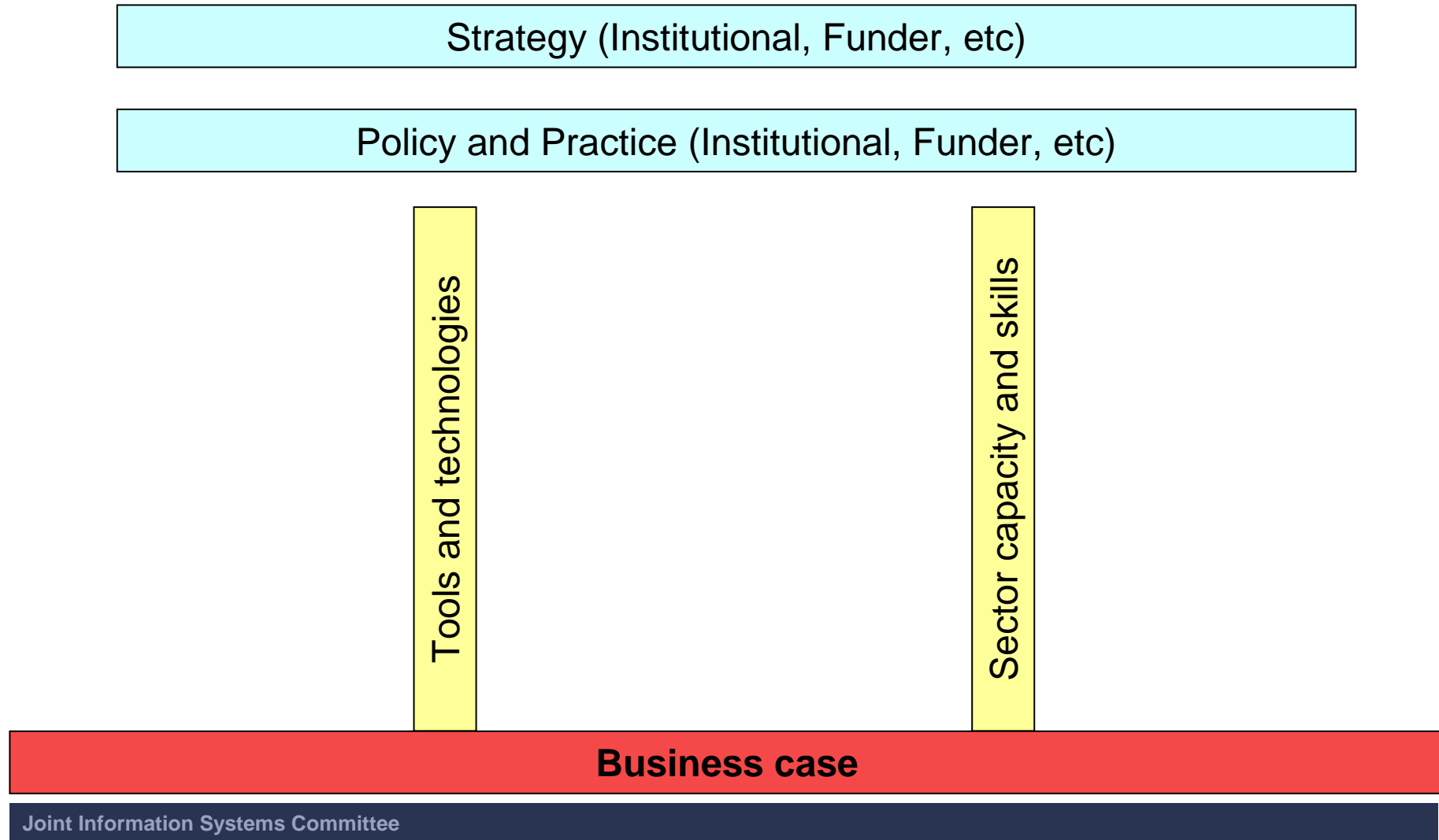
- A **business case needs to be made** that is persuasive for managers, practitioners, researchers and data managers in institutions and archives.
- On this basis, **partnerships** need to be established within institutions, to take forward specific areas of work. These partnerships are among senior management, researchers, and also outside the institution / archive, for example with publishers.
- The **agenda within this theme is broad**, covering sharing data, access management, and legal issues.
- **Supporting activities** are likely to be needed that provide guidance or case studies.

- **Technical infrastructure** will be needed to ensure appropriate and effective management and sharing of research data, as defined by strategy, policy, practice and researchers requirements.
- This infrastructure will include **generic tools and domain specific tools** implementing both generic and domain specific standards.
- Tools and technologies focused on areas such as:
  - For **researchers** - data discovery and sharing, data analysis and legal issues
  - For **managers** - for example on costs and benefits.



- Sector capacity and skills will also be needed to ensure appropriate and effective management and sharing of research data, as defined by strategy, policy and practice.
- Considerable work has already been done to identify requirements but **further supporting study** is likely to be needed.
- This area of work as much as any other will require effective **partnership** working at (inter)national levels, to coordinate effective action, ensure experience is shared and to build on existing work.
- There will need to be partnership working on specific work with research funders, and research libraries.
- The sector will need well-grounded advice and training on **data management** and **IPR**.







# JISC Research Data Programme

2009-11

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- The programme was designed to address a strategic requirement for UK HE to improve its data management capability and better to understand how this can be taken forward.
- **Business case** for more data curation / management needs to be made before major top-down initiatives can succeed.
- Measures to meet expressed demand from HEIs to be taken forward, including the context of any UKRDS.
- Strategic objective is “**to build upon existing work** within and without the JISC and both nationally and internationally **to build the foundations for the UK research data infrastructure.**”
- Specific benefits include to:
  - ensure coherence and coordination in the development of a data infrastructure;
  - provide support for HEIs in management and curation provision for research data that does not form part of national managed collections.
- Strands of activity to contribute in various ways to **building business cases for the research data infrastructure.**

- **Sector capacity and skills** are needed to ensure appropriate and effective management and sharing of research data, as defined by strategy, policy and practice.
- Working with the **Digital Curation Centre (DCC)** Phase 3 (TBC)
- Assuming Phase 3 funding is agreed, significant role for DCC in this strand of activity.
- Priorities: outreach, embedding, raising capacity in the sector.
- Sector capacity to be raised by the dissemination of relevant resources, awareness-raising measures, and the provision of training.
- Additional **Projects to implement recommendations and define policies relating to sector capacity and skills**: In particular, linking institutional data management with subject specific curation expertise. Taking forward findings of Key Perspectives Report.

- Focus on tools to help institutional managers make the **business case** internally for investment in data curation / sharing.
- **Institutional Planning Tools:** continuation of current work, building on Data Audit Tools, DRAMBORA and costing tools.
- Work being taken forward by a workshop organised by the DCC 'to review progress and key outcomes from the Data Audit Framework project and, on the evidence identified, to develop and propose appropriate next steps.'
- **National repository / archive interoperability:** scoping then execution of projects building infrastructure across (inter)national data archives and institutional stores. Call likely to be early Autumn 2009.
  - Identifying and applying appropriate technical standards to ensure interoperability for data repositories.

- **Institutional data infrastructure:** Major Call to be issued early June.
- To build capacity within the sector. To provide a raft of exemplars which will contribute to broader strategic and policy discussions over the provision of infrastructure for research data management.
- ‘What is needed for this institution (department, research group; or consortia of institutions) to be able to meet the demand for an effective research data infrastructure, in technical and organisational terms as well as in respect of the requirements relating to professional expertise?’
- Requirements analysis > Implementation Plans > Execution thereof > **Suggested business models for data management.**
- Bids will be encouraged from consortia of institutions, departments or research groups which are able to present a case for the **benefits** of sharing their research data.
- A deliverable will be the presentation of requirements analyses and implementation plans, roughly six months into the projects, either at the ICISA Conference itself or at a separate workshop.
- **Support project to pull together picture of business models.**



- **Policy and practice:** Exemplar projects and studies designed to help establish partnerships between researchers, institutions, research councils and to explore the division of responsibility and costs within these partnerships.
- **Working with Research Council Projects** to add or assist with data management aspect to carefully selected Research Council projects.
- Funding data management responsibilities associated with the project, whether executed by researchers within or attached to the project team, or by specialist data managers at the host institution or elsewhere.
- Aim is to help RCs and JISC draw lessons about the effectiveness of data management planning and roles and costs of specialised data management responsibilities.
- **Working with institutions/consortia:** Projects to take a comparable approach working with groups of projects within an institution or a consortia of institutions.
- **Case Studies**, building on SCARP to show **benefit** of data sharing, curation for researchers.

- **Establish business case acceptable to relevant national bodies, research funders, data archives, HEIs, researchers, research libraries and institutional computing services.**
- Establish Advisory Group.
- Draw up roadmap, forward planning function.
- Vitaly important to be working in partnership with RCs, RIN, Data Centres, UKRDS Pathfinders and other stakeholders.
- **Value and Benefits Studies:** Commission more in-depth and comprehensive benefits work.
- Value and impact of established data archives: major study, jointly funded by RIN and JISC.
- Study of Institutional and untapped data resource.

- ‘Within the UKRDS Case studies and surveys, researchers have drawn attention to the effort and investment needed to upgrade data collections developed for sharing between the research team and collaborators to the higher standards and documentation to be useful for wider use. **Not all data collections have the potential to support wider use which would justify this additional effort.** National subject centres to undertake this selection and added value role do not exist for all disciplines.’ p.18.
- ‘The researcher survey has also provided a sample of researcher data storage requirements and where it is stored. However the sample is comparatively small and we found very wide variation within and across disciplines, with individual researchers and projects often having significantly large and non-standard “average” requirements. **It would not be safe to project storage requirements of individual researchers to the wider UK sector therefore without significantly expanding the sample.**’ p.25
- Demonstrates how much work is still to be done before we know how best to target activities.

## Benefits/Value and Business Case for UK Data Infrastructure

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- Business case needs to be developed which is acceptable to all stakeholders.
- This must be soundly based upon studies of benefits and value.
- Who benefits in what ways?
- Can the benefits be quantified?
- Of fundamental importance because the picture of who benefits and how, can help us answer the question of how the (financial) responsibility for funding a UK data infrastructure can be apportioned.

# The benefits of research data centres

## Joint RIN-JISC project

- “To provide a detailed and quantifiable analysis of the usage and impact of a number of research data centres, representing a cross-section of research disciplines, in the UK”
- The aim is to make a case for improving the data sharing environment in the UK
- For the benefit of:
  - Research funders
  - HEIs
  - Researchers
  - Data managers
  - Government and policy-makers

## What is the approach?

- ***Evidence-based:*** demonstrating the ‘value’ of data centres by looking at:
  - How researchers have made use, and are making use, of data centres; and the challenges they have encountered in doing so
  - The impact of the data that is curated by the data centres
- ***Timely:*** complementarity with the wide body of work and initiatives focusing on data sharing and curation, not least:
  - JISC-commissioned cost analysis for long-lived digital datasets
  - Blue Ribbon Taskforce on Sustainable Digital Preservation and Access
  - UKRDS
- ***Collaborative:*** scoping document is the product of consultations with research funders (RCUK, HEFCE, Wellcome), DCC, DPC, UKRDS and others.
  - Partners for the study are welcome!

## **Practicalities**

- **RIN and JISC jointly putting in £150k into the project**
- **Projected expected to run from June 2009 to March 2010**
- **Call for expressions of interest issued mid-April: 19 responses received to date**
- **Invitation to tender in mid-May**