Diversity in the workforce

In partnership with ACS

Change can drive productivity

Women pivot to IT through 'returnship'

Hiring We need to branch out from the status quo.

Georgina Dent

Building a diverse technology workforce in Australia remains a work in progress with the under-representation of key demographics across the population persisting.

Professionals Australia found 80 per cent of IT professionals were male and more than half of IT workers were 25 to 39, according to a 2010 report.

Despite some improvements almost a decade later the report, entitled *Addressing workforce challenges: diversity and gender issues in IT*, has barely aged.

"There is a massive amount of work to do," Carsales managing director of consumer business Ajay Bhatia says. "History and stereotypes perpetuate the status quo and we need to branch out from that if we want to make a dent in diversity."
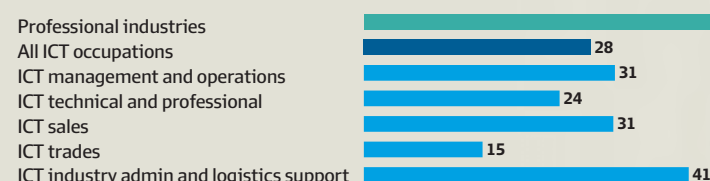
ACS vice-president, communities, Craig Horne says failing to address this problem will cost the industry and the national economy dearly.

"Diversity within the tech sector is potentially the greatest driver of productivity growth as it will help to deliver the capability, in terms of skills development, and the capacity, in relation to the supply of sufficient human capital, for Australia to meet the 200,000 additional workers we'll need by 2023 to become a world-leading digital economy," Horne says.
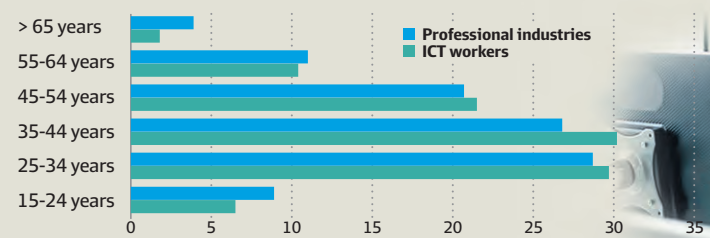
The participation of women in ICT roles remains significantly lower than it is across broader professional occupations; women currently comprise only 28 per cent of all ICT workers in Australia, compared with around 45 per cent female representation across all professional industries, a figure that has not changed since 2015. Only 12 per cent of ICT workers are over 55, compared with 15 per cent generally. Cultural diversity remains a live concern too.

The new workforce

Share of women in information and communications technology occupations, 2017 (%)

Professional industries	45
All ICT occupations	28
ICT management and operations	31
ICT technical and professional	24
ICT sales	31
ICT trades	15
ICT industry admin and logistics support	41

Age profile of ICT workers, 2017 (%)

Professional industries
ICT workers

> 65 years
55-64 years
45-54 years
35-44 years
25-34 years
15-24 years

SOURCE: DELOITTE ACCESS ECONOMICS

The extent to which culturally diverse men and women are represented in Australia's ICT workforce is unknown.

Research published by the Diversity Council of Australia in 2017 found that if ASX directors were 100 people, about two would be culturally diverse women, six would be Anglo-Celtic women, 28 would be culturally diverse men and 64 would be Anglo-Celtic men.

Homogeneity in the ICT workforce is a global phenomenon. According to The World Economic Forum women represent about 26 per cent of the overall science, technology, engineering and mathematics workforce in developed countries, where numbers are skewed towards relatively more women in science and mathematics, and fewer in engineering and technology.

Board director and AMP Capital chairman Ming Long says failing to tap into a wider talent pool will leave Australia exposed.

"There is a deep pool of highly capable and talented culturally diverse women out there. If we don't harness this, we risk missing out on talent, skills and important new perspectives," Long says. "With an increasingly global marketplace and disruption, this is something Australian organisations can't afford not to do."

Divisional technology executive at AGL Dayle Stevens says her professional experience of diversity in practice mirrors what the research indicates.

"You get better outcomes," she says. "As a leader I know I am not the perfect person so I need to surround myself

To get the best outcomes you need a broad range of experiences.
Peta Ellis, CEO, River City Labs

with people who fill out different areas and strengths. When you get different backgrounds and experiences around the table you remove silo thinking and solve problems with a much broader perspective."

While Stevens acknowledges there is work to do she says there is cause for hope.

"Australia's tech workforce is in a better place than say the US but we are still so influenced by what we hear from Silicon Valley," Stevens says. "It's important to realise we are ahead and doing something and we need to be confident enough to keep charging down this path."

Peta Ellis, CEO of River City Labs, says the fact there's an increased awareness of why diversity matters is promising.

"To get the best outcomes and be truly innovative you need a broad range of opinions and experiences that you cannot get when everyone comes from the same socio-economic class or gender or background," Ellis says. "You are completely missing the point if you think diversity is about ticking an HR box on cultural background or gender. Getting diversity means understanding the true value it brings."

ACS's Horne agrees that diversity is not shorthand for hiring more women.

"While gender diversity is extremely important, it's just as important to embrace individuals of different backgrounds, age, cultures and under-represented and under-utilised groups to create a workforce that can tackle the big challenges of our time, seize opportunities and ensure Australia continues to prosper."

Retraining

Georgina Dent

Faced with a shortage of female IT graduates and relatively low numbers of women across the organisation, MYOB wanted to find an alternative approach to recruitment.

In 2016 it launched an experimental program, called DevelopHer, to see if it was possible to teach people with no previous IT experience basic coding in 16 weeks. "DevelopHer … forms part of our contribution to growing the pipeline of women in technology," MYOB chief employee experience officer Helen Lea says.

"We take women who are not from coding or engineering backgrounds who may be returning to work, or wanting to try a different career direction, and we sponsor them through a paid internship to develop base technical knowledge and skills to build a career in tech."

The initial offering in 2016 attracted hundreds of applications from which three recruits were selected to complete the in-house coding course. Reskilling talent is an investment Lea says MYOB is keen to make.

"We believe investing in people from other backgrounds is a way to help close the skills gap and change the pipeline dynamic," she says. "If we believe they have the aptitude and cultural fit we can add to their skills base."

A career in tech is not a proposition that suits everyone and there are challenges in reskilling, but Lea says it can be done successfully.

"There are people from other backgrounds with an ability to adapt their existing skill set into something more technical," Lea says.

"It requires an investment in base technical skills to build a career for the longer-term, but for people with an affinity with tech or people who are curious and wired to solve problems can make the transition very successfully."

This type of "returnship", designed to ease the re-entry period back into work, is a growing phenomenon aimed at luring women back into the workforce.

Cultural shift can pay off on bottom line

Culture

Georgina Dent

McKinsey has found that companies in the top bracket for gender diversity are likely to outperform.

In 2014 McKinsey found that companies in the top quartile for gender diversity on their executive teams were 15 per cent more likely to experience above-average profitability than companies in the fourth quartile.

In their expanded data set in 2017, drawing on more than 1000 companies covering 12 countries, this number rose to 21 per cent. For ethnic and cultural diversity, the 2014 finding was a 35 per cent likelihood of outperformance, comparable to the 2017 finding of a 33 per cent likelihood of outperformance.

A 2014 study, conducted by researchers at the Massachusetts Institute of Technology and George Washington University, found that transitioning from a single-gender office to an office evenly split between men and women translated into a 41 per cent increase in revenue.

In 2011 Forbes published a report concluding that the commercial perks of diversity include driving innovation and creativity, improved understanding of, and penetration into, different markets, attracting top talent and securing global success.

The number of studies reinforcing the business case for diversity are endless but despite the unequivocal benefits the dial has not moved dramatically.

AGL's divisional CIO Dayle Stevens says wholesale change has not occurred because it necessitates a departure from the status quo.

"Going out of your way to look for talent that brings different experiences is not how our business and organisations have traditionally operated," she says. "Traditionally there has been a drive to attract and recruit the same type of people."

Searching for different types of candidates – whether they come from a different industry, discipline, cultural background, gender or age bracket than "typical" candidates – takes more time and requires confidence.

"When you think about this issue at scale and start to wonder 'How can I be inclusive of 1000 people?' it can feel impossible to tackle," Stevens says. "But if leaders can bring it down to their one-on-one interactions with individuals that's how it becomes scalable and you build an inclusive culture."

Ajay Bhatia from Carsales says the first step to moving from why to how is making sure the issue and its strategic significance is understood.

"Diversity is merit. People who don't believe that believe history is the best predictor of what we should do in the future, which is contrary to innovative thinking," he says. "Diversity will help an organisation avoid the costly pitfalls of conformity. Once a business can get that openly understood everything else becomes a lot easier."

Recruiting the same types of candidates from the same pool is tempting but lazy.

"That's not beneficial to anyone," he says. "We need to be bold enough to bring in new thinkers. The trouble is we want someone to come in and be up

Danya Azzopardi: Top-down attitude needed. PHOTO: ANDREW HENSHAW

and running in three months, rather than investing more time, like six months, into bringing them up to speed."

Danya Azzopardi, a senior UX designer with SEEK, agrees creating an optimally diverse workforce that is truly inclusive is a cultural shift.

"There needs to be a top-down attitude of being open to listening and measuring success in this space by listening to people who are actually impacted by diversity initiatives," she says. "There is an attitude of ticking the box, where a business does enough to say 'we're doing this' without being willing to go beyond that and understand exactly what the problems are."

The relative lack of success with diversity initiatives – particularly in Silicon Valley – makes the case for thinking outside the square.

"We need to consider the Australian context rather than trying to follow a list of things that big name companies are doing elsewhere."

As a woman in tech, Azzopardi says two things have been particularly powerful in her career. The first was finding a mentor many years ago whose experience and background mirrored her own but who was 10 years further ahead.

"I asked her to be my mentor and it had such a big impact because there are so many things … you never learn unless you speak to someone who has done it before."

Having allies willing to elevate different voices also supports diversity.

"People who might have more privilege through their seniority, or gender or position who make space for marginalised voices to be heard, and for their perspectives to be validated, make a really big difference," she says.

Tackling the tough questions to produce change

Harassment

Georgina Dent

Bloomberg journalist Emily Chang interviewed a venture capitalist who suggested to her that hiring more women might mean "lowering our standards".

The maelstrom that followed the publication of his remark made in 2015 ultimately led to Chang writing the book, published this year, *Brotopia: Breaking Up the Boys' Club of Silicon Valley* .

Chang's investigation into the "bro-culture" exposed sexual harassment, visits to strip clubs and the general degradation of women as rife in some tech companies. It matches the culture described by American software engineer Susan Fowler in a blog post that went viral in February 2017.

It is the culture confirmed by the infamous Google Memo, a 10-page manifesto written by a former Google employee last year, explaining that women were not under-represented in tech because of the discrimination they face, but rather because of inherently different psychological traits that men and women possess.

Exactly how bro-culture permeates tech companies and alienates females is unclear but Patricia Baum Salgado, a Fellow at the Institute for Social Innovation at Fielding Graduate University in Santa Barbara, California, says her research suggests it cannot be dismissed altogether as a factor in women remaining chronically under-represented in the field.

"There is a stereotype that women leave the tech industry because they don't like programming, desire more

social interaction, or are not 'biologically fit'. But research shows that women are being driven out of the industry due to a lack of opportunities or mentoring, pay inequity or hostile colleagues."

Curbing blatantly sexist practices is one end of the spectrum, but even in organisations where that does not occur moving the needle on diversity will entail difficult conversations. "Of course there is resistance to change," AGL divisional CIO Dayle Stevens says.

"The thing that's made a difference to me is helping people to understand what's in it for them and how they can be part of that change."

Battling backlash can take a toll, which is why Stevens says it is critical to keep the big picture in mind.

"This will take time and effort but it will have a positive impact. When you run into barriers – which you will – I try to focus on why it's worth the effort to dismantle the barriers."

ACS vice-president, communities, Craig Horne says affecting the type of cultural change necessary to achieve a more diverse workforce takes courage and commitment.

"Transformational change is never easy and it takes courage on behalf of leaders because those [difficult] conversations aren't pleasant, but you need to have them," Horne says. "You need a vision and then you need to make decisions to achieve it. You have to articulate what the organisation is doing, explain why it's doing it and then say we're not going to talk about it anymore."

Linking the diversity vision with the organisation's objectives and growth is critical, Horne says, and it becomes easier with time.

American software engineer Susan Fowler has been influential in exposing the culture within the tech sector.

"Once you start to achieve success in the vision you become faster and more efficient and you don't have meaningless arguments about it," he says.

MYOB's chief employee experience officer, Helen Lea, says staying true to what change you are trying to deliver is critical.

"We try to ensure our people understand where we want to go results-wise and we give them insight into their metrics," Lea says.

"You need to be clear on expectations around change and the improvements the organisation is working towards."

It does mean working through people's fears and having tough conversations.

A senior UX designer at SEEK, Danya Azzopardi agrees that the conversations necessary to shift culture and build an inclusive work environment are not always easy and say there is def-

> **Transformational change is never easy and it takes courage on behalf of leaders because those [difficult] conversations aren't pleasant, but you need to have them.**
> Craig Horne, ACS vice-president, communities

initely a level of "anti-diversity sentiment" at play.

"If someone comes along and suggests that the attitude a person had held for their entire career isn't 'right' it can be seen as a direct challenge of that person and often times in that instance that person's automatic response is to quell the conversation," Azzopardi says. "And that obviously doesn't enact change."

Resisting the urge to shut down those conversations or shy away from them altogether is the only way to advance the cause. Without addressing culture, the best diversity measures and policies are destined to fail.

MYOB's Lea says the prize, creating a culture in which all staff feel safe and valued and able to thrive, is worth fighting for. "While building and managing a diverse team can be hard at times, without a doubt the result will be a more innovative and productive team."

Skilled workers needed to plug growing gap

Digital economy

Georgina Dent

To become a world leader in the digital economy Australia needs a further 200,000 technology workers by 2023, a 30 per cent jump that would bring the total information and communications technology (ICT) workforce up to almost 871,000 people.

Given the global skills shortage and the fact there are fewer than 5000 local graduates from ICT degrees each year, how Australia can attract, retain and develop tech talent to plug the gap is a critical challenge.

"It will take a willingness on the part of government, education and business to effect this change," ACS vice-president, communities, Craig Horne says.

"There is a real opportunity cost attached to us not creating an IT workforce that can adequately contribute to the economy."

According to research by ACS and Deloitte, ICT services exports increased by more than 60 per cent over the past five years to reach $3.2 billion, which underscores the fiscal significance of the challenge.

Comparative research indicates Australia is in the middle of the pack in terms of global competitors in the digital economy but risks falling behind in productivity and growth if the shortfall in skills, particularly in artificial intelligence, data science, cyber security and blockchain, is not addressed.

"Australia ranks 12th out of the 16 countries on business expenditure on research and development in ICT when R&D is examined as a share of a country's overall gross domestic product," Deloitte Access Economics partner Kathryn Matthews says.

"Couple this with falling behind in the supply of ICT skills in the current workforce and on STEM performance in schools, we cannot afford to be complacent."

Attracting skilled migrants and building the pipeline of talent are both necessary parts of the solution.

"Global talent is absolutely critical," Horne says. "We need to be an attractive place to Australian expats from Silicon Valley, professionals from southeast Asia, as well as professionals further afield."

Carsales managing director of consumer business Ajay Bhatia says getting migration right is crucial.

"Without getting the right people and skills into the country, the short-term problem isn't solved and without solving the short-term problem we will all suffer," he says.

River City Labs CEO Peta Ellis says ensuring visas can be obtained easily for the right talent is essential.

"We have a great offering in Australia in terms of salaries and lifestyle but if someone cannot easily access a visa to work here they won't come," she says.

"If tech talent is a stream we need coming into Australian businesses for them to scale and compete globally we are doing ourselves a great disservice if we don't make it possible for people to come."

Another potential source of tech talent in the shorter term will be attracting workers from other occupations into ICT-related roles. LinkedIn data

Craig Horne says change will take a willingness on the part of government, education and business. PHOTO: DALLAS KILPONEN

from 2016 indicates that more than 40 per cent of ICT workers had a previous role that would not have been classified as an ICT occupation.

Ellis says many large organisations are embarking on retraining and reskilling existing talent.

> **If someone cannot easily access a visa to work here they won't come.**
>
> Peta Ellis, CEO, River City Labs

"Larger corporations do understand the value of hanging on to really good employees and they are focused on transitioning employees into different roles, but outside large corporations there are fewer opportunities to do that," she says.

"Everyone can be reskilled and there is a huge opportunity, particularly

among women who are returning to work after having time off raising families."

To ensure they are taken up Ellis says these opportunities need to be as visible and accessible as possible. "Retraining talent does not necessarily need to happen just through the traditional pathway of undertaking a multiple year-long degree. There are skills people can learn on the job while they are also earning money."

Dayle Stevens, a divisional CIO at AGL Energy, says organisations need to be strategic and flexible about how they fulfil their demand for tech skills.

"We have a permanent workforce that we can supplement with contractors as necessary," she says.

"We have our own workforce that we use as much as possible but when big projects come along we will partner IT or consulting firms to create flexibility in our workforce."

Longer term, boosting the number of graduates studying IT and creating

interest in the field is an ambition, shared by government, business and universities.

Domestic undergraduate enrolments rose from about 19,000 at the start of this decade to 25,700 in 2015, and domestic undergraduate completion of ICT degrees increased from about 3000 to almost 4000 over the same period.

Domestic postgraduate enrolments and completions have also increased marginally, but remain below the peaks of the early 2000s.

"To get the pipeline interested we need to be much more open about what a career in technology actually is," Stevens says.

"We need to get out there with other organisations into schools and talking about the career opportunities so they understand it's not just sitting in a dark room coding. It's about problem solving and communication and no matter what career you're in these days, technology will be part of it."

Retraining is key to developing skilled staff

Careers

Georgina Dent

In the past two years, ACS has grown substantially, from a staff of about 50 to approximately 100, which has meant it has focused on retraining staff.

"Given the rapid expansion we have experienced and our own digital transformation journey bringing in our digital IP and product road map back inhouse, you can't just hire new people and hope it all goes well," ACS director of membership sales and marketing Daniel Reihana says.

"We wanted to lead by example and make sure we were developing talent ourselves, using best of breed technologies and providing opportunities for our own staff to grow."

ACS focused on retraining and re-skilling existing employees where possible. "There were plenty of internal opportunities and bringing people into new roles that fit the culture was part of a large cultural transformation project that we embarked on," Reihana says.

Jen Lewis and Ciara White are two ACS employees who unexpectedly found themselves in tech roles as a result, a transition they have both relished.

"I just regret not getting into [tech] sooner," White, who works as a business operations analyst, says.

Having studied business, a career in technology was not something White ever imagined. She began at ACS in a member services role and has just completed work developing an AI chat bot.

"My entire perception of tech has changed since working in it. Before I saw it as programming or coding that I'd never be able to do," she says. "Now, having worked with the teams I have a huge respect and admiration for this

> **My skills are constantly evolving and now I know I want to stay within the sector.**
>
> Ciara White, ACS

work. My skills are constantly evolving and now I know I want to stay within the sector."

Lewis, a lead product owner, studied sociology and criminology in Leeds and had no intention of working in tech.

"The key skills you need in any tech role are problem solving, relationship building and understanding where people are coming from," Lewis says. "I

Lead product owner Jen Lewis, left, and business operations analyst Ciara White unexpectedly found themselves working in tech roles. PHOTO: DALLAS KILPONEN

didn't see that side of it but it's all about breaking a problem down and working towards the outcome we all want. The work is diverse and doesn't stand still."

There is also Judy Carter, an ACS skills assessor in her 70s who very deliberately chose a career in technology back in the 1960s.

"I went to an open-day at Melbourne University when I was in Year 11 and there was an exhibition with photographs of all the computers at that time from around the world and you can imagine they were the size of monsters!" she says. "I happened to chat to a woman who had qualified into techno-

logy with a maths degree and I was very impressed. I liked maths so I thought I'd do that."

She studied maths and computer science at RMIT and has worked in technology ever since, including stints with the CSIRO, IBM, RMIT and Monash University.

"Here I am at 71 still working at IT and I haven't stopped since the moment I started in November in 1967," Carter says. "There probably is a bias towards younger workers but also experience counts for a lot and so does accumulated knowledge."

ACS' team of skills assessors, who are responsible for verifying and assessing the qualifications and skills of tech workers range in ages.

"Some are older than me and are in their 80s, there are several in their 70s and the youngest would probably be in their early 40s," Carter says.

"There are opportunities for older workers but it takes an organisation to give it, and it takes the individual to be flexible and prepared to learn constantly."

Vital to find ways to reduce unconscious bias

Recruitment

Georgina Dent

In 1952 the Boston Symphony Orchestra conducted one of the most famous recruitment tests of all time. In a bid to boost the number of women among their ranks they introduced "blind auditions" and asked musicians to play behind a curtain.

Initially more men were still picked, at which point they asked musicians to remove their shoes before entering the room to avoid the sound of high heels alerting the adjudicators to their gender.

The difference? Almost 50 per cent more women made it past the first audition.

Word spread and academic analysis shows that between 1970, when gender blind auditions were adopted widely, and the 1990s, the representation of female musicians in America's top five orchestras increased from 6 per cent to 21 per cent, and more widely from about 10 per cent to roughly 40 per cent.

The Boston Orchestra experiment is famous because it provides irrefutable evidence that unconscious bias exists.

Creating "blind audition" conditions in the hiring process has been proven to increase the diversity of hires.

For example, research shows that white-sounding names receive 50 per cent more callbacks for interviews than

ethnic-sounding names and women are often perceived as having lower technical skills than men, so hiding names from resumes allows candidates to be assessed more objectively.

Being conscious about making the process as inclusive as possible reaps rewards. After making changes in its interview and recruitment process, for example wiping all personal identifiers from each candidate's coding test, Slack has made tangible improvements in its diversity efforts.

When Stanford researchers observed more than 75 recruiting sessions held by more than 60 companies they identified countless ways the recruiters were alienating female recruits, from sexist jokes to presentations displaying only slides of men. Others have found that male-dominated industries tend to use masculine language in job advertisements that does not appeal to women.

Textio is a writing-enhancement service that uses AI to analyse job descriptions in real time, highlighting jargon, boring bits, and words that could come across as particularly masculine or feminine, to rewrite job descriptions.

Johnson & Johnson reported an additional 90,000 female applicants, representing a 9 per cent increase in its pipeline, after using Textio to refine its job postings.

Retail payment-technology company Square received twice as many applications in Australia, both male

The Boston Symphony Orchestra's "blind audition" experiment exposed inherent biases in selections.
PHOTO: AP

and female, using Textio to rewrite ads.

MYOB's chief employee experience officer, Helen Lea, says being very conscious of language in position descriptions is one way to directly appeal to more women.

"The most important thing to us when recruiting is ensuring the cul-

tural fit so as opposed to focusing on the very detailed technical skills we try to assess whether this is someone who will add to the mix of the team and organisation," Lea says.

"Rather than list technical skills we describe the candidates we are seeking as individuals who want to grow, who have a change mindset, who are interested in self-development and self-improvement.

"We find that language is very attractive to women in the selection process."

Having made a concerted effort to appeal to a broader pool of talent has garnered the organisation results.

"We have recruited over 460 employees this year across the organisation, both externally and internally, and 49 per cent of appointments have been women," Lea says.

"Our target is 50 per cent – so we are just below that but we are proud. We are just thinking about it differently and we've seen the payback."

River City Labs CEO Peta Ellis says the tech sector needs to be proactive about tapping into a deeper pool of talent.

"We cannot just expect people to come to us, we need to consider how we can take our industry to a variety of different people," she says.

"We have to adapt and shift how we make ourselves accessible to people who wouldn't necessarily step into a start-up hub in the centre of the city."