Australia's National Information Infrastructure for Research

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(and APAC, GrangeNet, APAN, ...)

In the beginning...

- There was competition
  - For money
  - For people
  - For resources
- And it was project-based, and not sustained
  - So when projects ended, the infrastructure and the data just faded away and were often lost
  - Or the results were kept around but not managed long-term
- How to change this? And change what??
  - Funding culture: Collaboration and strategic investment
  - Engage with long-lived institutions to deliver services

NCRIS: a National Collaborative Research Infrastructure Strategy

- A strategic approach to investment in research infrastructure

- Priority capability areas for support have been identified

- Investments will support core goals: support research excellence, promote collaboration, provide national benefit

- NCRIS is a response to

  – Recognition of the need for a 'small' country to be strategic

  – Increasing importance of major research infrastructure to research and innovation

  – Increasing need for collaborative research

  – Increasing cost and complexity of research infrastructure

NCRIS Investments

$540M over the five years: 2007-2011

- Evolving bio-molecular platforms and informatics
- Integrated biological systems
- Characterisation
- Fabrication
- Biotechnology products
- Optical and radio astronomy
- Integrated marine capability
- Structure and evolution of the Australian continent

- Networked biosecurity framework
- Population health and clinical data linkage
- Terrestrial ecosystem research network

Platforms for Collaboration (allocated $75M)

Many disciplines developing major infrastructure, and sharing platforms (information services)

Platforms for Collaboration

Australian National Data Service   *Data Federations*

- Develop user and owner frameworks for a data commons
- Develop and operate national registries and data sharing services
- Help Institutions connect repositories to the data commons
- Help researchers share data through the data commons

National Computational Infrastructure   *Advanced Models*

- Develop and operate a shared national computational facility
- Develop domain oriented advanced modelling capabilities

Interoperability and Collaboration Infrastructure
(Australian Research Collaboration Service)   *Research Workflows*

- Develop and operate services linking systems and resources nation wide
- Develop and operate collaboration and workflow tools for researchers
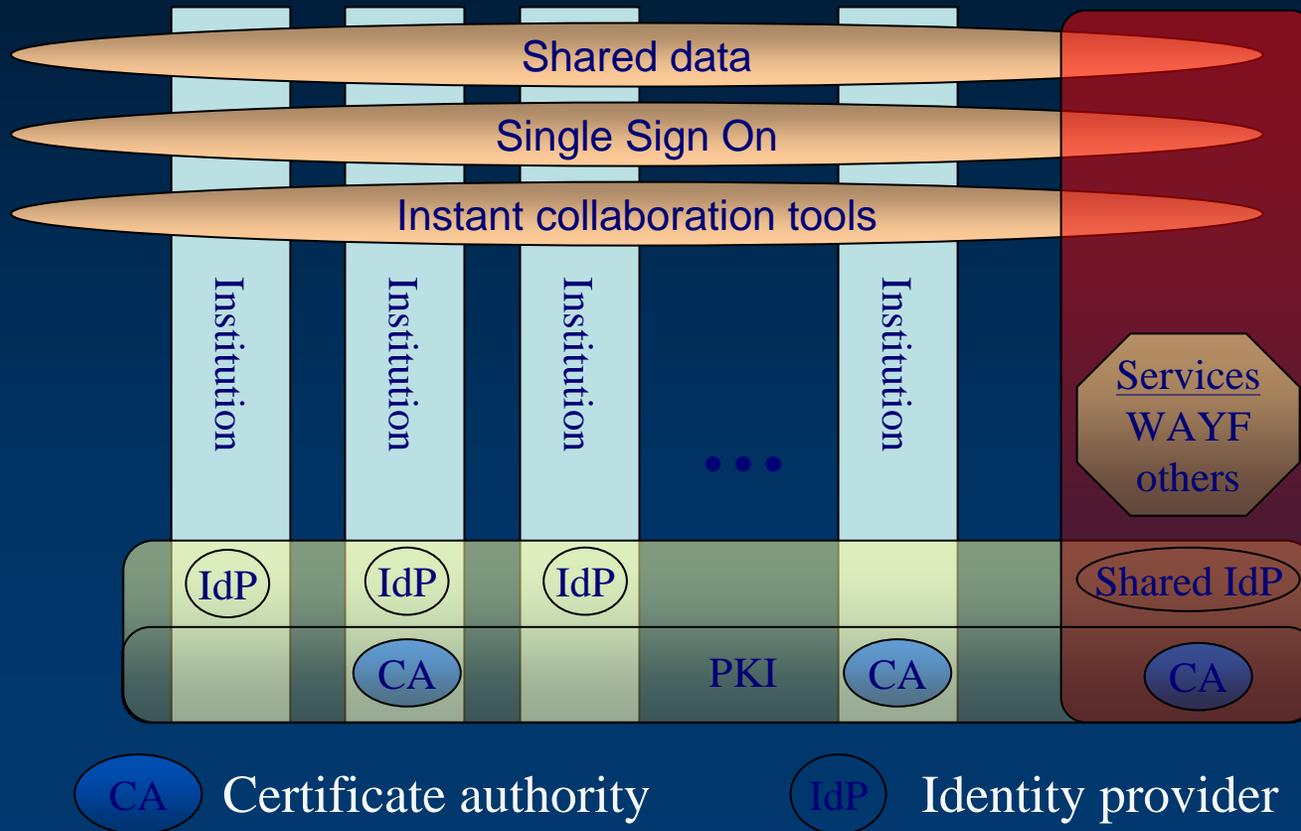
AREN and AAF   *Seamless Reach*

- Connect researchers and research resources at required bandwidth
- Develop a shared authorisation framework for access to research resources

Australian Access Federation

- Develop a shared authorisation framework for access to research resources
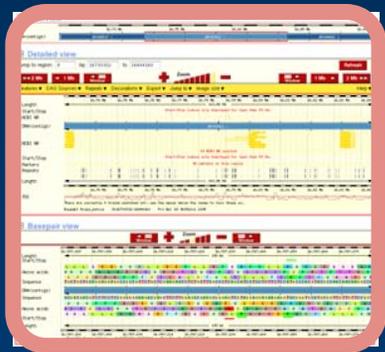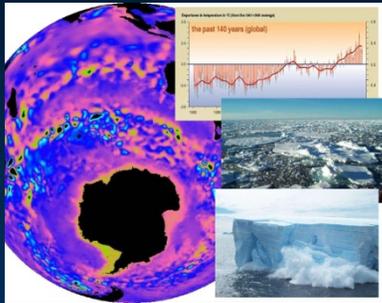
Trust Federation

Advanced Models: National Computational Infrastructure

- Develop and operate a shared national computational facility
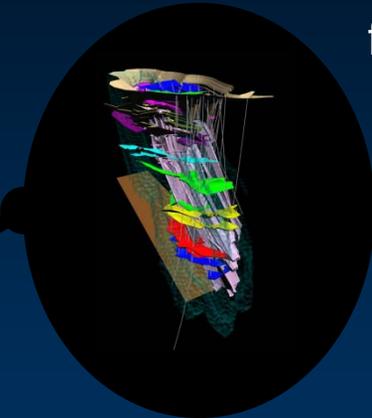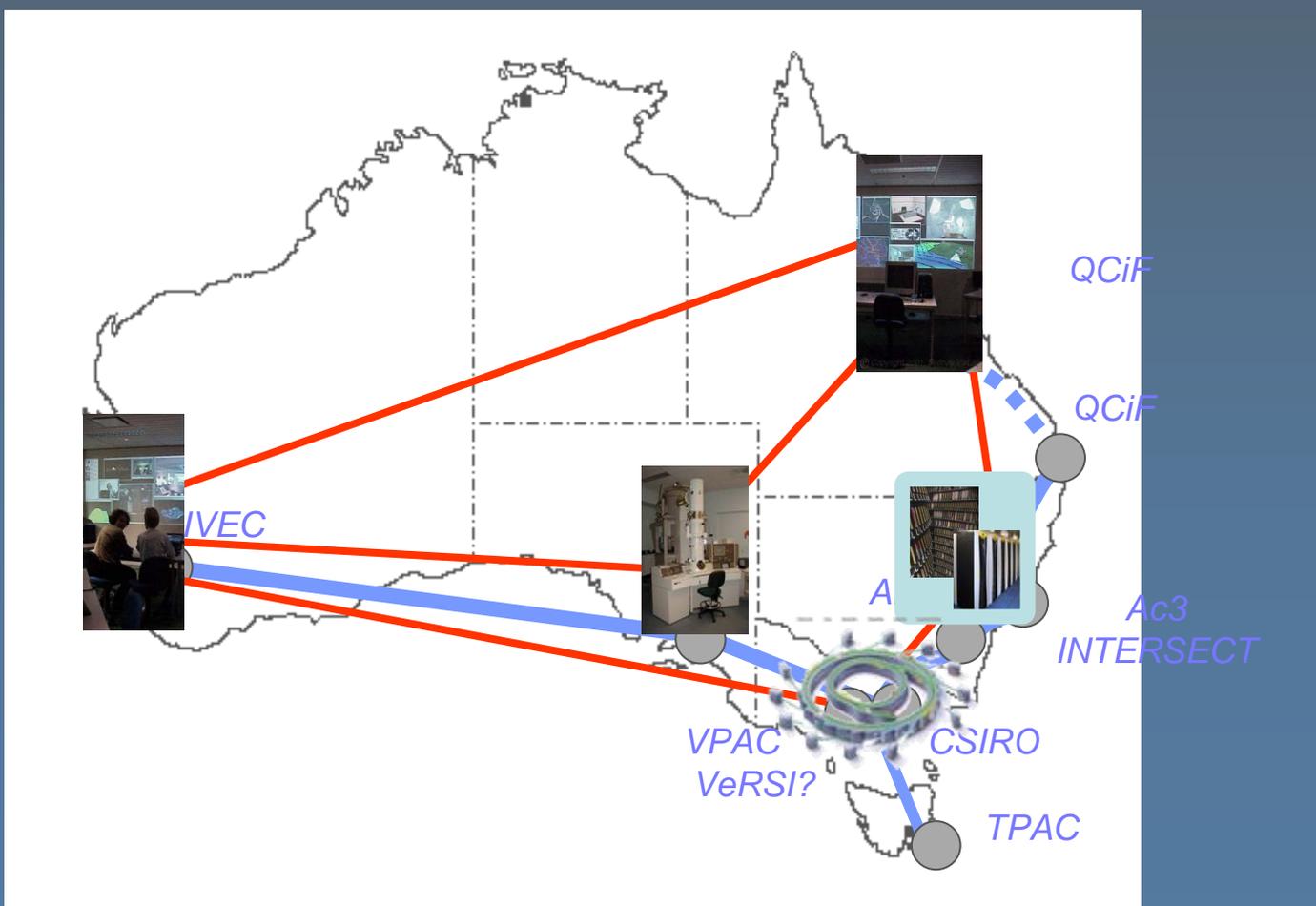- Develop domain oriented advanced modelling capabilities

Geoscience focus

Ecosystem focus

Biotech focus

NCI Peak Facility
- managed by ANU-SF
- national merit access

?

Research Workflows: Australian Research Collaboration Service

- Develop and operate services linking systems and resources nation wide
- Develop and operate collaboration and workflow tools for researchers
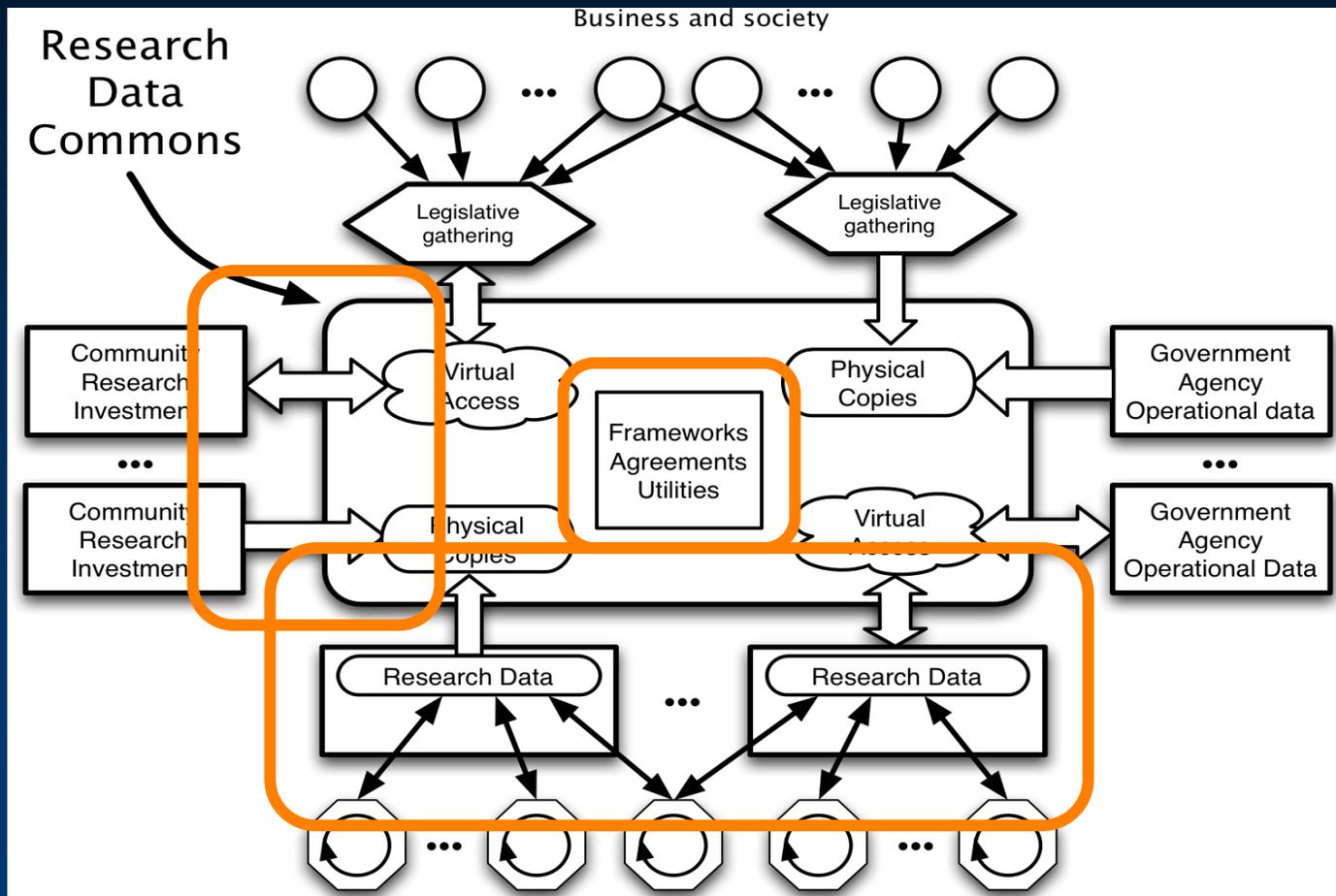- National grid services

Australian National Data Service

- Building the Australian Data Commons
  - Allowing all researchers to deposit their data for re-use and preservation, within and across disciplines

- Taking existing research practices, and
  - supporting them on national infrastructure,
  - linking them to long-term archival and preservation of research data
  - And helping institutions to get there

- Not a publications repository, but the actual data
  - All of it, for ever... Hopefully

Data Federations: Australian National Data Service

- Develop user and owner frameworks for a data commons
- Develop and operate national registries and data sharing services
- Help Institutions connect repositories to the data commons
- Help researchers publish and share data through the data commons

Data Federations: Australian National Data Service

The Frameworks Program
     Agreements, standards, best practices

The Utilities Program
     Develop and operate (long term!!) common services, registries,
     directories, discovery services – the Commons

The Repositories Program
     Build institutional and discipline skills at major centres to deliver
     repository services, and interface to the Commons

The Researcher Practice Program
     Provide research disciplines with the tools and skills to make their data
     manageable long-term, rather than letting them run away at the end!

Thank you!

- Questions?

- You can also email me at *Markus.Buchhorn@anu.edu.au*

  - And if I don't know, I can hunt down those who do! ☺
  - Some useful documents at www.pfc.org.au