SERVICE PROVIDER PANEL

AeRO Forum

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THE AARNET MODEL

Structure and Governance

Subscription/ Consumption Model

Co-Investment

Wholesale Model

Demand Aggregation
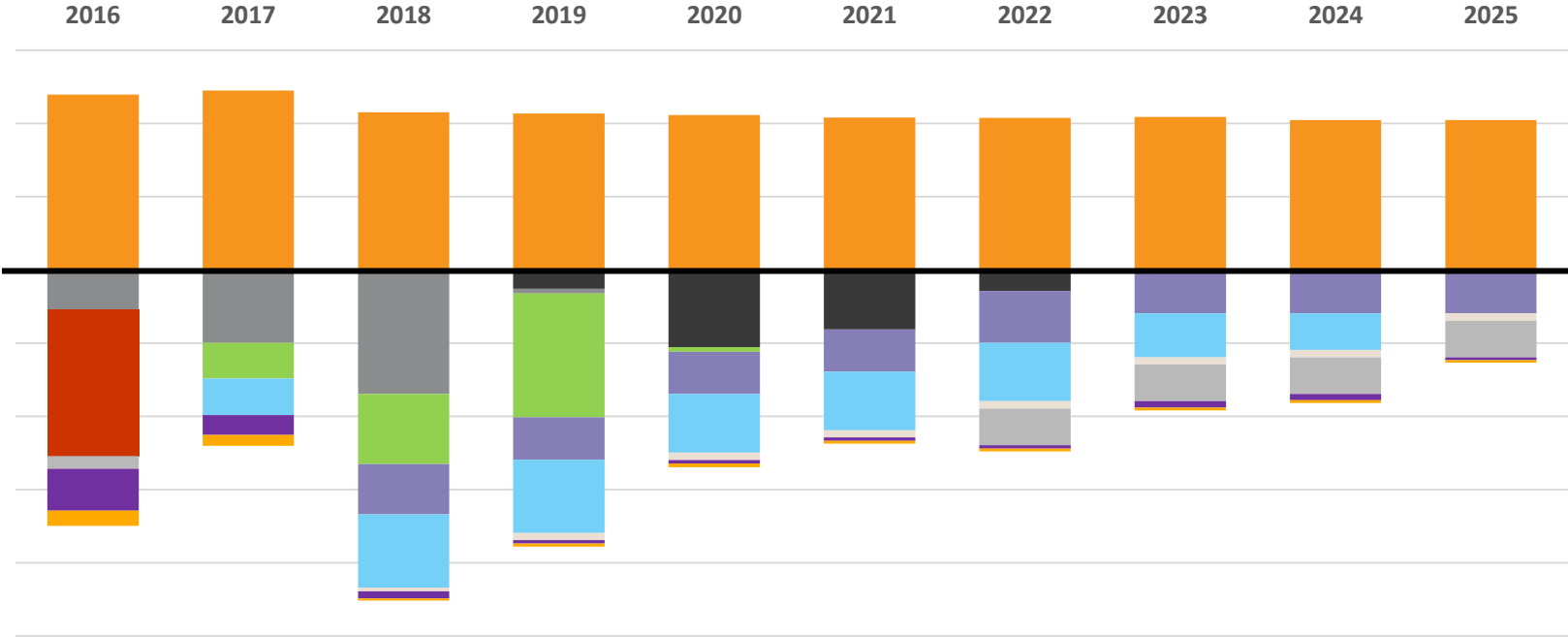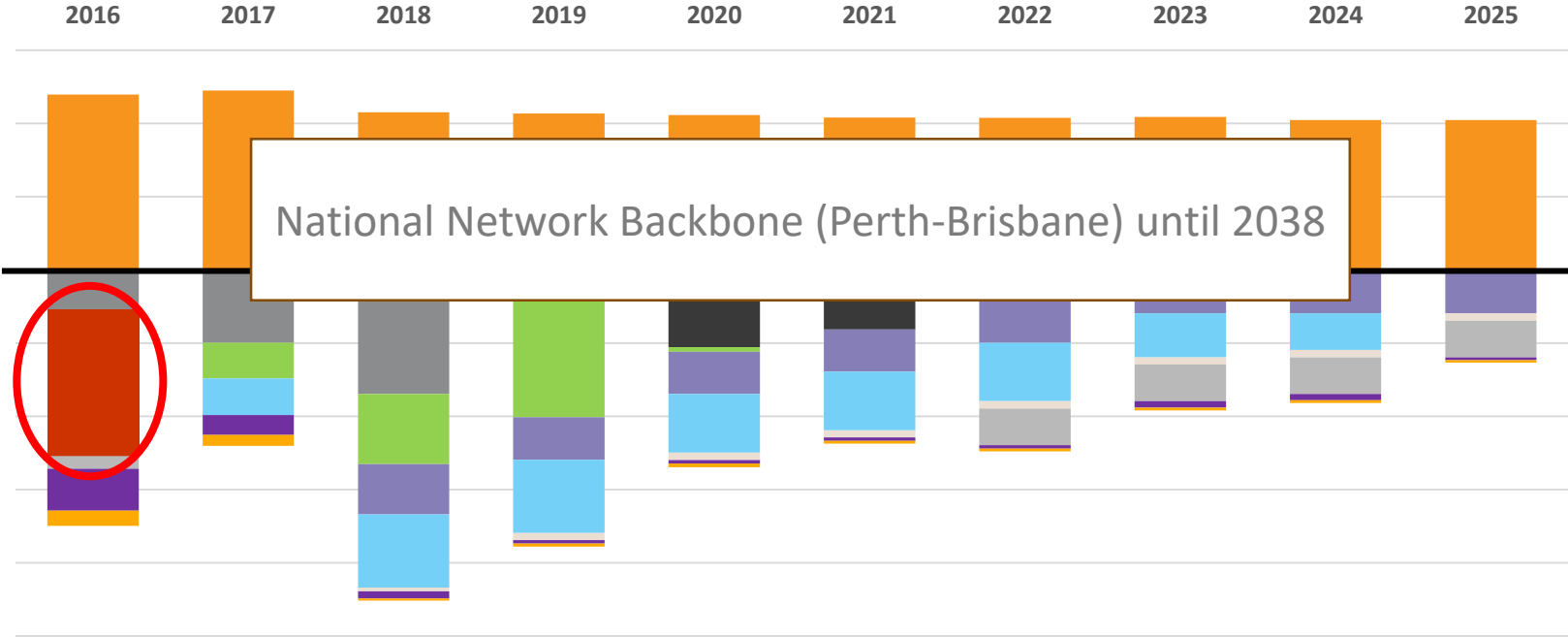
Operating Surplus

Internationally Aligned and Integrated

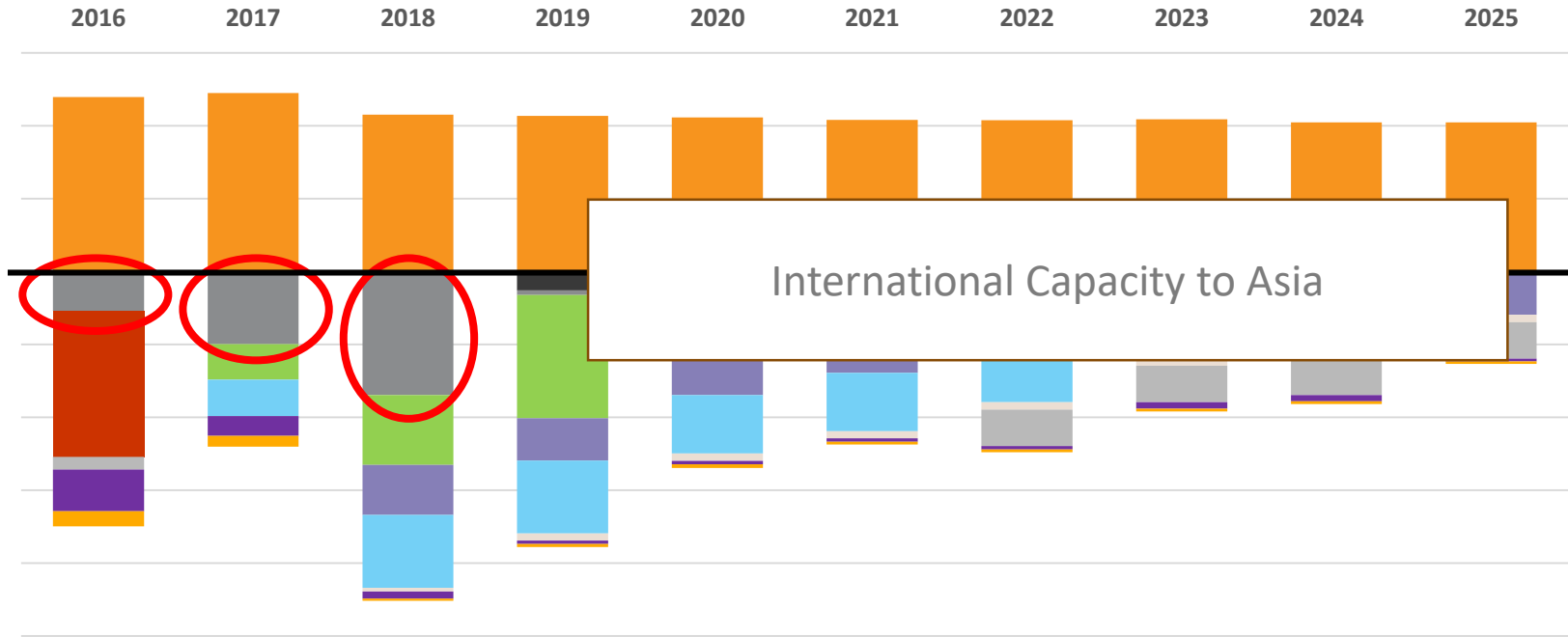Addresses a Market Failure

Acquires, Pools and Leverages Assets

LONG RANGE INVESTMENT PLAN

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National Network Backbone (Perth-Brisbane) until 2038

LONG RANGE INVESTMENT PLAN

International Capacity to Asia

PROJECT INDIGO

AARNet, Google, Indosat, Singtel, SubPartners, and Telstra

Two pair fibre system Singapore – Sydney via Perth – 9,000 km

This is the FIRST subsea project where a National Research and Education Network (NREN) has been a consortium partner

This is one of the first subsea projects to make available portions of the fibre (spectrum or frequencies) to investors

This investment involves no Federal government funding, either for the initial investment or for the operational support

The contracted life of this system is multiple decades

Singapore

Jakarta

Perth

Sydney

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LONG RANGE INVESTMENT PLAN

Network Expansion
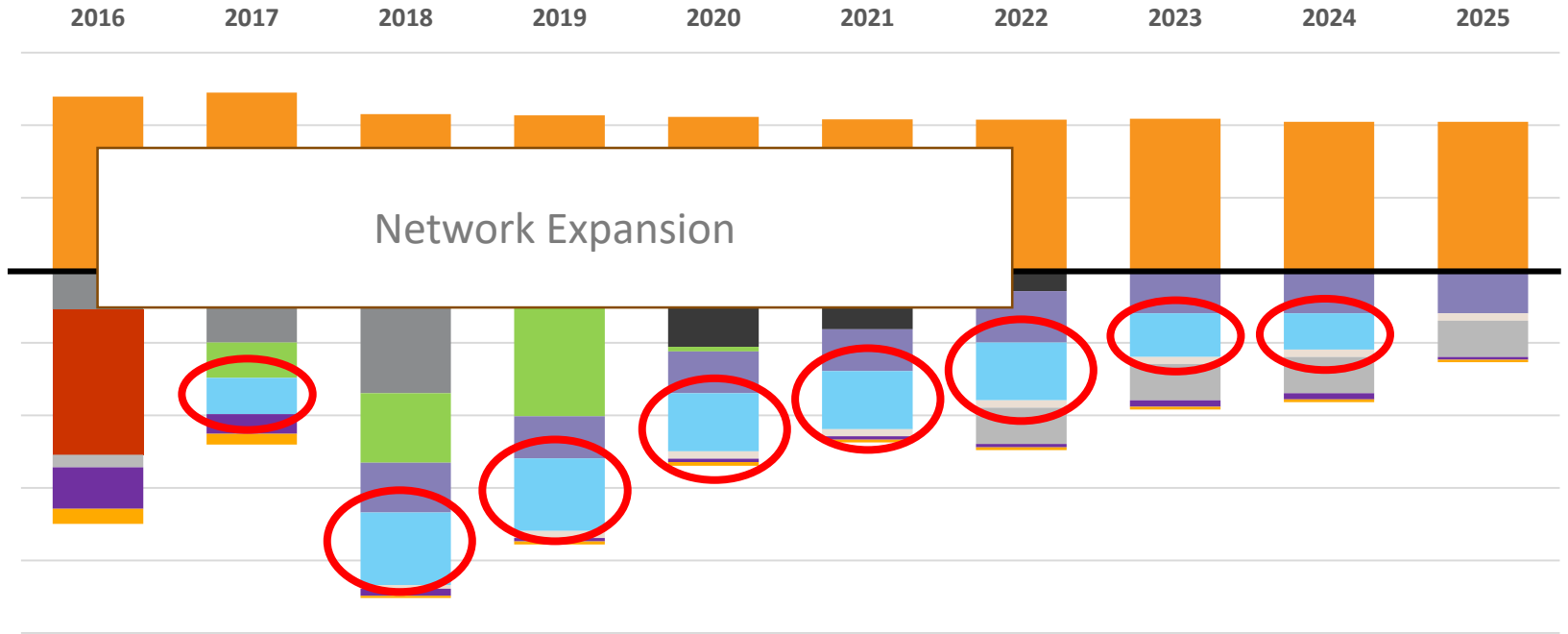
PROMPTERS

1. **What key eResearch learnings from the last 10 years do we want to address/carry forward into the next 10 years?**

2. **How do you build user confidence in the long-term sustainability of an eResearch service, with or without significant Federal investment?**

3. **What role you see your organisation playing in the definition, evolution and operation of an ARDC?**

4. **How can researchers best be given streamlined access to data (and tools) that may be offered across many providers?**

LEARNINGS

Integration

Clarity of purpose

Institutional engagements

USER CONFIDENCE

Ease of use

Research relevance

Service/facility (not program)

DATA ACCESS

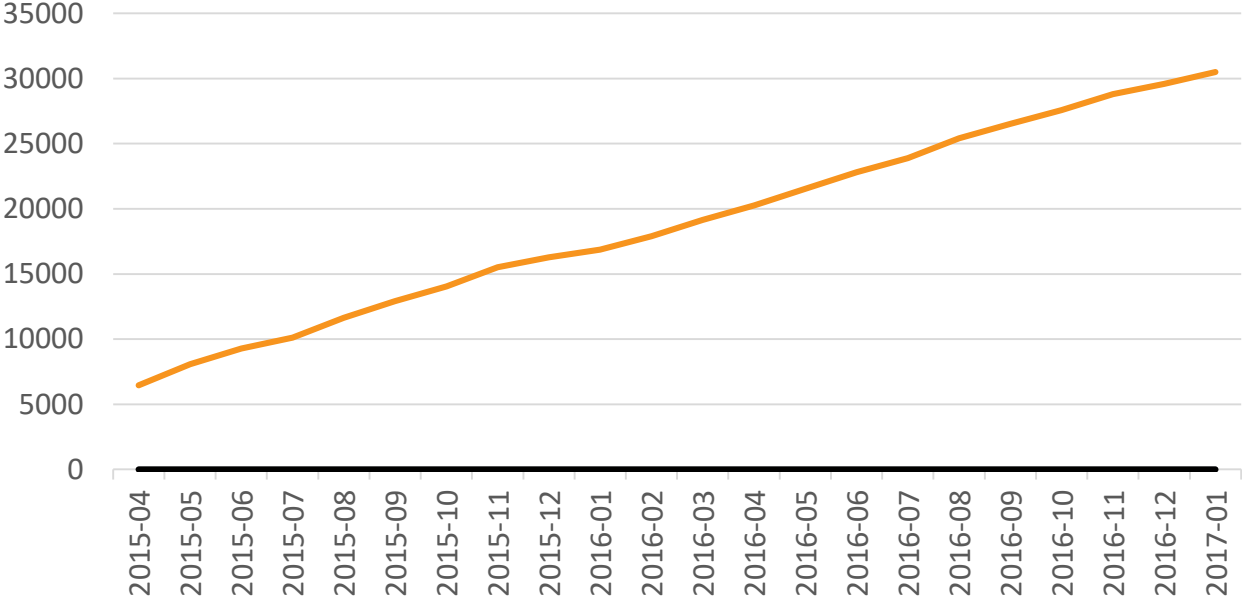**Won't (ever?) get all the data co-located with all the compute**

CLOUDSTOR USAGE (SYNC/SHARE)

Users
30,500+

Domains
238

Storage Used
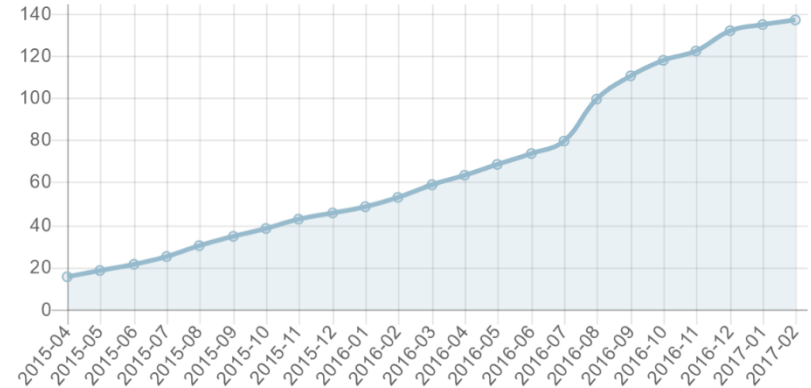**135 TB**

Total Users Over Time

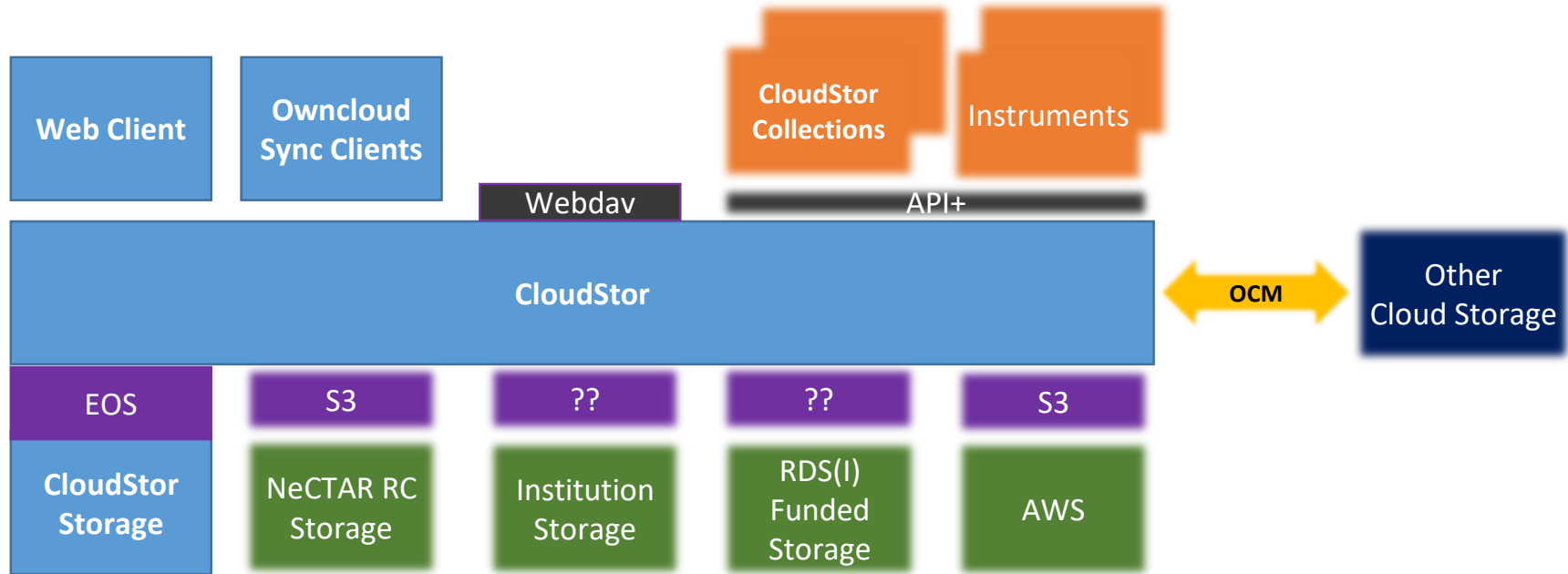*Latest data as of 2017-01-31

WHY ?

- Zero-barrier to entry
  - Free (and on-net)
  - Pre-approved 100GB
  - Familiar
- Fast
- Australian
- Cross-institution collaboration
- Local "real" support
- AARNet brand

Total Storage Used (TB) over Time

- Strong institutional interest …
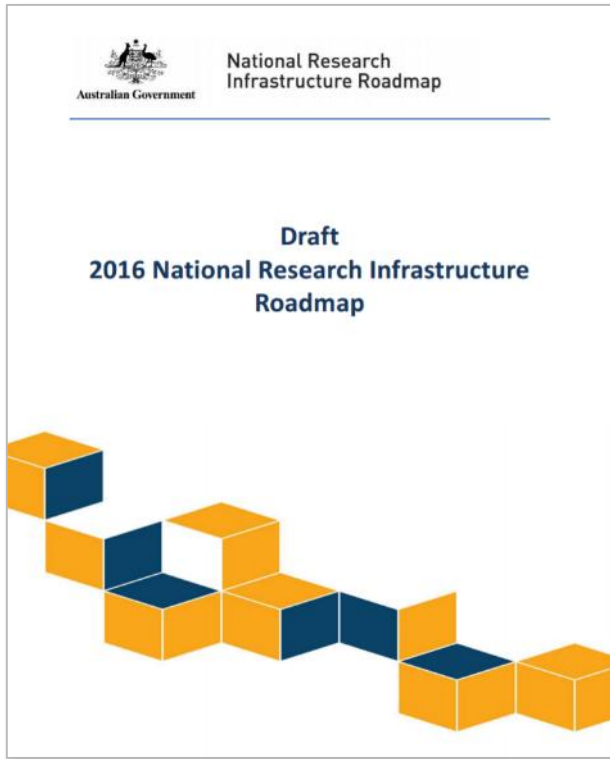
CLOUDSTOR AS THE (OR A) DARK MATTER …

OCM – Open Cloud Mesh

ARDC

Create Australian Research Data Cloud

Enhance existing capability through the integration of existing capability – ANDS, NeCTAR and RDS to establish an integrated data-intensive infrastructure system, incorporating physical infrastructure, policies, data, software, tools and support for researchers.

AARNET RESPONSE

AARNet is very strongly of the opinion that the "Create Australian Research Data Cloud" **requires significant further definition**.

Moreover, there are **several stakeholders that are critical to the success of this priority** that must be explicitly and formally engaged in the definition, subsequent deployment and operation of the services the Australian Research Data Cloud will provide.

At a minimum**, these stakeholders are AARNet, the AAF, the Pawsey and NCI facilities, and representatives of Australia's research institutions**, and these should be identified as being critically important players in the roadmap **in addition to ANDS, RDS and NECTAR**.

ARDC ISSUES

Governance

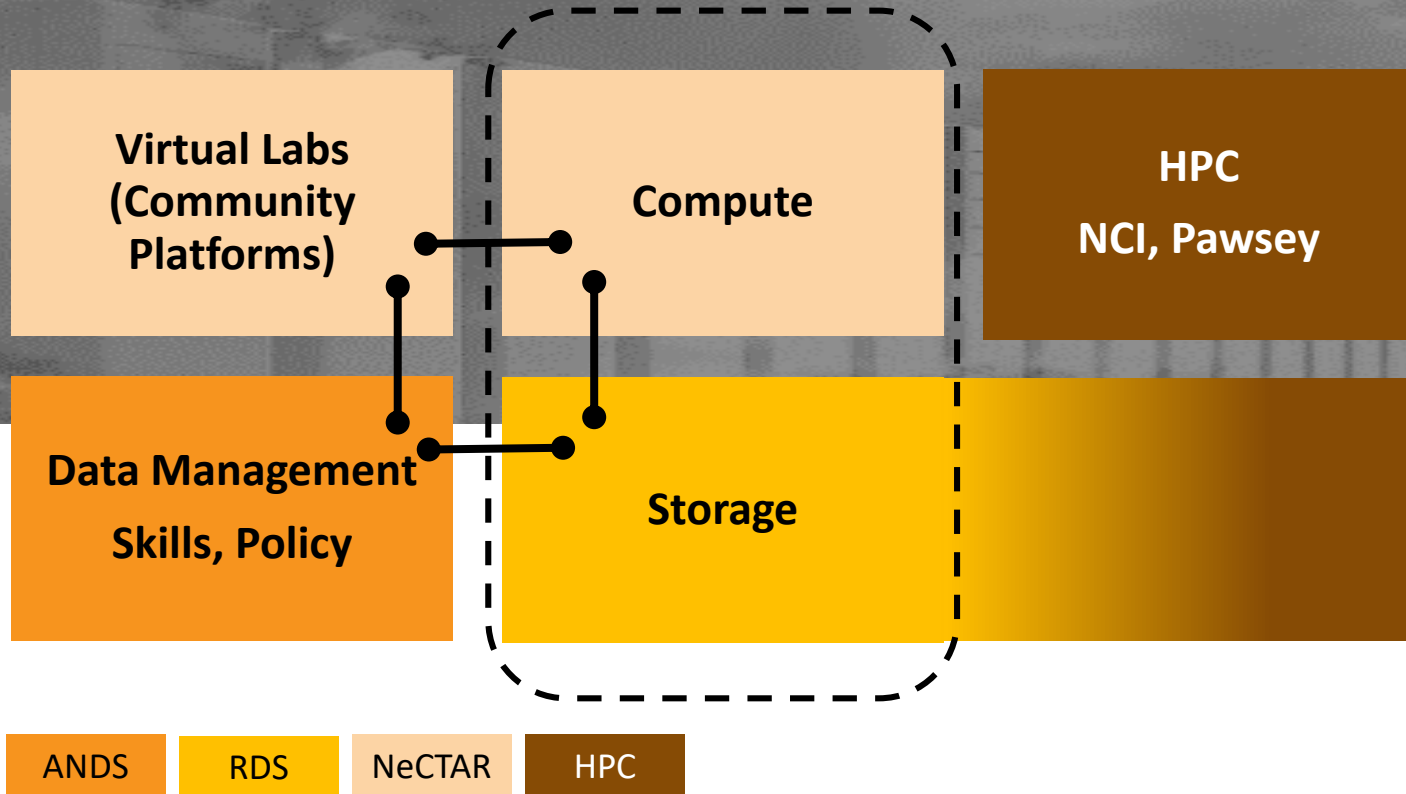**Operational Sustainability**

Existing Infrastructure is Close to End of Life

Federated Services

Industry leverage

Service Consistency, Integration and Ease of Use

Consolidation

Discuss

THANK YOU

DATA AND RESEARCH INFRASTRUCTURE ROADMAP

National Research Infrastructure Roadmap

Australian Government

Draft
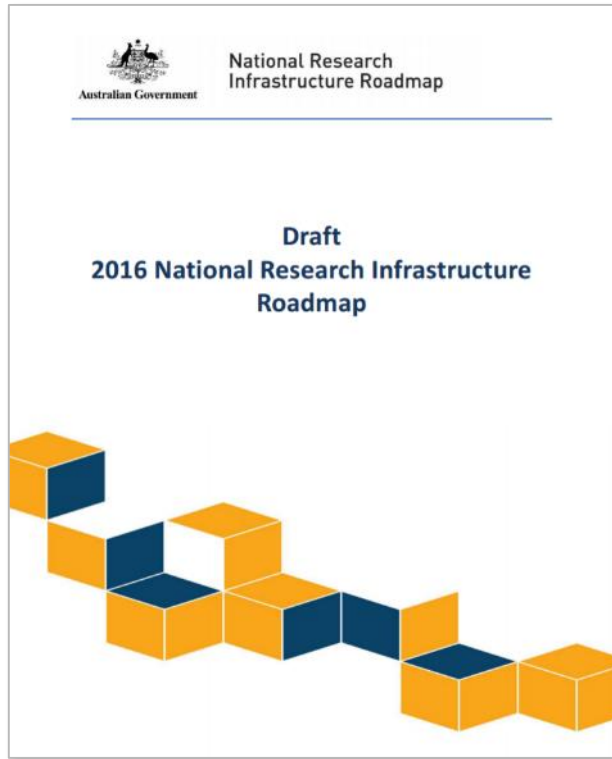**2016 National Research Infrastructure Roadmap**

... **more integrated, coherent and reliable** system to meet the needs of data-intensive, cross-disciplinary and global collaborative research

... broadly **align with the European Open Science Cloud** and other global initiatives.

... support **research data management** from creation and discovery, through description and provenance, integration and storage, manipulation and analysis, and preservation.

... **provide digital platforms** that meet **specific research requirements** and **integrate other data rich research infrastructure**.

... support the **sharing** of informatics and software techniques to enable the deployment and wide use by researchers.

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NATIONAL RESEARCH INFRASTRUCTURE FOCUS AREAS (9): DIGITAL DATA AND ERESEARCH PLATFORMS (2017)

Tier 1 HPC

Enhance existing national HPC

Explore governance integration of these Tier 1 high performance computing facilities

Create Australian Research Data Cloud

Enhance existing capability through the integration of existing capability

Research Networks

Enhance the capability and capacity of the Australian Research and Education Network

Access and Authentication

Enhance capability and international relationships in access, authentication and authorisation services

https://docs.education.gov.au/system/files/doc/other/draft_2016_national_research_infrastructure_roadmap_2.pdf

ERESEARCH

ICT Industry ←→ **eResearch** ←→ **Research Communities** →

Integration
Adaptation
Aggregation
Development
Customisation

As Is

Skills, Training, Awareness

RESEARCH OUTCOMES