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By Gunilla Burrowes

Being more human @ work



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Gunilla Burrowes is a member of ATSE's Diversity and Inclusion Committee. She is a consultant with Gender Matters, which advises organisations on gender equity issues and provides training in cognitive bias mitigation. Dr Burrowes co-founded underwater technology company the BlueZone Group and angel investing organisation Rights House (now Hunter Angels). She also runs Eighteen04 Inc, a co-working incubator space for start-ups and scale-ups in the Clean Tech and Smart City sectors.

Industry 4.0 is here – but do our workplaces look much different to what they did under Industry 2.0? Melinda Gates says “we are still sending our daughters into workplaces that are designed for dads”.

These spaces are dominated by patriarchal and hierarchical models left over from Industry 2.0 – models designed to support mass manufacturing, scientific management and Taylorism (a century-old approach to maximising worker efficiency invented by Fred W. Taylor).

With ever-more sophisticated data analytics altering and automating today's workplaces, there's no question that digital technology and AI will transfigure the future of work.

In *The Future of Jobs 2018*, The World Economic Forum reported that machines and algorithms currently handle about 29 per cent of tasks across 12 major industries. By 2022, that proportion will leap to 42 per cent of all tasks, including 62 per cent of data processing and searches.

Clearly, there will be job losses, and the creation of new jobs we are only just beginning to conceive of. But we also have to ask who will be performing these tasks, and how. These challenges are enormous, and they're here now.

I often hear that we're not keeping up with the ethical dilemmas new digital technologies are introducing. If we are to deal with these issues successfully, we need to bridge the disconnect between our human and technical worlds.

Workplaces are where the decisions about these technologies are being made. Since these choices impact all of humanity, it's important that humanity, in all its capacities, are present in these workplaces. We need to bring the entire team with us on the journey.

The places we work need to become more human-centric. As we're beginning to address the issue of a more diverse workforce, the critical issue is inclusion.

Diversity & inclusion

There's no doubt that we've made significant progress with diversity in our workplaces, and this success should be celebrated. Many organisations have increased the numbers of women and other historically underrepresented groups on their payrolls.

Improving diversity in the workplace has predominately focused on who's sitting around that table, who's being recruited and who's being promoted. This is tracked on the basis of traditional characteristics like gender, ethnicity, sexual orientation and disability.

Diversity is an easy concept for Industry 2.0 organisations to implement: a scientific approach of head counting, positive discrimination and other easy-to-understand tools to yield measurable results. Very satisfying for a traditional organisation and easy to announce in an annual report.

But to experience the full benefits of diversity, we need to now focus on inclusion. Inclusion is the rocket booster that can launch our newer more diverse organisations from low earth orbit into a new world.

Some organisations are not seeing the benefits of diversity because they haven't taken the extra step to implement the practices and behaviours necessary for real inclusion. It's time for male-dominated organisational models to change at a deeper level. Diversity and inclusion isn't just about equity – it's about strategy.

The challenge for engineering

As engineers, it's easy to blame others for not keeping up with technological change. We're dealing with the advancement of technology itself: we shouldn't have to be philosophers or lawyers concerned with the messiness and uncertainty of politics and deal-making.

However, the way the engineering profession handles technology at this pivotal moment will have subtle and powerful ramifications for our world.

The results of Industry 2.0 – the shift of agrarian workers to factories and cities – are easy to see. The social upheaval was enormous; but governments could relatively quickly understand and address it by creating the infrastructure of modern cities.

How will sophisticated algorithms implemented on the internet of things (IoT), big data analysis, machine learning and automation now affect our society and way of life? Many of these impacts simply cannot be foreseen.

Engineers, scientists and technologists are leading the discussion about our digital future, such as in ATSE's 2019 report, *Preparing for Australia's Digital Future*. Underpinning many of the 23 recommendations in this report is a mindset change where organisational leaders need to become inclusive leaders.

To manage the impact of new technologies on our society, we need to empower the whole of the workplace to participate in the development of our digital future. To do this, we need to understand inclusion.

Inclusion

The goal of inclusion strategies is to have practices and procedures that integrate everyone in the workplace, allowing their differences to coexist in a mutually beneficial way. This supports people across an organisation to work together to improve the organisation's performance and wellbeing.

This is when we will actually see the true benefits of diversity and a more “human” way to develop digital technologies.

There are a growing number of inclusion models with fundamentally similar components. The Diversity Council of Australia's Inclusion@Work model focuses on four elements that are needed for inclusion to occur in the workplace:

1. connection
2. respect
3. contribution
4. progress.



Connection means that everyone is welcome and feels that they fit in.

As a female engineer I have known at times in my career that I was not seen as belonging in a workplace, and this lead to demotivation and demoralisation. In inclusive cultures everyone is respected for who they are, allowing you to bring your best self to work.

Being asked to contribute your perspectives and talents is critical to being valued as a team member. This opens up a variety of ideas, knowledge, perspectives, approaches and styles that can help create more innovative solutions.

We all want to keep progressing in our career, whether that means through learning or being promoted – which is about equal access to opportunities and resources. None of this is rocket science, it is human nature.

For ATSE, its *Diversity and Inclusion Action Plan* is a great demonstration of the mindset change needed in organisations to progress. It uses a four-level progress model: *The Diversity and Inclusion Progression Framework for Professional Bodies* from The Royal Academy of Engineering, Science Council 2017.

Conclusion

Workplaces are in major transition as is the way we work, due to rapid developments in digital technologies, yet workplaces have not changed to understand the challenges that these technologies bring.

There is still a disconnect between our human and technological worlds, and workplaces are where we need to empower this to happen by engaging everyone to participate in the development of our digital future. Workplaces need to become more human-centric and more inclusive. If we can achieve this, everyone will benefit. ►



Eleven higher education and research institutions have taken home the internationally recognised Athena SWAN Institutional Bronze Award as part of the Science in Australia Gender Equity (SAGE) initiative.

The award recognises an institution's commitment to advancing the careers of women, trans and gender diverse individuals in science, technology, engineering, maths and medicine – STEMM disciplines.

WINNERS

AAO – Macquarie University
Department of Defence, Defence Science and Technology Group
Geoscience Australia
Murdoch University
Southern Cross University
Telethon Kids Institute
The University of Adelaide
The University of Melbourne
The University of Western Australia
University of the Sunshine Coast
University of Canberra

At the SAGE gala dinner at the Adelaide Town Hall in February, the awardees were joined by representatives from thirteen institutions announced as Athena SWAN Institutional Bronze awardees in September 2019.

Forty-five Australian higher education and research institutions have completed the SAGE pathway to accreditation, with the majority (39 organisations/86 per cent) being awarded the Athena Swan Institutional Bronze Award. SAGE Executive Director Dr Wafa El-Adhami said that 50 per cent of the sector had now completed the full cycle of accreditation for an Athena SWAN Bronze Award, the first and foundational phase of the journey to transformational change.

“This is testament to the leadership and commitment of the member institutions,” said Dr El-Adhami.

Minister for Industry, Science and Technology Karen Andrews congratulated members on achieving accreditation.

“Encouraging research and higher education organisations to make meaningful improvements to their gender equity policies and practices is vital if we’re going to bring about much needed change.”

The Australian Institute of Marine Science and the University of Southern Queensland were also recognised for their progress towards Bronze Award accreditation, and their continued commitment to SAGE.

Established in 2015, SAGE is a partnership between the Australian Academy of Science and the Australian Academy of Technology and Engineering.

“The SAGE Athena SWAN Bronze Institutional Awards recognise organisations at the forefront of diversity practice,” said ATSE CEO Kylie Walker. “We’re thrilled about the ongoing impact of SAGE, our initiative in partnership with the Australian Academy of Science. It’s vital that people of all genders and backgrounds are given the opportunities and support they need to contribute.” ►

IMAGE: ATSE CEO Kylie Walker; Advance HE CEO Alison Johns; SAGE Executive Director Dr Wafa el-Adhami; and Academy of Science CEO Anna-Maria Arabia.

SAGE welcomes STEM gender equity evaluation

Science in Australia Gender Equity (SAGE) welcomed the Federal Government’s *Women in STEM Action Plan* and the *STEM Equity Monitor* as pivotal to driving the systemic transformation of gender equity and diversity in the sector.

SAGE Executive Director, Dr Wafa El-Adhami, said the Government continues to play a significant leadership role as supporter, enabler and participant in advancing gender equity and diversity.

“We welcome the Government’s plan of action for delivering the vision of Australia’s 10-year plan for women in STEM and also an annual national data report on girls’ and women’s participation in science,” Dr El-Adhami said.

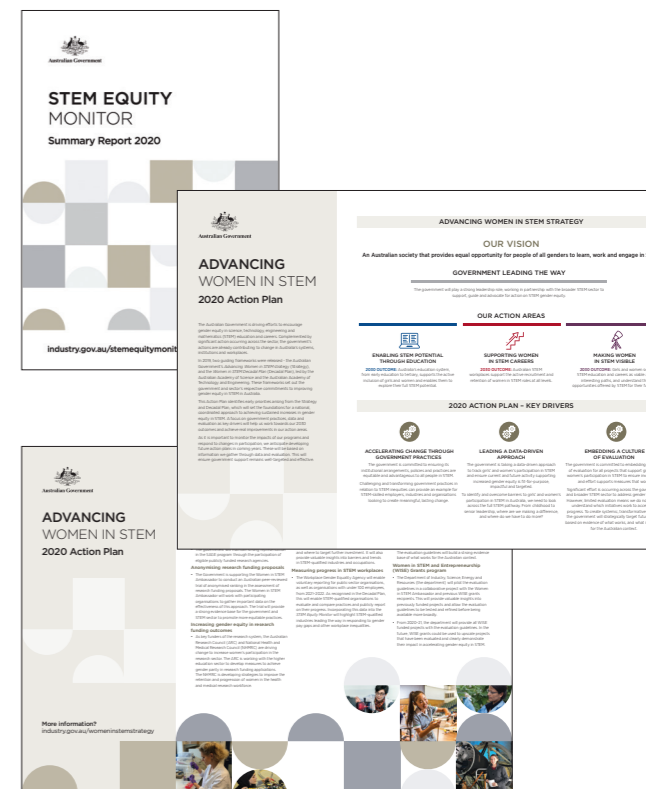
“SAGE is one of a few national gender equity and diversity programs that has been through formal evaluation and is currently the only transformative gender equity program of its kind in Australia designed to achieve sustained cultural change via a national accreditation framework.

SAGE also acknowledged the Government reaffirming in the action plan its funding support for the SAGE program until 2021-22, as announced in last year’s Federal Budget.

“We look forward to working with the Government and the sector to ensure all eligible organisations can participate and succeed in the program,” Dr El-Adhami said. ►

MORE

sciencegenderequity.org.au
industry.gov.au/data-and-publications/advancing-women-in-stem-strategy/2020-action-plan
industry.gov.au/data-and-publications/stem-equity-monitor



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