2012 and Beyond

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National ICT Australia

From imagination to impact

Research Excellence in ICT
Wealth Creation for Australia

From imagination to impact

NICTA in Brief

- Australia's National Centre of Excellence in Information and Communication Technology
- Five Research Labs:
  - ATP: Australian Technology Park, Sydney
  - NRL: UNSW, Sydney
  - CRL: ANU, Canberra
  - VRL: Uni. Melbourne
  - QRL: Uni. Queensland & QUT
- 700 staff including 270 PhD students
- Budget: ~$90m/y from Fed/State Gov and industry
- ~600 research papers/year, ~150 patents total
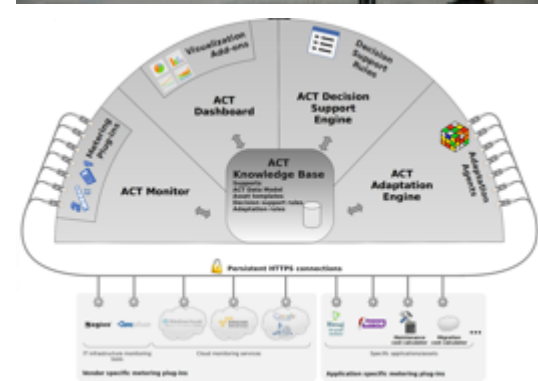
NICTA: Research and Outcomes

University Partners

- Machine Learning
- Software Systems
- Optimisation
- Networks
- Computer Vision
- Control & Sig. Proc.

- Engineering & Tech. Development
- Broadband and the Digital Economy
- Health
- Infrastructure, Transport and Logistics
- Security and Environment

Industry & Government Partners

RESEARCH EXCELLENCE

WEALTH CREATION
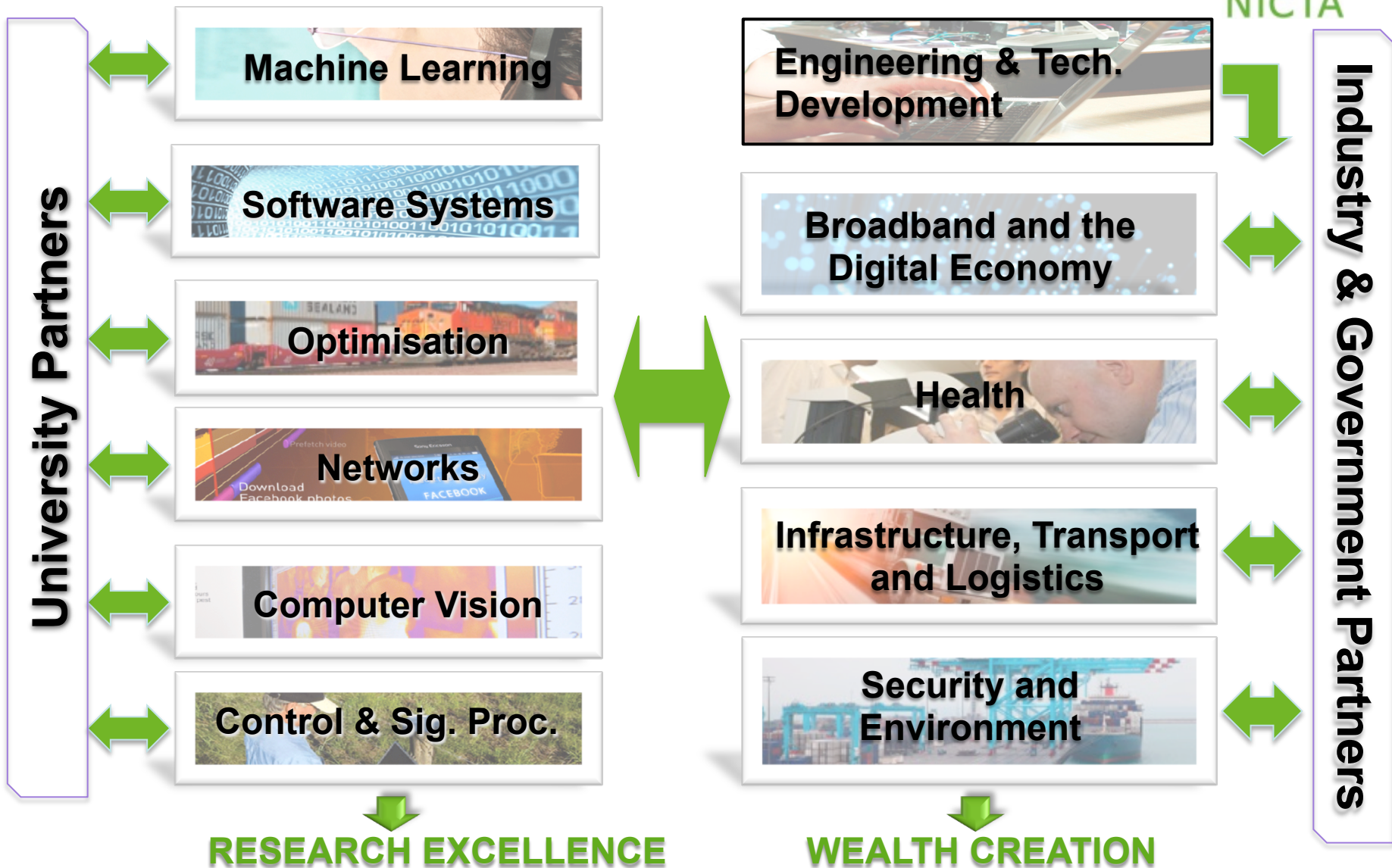
Research Groups

Critical mass per Research Group incl students, March 2012

	Computer Vision	Control and Signal Processing	Implant Systems	Machine Learning	Networks	Optics & Nano Electronics	Optimisation	Software Systems
PhD students	47	34	1	45	45	20	27	43
Research staff FTE	38.97	35.59	11.25	28.48	35.41	26.63	36.57	68.96
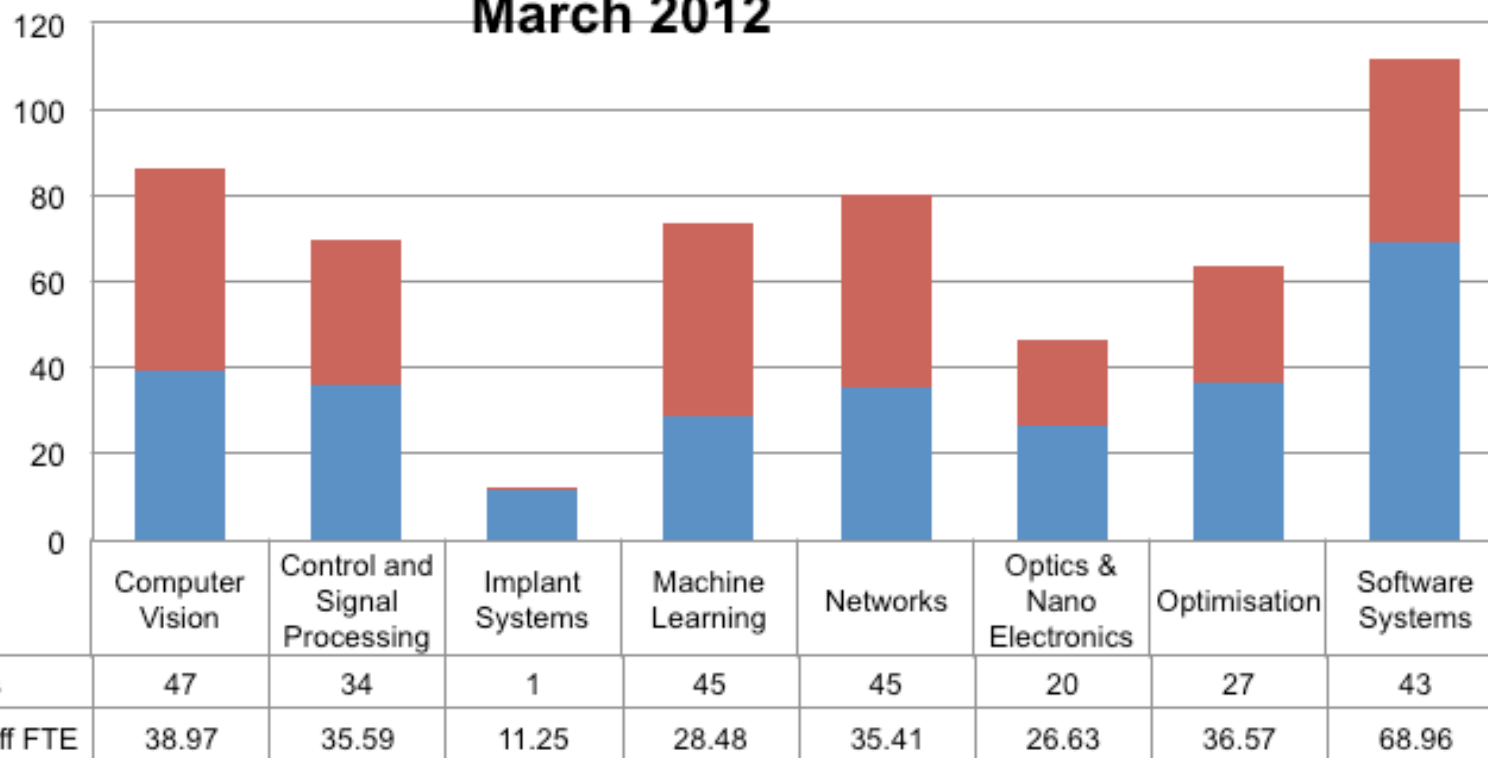
Publication Rate

Figure 3: # Publications per researcher (FTE) 2011
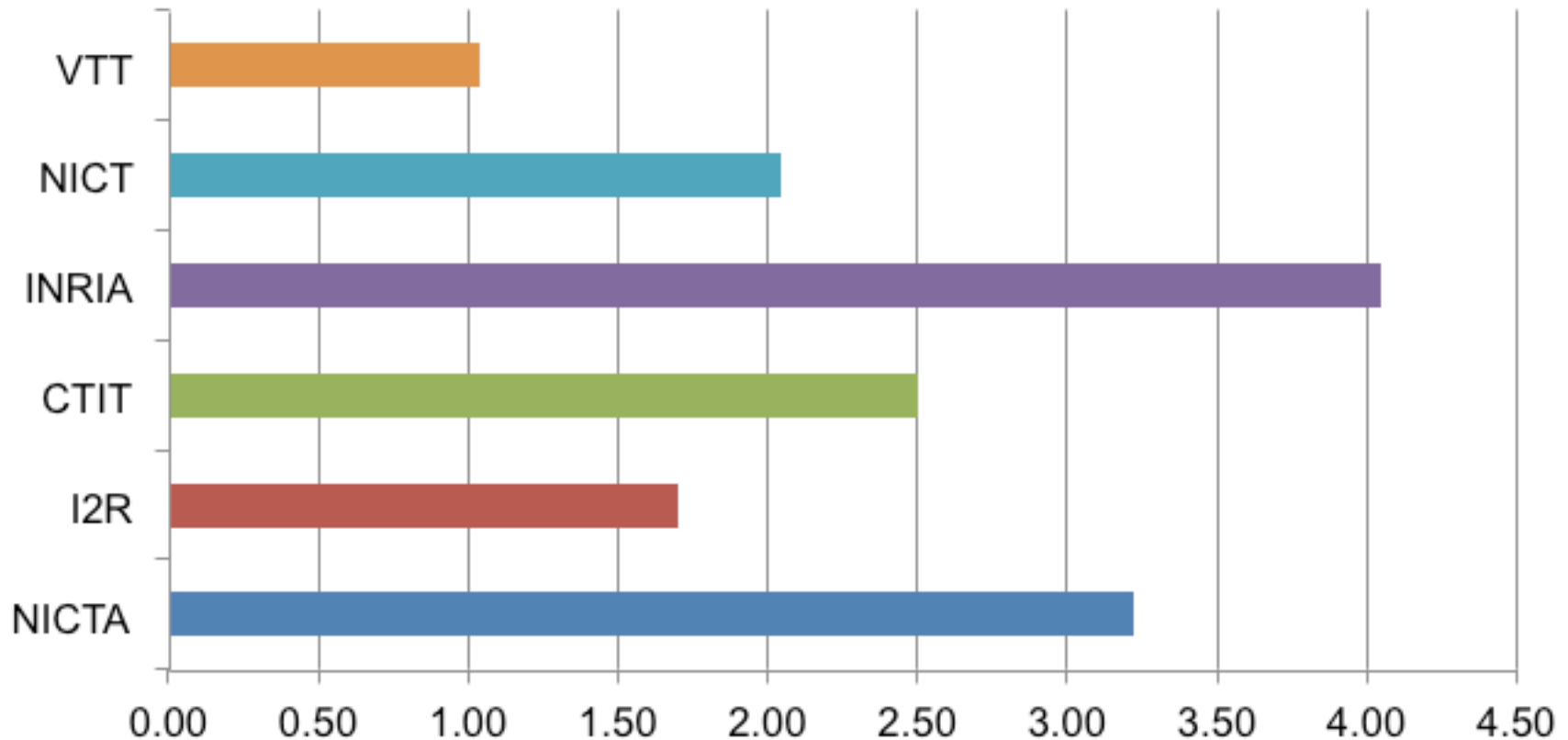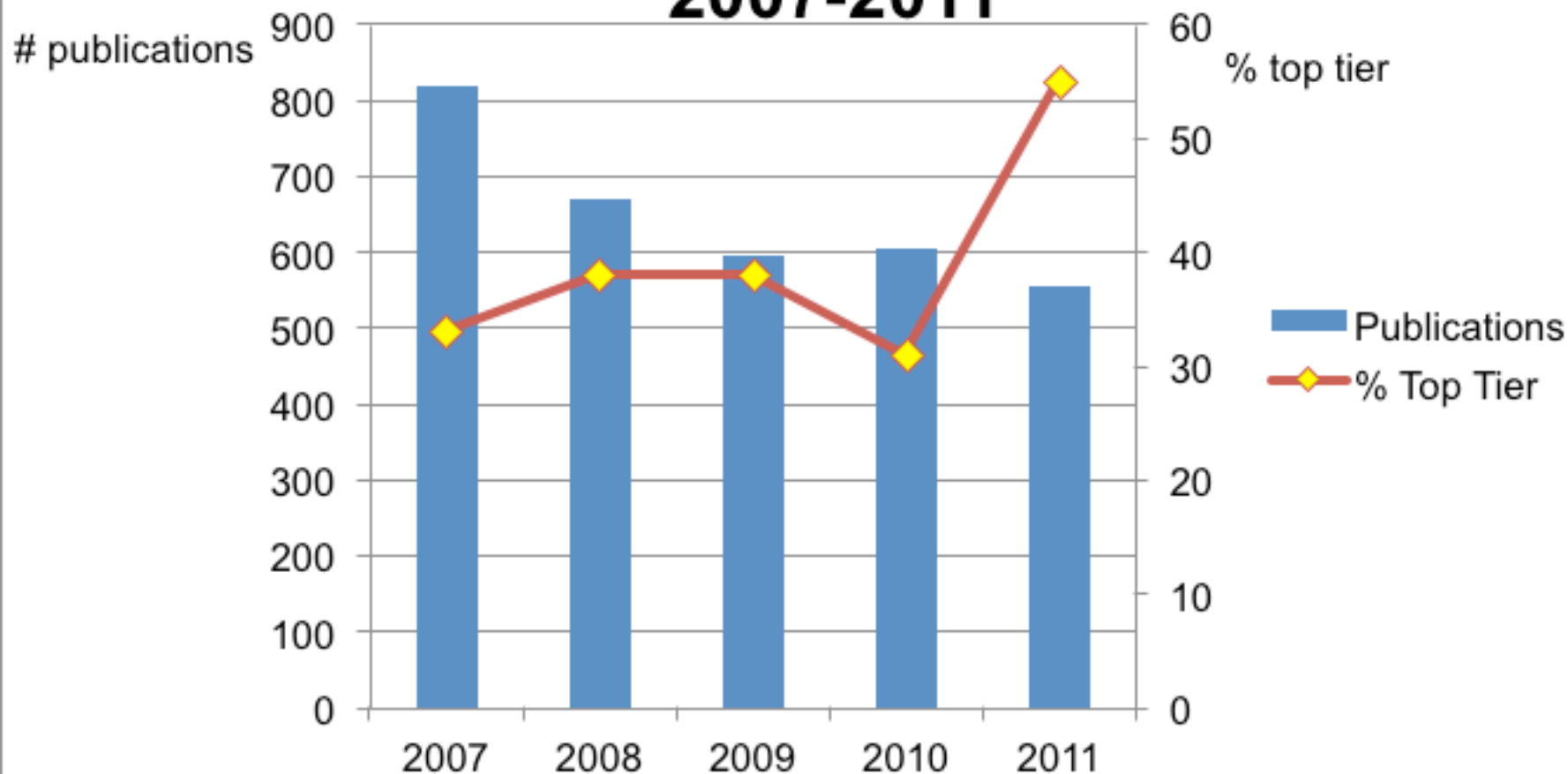
Publications 2007-2011

Figure 2: NICTA Publications output 2007-2011

Business Teams

- **Spinouts**
  - 2-4 spin-outs this year.
  - 5 more in transition and 6 more in pipeline
- **Patents and Licencing. Disclosures**
- **R&D Contracts and External Income**
  - $4.5m in 2011
  - $10m in 2012 pipeline (signed, maybe multi-year)

Framework

- NICTA University Collaboration Agreement (NUCA)
  - Agreement with UNSW and ANU in 2011
  - USyd, UQ, QUT and Adelaide University also signed
  - New Universities in Victoria coming on board
- Collaborative Research Projects (CRPs)
  - Defines all joint research projects and funding contributions by both NICTA and Universities
  - Staff, students and non-salary expenditure
  - Cash and in-kind
- University Planning Committee (UPC)
  - Advisory body to meet quarterly
  - Membership includes RG leaders, University Deans and Heads of Schools

PhD Student Enrolments

PhD Enrolments by University, March 2012
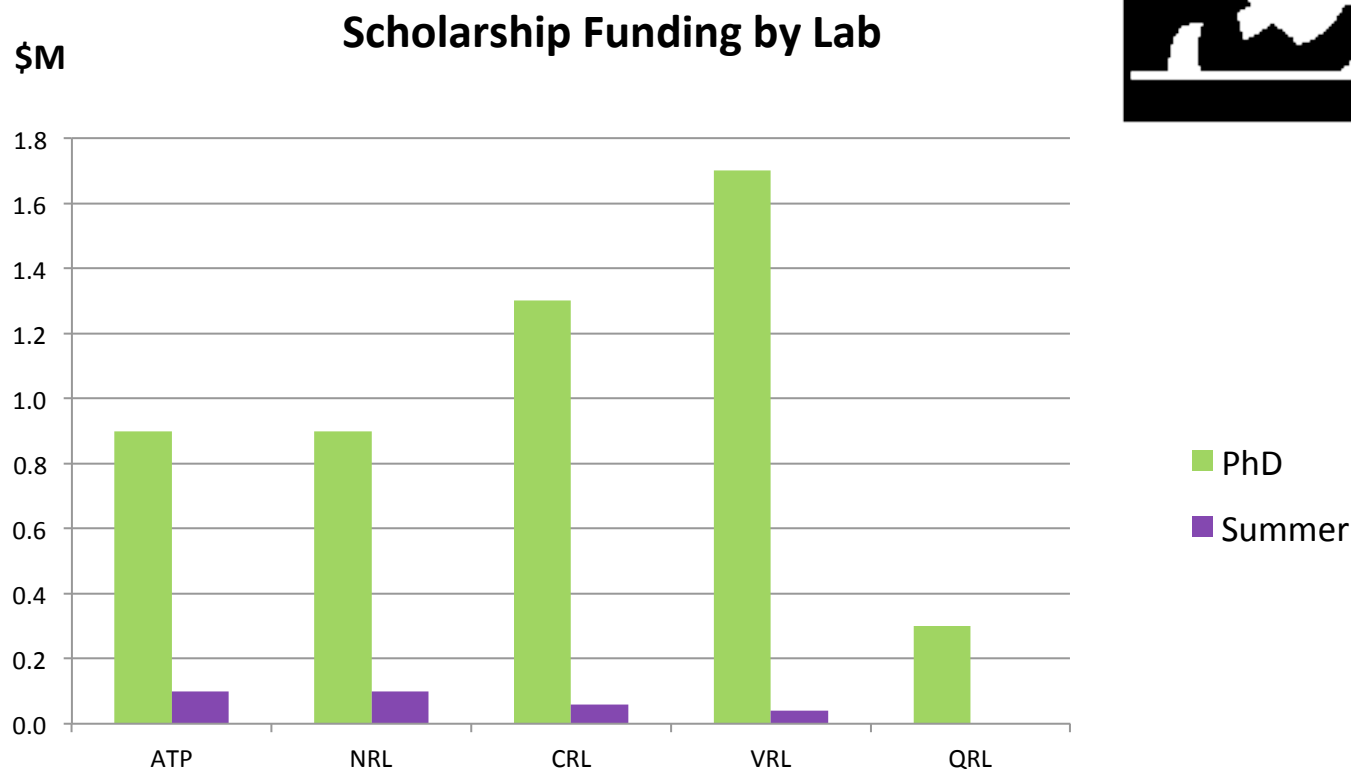
ANU, 61
Ballarat, 1
Monash, 3
RMIT, 4
UMELB, 60
UNSW, 68
UNSW ADFA, 1
USYD, 31
UQ, 19
GU, 11
QUT, 3
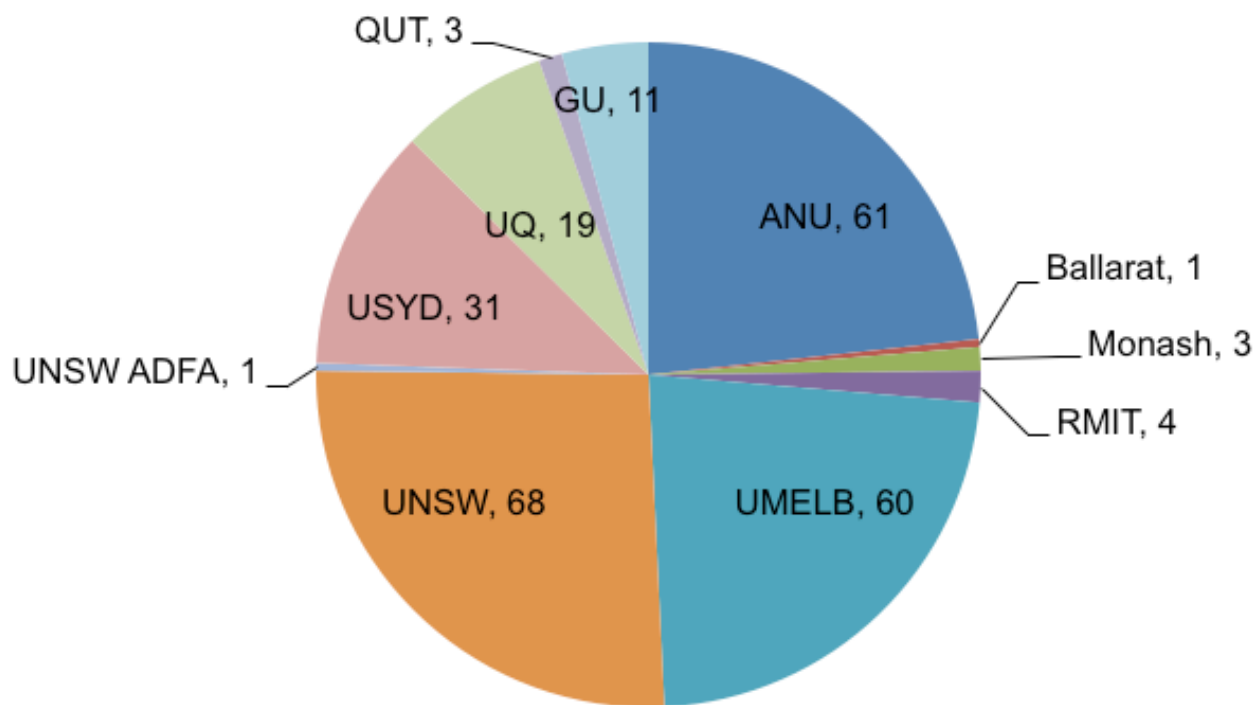
Total = 262

as at

2012 Budget

- # Scholarship Budget = $5.1M
- ## Operational Budget = $584K

Scholarship Funding by Lab

Promoting Scholarships

NICTA: WORLD CLASS ICT RESEARCH

Postgraduate Study Opportunities

NICTA undertakes pure and applied use-inspired research that advances knowledge and produces technology that will benefit end users by solving real problems.

Our main research areas are:

SOFTWARE SYSTEMS
operating systems, formal methods, distributed systems, software engineering

COMPUTER VISION
understanding the world through images and videos

OPTIMISATION
artificial intelligence and operation research techniques applied to logistics, smart grids, bio-informatics and beyond

MACHINE LEARNING
large scale data analytics, cognitive, image and text learning

NETWORKS
media distribution, privacy preservation, improving human performance and safety

CONTROL & SIGNAL PROCESSING
control of large scale and complex information systems

- NICTA labs are located in Sydney, Melbourne, Canberra and Brisbane.
- NICTA competitive PhD scholarships are offered in conjunction with member and partner universities:

To find out more, send your CV and undergraduate details to
students@nicta.com.au

www.nicta.com.au/education

NICTA – UNSW Undergraduate Research Scholarships

New opportunity for high achieving engineering, mathematics and computer science students

What is it?

NICTA-UNSW Undergraduate Research Scholarships are aimed at high achieving students interested in engineering, mathematics and computer science. This new scholarship program offers opportunities to pursue exciting and challenging research during bachelor degree studies. If you have a passion for solving problems, a desire to work right at the cutting edge of technology development, and an excellent academic record, applying to this scholarship program is a must.

A NICTA-UNSW Undergraduate Research Scholarship provides:

- $12,000 p.a. for every year of study
- Eight months of research training with up to three different research groups during your degree
- Unique opportunities to experience the R&D environment and gain research skills before you even complete your degree
- Ongoing membership of a research group, and opportunities to work with world-renowned researchers
- An Academic Co-ordinator who can offer advice and support throughout your degree
- Exposure to the commercialisation process – see how technologies are born, nurtured as start-up companies and grown into industry leaders

Students selected to be a NICTA-UNSW Research Scholar join a new elite group of students on an accelerated path towards R&D careers in technologies that are still yet to be conceived.

For eligibility details and answers to Frequently Asked Questions

http://www.nicta.com.au/education/scholarships/undergraduate_scholarships

Enquiries: nicta@unsw.edu.au

Available to students enrolling in degree programs in the Schools of Electrical Engineering and Telecommunications and Computer Science and Engineering at UNSW

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Application Contact:
nicta@unsw.com.au

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