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Author(s)	Slaney, John
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National ICT Australia Ltd

NICTA is proudly supported by:



Agenda

- Background to NICTA
- NICTA's evolution
- Research
- Education
- Commercialisation
- Collaboration

Background

- National Research Laboratory
- Established in 2002
- Funded until 2011



NICTA Members

- NICTA Members
 - Department of Communications, Information Technology and the Arts
 - Australian Research Council
 - Australian Capital Territory Government
 - New South Wales Government
 - The University of NSW
 - Australian National University



NICTA Partners

- NICTA Partners
 - Victorian Government
 - University of Melbourne
 - The University of Sydney
 - Queensland Government
 - The University of Queensland
 - Queensland University of Technology
 - Griffith University



NICTA People

- Support NICTA's mission
 - Purposeful
- Use exceptional talents
 - Imaginative (idea generation)
- Collaborate internally and externally
 - Open
 - Teamwork
- Carry our message
 - Proud

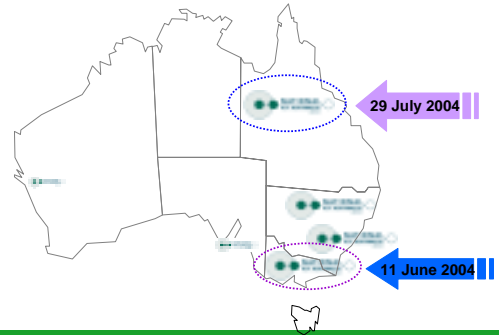


Mission

- To be an enduring world class research institute in Information and Communications Technology that generates national wealth



Locations



NICTA's Evolution

NICTA 2001



- Company registered

NICTA 2002



- Constitution established

NICTA 2003



Company

- Member contribution agreements (MCA) signed
- First IBAG & ISAG Meetings

Research

- Initial programs populated

Education

- Initial scholarships offered

NICTA 2004



- Company**
 - Establish VIC and QLD Labs
- Research**
 - Priority Challenges established
 - Research output begins
- Commercialisation**
 - Commercialisation infrastructure specified
- Education**
 - Alignment of NICTA graduate students to NICTA researchers
- Linkages**
 - Industry forums created

NICTA 2005



- Company**
 - Emergence of NICTA acceptance internationally
 - Results transfer begins
- Research**
 - Critical mass of researchers established
 - Use inspired research culture
- Commercialisation**
 - Outcome pipeline begins
 - Australian seed bed cultivated for business support
- Linkages**
 - Industry forums result in collaboration
- Education**
 - Number of students in the pipeline approaches steady state

NICTA 2006



- Research**
 - Awareness of the benefits of use inspired research approach
- Commercialisation**
 - Harvesting commercial results
- Education**
 - First graduates
- Linkages**
 - External collaboration becomes embedded in culture

NICTA 2007



- Research**
 - Phase two research begun
 - Recalibrate research strength with Australia's needs
- Commercialisation**
 - Flow of graduates leads to first real wave of economic impact
- Education**
 - Capacity of graduates reached (75 people)
- Linkages**
 - NICTA becoming commercial partner of choice

Operating Pillars

- Established on:
 - Research – Built on exceptional research talent
 - Education – Built on enhancing ICT education
 - Commercialisation – Built on consideration of use
 - Collaboration – Built on exceptional partnerships



RESEARCH

NICTA is focusing its ICT research talent toward advances in technology which will produce significant social, environmental, and economic benefits for Australia

Research

- Central drivers of NICTA's research effort are our two Priority Challenges - inspired by uses for society, the market, and the environment.

- From Data to Knowledge
- Trusted Wireless Networks



Priority Challenges

- Trusted Wireless Networks
 - Enabling greater confidence, freedom and capability through the improved efficiency, reliability and security of wireless environments
- From Data to Knowledge
 - Producing social, environmental and economic value from the gathering and use of information

Research Programs

- Autonomous Systems and Sensing Technologies
- Embedded, Real-Time, and Operating Systems
- Empirical Software Engineering
- Formal Methods
- Interfaces, Machines, and Graphic Environments
- Knowledge Representation and Reasoning
- Logic and Computation



Research Programs cont.

- Network Information Processing
- Network Technologies
- Networks and Pervasive Computing
- Sensor Networks
- Statistical Machine Learning
- Symbolic Machine Learning and Knowledge Acquisition
- Systems Engineering and Complex Systems
- Wireless Signal Processing

Research Structure

- Programs
 - Research/research training/developing commercialisation/linkages (between research & industry)
- Projects: the vehicle
 - Interacting with external corporations & government
- Priority Challenges/aims
 - Pursue long-term theoretical research
 - Contribute to research projects & the centres end-under activities
 - Develop coursework & supervise PhD candidates

Research Structure cont.



EDUCATION

A nation's future is built on each generation's ability to improve social, environmental, and economic conditions

NICTA PhD Program

- Building on traditional education programs
- Generating human capital for ICT research and development, of the highest international standards
- Value-added degree programs within universities
- Enriching the education experience to enhance Australia's economy



NICTA PhD Program

- Focus on four key fundamentals:
 - Research Excellence
 - Technical Broadening through extensive coursework
 - Networking – interaction with people in their area of research
 - Commercialisation – potential for commercialisation of each student's project



University Partners

- Agreements with:
 - University of NSW
 - University of Sydney
 - Australian National University
 - University of Melbourne
 - University of Queensland
 - Queensland University of Technology
 - Griffith University



COMMERCIALISATION

An intellectual property portfolio that is not used has no economic value

Commercialisation

- Aim: to generate national wealth through the commercialisation of intellectual property through
 - Flexibility in approach
 - Licensing of research and technology
 - Creation of spin-offs and joint ventures



Commercialisation

- Focusing on:
 - The creation of open access to NICTA for small and large businesses committed to research
 - An internal research funding program that encourages collaboration
 - Training & capability development with attention to the creation of opportunities for frequent contact between NICTA & business.



COLLABORATION

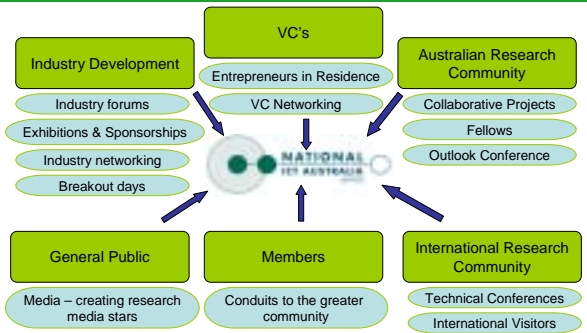
Some of the best ideas are born through the meeting of imaginations

Collaboration

- NICTA fosters research & commercialisation through an open & accessible culture that welcomes collaboration with business & technology organisations
- NICTA collaborates with:
 - Small to Medium enterprises
 - Multinational ICT companies
 - Users of ICT
 - Researchers (national and international)



NICTA's Network



The imagination driving Australia's ICT future

