Victoria's Future Industries - Professional Services
Swinburne discussion paper

Professor John Wilson
Acting Deputy Vice-Chancellor (Research and Development)
Executive Dean, Faculty of Science, Engineering and Technology
Swinburne University of Technology
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Introduction

Swinburne University of Technology ("Swinburne") is pleased to make this submission to the State Government of Victoria's Future Industries task force. We believe it is vital for Victorian business, industry, government and communities to have these discussions about how we grow or transition existing industries into new and emerging markets.

Victoria's professional services industries are in a unique position to positively and directly affect employment and activity across a wide range of Victorian sectors. In line with the 'Scope' section of the discussion paper, Swinburne's core areas of research and teaching expertise span the majority of the industries in the sector across both professional, scientific and technical services, and financial and insurance services. Swinburne has chosen to focus its response on ICT which is the underpinning force for change throughout every industry in the professional services sector. Included are a number of recommendations for the consideration of the Victorian Government.

We ask that you review this response in combination with:

- Simona Jobbagy's participation in the Future Industries Fund Professional Services Workshop on September 9, 2015
- Swinburne's contribution to the discussion on Victoria's first Creative Industries strategy, submitted 20 July 2015
- Swinburne's contribution to the discussion on Victoria's Medical Technologies and Pharmaceuticals submitted 14 September 2015, which includes some recommendations also relevant to the professional services sector

1. **Where are there specific skills and training gaps in professional services and how best can we build, attract and retain the right skills for this sector going forward? (Question 1)**

   The Victorian ICT sector is challenged by a number of issues related to skills and training:

   - Since the IT job market began to retract in 2012, the Federal Government has not commensurately capped the number of '457' visas being issued to international IT workers. With an oversupply of overseas-born IT workers competing in a shrinking market, domestic IT graduates face a highly competitive job market and limited employment prospects. A compounding factor is the increased amount of offshoring of work by Australian public and private organisations. As work opportunities decline, so will Australian enrolments in IT - resulting in a local skills gap.
   - Without industry relevant skills, graduates making their entry into the job market can be unprepared for changing market demands, and struggle with the transition from university to employment. Often this is because students lack the 'soft' team-based, communication and relationship skills that complement the technical 'hard' skills they've gained. To ensure that students graduate with relevant technical and non-technical skills, universities need to continually involve industry in the development and delivery of course content. One of the ways Swinburne has achieved better employability outcomes for graduates is through its work integrated learning programs, designed in close partnership with industry. Work integrated learning enables students to complement their formal academic activities with real industry experience, improve their job readiness and gain a competitive employment edge.
   - Swinburne notes that the ICT Industry places limited focus and resources into the continuing professional development of their IT staff despite being a rapidly changing sector. We believe there should be increased focus on innovation within the sector and greater emphasis on developing high-value products and services for a global market.
   - Movement of people between government, industry, research labs and universities is too difficult at present. A lack of mobility between these groups is a barrier to effective collaboration and prohibits technology/knowledge transfer across industries and sectors.

   It has never been more critical for industries to embrace technology in order to remain competitive. Therefore universities should look beyond the classic ICT courses and develop new offerings that infuse the broader professional services education offerings with a digital and IT focus.

   Increasingly we are seeing technology intersect with law and a key challenge facing the legal profession is sourcing staff with a combination of legal and IT skills, a discipline that traditional law degrees don't usually cultivate in students. In response to this and other market gaps, Swinburne launched a law school in 2014, with a special emphasis on digital innovation, invention, creativity and intellectual property. Swinburne law students also complete three 20 day law-related professional experience placements in industries spanning technology, medical, film production, media and entertainment, design, advertising, as well as traditional law firms.

Recommendations:

A. Swinburne recommends that the Victorian Government put in place measures to encourage the use of local IT expertise for both private and Government IT contracts. This will support both the current and future development of local IT expertise. We further suggest that the Victorian Government lobby to make points tested visas (such as the 457 visa) more difficult to obtain for IT and other over supplied roles. For example, The Australian Computer Society currently only requires an IELTS English language standard of 6 which is less than the required English skills needed by professionals in other sectors.

B. The Victorian Government can play an active role and stimulate greater collaboration between government, universities, industry and research bodies through staff exchanges and research collaborations. The previous technology voucher program was an effective scheme that encouraged collaborations that would otherwise not have occurred between research and industry; as is the Federal Government's Research Connections scheme that places researchers in industry.

2. How are workforce management practices and employee expectations changing in this sector? (Question 3)

Workforce management practices are changing in the following ways:

- More use of contract staff
- More use of freelance workers, to manage peaks and troughs in demand
- More emphasis on hiring employees with a broad range of technical and non-technical skills
- Decreased demand for staff by large corporate organisations due to outsourcing
- An increase in the number of IT roles in small to medium enterprises ("SMEs")
- Limited continuous professional development of staff

The 'casualisation' of the workforce has transformed the relationship between employers and employees. It has brought benefits such as greater flexibility however, it has also created challenges. These include the logistical demands of managing a dynamic workforce and reliance upon external employment agencies. For casual employees, it means greater uncertainty and limited opportunity for quality staff to be recognised and rewarded.

Technology will play a key role in supporting the transition to a more casual workforce. An example of this is 'Prompa', currently being trialled by Australia's hospitality industry, a start-up that Swinburne's Software Innovation Lab has collaborated on in recent years. Prompa provides a single, cloud-based system which connects employers and workers through a common rostering platform. It streamlines shift management by enabling rosters to be created, updated and viewed in real-time via the app. Supervisors can rate the staff performance, and workers in turn can rate their supervisors. Hours worked are also tracked, ensuring that workers do not exceed maximum hour restrictions to provide fairer shift allocation and saving preventable penalty rate costs. Using a rapid development process, the system was developed through continuous prototyping. As a start-up, prototyping was essential for Prompa, enabling them to test and modify their product with prospective

clients. The result is a fully scalable platform with the potential to fundamentally transform staff management.

Software solutions like Prompa change the way industries manage their workforces. Likewise, employment opportunities are generated in response to such changes, such as development of new software technologies (for example Uber).

3. What impact is outsourcing having on business models and employment levels across the sector? (Question 4)

In the IT sector, the impact of outsourcing has been negative due to:

- Loss of local expertise
- Resultant lack of Australian/Victorian technology innovation
- Resultant loss of IP
- Misuse of 457 Visa scheme
- Harder to attract students to IT courses due to constricted local job market

Outsourcing leads to a hollowing out of the local ecosystem, and it limits the potential to create future value via innovation and development. Furthermore, companies may strangle their employment pipeline as university-qualified employees often begin in lower level positions such as call centres (which is the type of work that is generally outsourced) and then progress to higher level positions within an organisation. It is essential that universities focus on producing graduates who possess high value-adding skills so our younger workers can remain competitive in today's job market.

4. How important is networking to professional services businesses? What are the benefits and what type of networking is most valuable? (Question 5)

In today's world, networking is crucial to business innovation and market growth. Networks can lead to the creation of strong communities of interest and practice rather than sporadic discussion forums. They enable the sharing of expertise, experience and solutions. Meetup groups, industry conferences and LinkedIn are very popular networking facilitators. Joining associations is another powerful way for businesses to connect to others within their industry and can lead to the discovery of new opportunities, new suppliers, customers and staff. Industry associations can also give SMEs the scale they need to tackle whole-of-industry challenges.

Recommendations:

C. Swinburne recommends that the Victorian Government support high-functioning industry associations by assisting with sustained resourcing and through the provision of spaces or marketing support for networking activities.

5. What particular challenges do regional firms, small and medium firms and start-up businesses in professional services face? (Question 6)

Start-ups experience the following challenges:

- Global competition for skilled IT workers
- Capital and cash flow challenges
- Funding challenges
- Expansion into global supply chains
- Introducing new and emerging technologies
- Lack of time and funding for research and collaboration

Recommendations:

D. SMEs experience similar issues as start-ups, as well as some labour market skill issues. As a result, these organisations need to be more resilient. Networking is crucial to these businesses and the Victorian Government can support this through providing co-working spaces for start-ups and running targeted workshops and events for SMEs.

6. What are the big technology opportunities for the sector and how can Victorian businesses best capitalise on them? (Question 7)

The big technology opportunities for the IT sector are innovative solutions for the emerging "social enterprise" including:

- Retail – crowd sourced requirements, design, usage, reviews of products
- Financial services – micro-finance, tailored packages, on-demand services
- Government services – transport, infrastructure especially demand-based supply – personal, group, demographic data etc.
- E-Health – wearable data, personalised solutions e.g. fitness, dietary, treatment
- Education – learning analytics merging Learning Management System, Open Learner Model, group interaction, behavioural data
- Use of Cloud and mobile apps
- Emerging professional services opportunities related to the Internet of Things and cognitive systems e.g. advanced ICT technicians to support industry 4.0/ new era of manufacturing

Victorian businesses can capitalise on these opportunities by collaborating with universities and other research organisations. University-Industry research collaboration can drive the kind of innovation which will enable Victoria to compete more effectively on a global scale.

An innovative example of university-industry collaboration is Swinburne's Design Factory, the only one of its kind in Australia and part of the Design Factory Global Network. Design Factories are a platform for design-led innovation, enabling students and academics from engineering, ICT, business and design to collaborate with industry on real global challenges. The network fosters international collaboration with leading universities and organisations, on projects of international significance, tapping into emerging technologies.

As mentioned in the Medical Technologies and Pharmaceuticals paper submitted 14 September 2015, Swinburne commonly finds that SMEs are too small to make the best use of the many funds, collaboration possibilities, partnership activities and university collaborations open to them. For SMEs, people are their most valuable and least available resource. Most of the existing collaborative funding models require industry to contribute both cash and in kind, via personnel commitments. Most SMEs do not have the staff available to undertake a collaborative or non-core business project; they have no time available to interface with such a project effectively.

SMEs need the funding to employ someone to undertake the activity or have access to a pool of flexible technical staff – such as a technical services consultancy for the professional services industry. This consultancy would employ staff on retainer to provide a localised speciality service to SMEs to enable partnerships to occur. The model could be similar to that used by Golder Associates for the mining sector - http://www.golder.com.au.

The concept of a Technical Services Consultancy sector could be a valuable addition to the local economy and provide avenues for researchers to transition from academia to industry as well as an attractive resource for SMEs and larger companies wishing to establish themselves in Victoria. It could be the route by which employees from other sectors are up-skilled with training programs in regulatory and GMP processes. One model may be to create a partnership between CSIRO, universities and local industry to establish the framework for such an entity and pilot the scheme. Longer term, if successful, the model would be expected to spin out into new companies, who may in turn specialise in specific aspects of the sector.

Recommendations:

E. We recommend that the Victorian Government put in place measures to facilitate greater collaboration between universities and industry towards the creation of a technical services consultancy sector, that can provide a range of expert, industry specific staffing solutions on a short-term basis to support both industry and university research and development projects in Victoria.

7. What are Victoria's key capabilities and competitive advantages? How could they be better promoted? (Question 17)

Victoria is an attractive place to live and Melbourne is frequently ranked among the world's most liveable cities. Victoria boasts some good SMEs and start-ups but they need to be nurtured in order to grow. Victoria has some excellent universities where world-leading research is taking place but this also needs to be nurtured and industry-university collaboration needs to be stimulated to ensure knowledge transfer across the entire sector.

There is potential for a 'One Victoria' (and 'One Australia') approach to IT innovation in terms of education, upskilling, reskilling and research but the right drivers of behaviour are required. For example, the Federal system of funding does not currently reward university-industry collaboration; the majority of Research Block Grant funding is allocated based primarily on academic publications. Until funding metrics reward industry-focused research, we won't see a change in behaviours or outcomes.

Recommendations:

F. We recommend that the Victorian Government promotes Victoria/ Melbourne as the 'IT hub' of Australia, at the cutting edge of ICT innovation, projects and careers. This will increase the attractiveness for employers to recruit from Victoria's pool of talent.

G. We recommend that the Victorian Government maintains a clear focus on measures that strengthen collaboration between companies and research organisations.

8. What are the key things that the Victorian Government should be doing to support growth and competitiveness in Victoria's professional services sector? (Question 18)

To support growth and competitiveness in Victoria's ICT sector, the Government could put in place measures to support the following initiatives:

- IT innovation hubs which are specifically designed to promote collaboration and innovation
- Support start-up co-location – start-up businesses make huge strides by "living" together, using each other's talents and services, learning from each other, and being exposed to educational resources and mentors
- Encourage and support strong work integrated learning models at Victorian universities
- Use of tax and other government measures to support R&D innovation
- Promote and support collaboration between industry and research providers
- Use local providers for Victorian Government IT provision
- Discourage outsourcing Victorian jobs by limiting access to Victorian Government grants or contracts unless local content can be demonstrated
- Increase regulation to limit the number of private provider courses with poor outcomes

Recommendations:

H. We recommend that the Victorian Government supports measures to increase the opportunities for industry collaboration with universities and other research providers, as well as deferral of start-up taxation including payroll tax, PAYG and GST liabilities for a period.

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Jane Ward, Director, Collaborations & Partnerships
Belinda Anson, Senior Manager, Collaboration & Partnerships
Professor Bernadine Van Gramberg, Dean, Swinburne Business School

Sincerely,
Professor John Wilson
Acting Deputy Vice-Chancellor (Research & Development)
Executive Dean, Faculty of Science, Engineering and Technology
Swinburne University of Technology