

techgirls» movement FOUNDATION

Women in STEM Decadal Plan

Tech Girls Movement Foundation Response
October 2019



techgirls» movement

FOUNDATION

OUR VISION

A society in which girls confidently lead in STEM entrepreneurship and contribute to their community and the economy

OUR MISSION

To champion Australian school girls using hands-on learning to transform their future and encourage equity in the technology industry

Objectives:

- To help girls get excited and connected with technology in a way that is meaningful and life-changing
- To give every girl the opportunity to participate in the Tech Girls Movement Foundation and realise their potential to lead

What we do

We exist to give girls access to technology and programs to build their skills and confidence. We present real-life female role models - women working in STEM, as mentors and superheroes featured in our Tech Girls Are Superheroes books. We inspire young women to solve important community problems with technology skills and business acumen through our annual online Techgirls Competition (formally known as the Search for the Next Tech Girl Superhero). We run hands on workshops for entrepreneurship, robotics, electronics and more. Our Founder & CEO travels worldwide advocating for diversity and inclusion through public speaking engagements.

In the signature program of the Tech Girls Movement Foundation, Techgirls, girls from 7-17 years of age, in Australia and New Zealand form a team and enter the competition. They are then matched with a female tech mentor who meets weekly with them for 12 weeks. Teams identify a problem in their local community to solve, then research and document a solution in a business plan, build a working app prototype and pitch it in a public video.

We have distributed *80 000 free books, placing one in every primary and secondary school in Australia [9966 schools]. Our books present real-life women in STEM as superheroes who change the world. Used as a career resource the books use storytelling and strong powerful avatars to counteract the negative STEM stereotypes presented in the media. The inspiring stories showcase to all young girls that they can have a successful and rewarding career in STEM.

Our hugely successful program has reached many regions of Australia and New Zealand and continues to grow. We launch our campaign on International Women's Day each year.

Response to Decadal Plan Opportunities

Evaluation

Evaluation is a key part of any long term successful program. We conduct formal pre and post-competition surveys on our signature 12-week STEM Entrepreneurship education program from the students participating, from their coaches (usually teachers) and from mentors. Measurement is necessary in order to make incremental improvements to the program.

We now have longitudinal data on our program over the past 4 years and we will continue to add to this. Currently, the surveys are optional but encouraged. In 2020, completion of the surveys for all 3 stakeholder groups will be mandatory with the rollout of our new competition management system. This ongoing evaluation of the program and its impact is enabling us to scale up our program across all states and territories in Australia and New Zealand. Committing to this opportunity contributes to the establishment of the national evaluation framework that will guide decision making and drive investment and effort into measures that work.

Full survey evaluation report and summaries available at
www.techgirlsmovement.org



Feedback from students from the 2018 competition talked about how their role in the competition had benefited their self-esteem and personal development.

"On a personal level, I think I learnt a lot about my work ethic, and I think I also learnt a lot about the importance of taking the initiative and not being too afraid to give others that too."

"Technology is an amazing thing that you can do pretty much anything with. After participating in this competition, I feel like I can absolutely develop new ideas using technology."

Visibility

We strongly believe that role models count. We present real-life women in STEM as superhero characters through our series of **Tech Girls Are Superheroes books**. In 2020 we will launch the Tech Girls Are Superheroes book 3 which will feature female students who have successfully been through our program as superhero characters on an adventure. The previous 2 books featured adult women. This shift to feature student peers in the book is to highlight them as role models for all students.

It is also necessary for our program participants to see women in diverse STEM careers; we are committed to continue to match every team of female students in our program with a female mentor working in STEM (and they meet for one hour per week for 12 weeks online or face to face).

Also important is for our program participants to see women equally represented in the media and in public events; we will continue to seek **media coverage** to showcase our student's work, and we are committed to run free, public events in the community.

We are committed to educating the public via social media and in corporate presentations about the lack of women in STEM with an evidence-based research approach. We will continue to present statistics and qualitative **research** on the barriers to STEM education and careers, whilst continuing to work with universities such as the University of Technology Sydney to research this issue. We will seek new solutions and insights to this systemic problem from international research.

We will continue to position STEM in Australia as a viable and vibrant career option for girls and women, and seek ways to recognise volunteer efforts made by role models and leaders for actively contributing to outreach activities which assist students' awareness of the diversity of career paths available.

We will showcase our exceptionally talented winning Tech Girl Superheroes when we visit **Silicon Valley** annually. Winning teams are actively pitching to top tech companies, CEOs, executives and venture capitalists as part of the winning teams' prize in the Search for the Next Tech Girl Superhero Competition.

Education

Because families are critical in either shaping (reinforcing or changing) stereotypes and imagery associated with subject career choices, we are committed to including parents and carers in all of our public events. While very few programs target these groups to improve awareness of life and career opportunities arising from studying in STEM, for us it is essential to educate parents on the importance of digital literacy and participating in STEM education, and for them to see their child/ren not only enjoying STEM activities but actively engaging and learning. We are committed to providing an inclusive space for families, in particular parents and carers, to engage in our program.

We have an ongoing commitment to inclusiveness, with a focus on hosting events and engaging students in our program in low socioeconomic areas, and rural and regional areas, to ensure they are represented in STEM throughout the entire pipeline.

The use of language around STEM diversity and inclusion is powerful, and we will continue to challenge biases and stereotypes through inclusive language and content in our program e.g. removing the use of the word "guys" when talking to young women.

We are committed to providing curriculum and teaching strategies that focus on 'real-world' STEM scenarios to make STEM more appealing and engaging. Through this, we will contribute to strengthening the education system to support teaching and learning on a national scale, to enable and encourage girls and women at all levels to study STEM and equip them with the skills and knowledge to participate in diverse STEM careers.

For Parents

We want to help parents to guide their daughters to reach their potential;

- To see the positive social impact of technology
- To look beyond their own experience of the workforce
- To understand the range of careers in technology
- To support their daughters to embrace technology careers

For Teachers

We want to help schools deliver quality technology learning opportunities;

- To find a good and simple way to fulfil the digital curriculum requirements
- To close the digital divide by giving all teachers the confidence to teach technology
- To meet and create role models and be part of a community of support

For Industry

We want to help the technology industry to grow and be more equitable;

- To provide a pipeline of young women to fill industry skills shortages
- To help tech professionals to give back to the community
- To help corporates to fulfil their community & social responsibilities (CSR)

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