Theme 3: Employability

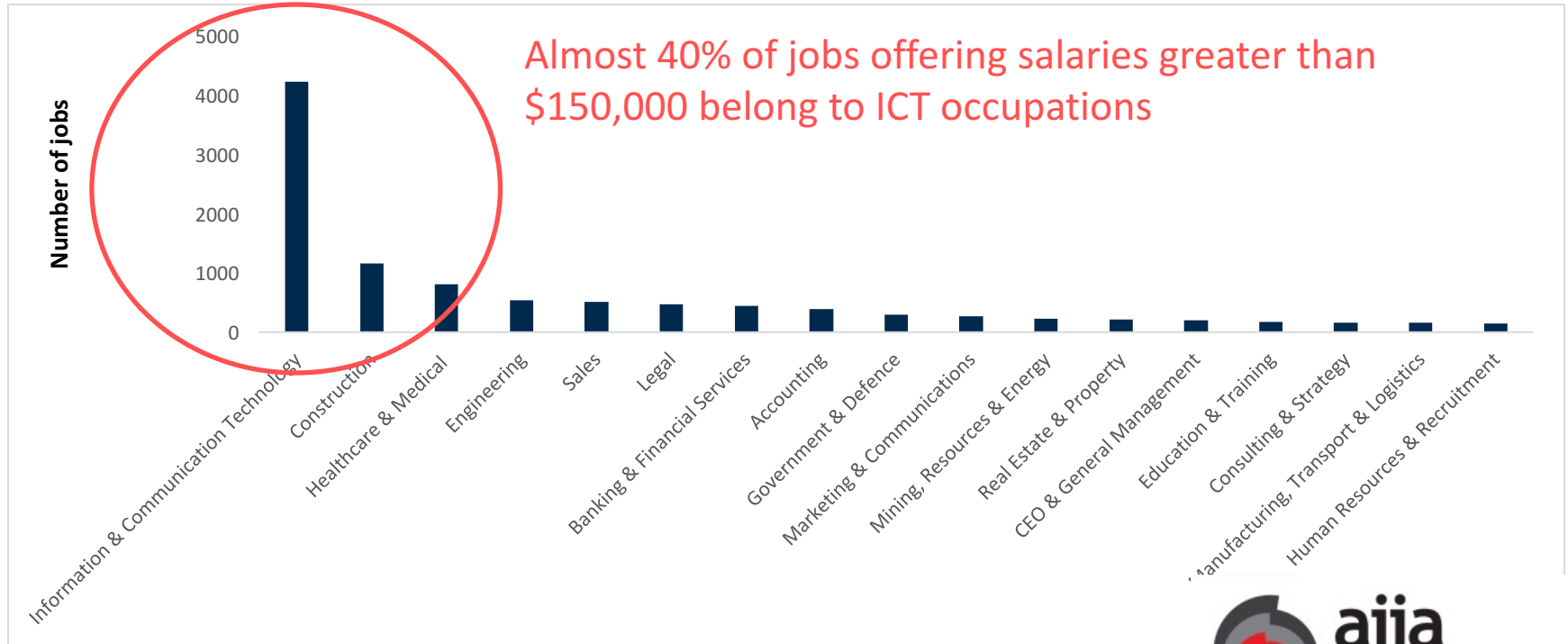*Suzanne Roche, GM Policy and Advocacy, AIIA*

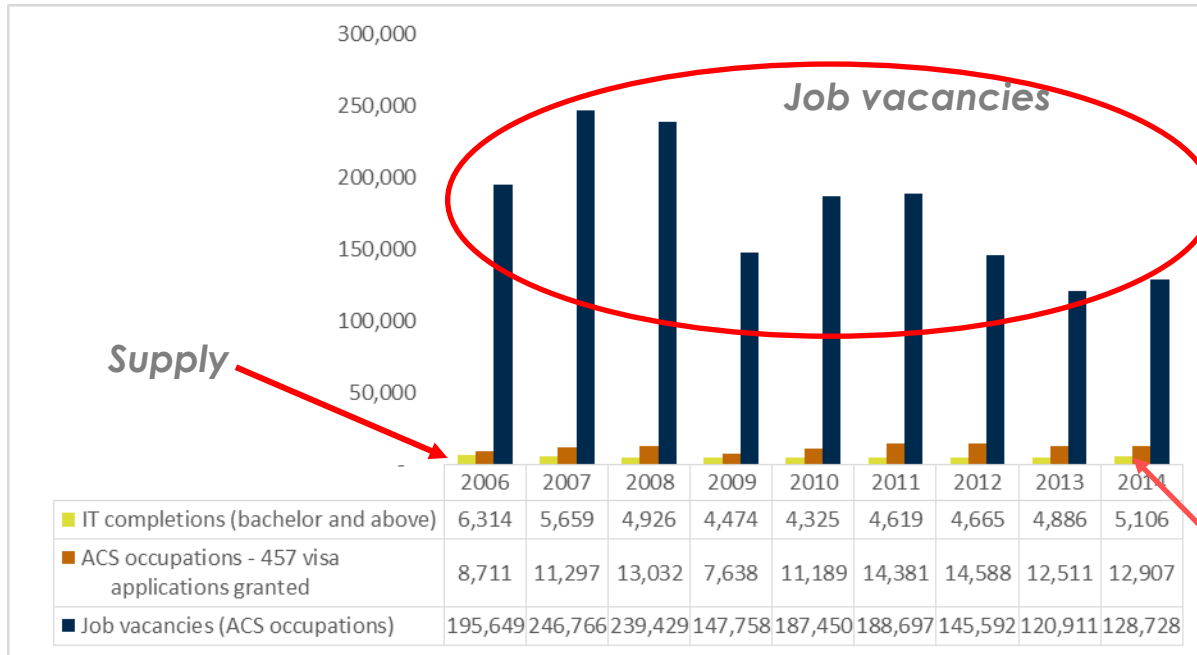April 2017

ICT graduates struggle to find employment whilst employers struggle to fill ICT roles

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Premium Salaries

Almost 40% of jobs offering salaries greater than $150,000 belong to ICT occupations

Number of jobs (y-axis): 0, 1000, 2000, 3000, 4000, 5000

Categories (x-axis): Information & Communication Technology, Construction, Healthcare & Medical, Engineering, Sales, Legal, Banking & Financial Services, Accounting, Government & Defence, Marketing & Communications, Mining, Resources & Energy, Real Estate & Property, CEO & General Management, Education & Training, Consulting & Strategy, Manufacturing, Transport & Logistics, Human Resources & Recruitment

Data from seek.com.au of jobs offering salaries greater than $150,000. Accessed on 13 July 2016.

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Supply vs job vacancies

	2006	2007	2008	2009	2010	2011	2012	2013	2014
IT completions (bachelor and above)	6,314	5,659	4,926	4,474	4,325	4,619	4,665	4,886	5,106
ACS occupations - 457 visa applications granted	8,711	11,297	13,032	7,638	11,189	14,381	14,588	12,511	12,907
Job vacancies (ACS occupations)	195,649	246,766	239,429	147,758	187,450	188,697	145,592	120,911	128,728

- Domestic supply stagnant around 5,000 pa (until relatively recently)

- Growth in 457 visas

- Still significant jobs vacancies

Employment of ICT Grads

Expectation that employment prospects for domestic IT graduates should be strong, not borne out in graduate employment outcomes.

Are ICT skills not being utilised – or is they are not the right skills?
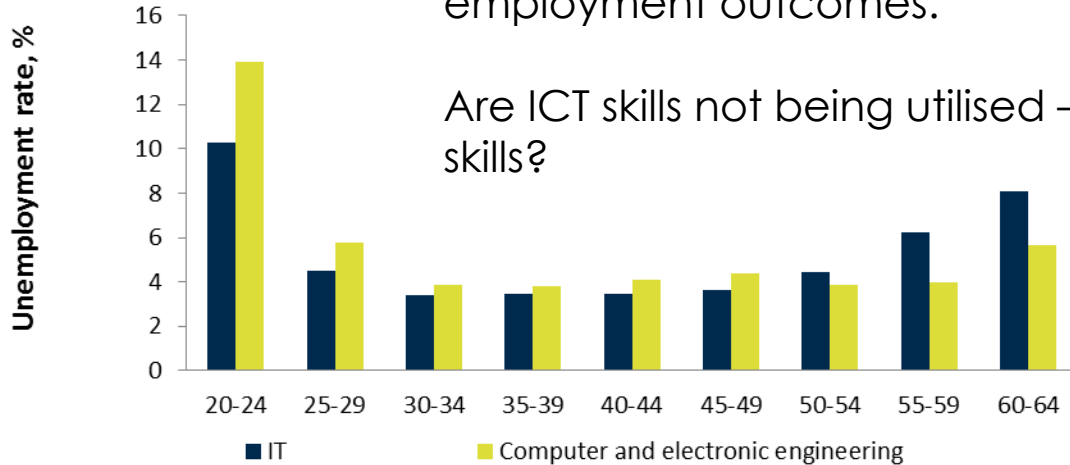
AIIA member STEM/Skills Survey

Overwhelming view - there is a job ready skills gap in ICT graduates, both in quantity and quality

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AIIA Member STEM Survey

- **84%** believe there is job-ready skills gap in Australian Graduates for the ICT industry

- Key areas of deficiency:
  - Academic Knowledge: Design thinking; Business informatics
  - High Order Skills: communication; initiative; complex & creative problem solving; project management; understanding business & industry
  - Hard ICT Skills: Security, cloud, certification, big data & analytics

  - Qualitative comments
    - Lack of modern coding language knowledge
    - Low digital business skills
    - Poor business understanding and application of technology to solve business problems

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Academic Knowledge

Agree or strongly agree

That Students/Graduates are capable in:	AIIA
Software Engineering	73%
Design Thinking	**31%**
Information Systems	74%
Business Informatics	**34%**

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Higher Order Skills

Agree or strongly agree

That Students/Graduates are capable in:	AIIA
Communication	**43%**
Initiative	**41%**
Aptitude for Learning	76%
Complex Problem Solving	53%
Creative Problem Solving	**42%**
Project Management	**31%**
Quantitative Skills	60%
Understanding Business and Industry	**15%**

Hard ICT Skills

Agree or strongly agree

That Students/Graduates are capable in:	AIIA
Software	77%
Systems	53%
Security	**39%**
Cloud	**42%**
Industry Certifications	**31%**
Data Analytics	**39%**
Networks	62%
Big Data	**19%**
Programming	71%

* More Tertiary focus on current transformation case studies e.g. cloud & big data in action

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Additional anecdotal feedback

- Reluctant to hire people with deep discipline knowledge

- Happy to take graduates with relevant broad skills companies can 'train' themselves to meet their own needs

- Looking overseas or basing parts of their organisation overseas to attract talent

- Some companies investing in courses they can recruit from

- Increasingly reliant on industry certifications

- New knowledge acquisition and employment paradigms emerging

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Where to from here

Six priorities identified

Priority 1: Develop a reciprocal exchange program between university academics and industry

Priority 2: Embed industry practices in IT and engineering courses wherever possible.

Priority 3: Raise the profile and recognition of teaching (relative to that of research)

Priority 4: University and industry work together to define graduate attributes that are important

Priority 5: Academia and industry work together to implement for credit work integrated learning at the national scale in ICT. This will align with the National Strategy on Work Integrated Learning.

Priority 6: Examine new education models which deliver the right graduate skills e.g. higher level apprenticeships.