IRC Briefing Paper

Automation Skills
Cross-sector project: Case for Change

What did we set out to achieve?

The project aimed to identify skills shared by multiple industry sectors in relation to automation, and recommend training package developments and modifications that will enable the use of training products across multiple industries, thus reducing duplication and enhancing skill transferability.

This work will contribute to Australia having training products that can support and sustain automation-enabled economic growth through the development of skilled workers.

What did we hear from stakeholders?

Stakeholders from a wide range of industries expressed support for the development of training products to build the workforce skills and knowledge required for automation. Consultation for the project indicated that the impact of automation cannot be universally predicted as technologies will evolve rapidly over the next five years and uptake will vary widely across industries.

Stakeholders frequently reported a lack of critical know how, expertise and skills as challenges to an organisation's ability to rapidly respond to opportunities to automate processes or activities. The social impacts of automation were also identified as a major challenge for employers, and for society more broadly. There was seen to be a need for training products to include the skills and knowledge to consider and manage the social implications of the move to automated work processes. Transferable, underpinning skills – including STEM skills, problem solving, entrepreneurship, creative/design and collaboration – were also identified as important for consideration in the development of training products to support automation.

With regards to implementing cross-industry training products in automation skills, stakeholders expressed concern about the availability of trainers and assessors with the competency and experience to train and assess automation skills, and the difficulty of developing training products that are generic enough to apply across multiple industries yet able to be aligned to the specific skills and knowledge required by individual industries.

What are we proposing?

The changes proposed are:

1. Develop new units of competency, or adapt existing units, to address required skills within the following domains:

   a. Assessing the business opportunity for automation
   b. Designing and testing for automation
   c. Optimising business outcomes through automation
   d. Planning change and automation deployment
   e. Managing deployment, including maintenance and evaluation.

2. Develop five new skill sets, using the new automation units, as follows:

   a. Work with automated technologies or processes (AQF 3/4)
   b. Enable business adoption of automation (AQF 4)
   c. Deploy business process automation (AQF 4)
   d. Drive business adoption of automation (AQF 5/6)
   e. Lead business adoption of automation (AQF 8)

3. Develop nine new qualifications, using the new automation units, as follows:

   a. Certificate III in Industrial Automation
   b. Certificate IV in Industrial Automation
   c. Certificate IV in Business Process Automation
   d. Diploma of Industrial Automation
   e. Diploma of Business Process Automation
   f. Graduate Certificate in Leading Industrial Automation
   g. Graduate Certificate in Leading Business Process Automation
   h. Graduate Certificate in Leading Change
   i. Graduate Diploma in Industrial Automation

A suitable 'home' for the new units, qualifications and skill sets will need to be identified through further stakeholder consultation and consideration by the AISC, department, IRCs and SSOs.

What will the impact be on training packages?

Development of the proposed cross-industry units, skill sets and qualifications, and their adoption across multiple industries, has potential to prevent the development of many more new units. Without access to cross-industry units, there is a risk that many industry-specific units will be developed as each industry begins to grapple with the need to develop skills in automation.

If the recommendations in the Case for Change are taken up, they will have the following impact on training packages:

- Units of competency from a wide range of training packages will be considered for their potential application across industry. It is expected that a small number of these will be identified as suitable for adaptation as cross-industry units. Such a review will need to involve the responsible IRC for the target unit. Adaptation of units for cross-industry use may result in major or minor modifications made to the unit.

- Any changes to existing units of competency will require an update of:
    - packaging rules for skill sets or qualifications that include the changed unit
    - implementation guides that refer to the changed unit
    - purchasing guide and nominal hours (STA responsibility)
    - training and assessment plans, programs and resources (RTO responsibility).

Units of competency highlighted in the Case for Change as having potential to be impacted by automation are from the following training packages:

- Aeroskills
- Agriculture, Horticulture and Conservation and Land Management
- Australian Meat Processing
- Automotive Manufacturing
- Aviation
- Business Services
- Chemical, Hydrocarbons and Refining
- Construction, Plumbing and Services
- Creative Arts
- Defence
- Electrotechnology
- Food Processing
- Forest and Wood Products
- Furnishing
- Gas Industry
- Health
- Information and Communications Technology
- Laboratory Operations
- Manufactured Mineral Products
- Maritime
- Metal and Engineering
- National Water
- Plastics, Rubber and Cablemaking
- Printing and Graphic Arts
- Property Services
- Public Safety
- Public Sector
- Resources and Infrastructure Services
- Sustainability
- Sugar Milling
- Tourism, Travel and Hospitality
- Transmission, Distribution and Rail Sector
- Transport and Logistics

The availability of new automation units, skill sets and qualifications will have implications for any training package that may benefit from the importation and use of these cross-industry products. Industry-specific support resources may need to be developed to guide the implementation and contextualisation of cross-industry products in different industries.

The project analysis of existing training packages identified units of competency where automation has the potential to transform work tasks or processes. These units have been identified across 33 training packages and are listed in Attachment B, Table 1 of the Case for Change. Many of these units are highly industry specific and are unlikely to have cross-industry application, and their ongoing industry currency and applicability is the concern of the responsible IRC. However, some of these units may be suitable for use across multiple industries and their potential should be considered in relation to the five skills domains identified for new unit development.

Next steps

Skills Impact is asking IRCs to consider this document, provide feedback and if possible indicate approval and support for the Automation Skills Case for Change via this link: https://www.surveymonkey.com/r/AutomationSkills

While we are hoping to receive a response in November 2017 we will be able to take additional feedback up until 7 December 2017.

IRC approval for the Case for Change is provided on the understanding that these are proposed changes only, and further consultation will be undertaken if the Case for Change proceeds to a second phase of work. Ultimately it will be the home IRC's decision whether to adopt any proposed changes that involve existing units in the IRC's training package.

Approve and support the Automation Skills Case for Change

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