Australian Government

Department of Innovation, Industry, Science and Research

CRC AUSTRALIA

Innovation in Australia: Future challenges and opportunities

Neville Stevens AO

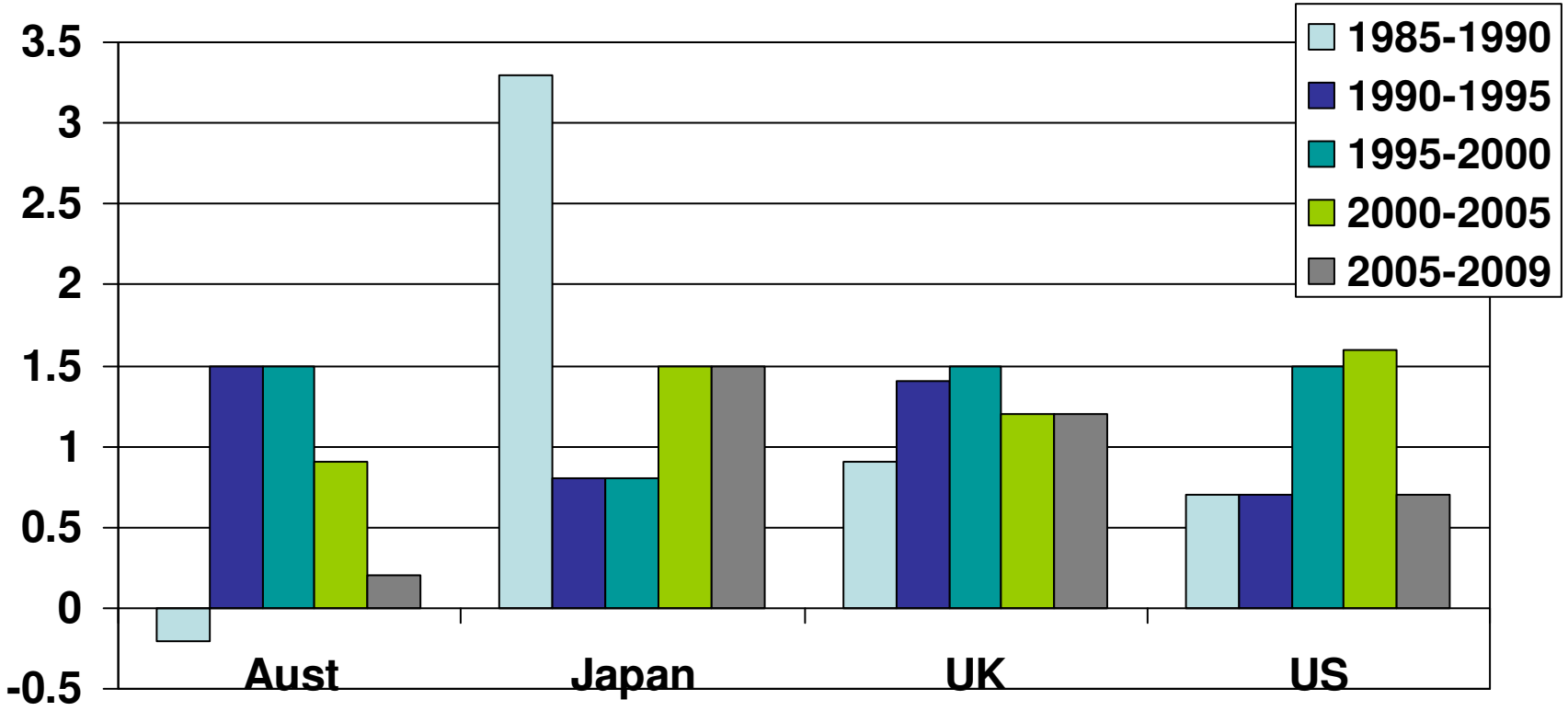
Chair, CRC Committee

Presentation to CRCA Conference: Keeping ahead of the curve, 17-19 May 2011

This session will cover…

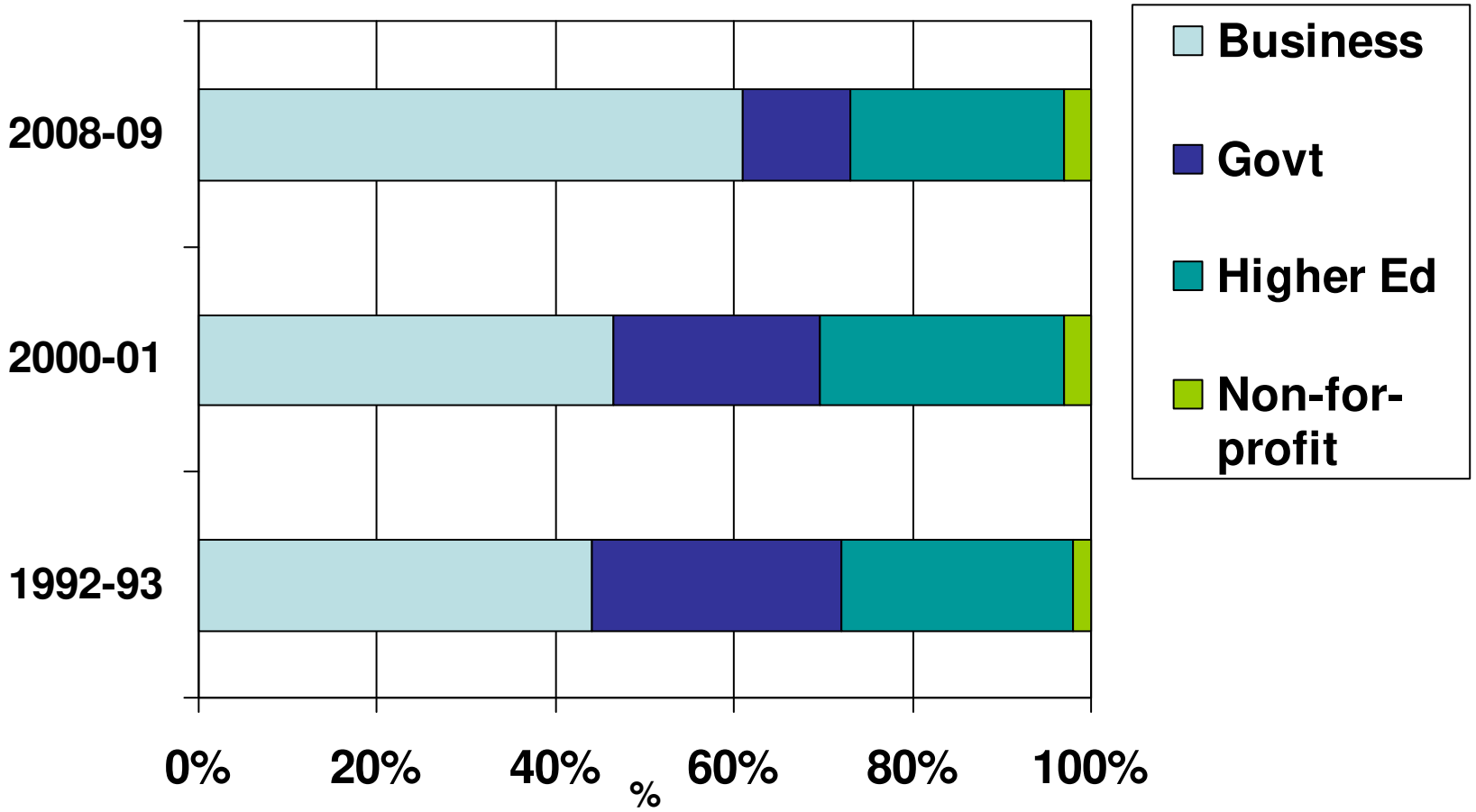
- Australia's productivity and global competitiveness
- Investment in R&D
- Challenges and opportunities
  - Collaboration, capacity, scale
  - Contribution and role of the CRC program

Average growth in Multi-factor Productivity – 1985 to 2009



Source: OECD, Multi-factor Productivity, OECD.Stat

Gross expenditure on R&D – by sector



Source: ABS Research & Experimental Development, 2008-09, cat. no. 8112.0

Proportion (%) of R&D investment – Sector by socio-economic objective

	1992-93	2000-01	2008-09
Business			
Defence	5	3	2
Economic development	90	89	94
Society (health, education)	2	6	3
Environment	1	1	1
Government			
Defence	11	10	14
Economic development	57	58	34
Society (health, education)	11	12	22
Environment	16	17	23

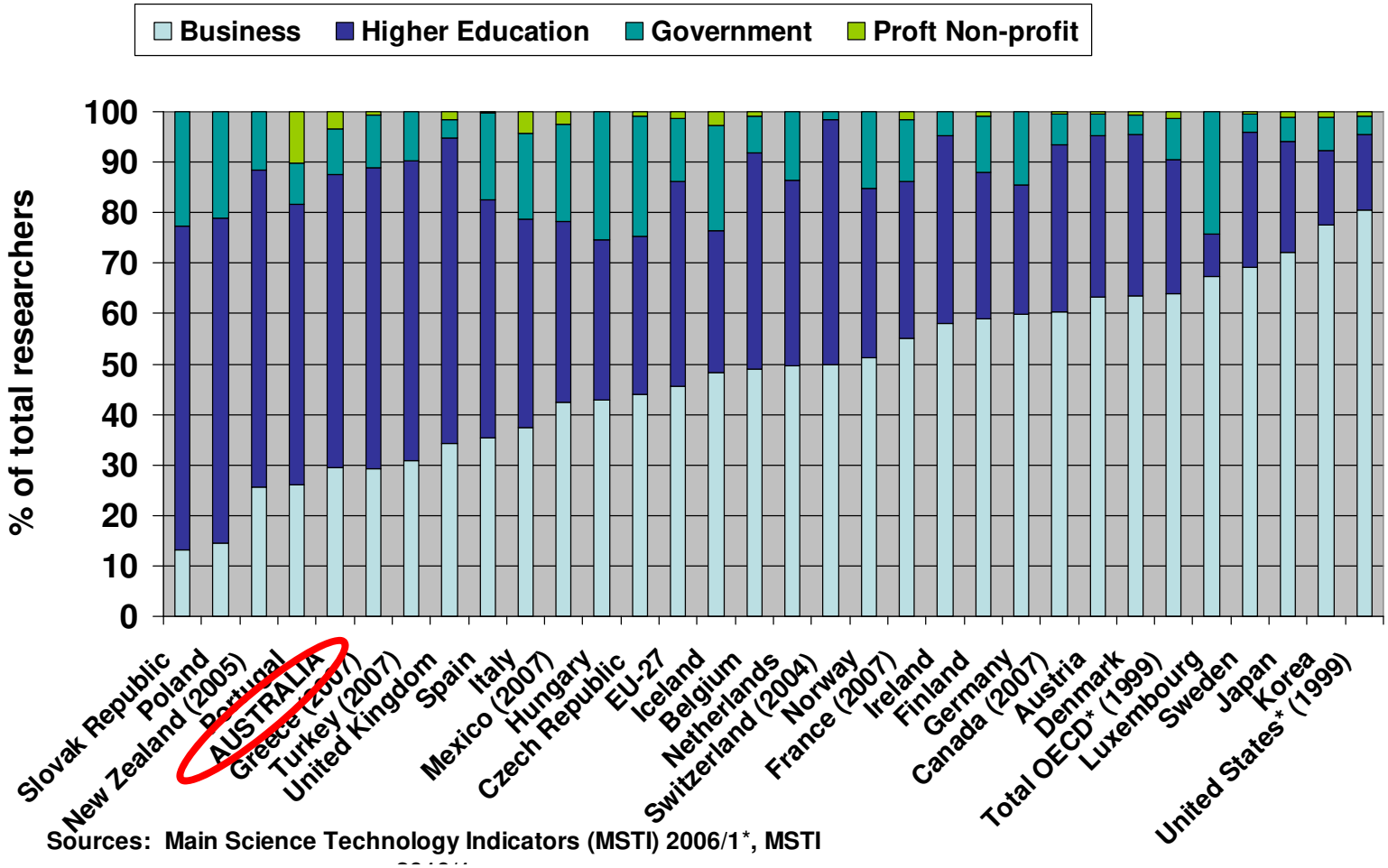
Source: ABS Research & Experimental Development, 2008-09, cat. no. 8112.0

Expenditure on R&D as proportion (%) of GDP

	Gross (GERD)			Government (Goverd)			Business (BERD)		
	1981	**1992**	**2008**	**1981**	**1992**	**2008**	**1981**	**1992**	**2008**
Australia	**0.89**	**1.44**	**2.21**	**0.40**	**0.40**	**0.27**	**0.22**	**0.55**	**1.35**
OECD	**1.90**	**2.14**	**2.34**	**0.34**	**0.31**	**0.26**	**1.24**	**1.48**	**1.63**
US	2.34	2.64	2.79	0.43	0.39	0.30	1.62	1.93	2.02
UK	2.35	1.99	1.77	0.49	0.30	0.16	1.48	1.36	1.10
NZ	0.98	0.99	1.18	0.59	0.41	0.32	0.21	0.26	0.50
Japan	2.29	2.89	3.44	0.25	0.24	0.29	1.39	2.08	2.70

Source: OECD, Main science and technology indicators, OECD.Stat

Distribution of total researchers by sector - by OECD country, 2007



Sources: Main Science Technology Indicators (MSTI) 2006/1*, MSTI

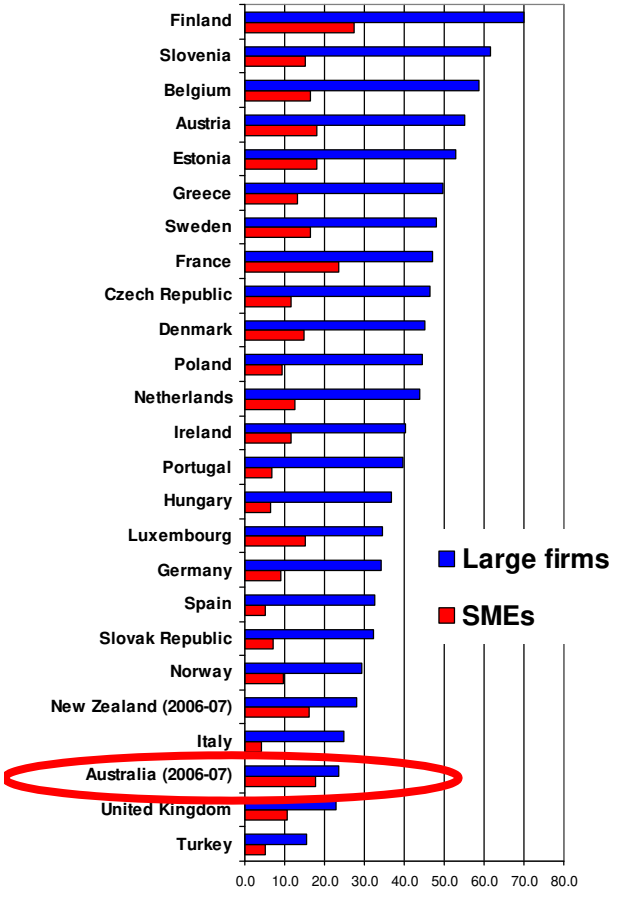
Collaborating for Innovation – Innovative firms by type of organisation collaborated with, 2008-09

	Australia %	Overseas %	0-4 employees %	200+ employees %
Clients, customers & other buyers	41.1	2.3	**43.8**	24.4
Suppliers of equipment, materials, components, software	35.7	7.5	34.3	**43.9**
Consultants	33.7	0.8	30.4	**35.4**
Competitors	31.0	1.7	**39.0**	16.4
Government agency	9.4	-	9.2	10.0
University or other higher education institution	2.4	1.2	2.4	**11.5**

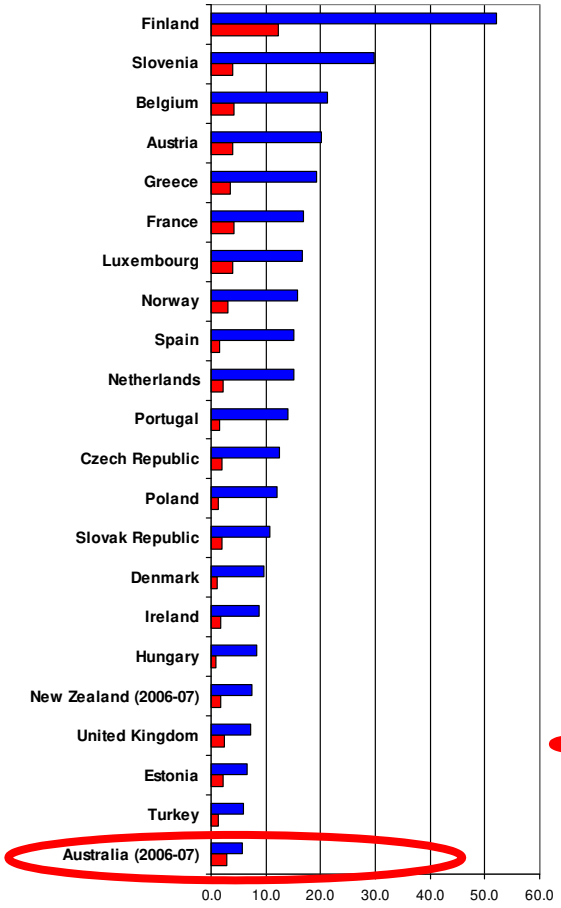
Note: Businesses could identify more than one location or type of organisation.

Source: ABS, Innovation in Australian Business, 2008-09 (cat. no. 8158.0)

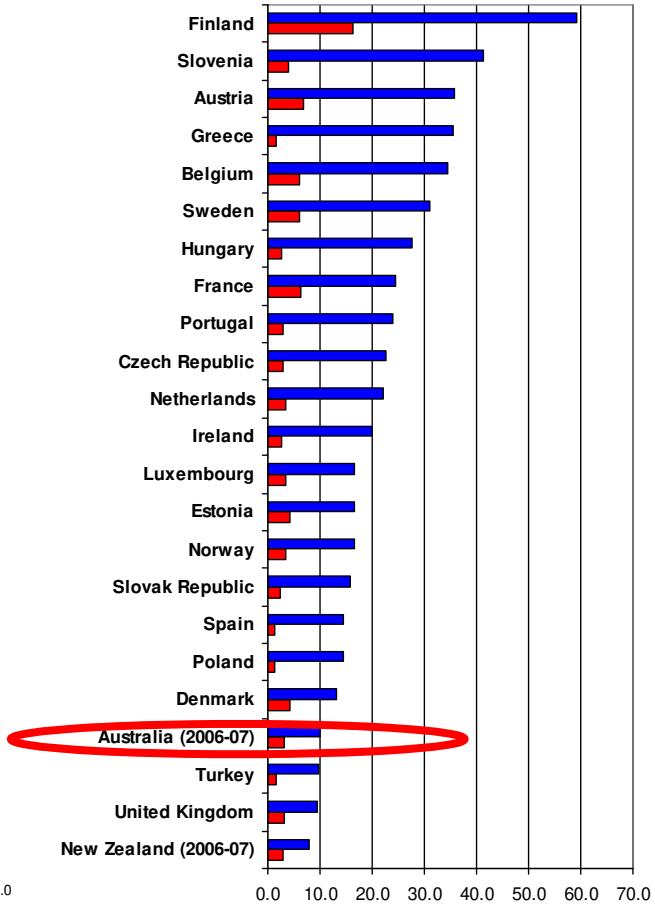
Firms collaborating on innovation by size & sector, 2006-07



Overall



Government research institutes

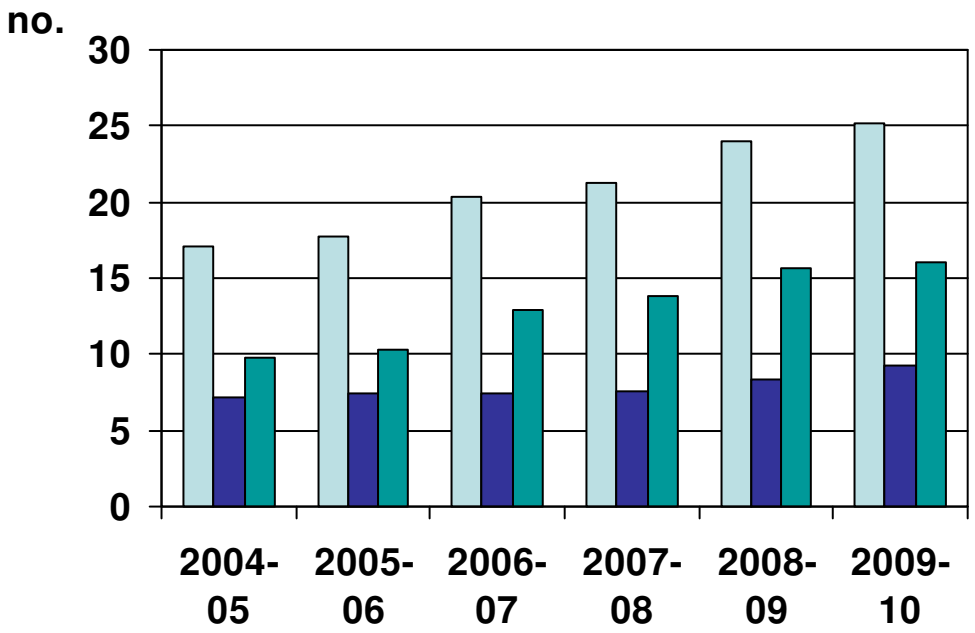


Higher Ed Sector

CRCs – bringing industry and research together

- In 2009-10 CRCs collaborated with 1,258 firms
  - 460 small (<20 employees)
  - 368 medium (20-99)
  - 430 large (100+)
- 226 firms were essential participants
- Still only small % of Australian firms

Average number of firms collaborating with a CRC



Source: DIISR, aggregated CRC Management Data Questionnaire (MDQ) data

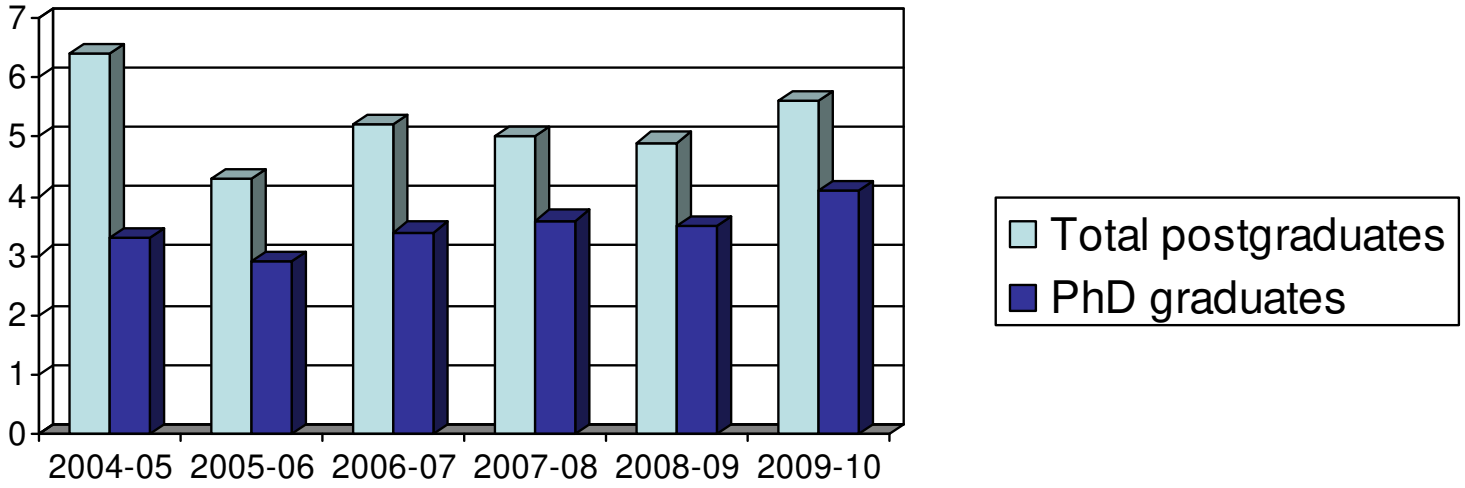
CRCs – Why are they important?

- Significant government program that delivers genuine collaboration between researchers and end users – they must work together
- Supports long term collaboration for end-user focused research with clear path to utilisation
- Capacity and capability building of the program – supply postgraduates to industry and brings greater awareness to university researchers and industry participants
- Builds critical mass with the time frame necessary to tackle major challenges

CRCs – Building human capital

- CRC postgraduate program:
  - Around 1,800 graduates since 2005
  - Almost 1,500 postgraduate students enrolled at 30 June 2010
  - Between 2005 and 2010, CRCs produced an average of 4-6 industry-ready graduates each
  - Around 40-50% supervisors are from industry

Average number of postgraduates per CRC



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DEPARTMENT OF INNOVATION, INDUSTRY, SCIENCE AND RESEARCH

Industry House
10 Binara Street
Canberra City, ACT 2601, Australia
Telephone +61 2 6213 6000