Innovation Culture

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ABOUT eRSA

• eRSA is the South Australian provider of
  – high-performance computing,
  – data management and storage,
  – cloud computing
  – software development
  – expertise: skills and training (cadetships)
• eRSA is a collaborative joint venture between the University of Adelaide, Flinders University, and the University of South Australia
• eRSA is SA’s link to national collaborative infrastructure funding schemes
eRSA TEAM

- Small – 15
- Flat structure
- Collaborative management team
- Departments equally weighted
How did we build and innovation culture?

• We are used to innovation
  – From our early HPC days we’ve worked at the bleeding edge
  – We are used to making ‘tech mashups’ work
  – ‘Not normal IT’
  – Innovation enablers

• We have been disrupted
  – $6m cash injection in 2012 to build the SA Nodes of an experimental national cloud and 6 petabyte storage network
  – This changed the nature of our offering
  – We could now offer complete solutions, not just HPC

• We live and breathe it through our core business
  – Supporting researchers
  – Build solutions that can’t be met by the market

• It is a strategic priority
  – Leadership
What is innovation and implications?

• Romanticism around innovation disguising its implications
• You may not actually want innovation
• Messy and regular failure
• It means disruption, discomfort, staff changes, requires flexibility
• eRSA is comfortable with being uncomfortable
• And change is our main constant
What have we done with this experience/expertise

• Attractive – what we do is exciting and people want to work with us
  – Vendors
  – Researchers
  – Commercial research
• We get opportunities to trial things
  – Networking
  – Firewall
• Adelaide is a ‘safe’ environment to test and R&D and fail
An introduction to TANGO

• It’s a sandpit – a safe place to test and fail
• A collaboration – not locked to one vendor
• We wanted to combine the cloud compute with high performance compute in the interests of efficiency, and we wanted to be sure that the right kind of storage was available for all work on both cloud and HPC
• The Platform model allows for collaborative projects between commercial partners and research and science to flourish into commercial derivatives that will drive economic opportunities and job creation.
TANGO Partners

- University of Adelaide
- University of South Australia
- Flinders University
- The Centre for Cancer Biology
- Australian Wine Research Institute
- The ARC Centre of Excellence for Particle Physics (CoEPP)
- Dell
- Hitachi
- Amazon Web Service (AWS)
- Ricoh
Business models

B2B
Partnering technology vendors are interested in using this as back end to their technology solutions

B2C
Services for our current user base
Enables us to enter new markets
Single point of entry: a platform

- Keeping it simple for the innovator – they need to manage the business, eRSA and technology partners manage the technologies
- New technologies can be introduced as they emerge and run alongside present ones, with the connections managed by the technologists
Use cases

• Examples include:
  • smart meter monitoring and analysis on water, electricity and transport;
  • health improvements such as improving efficacy of cancer treatments, sports science and disease cures;
  • agribusiness opportunities such as drought resistant crops, wine innovations and sustainable agriculture.
What’s next for eRSA?

• Everything
  – If this talk has inspired you come and talk to us
• Testing and launch
  – Looking for beta testers and early adopters
  – Keep an eye our for our launch
Platform

Consultancy

- Software Development
- Applications
- Operations
- Hardware
- Network
Hardware

- Instruments (Gene Sequencing etc)
- Digitization
- Visualisation
- Sensors

Data Storage

Desktop Performance

High Performance Computing
- Parallel Computing
- High Throughput Computing (Fast)

Other Cloud Providers
Operations

Operating Systems

Windows | Linux | Mac

Web Interfaces

Virtualization

Identity Management

Security
Applications

- Analytics
- Apps for Virtual Machines
- Virtual Laboratories
- Simulation & Modelling
- Data Management
- Big Data Apps
- Other Apps
Consultancy

Help desk & Support  Help Choosing Apps  Technical Help

Work with technology to develop new research, **new business**
eRSA is uniquely positioned to connect local researchers to national initiatives, infrastructure investments and support services.

**eRSA support**
- eResearch experts
- Training
- Ticket support
- Phone support
- Tier 0 users guides for all services

**eRSA services**
- Cloud
- Storage
- Data management
- HPC
- Collaboration services
- Consultancy
- National advocacy
- Training
- Support