

*Industry brief –  
Information  
Communications and  
Technology*

June 2016

# Defining the sector

## Training Package name:

Information Communications and Technology (code ICT)

## Most recent release:

Information Communications and Technology (Release 3.0)

## Sector name:

Information Communications and Technology

## Major updates history:

- **March 2015** – Primary release of the ICT Training Package (Release 1.0). This release superseded the Information Communications Technology Training Package (ICA11).
- **January 2016** – Qualifications from the Integrated Telecommunications Training Package (ICT10) Training Package were transitioned to the Information and Communications Technology Training package. Although some UoCs have remained current in ICT10 Training Package.

**Note:** There are other ICT relating UoCs that have remained current in Telecommunications Training Package (ICT02) and Information and Communications Technology Training Package (ICA05).

ICT Training Package includes:

- 44 qualifications
- 46 skill sets
- 664 native and 95 imported UoC

Sector	Information Communications and Technology			
Sub-sector	Information Technology			Telecommunications
Qualification areas	Data Entry	IT Operations and Support	Business Analysis	Rigging Installation
	Programming	Digital Media and Interactive Games	IT Strategy and Strategic Management	Network Building and Operations
	Web-based Technologies	Computer Software and Systems Development	Application Development	Network Planning and Design
	IT Security	Project Management		Telecommunications Engineering
	IT Infrastructure/ Network	System Analysis and Design		Telecommunications Network Engineering
	Testing	Database Design and Development		Telecommunications Technical
				Strategic Management

# Sector wide trends

## 1. Emerging digital technologies

### Job demand:

- Emerging digital technologies will drive increased demand for specialist ICT jobs in data analytics, cybersecurity, cloud computing, application development and automation.

### Skills needs:

- Workers need digital and digital literacy skills relating to current and emerging technologies such as data analytics, cloud computing, Internet of Things, automation, application development and cybersecurity.
- In addition to technical skills, workers will need adaptability to understand and embrace new technologies and ways of working in a digital era.

## 3. Changing workplace roles

### Job demand:

- The disruption caused by emerging technologies is resulting in significant changes in the employment landscape. This will impact the types of skills required in the ICT sector as well as how future jobs will be undertaken. New and emerging ICT roles include strategic and managerial positions, and ICT professionals specialising in security, compliance and risk management.

### Skills needs:

- Workers will need strategic, managerial and risk management skills. Ethics and professional integrity will also be important in many of these emerging roles.
- Lastly, to transition into ICT roles in various industries, communication, organisational understanding and teaming skills will be important.

## 2. More connected economy i.e. NBN

### Job demand:

- Australian businesses are increasingly able to embrace digital connectivity as a core part of their operations, especially as access to high speed broadband is rapidly increasing. As a result, there will be increased demand for new fields of ICT roles relating to cybersecurity, data management, data confidentiality, business development, commercialisation and innovation.
- ICT professionals will also be required to work in virtual teams.

### Skills needs:

- Workers need digital and digital literacy skills relating to cybersecurity, data management and data confidentiality.
- In addition, workers need virtual collaboration, commercialisation and entrepreneurial skills to drive customer engagement and innovation.

## 4. Supporting the automation of roles

### Job demand:

- As more roles become automated, there will be increased demand for specialist ICT roles in the areas of computing, systems, diagnosis, service and maintenance.

### Skills needs:

- The priority should be on reskilling existing workers in supporting ICT services, enabling them to understand and integrate with embedded digital technologies and processes.
- For ICT professionals, technical skills required include those for the operation, service and maintenance of automated systems.

# Priority skill needs

From the initial consultations and research conducted on trends shaping the ICT sector, the following have been identified as priority skills for the ICT Training Package. These skills priorities will underpin the ICT Training Package development and will be vital for ensuring the skills required by the future ICT workforce will be up to date and fit for purpose.

Skill	Definition
<b>Digital and digital literacy skills</b>	High level technical and computational thinking skills and knowledge required to understand and work with current and emerging technologies such as data analytics, cybersecurity, Internet of Things, cloud computing, application development and automation.
<b>Skills for working in virtual teams</b>	Ability to work productively, drive engagement, and demonstrate presence as a member of a virtual team.
<b>Customer (client) centric skills</b>	A specific approach to doing business that focuses on understanding customer needs and concerns.
<b>Strategic shaping and thinking</b>	When applied in an organisational strategic management process, strategic thinking involves the generation and application of unique business insights and opportunities intended to create a competitive advantage for a firm or business.

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