



## Findings

- **SFIA to define ICT Career Roles**
  - Good examples in Industry
  - Academic examples largely aspirational or limited to mapping exercises
- **Cognition, Experience and Authentic Learning**
  - SFIA skill sets readily identified for given role
  - Assumptions necessary to identifying higher levels
  - Practicum, WILL, Industry-placements important
  - Various factors can lead to varying outcomes

## Findings

- **Soft Skills**
  - Focus on technical skills over soft skills
  - Experienced SFIA practitioners able to identify soft skills in context of technical skills
  - Less experienced struggled to develop shared meaning regarding the implicit connection
- **Processes and Related Frameworks-**
  - Mappings to other frameworks needed
  - Available but not widely disseminated

## Findings

- **Closing the Loop**
  - Case studies a common approach taken in relation to Green IT example
  - E-Portfolios to collect and reflect on evidence of SFIA skill attainment

## SFIA-Bloom's-AQF Mappings

SFIA Level	SFIA Autonomy	Bloom's Level	Bloom's Cognition	AQF Skills
1	Follow	1	Remembering	Remember
2	Assist	2	Understanding	Understand
3	Apply	3	Applying	Apply
		4	Analysing	Investigate, analyse
4	Enable	5	Evaluating	Critical reflection, evaluate
5	Ensure, advise	6	Creating	Create
6	Instantiate, Influence	These SFIA skills are generally achievable through experience in the ICT industry		
7	Set strategy, inspire, mobilise			

# The ICT Profession Body of Knowledge



- Identify roles, skills, level of autonomy & responsibility
- Identify role-specific knowledge
- Identify complementary knowledge
- Design course structure as part of a holistic program
- Collect artefacts to demonstrate skill attainment

ACS (2012) The ICT Profession Body of Knowledge, Adapted from Gregor, S., von Kinsky, B.R., Hart, R., and Wilson, D. (2008). The ICT Profession and the ICT Body of Knowledge (Vers. 5.0), Australian Computer Society, Sydney, Australia.

## Queensland Government SFIA-based position descriptions



### Software Designer

#### (Programming/software Development (PROG) (Level 4 - Enable)

Designs, codes, tests, corrects and documents large and/or complex programs...

#### Consultancy (CNSL) (Level 5 - Ensure, advise)

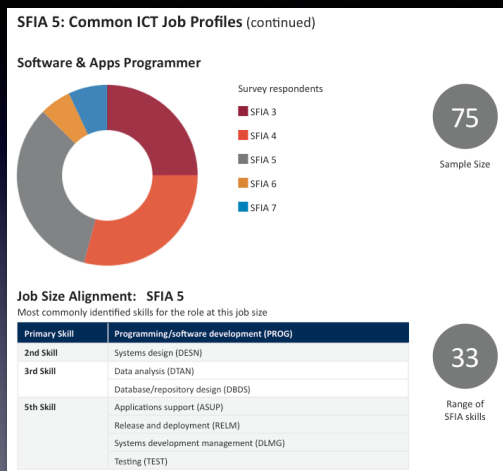
Takes responsibility for understanding client requirements, collecting data, delivering analysis and problem resolution. Identifies, evaluates, and recommends options, implementing if required...

#### Technical Specialism (TECH) (Level 5 - Ensure, advise)

Maintains an in-depth knowledge of specific technical specialisms, and provides expert advice regarding their application...

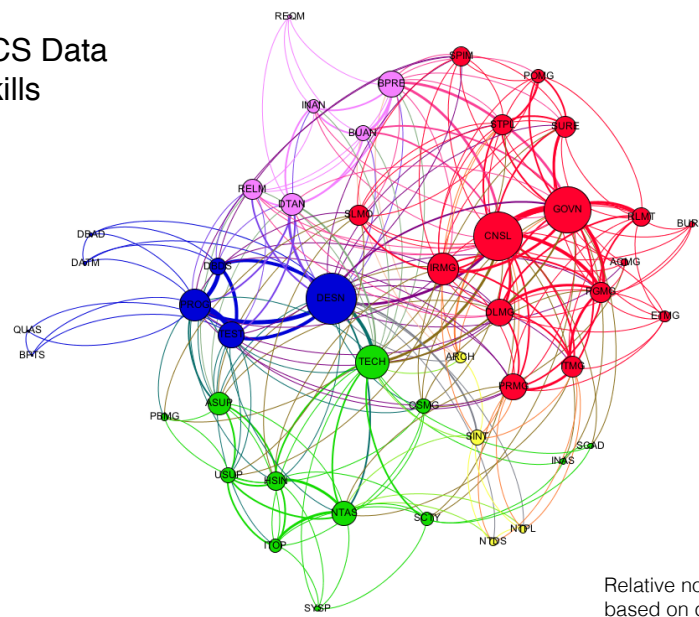
Queensland Government (2013) ICT Career Streams, <http://www.qgocio.qld.gov.au/products/ict-workforce-capability/careers-and-programs/ict-career-streams>

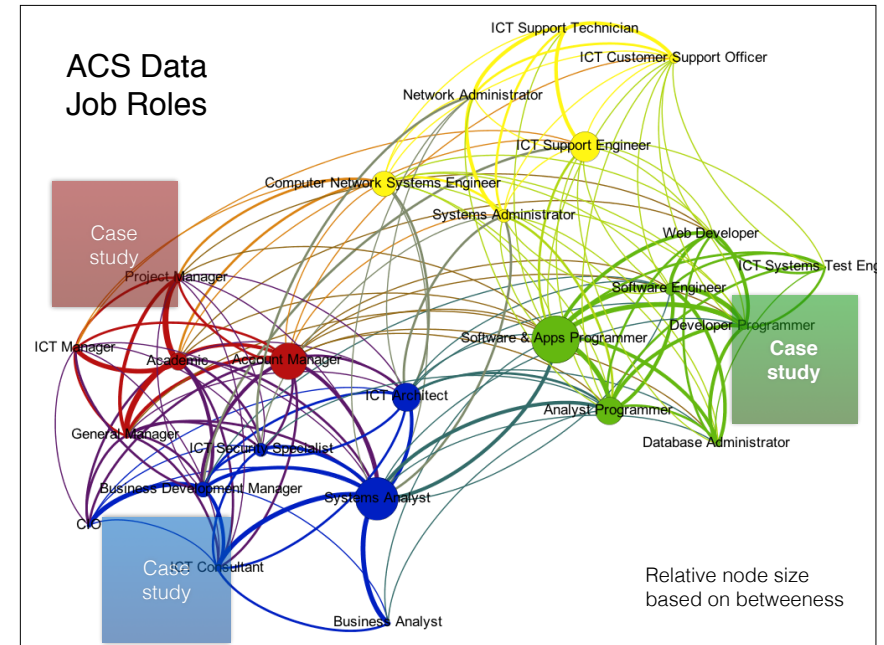
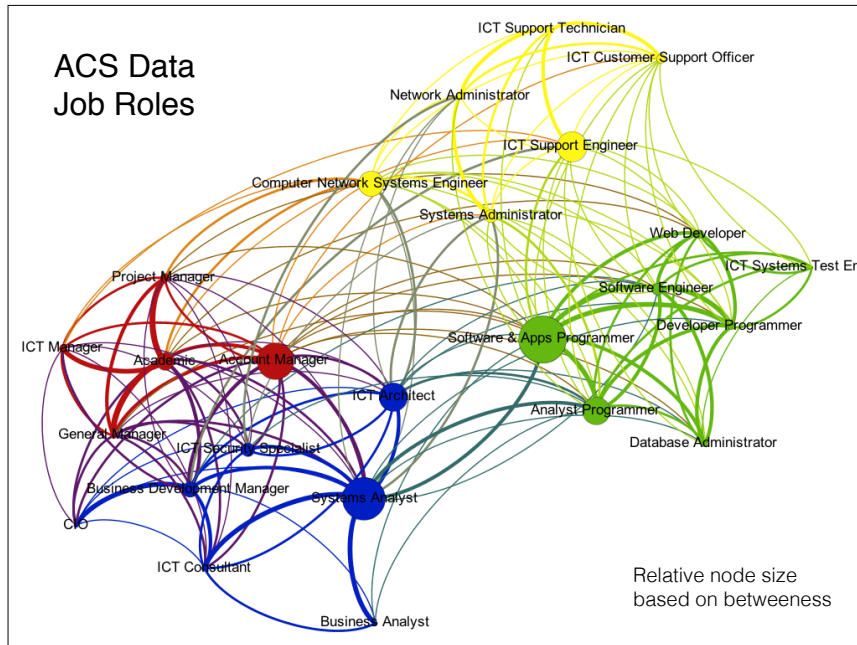
## ACS survey of SFIA skills reported by members in various job roles



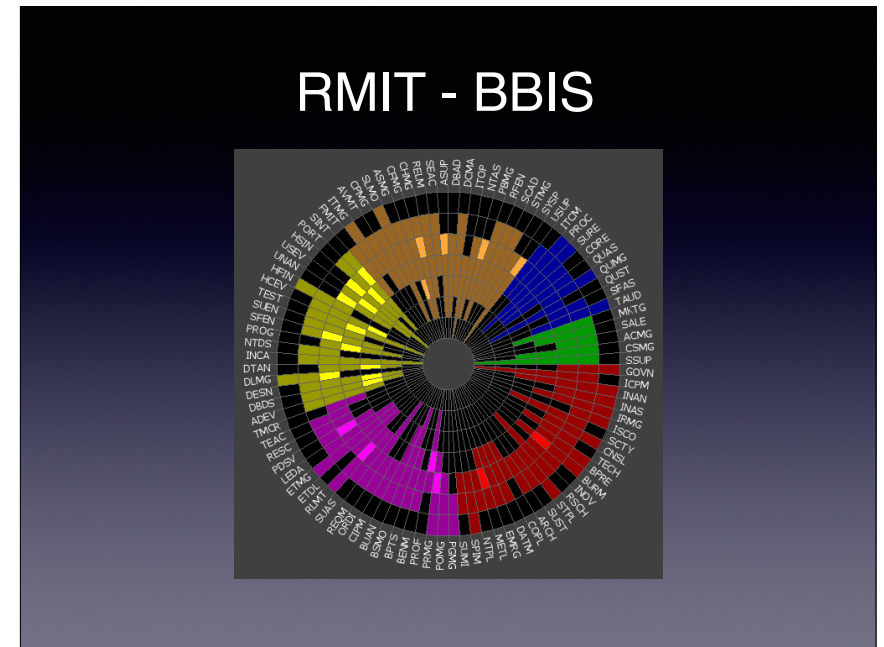
ACS (2013) Common ICT job profiles & indicators of skills mobility: ICT Skills White Paper, <http://www.acs.org.au/information-resources/ict-skills-white-paper>

## ACS Data Skills

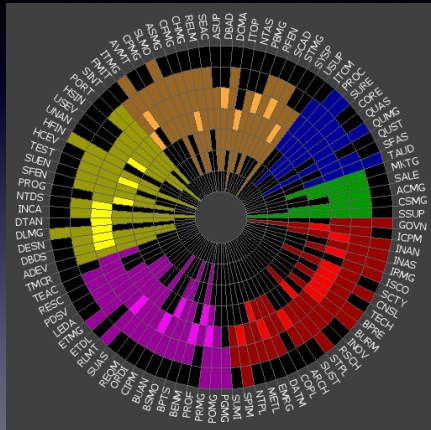




- ## Case Studies
- University of Tasmania Bachelor of ICT
  - RMIT Bachelor of Business
  - ACS Computer Professional Education Program (CPeP)
  - Hypothetical Data Science Position



## UTas - BICT



## Recommendations

- Use published sources to inform discussions with Industry Advisor Boards regarding ICT career roles
- Use network analysis to consider related skills and roles based on real data, not opinion and personal views
- Use SFIA Skill descriptors to inform assessment design
- Visualise SFIA skills and responsibilities for benchmarking and documentation purposes
- Don't reinvent the wheel and leverage existing mappings and case studies(e.g. SFIA-Bloom's AQF Mappings)

**Focus Groups:** Brisbane, Melbourne, Perth, Sydney

**Workshops:** Melbourne Conventicle, ACSW ACE Conference Workshop

### Published Papers:

von Konsky, B. R., Jones, A., Miller, C. (2013). *Embedding professional skills in the ICT curriculum*. ascilite 2012, Auckland, New Zealand, Australian Society for Computers in Learning in Tertiary Education.

von Konsky, B. R., Jones, A., Miller, C. (2014). *Visualising Career Progression for ICT Professionals and the implications for ICT Curriculum Design in Higher Education*. Sixteenth Australasian Computing Education Conference (ACE2014), Auckland, New Zealand, ACS.

### Papers in Preparation:

von Konsky, B. R., Jones, A., Miller, C., (in preparation) *SFIA: Engaging Stakeholders in ICT Curriculum Design and Management*

von Konsky, B.R., Jones, A., Miller, C. (in preparation) *SFIA Case Studies: Reflective conversations in ICT higher education*

von Konsky, B. R. (in preparation) *Network Analysis of ICT career roles*