



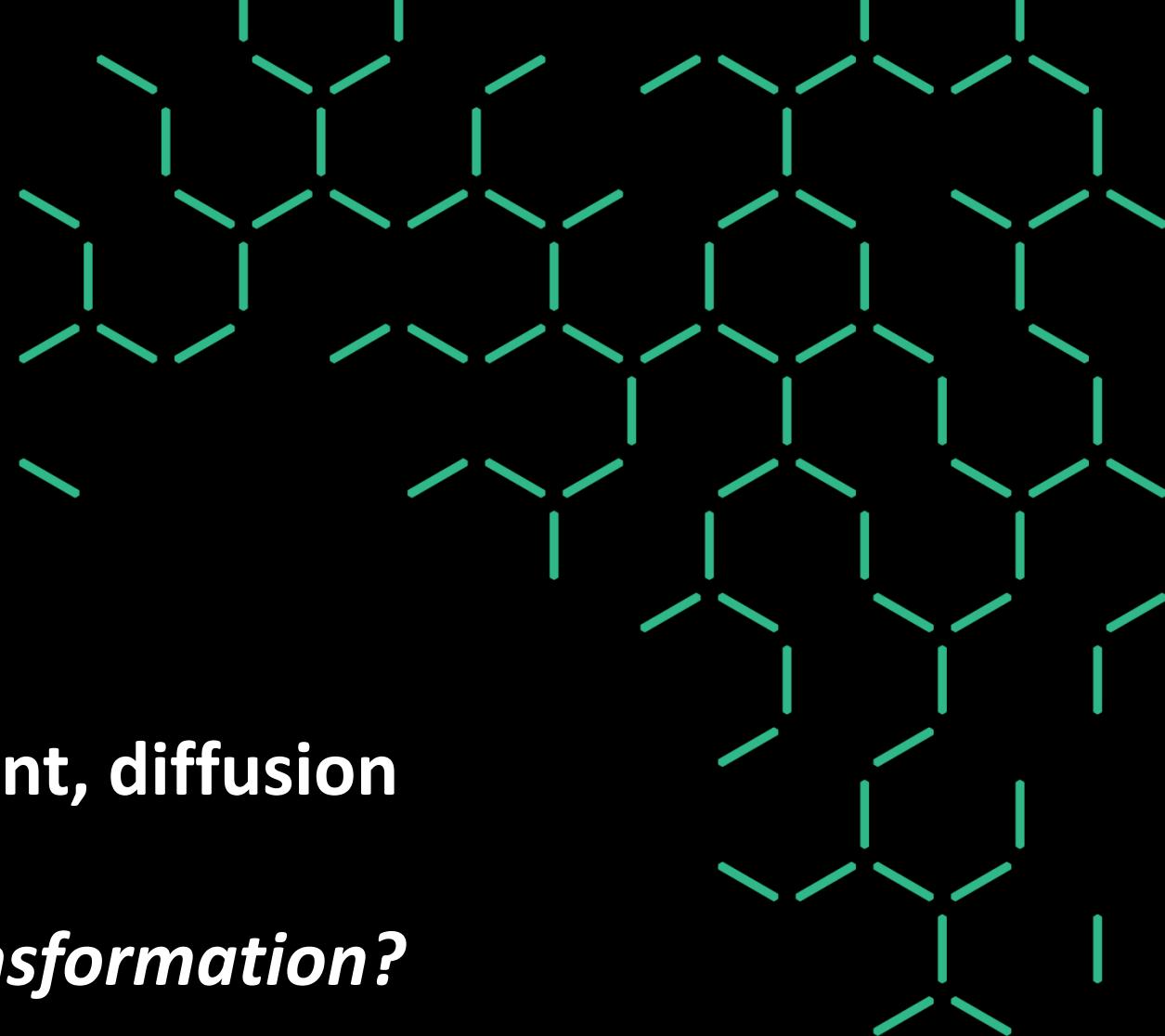
DATA
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Policies for technology development, diffusion
and collaboration:
What models facilitate digital transformation?

Peter Leihn | Commercial Director, Data61

September 2017

www.data61.csiro.au



AUSTRALIA'S DIGITAL INNOVATION POWERHOUSE

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1100+

employees
[including students]

415+

students

31

Government
partners

91

Corporate
partners

29

University
partners

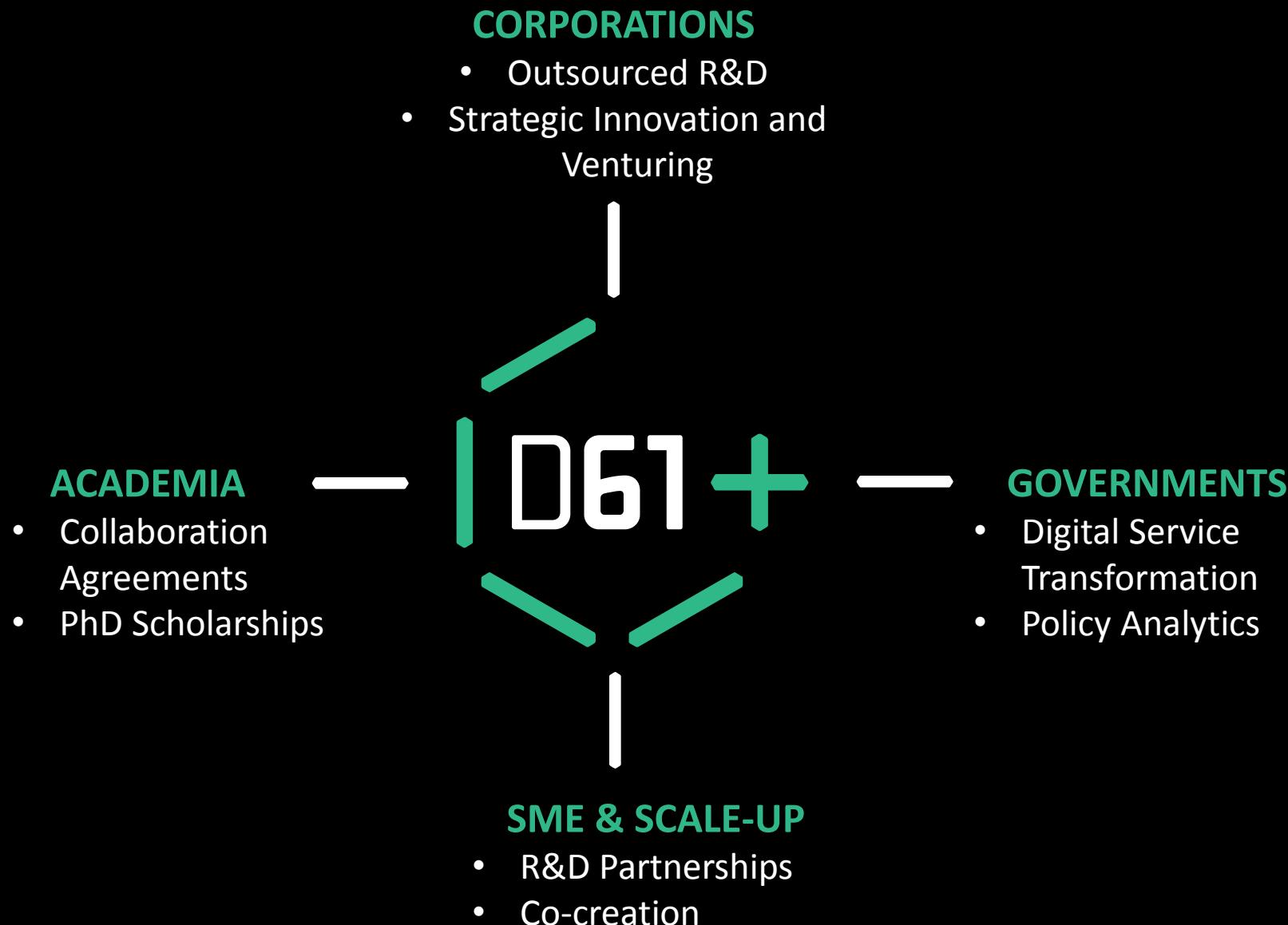
190+

data-driven
projects

172

patents

D61+ NETWORK – Supporting Digital Transformation

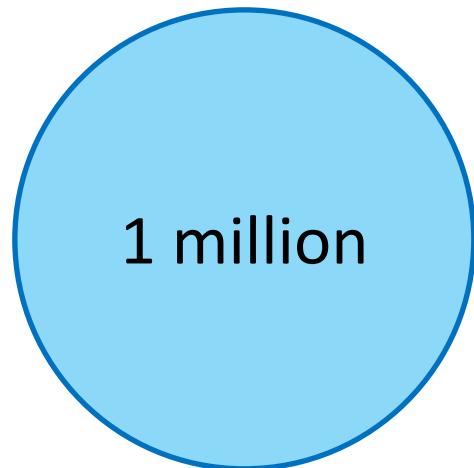


Impact of Regulatory Compliance (\$AU)



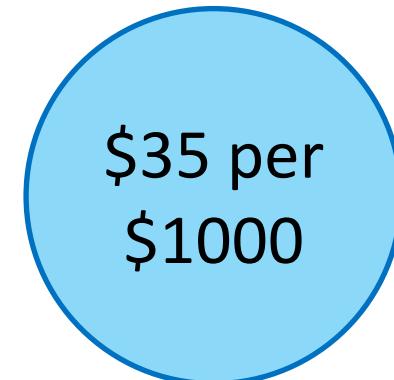
- \$249 billion *per annum* compliance cost for Australia [Deloitte]

People employed
in compliance in
Australia



US Tax compliance
costs
[US IRS]

“Small business pays \$35
per \$1000 revenue in tax
compliance”
[Australian Taxation Office]

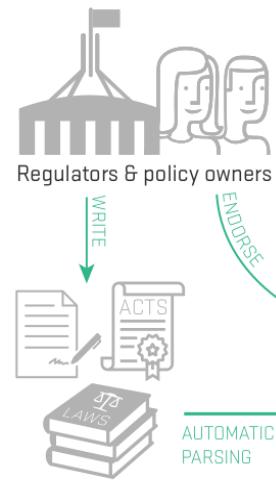


A photograph showing a stack of approximately 15-20 books standing upright, viewed from their spines. The books are bound in various colors including orange, blue, green, yellow, white, black, and red. The spines are slightly uneven, creating a textured appearance.

Digitising Regulation

Regulation as a Platform

by Data61



Logic language tutorial

To ensure compatibility with third party applications, we write and maintain documentation and standards, defining the logic's structure and how to use it.



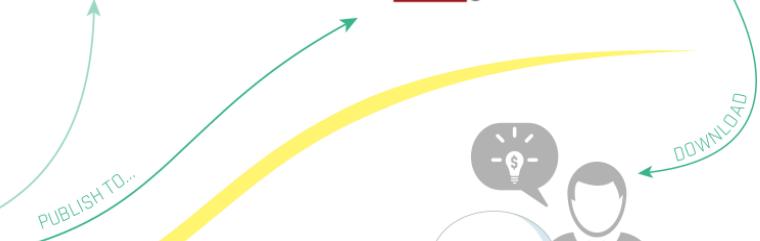
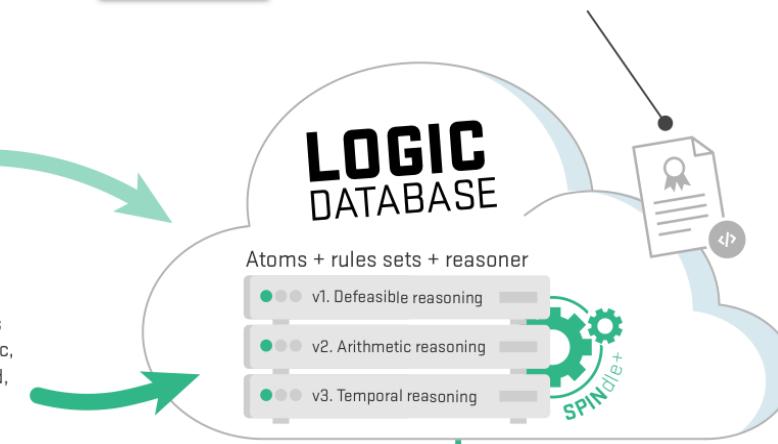
Logic analytics

This analytical tool will help to navigate through the range of regulations, browsing the logic rules to identify potential conflicts and grey areas in the law as well as estimating the cost of regulatory change.



Open data repositories

The legislation-based logic (sets of rules) will be periodically published onto the open-data platform Data.gov.au. An open-source version of the reasoner Spindle is also available on github for free, for anyone to use and build on.



Third-party software developers

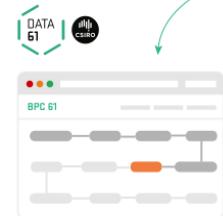


Future applications to come

Using the open-source logic and provided tools, anyone can build their own application, from government agencies, private sector industry leaders and citizens.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Austrac compliance | <input type="checkbox"/> Procurements? |
| <input checked="" type="checkbox"/> Construction code | <input type="checkbox"/> Visa applications? |
| <input type="checkbox"/> Trade/imports permits? | |
| <input type="checkbox"/> Grants application? | |

**OPEN SOURCE PLATFORM, PUBLICLY FUNDED
ENABLED "RegTech" INDUSTRY**



BPC61 - Business Process Compliance

Modern auto-mechanics use digital services to check car engines. Why not use a digital service to check the compliance of business engines? We developed an application that checks business processes against legislative requirements, automatically.



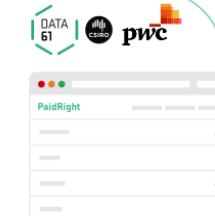
Live-Contracts

We used the parsing technology and the logic behind our platform to transform standard licensing contracts into logic. This application demonstrates the use of the technology in a wider legal environment.



PermitME - Permits & licences

Starting a new business? We're building an automatic concierge, which asks the right questions, at the right time, once. Using the requirements of legislation, we focus on getting the right information to the right regulator, allowing business entrepreneurs to apply for the required permits and licences, online.



Enterprise payroll analytics

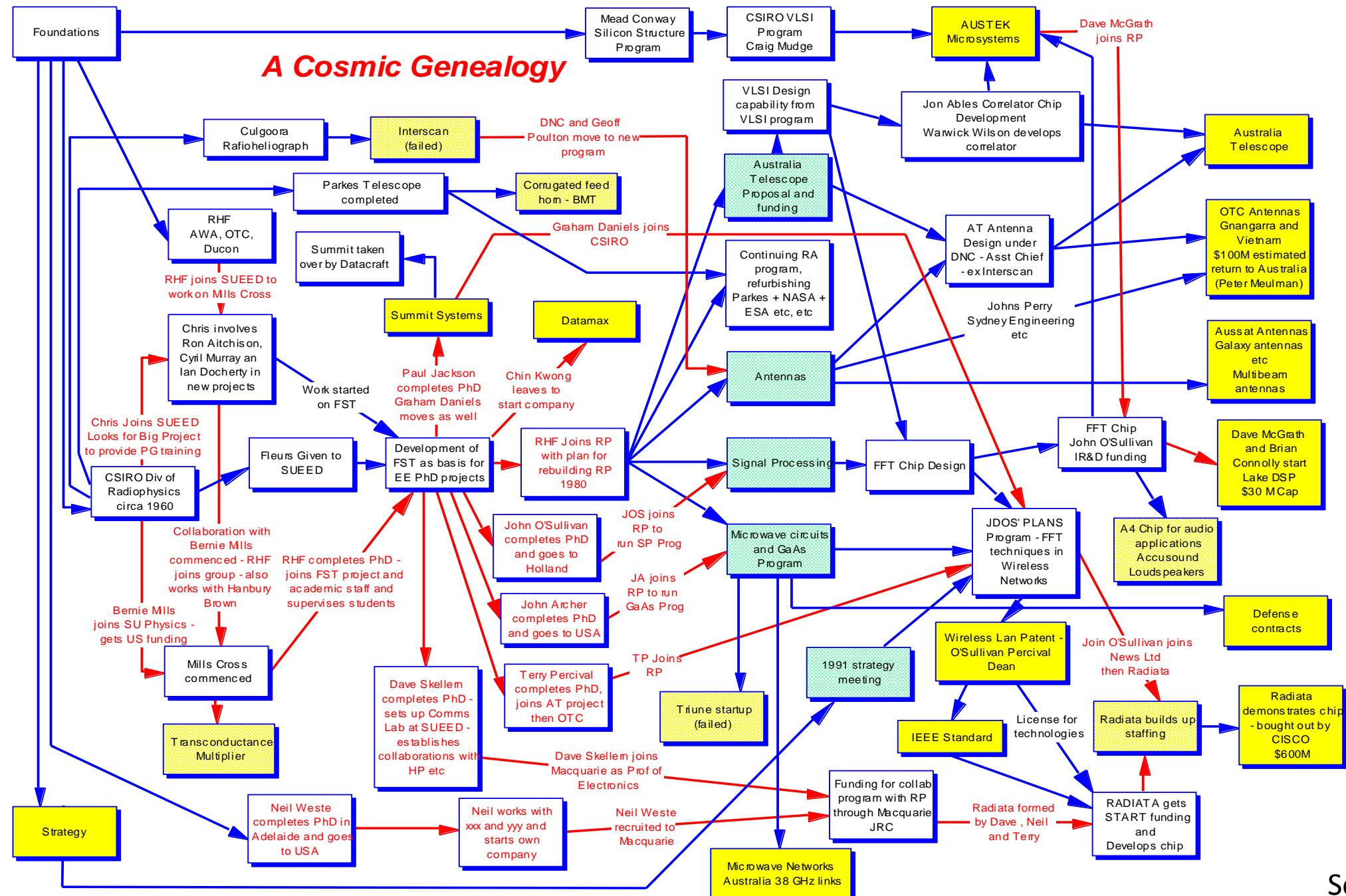
We're collaborating with PwC to build a system which checks employees' payslips against Enterprise Bargaining Agreements, allowing analysis of variances.

PaidRight targets the challenges in payroll





Unintended Consequences



It's All About Data



Why Government, why now?

40% of Australian jobs wont exist in 10-15yrs

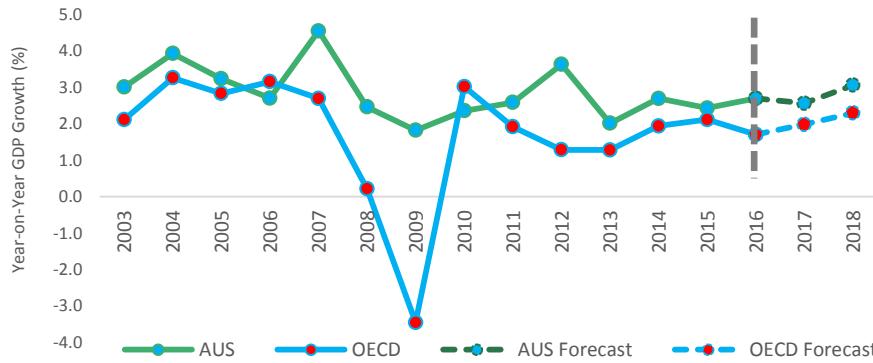


- Boeing factory automation
- 3D situational scanning
- 30 year R&D partnership

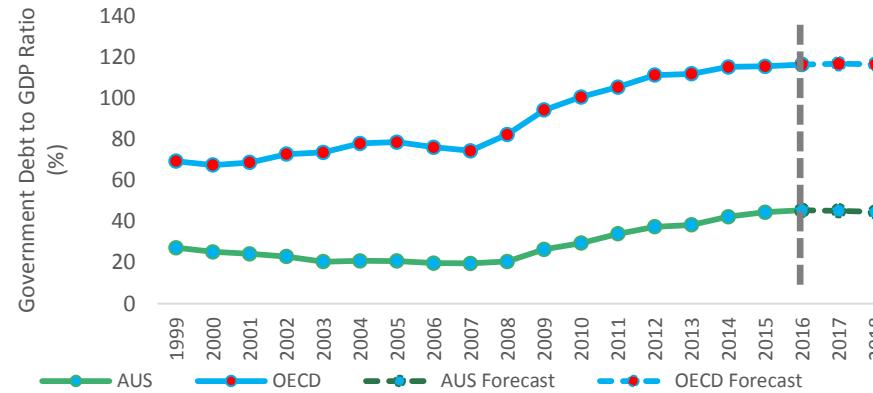
Australia: An Economy in Transition



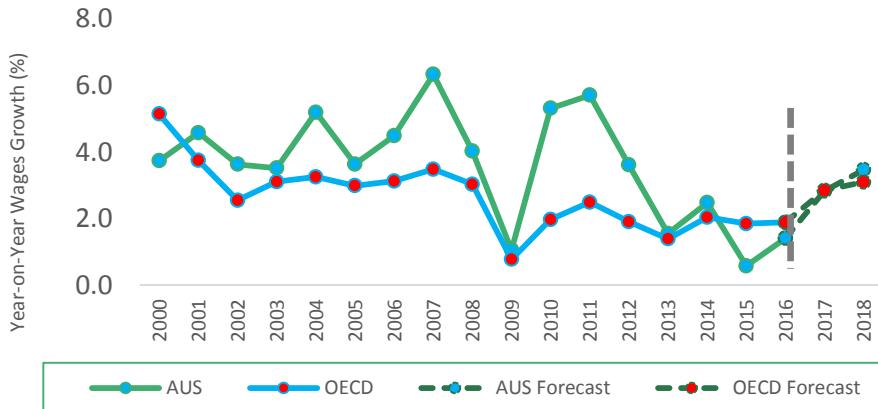
1. GDP Growth Rates are Below Historic Averages



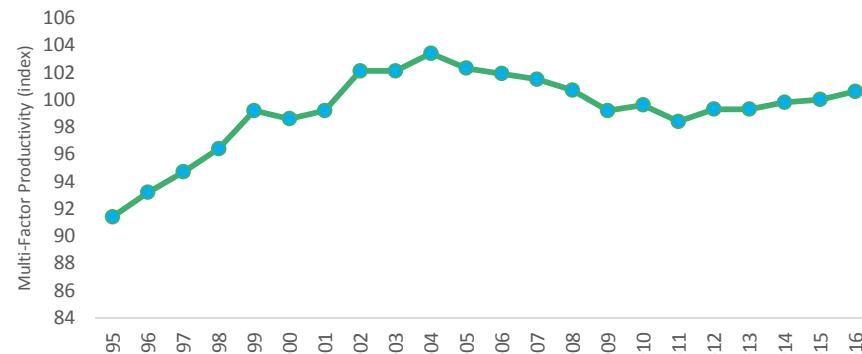
2. Government Debt to GDP Ratios are Rising*



3. Wage Growth is Slowing



4. Productivity is Plateauing



*General government gross financial liabilities - percent of nominal GDP

Digital + Domain



Australia employs
2 million people in
the retail industry

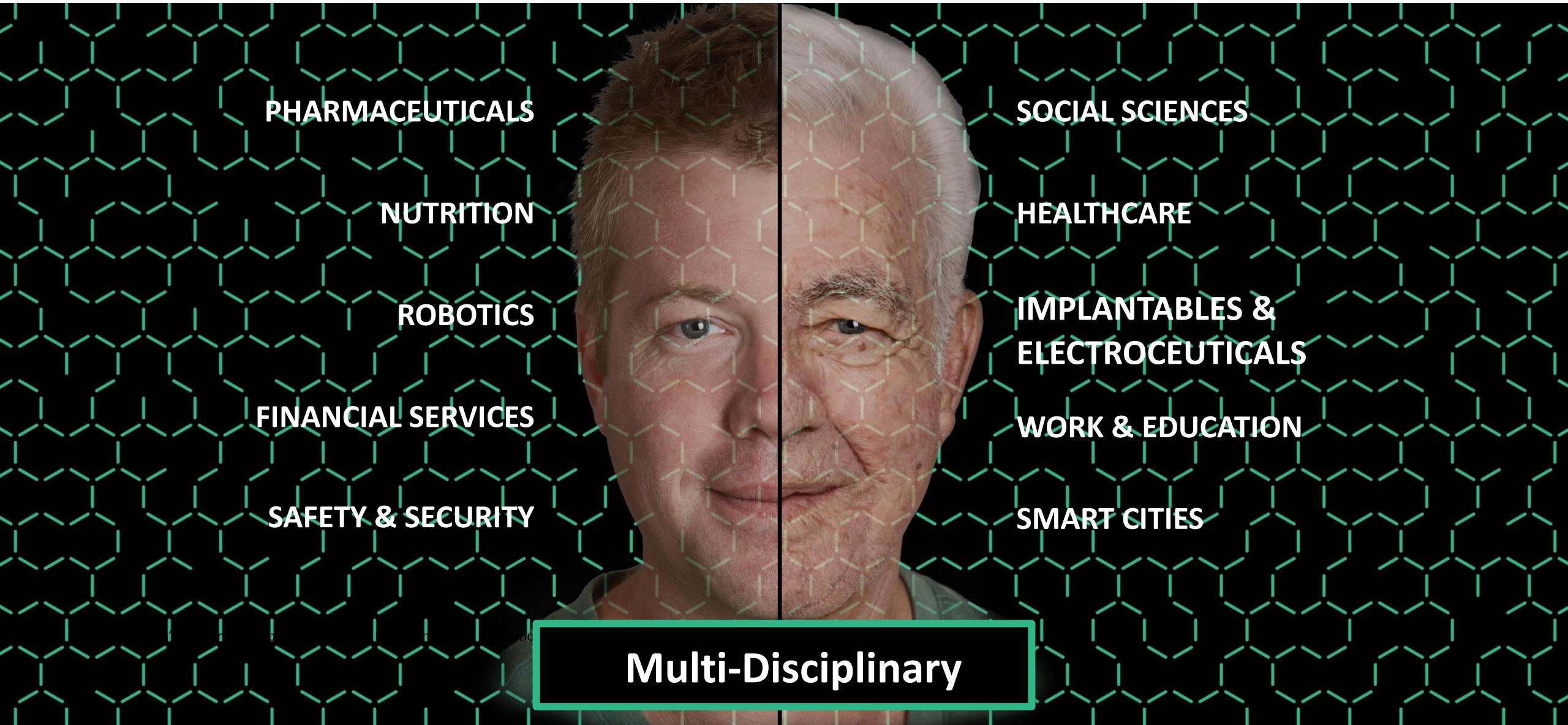
"I think the biggest innovations of the 21st century will be at the intersection of biology and technology. A new era is beginning."

Steve Jobs

Global Initiative for Honeybee Health



Seeding New Industry: Personalised Medicine



CYBERSECURITY

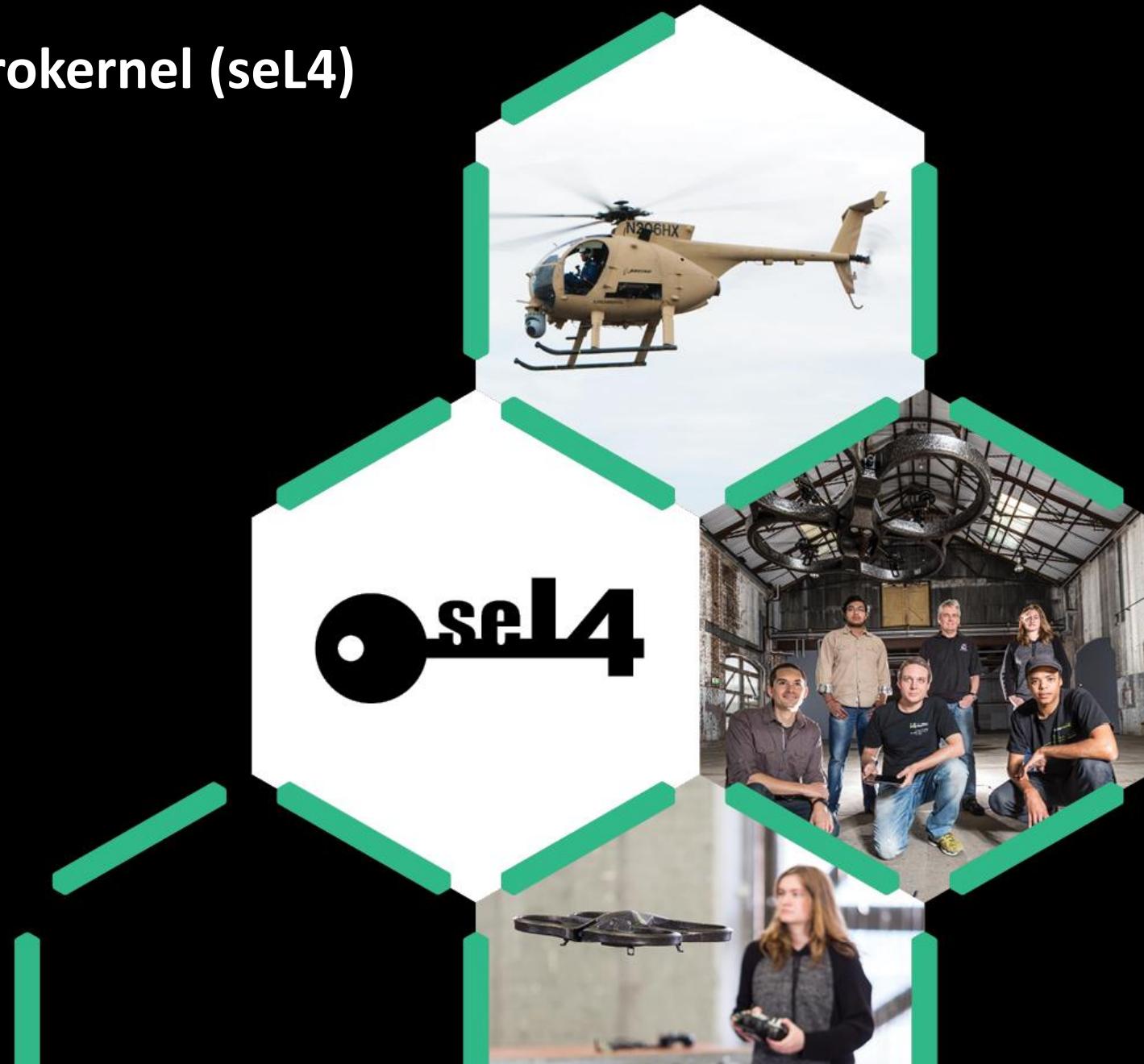
Trustworthy Systems: Secure Microkernel (seL4)

IMPACT:

- First generation L4 microkernel used in billions of Android smartphones and other devices – commercialised through General Dynamics
- Boeing Unmanned Little Bird autonomous helicopter protected from mission diversion cyber-attacks

PARTNERS:

- Rockwell Collins
- Collaborators on the US Defence Advanced Research Projects Agency (DARPA) - High Assurance Cyber Military Systems (HACMS)



Cyber Security Innovation Centre



- Data61's Cyber Security Innovation Centre opened in Melbourne in Oct 2016.
- The 135-seat Centre co-locates industry, government and research stakeholders with Data61, to drive cybersecurity collaboration and co-development.
- Data61 works directly with these partners to identify applications in their fields.



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A MOMENT IN TIME OPPORTUNITY