

# MAKEATHON REPORT 2019



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## WHO WE ARE

TOM: Melbourne is an innovative disability tech start-up committed to delivering extremely affordable solutions for people living with disabilities. By connecting Need-Knowers and Makers, individuals with a deep understanding of disabilities and those with the skills to create solutions, we facilitate the development of impactful, human-centred assistive technology. We believe that technology has the power to make these solutions accessible and affordable to all.

We create, develop and deliver unique assistive technology solutions. Our 3 phase approach is integrated into events, university curriculum and developer groups. All solutions developed through our process are available in the public domain, meaning they are freely available for anyone around the world to access. Founded in 2016, TOM: Melbourne is made possible by Debbie Dadon AM, together with government, corporate, philanthropic and community partnerships.

TOM: Melbourne is one of the leading TOM communities. Since its launch in 2016 TOM: Melbourne has achieved significant milestones:

**TOM is courageously pursuing a bold 10-year vision to positively impact the lives of 250 million people worldwide.**

- **Facilitated 3 Makeathon events (2016, 2017, 2019):**  
Creating 29 unique assistive technology solutions.
- **Established a Developer Group program (Cycle 1, 2018):**  
Advancing 4 TOM prototypes into final TOM products.
- **Established TOM@University (2018/19):**  
In partnership with Swinburne University's Design Factory Melbourne and Engineering Practice Academy, developing 8 prototypes and 2 final TOM products.
- **Facilitated a TOM 2.0 (2019) event:**  
To continue developing prototypes from the Makeathon.
- **Launched a TOM@Schools Workshop (2019)**  
Offering innovative STEM workshops for secondary school students from year 7-10.



## DESIREE RINY, PRODUCT DESIGN TEAM MARY

"Volunteering for this event and being part of Team Mary has created a significant impact in my career... It has probably been the best thing I've been a part of so far"



## MARY HENLEY-COLLOPY TEAM MARY

"Very stimulating! What an unbelievable team, it's going to be hard to leave. Thank you, thank you, thank you, I have never been to an event that was so brilliant, organised chaos!"



## FID CONSTANTINIDES TEAM FID

"I would do it again - absolutely. The whole experience was fantastic, one of the best things I've ever done. It was great to meet Steve with the same condition as myself. Meeting others as well, Dati was a lovely kid, very inspiring, it was fantastic, I would highly recommend it. Thank you for having us, I feel privileged. I wish I was doing it every weekend. If I can help in the future, I'd be happy to do anything."



## JOHN DARDAGANIS, ARCHITECT TEAM FID

"Nothing feels quite as virtuous as contributing to such a worthwhile cause."

The TOM: Melbourne Makeathon is a life changing event for Victorians living with a disability. The Makeathon is representative of the first phase of the TOM process which aims to create prototypes that directly address challenges identified by local Need-Knowers. Multidisciplinary teams of Makers (engineers, designers, developers and allied health professionals etc.) with a passion for social change, innovation and problem solving work together with Need-Knowers in a fast paced weekend of making. This year we had a talented cohort of Makers from both Regional Victoria and Metropolitan Melbourne working together to create unique assistive technology solutions at the state-of-the-art FAB9 Makerspace in Footscray.

The power of TOM is demonstrated when Makers and Need-Knowers work collaboratively in teams. Need-Knowers present a challenge they face on a daily basis that contains no affordable market or government solution. This challenge is presented to a multidisciplinary team of Makers that are carefully selected in order to create a unique solution that is specific to the Need-Knower but also universal in design so that other Need-Knowers around the world can have access to these solutions.

Challenges at the 2019 TOM: Melbourne Makeathon included 14 year old Dati who lives with Cerebral Palsy and would like to eat independently, John, a quad amputee who needs a solution to pick up items off the floor and Mary who, affected by Thalidomide, wants to keep in shape and stay healthy with a custom exercise machine.

**In just two and a half days, teams of Makers worked in groups of upwards of 8 at FAB9 to help solve problems faced by eight people living with a variety of conditions.**

Now in its fourth year of operation, the impact of TOM: Melbourne is that those who might otherwise be overlooked by society due to social and financial barriers, have the opportunity to find their independence again – facilitating accessibility, inclusiveness and wellbeing for Need-Knowers and the wider community.

Drawing on feedback from previous events in 2016 and 2017, TOM: Melbourne's strategy for the 2019 Makeathon was to increase the quality of outcomes for Need-Knowers while reducing the overall number of challenges. This was achieved through the targeted recruitment of highly skilled industry professionals and local disability organisations. Furthermore, TOM: Melbourne developed a Need-Knower ambassador role to help ensure the wellbeing of participating Need-Knowers before, during and after the event. Lastly, our talented multidisciplinary team of Mentors helped to guide and support each team through the design and development process. Together these key strategic initiatives, along with having access to the latest tools and machinery at the newly opened FAB9 makerspace, helped to facilitate our most successful and inclusive Makeathon to date.

## EXPERIENCE

100% of Need-Knowers rated the Makeathon experience as a 9/10 or higher while over 50% of Makers gave a rating of 9/10 or higher. 95% of both Makers and Need-Knowers indicated that they would be likely to attend another TOM event.



## COMMUNITY

TOM: Melbourne received an overwhelming response of 114 Maker and 23 Need-Knower Applications. 20% of total participants at the Makeathon reside in Regional Victoria, highlighting our commitment to Regional areas. We ensured a gender split of 53% Female, 47% Male for panel discussions, mentors and Need-Knowers.



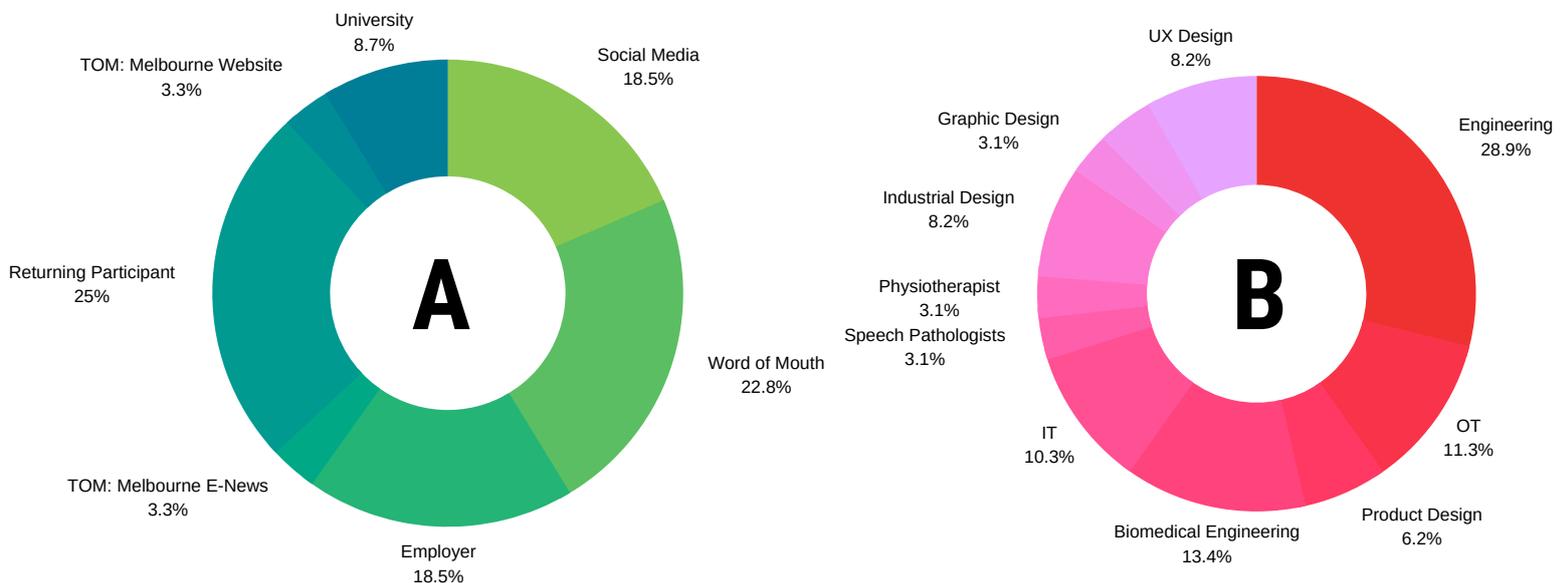
## PUBLICITY

TOM: Melbourne engaged Icon Agency to help support the Makeathon with public relations to raise awareness of the work TOM does to support people living with disabilities. Icon reported 12 editorial mentions including 9NEWS, ABC radio, 3AW, Yahoo News, Daily Mail and Jewish News just to name a few.



## PARTICIPANTS

The 2019 TOM: Melbourne Makeathon was made up of 8 Need-Knowers and 65 talented Makers. Our Makers come from a diverse range of backgrounds ensuring collaboration between industries and a multidisciplinary problem solving approach (See chart B). Makers are recruited through a wide range of marketing channels (See chart A). Makers range from university level students to highly skilled industry professionals facilitating mentorship and professional development opportunities for all involved.



# MAKEATHON TIMELINE

8

## PRETOM EVENT APRIL 9

Makers and Need-Knowers meet each other for the first time and begin to brainstorm in their teams.



## MAKEATHON LAUNCH MAY 24

Breakfast panel discussion on the intersection between disability and employment held at PwC Melbourne.

# MAKEATHON

## MAY 24-26

Teams work collaboratively at FAB9 for 2.5 days with access to the latest tools, 3D printers and machinery in order to develop a prototype solution.



# SHOWCASE EVENT

## MAY 26

Tools Down! Time to showcase the hard work of the teams throughout the weekend. The Makeathon has come to an end.



# PRETOM

PreTOM is the first milestone of the TOM: Melbourne Makeathon. The kick off event is the first time our teams meet each other and are introduced to their challenge, presented by their Need-Knower. This year, PreTOM took place on April 9 at FAB9, a state of the art Makerspace located in Footscray, which would also be the venue for the Makeathon, 8 weeks from PreTOM. This enabled Makers and Need-Knowers to familiarise themselves with the environment, and become inspired by the various manufacturing and design possibilities afforded to them by the different workshops and capabilities at FAB9.

**"TOM was an incredible opportunity to connect with other professionals to transform ideas into actions" - Hans Mestizo (Team Joanne)**

Following an opening address from our Makeathon MC, Michelle Mannering (AKA the Hackathon Queen), teams were welcomed into the TOM global community. They then spent the rest of the night getting to know each other, understanding and unpacking the challenge presented by their Need-Knower and developing a plan for the next 8 weeks before the Makeathon. PreTOM facilitated the beginning of the design thinking process, generation of ideas and the understanding of each teams challenge.





# MAKEATHON LAUNCH

We celebrated the launch of the 2019 TOM: Melbourne Makeathon with a breakfast panel discussion at PwC Melbourne, Friday May 24, exploring the intersection of disability and employment.

PwC's long-standing support of TOM: Melbourne has become synonymous with hosting a breakfast event on the morning of the Makeathon. This year's industry and stakeholder driven breakfast comprised of a diverse interdisciplinary panel discussion on the barriers faced by people with disabilities in the workplace, as well as the role that technology can play in creating a more inclusive workplace environment.

It was also an opportunity to thank our collective group of sponsors and supporters.

### **Thank you to the following speakers:**

- Jon Chadwick Partner - Management Consulting - PwC
- Beau Vernon - Motivational Speaker
- Kelly Schulz - Customer Protagonist, Belong
- Ryan Tilley - Design Engineer & Co-Founder, Gecko Tracks
- Amy Marks - Youth Disability Advocate & Film/Media Professional
- Sally McArthur - Research and Science Leader, CSIRO: Prof. Biomedical Engineering, Swinburne University of Technology
- Meg Dalling - Head of Accessibility, ANZ
- Peter Horsley - Founder, Remarkable: Inclusive Tech Accelerator, Cerebral Palsy Alliances Technology Accelerator





**“ We need to look at the strengths of individuals rather than look at people’s weaknesses. Organisations that are leaders in employing people with a disability are seeing the benefits of increased revenue, they don’t take as many sick days and are more loyal to the company they work for, they enjoy the opportunity to come to work and can really have a big influence on creating a more connected and positive workplace.**

**Beau Vernon**

Motivational Speaker & Ambassador, interact Australia.



**“ Technology can remove the barriers for people and provide the assistance that they need in a workplace. This is what TOM is trying to achieve during the Makeathon this weekend.**

**Peter Horsley**

Founder, Cerebral Palsy Alliances Technology; Accelerator, Remarkable.



**“ We really feel that TOM is an event that is going to change people’s lives. Here at PwC we are really committed to making a difference. We’ve got some really wonderful people here at PwC that live with a disability and are already in our firm and the commitment that they show to our firm and improving the culture is really impressive.”**

**Michael Dobbie**

Senior Manager, Diversity & Inclusion, PwC Australia.





# MAKEATHON DAY 1

We kicked off the 2019 TOM: Melbourne Makeathon at 6pm on Friday May 24th with an uplifting speech from our appointed MC, Michelle Mannering (AKA the Hackathon Queen) who introduced our 2019 Makers and Need-Knowers together with FAB9 CEO, Hans Chang. Michelle introduced the eight Mentors who all presented a short bio of their skill sets and roles as well as the FAB9 technicians who would be available all weekend to assist Makers in operating tools and machinery.

Following dinner, teams eagerly got to work on creating an early stage prototype (proof of concept) ready to test early on Saturday morning. It was clear just how quickly each team became a cohesive unit, many of which had previously met up numerous times already. Shortly after dinner, FAB9 was buzzing with a unique and creative energy.

**"It's amazing to see such a big group of people with complementary skills working together to serve and solve problems for others. It's both humbling and inspiring."**  
- Jaime Hislop (Team Austin)

The Makeathon had come to life! Colourful team shirts spread out around the Makerspace, deep consultation over design sketches and choices of materials and even some early prototyping in the various workshops. Teams made full use of the MakerBot Replicator+ printers, as well as FAB9's strong emphasis on woodworking. For most teams, the Friday evening session was a chance to solidify their designs and early stage prototypes in conjunction with the mentors, ready for an intense weekend of iterative design.





# MAKEATHON DAY 2

Day two saw a general shift from ideation to prototype building. Many teams had strategically left their 3D printers running overnight, ready to be finished when they arrived in the morning. By the afternoon, each team was well and truly into the early prototyping stage. Team John had begun to modify existing sets of crutches. Team Steve were busy tapping into Steve's wheelchair control panel. Team Fid were testing their actuator powered crutches. Makers and Need-Knowers were working closely together to build, receive feedback and then iterate.

We held a productive PiNG session, a TOM tradition that takes place three times per day during TOM events which provides each team with an opportunity to present their progress, needs and short term goals.

**"TOM's initiative in creating affordable solutions for people with often neglected needs is truly meaningful. I feel a real sense of purpose to be a TOM Maker"**

**- Amber Truong (Team Fid)**

Our Maker PiNG session took place outside in the sun while Mandy, our 2019 Need-Knowers Ambassador, ran the first ever Need-Knowers PiNG, an initiative implemented this year to provide Need-Knowers with a support network, a quiet space where they could be heard and provide feedback to the TOM team. As the sun set on day 2 teams continued to work through the night ready for the final push on Sunday!





# MAKEATHON DAY 3

As the Makers arrived bright and early on the final day, a large wall countdown timer set the scene and quickened the pace for the day. We saw tension start to build, last minute user testing, runs to the local Bunnings and plenty of magic moments exchanged between the Makers and Need-Knowers right up to 5pm, when the teams were instructed to put their tools down.

We were lucky to have some of our sponsors visit the Makeathon this year (EY, ANZ and Australian Friends of Tel Aviv University) as well as the inspiring G20 - Young Global Shapers. The TOM: Melbourne Makeathon took place during National Volunteer week and as such we were pleased to develop a customised volunteering program in partnership with Access Inc a local disability organisation. We had many volunteers working behind the scenes, helping to ensure the event ran smoothly.

Thank you to all the volunteers from Access Inc, Flying Fox and Australian Jewish Funders who joined us. A highlight of day 3 was when 9News Melbourne and their film crew made a surprise visit to the Makeathon. The journalist embraced the individual stories and managed to stay long enough to interview team Mary, team John and team Dati. The segment went live on air in Victoria and Australia wide (reach 1,026,000 in Victoria alone).







# MAKEATHON SHOWCASE

It was a very emotional and rewarding night for everyone involved in our closing showcase event. Our MC, Michelle, conducted the official proceedings, inviting each team to present their solution with demonstrations that were captivating and inspiring. We were blown away by the quality of each team's work. The collaboration between team members fostered a real sense of community making the 2019 TOM: Melbourne Makeathon our most successful and inclusive Makeathon thus far.

This event was a highlight on the Makeathon schedule which concluded with a networking party providing an opportunity for guests and industry personnel to mingle and get up close and personal with the assistive technology solutions that were proudly on display. It was great to hear from two of our Presenting Partners on the night - Andrew Tulloch, Executive Director, Innovation and Digital/ Bio Economy, Victoria State Government and Jeffrey Appel OAM, Trustee of The Eva and Les Erdi Humanitarian Charitable Foundation.

The following pages highlight each challenge and respective solution developed at the 2019 TOM: Melbourne Makeathon.

## Challenge:

Fid, a 51-year-old active man affected by Becker Muscular Dystrophy, loves going to the theatre, restaurants and friends' houses. He walks using crutches when he goes out but struggles getting off standard chairs, sofas and stools. It causes unnecessary back pain from weight-bearing on his crutches. Fid is seeking a portable and lightweight solution that he can operate independently that can raise him up and down off these surfaces.



## Solution:

Team Fid have developed a set of motorised crutches that have enabled Fid to stand up from a chair independently for the first time in 9 years. The crutches are powered by a set of actuators that Fid can trigger using a button built in to the crutch grips. After raising himself up and subsequently standing, Fid can remove the temporary seat, which he will be able to stow away and carry with him anywhere he goes.



**This challenge was proudly presented by Solve  
Disability Solutions**

## Challenge:

Mary, a 57-year-old lady affected by Thalidomide, has no arms, negligible leg function and is a full-time electric wheelchair user. Mary's challenge is to increase her functional capacity; reduce her risk of chronic disease; and condition her cardiovascular system, using a custom apparatus to enable her to independently undertake regular resistance and whole-body exercise. Together with her exercise physiologist Simon, Mary would like a solution to enable greater scope of physical therapy and conditioning.



## Solution:

Mary's team of skilled Makers have developed a customised workout machine which focuses on both cardiovascular and strength exercises. After transferring onto the machine, Mary can independently engage in a cardio exercise by rotating her torso to either side, sliding up and down an undulating, CNC cut, wooden ramp that provides her with resistance through her own body weight. For strength training, Mary pushes down on a sliding resistance arm that runs along track created with wheels from a skateboard and different weights.



## Challenge:

Dati is a 14-year-old boy living with Cerebral Palsy that finds it difficult to eat without assistance from his parents. His hands shake making it difficult for him to feed himself with a spoon. Dati is seeking an affordable solution to help him live and eat more independently so he can spend more time working on his biggest passion – graphic design.



## Solution:

Team Dati have created a robotic feeding mechanism controlled using Dati's foot that mimics human hand movements. The team adapted an open source robotic arm, creating a customised spoon attachment that is mounted on a wooden case. When Dati engages the green button with his foot, the arm scoops up the food and delivers it to his mouth. When he presses the red button, the plate carrying the food spins around so that he can access different parts of the bowl.



## Challenge:

John, a 55-year-old Quadruple Amputee and wheelchair user, finds it extremely difficult to pick up anything that falls onto the floor. This is due to the distance between the height of his wheelchair and the lack of dexterity in his prosthetics. John is seeking a solution that will grip onto objects and be dexterous enough to allow him to access things on the floor that would otherwise be out of reach.



## Solution:

John's team have designed a mechanism that allows John to easily pick up objects off the floor. The team have modified a single crutch by incorporating a pulley mechanism that opens and closes a claw. The crutch interfaces with his right arm, allowing John's left arm to control the pulley.



## Challenge:

Joanne, a 47-year-old studying her Cert IV in Disability, has a neurological degenerative muscular disease which limits her mobility in her arms and legs. Joanne has trouble using her hands due to her flexed wrists and poor skin quality, making simple tasks incredibly difficult. Joanne would like to create a system that allows her to brush her teeth independently and maintain good oral hygiene.



## Solution:

Team Joanne have designed two components that make the process of brushing her teeth more accessible. Firstly they have developed a device that Joanne can easily grip, which has a rotating toothbrush head. They have also created a toothpaste dispenser that along with the toothbrush, can be stuck up on a wall or mirror.

**This challenge was proudly presented by  
Australian Unity.**

## Challenge:

Rebecca, a 66-year-old lady, uses a power wheelchair and has a non-functional right arm after suffering from a stroke. Her challenge is to create more independence, so she can read books and hold items such as plates and drinks. Rebecca is seeking an aesthetically pleasing tray solution that folds underneath her left arm that can open and be positioned at different angles depending on its use.



## Solution:

Rebecca's team created a fold out wheelchair tray that she can operate using one arm. The tray, made initially from wood and finished with material, is housed on the side of her wheelchair. The team plans to manufacture the components of the tray using aluminium to increase its robustness and durability.

**This challenge was proudly presented by Solve  
Disability Solutions**

## Challenge:

Austin, a child who lives with Congenital Muscular Dystrophy, uses a Bipap Ventilator (with a mask that covers his nose and mouth) overnight to support his breathing while he sleeps. Austin's muscles are weak and as a result he cannot operate the mask independently. Additionally, due to muscle weakness in his stomach, Austin often vomits overnight causing a build-up of stomach discharge in his mask, which can be extremely dangerous (risk of aspiration).

Currently Austin relies solely on someone watching him and manually removing the mask if he vomits. Austin would like a solution that increases his level of safety. This challenge is in consultation with Austin's current medical team.



## Solution:

Austin's team have designed custom 3D printed latches containing liquid capacity sensors that attach to his Bipap mask. When liquid enters the mask, the latches are triggered causing the mask to release from Austin's face, reducing the risk of aspiration.

## Challenge:

Steve, a 55-year-old architect affected by Becker Muscular Dystrophy, has weakened proximal muscles and is a part-time wheelchair user. Steve is always on the go – his challenge is to create a simple and flexible system that enables him to easily access, secure, remove and attach bags and other objects to his wheelchair. This will enable Steve to independently access items of varying capacities without the difficulty of reaching around the wheelchair.



## Solution:

Team Steve have developed a motorised solution that brings Steve's wheelchair bag around to the side of his wheelchair with the press of a button. The system integrates with Steve's wheelchair control panel and ensures that Steve does not have to reach around to access his bags, making simple tasks like shopping more accessible.





**“** The Andrews Labor Government is proud to support our thinkers and innovators to use their skills to improve the lives of people living with disabilities.

**Jane Garret**

Parliamentary Secretary for Jobs



**“** PwC was very proud to once again be a major sponsor of the 2019 TOM Melbourne Makeathon because it is one event that truly aligns with our purpose as an organisation - to build trust in society and solve important problems. We were also extremely honoured to host the launch event of TOM Melbourne. It was wonderful and refreshing to have real conversations about increasing the aspirations of ALL people with a disability and the communities that they live in. By partnering with TOM Melbourne we're confident that we can turn these conversations and aspirations into reality and challenge us all to do better, to be better.

**Jon Chadwick**

Partner, Management Consulting, PwC



**“** Gandel Philanthropy is proud to be supporting this important initiative to address everyday barriers experienced by people living with disabilities. The opportunity to collaborate and create across design and technical fields, with 'Need-knowers' at the centre of the design process, will no doubt have a strong, positive and lasting impact for people living with disabilities, as well as their families and carers. Gandel Philanthropy has been supporting the disability sector for many years, aiming to support and facilitate health and social wellbeing programs, and foster inclusive and accessible communities for all. For the trustees of Gandel Philanthropy this was clearly an initiative that warranted support through our Community Grants program, and they very much look forward to hearing how it develops.”

**Nicole Brittain**

Jewish Grants Manager, Gandel Philanthropy





**“** EY is very proud to be sponsoring and participating in TOM Melbourne. As a firm our purpose is to build a better working world, and there can be no better way of doing that than enabling people with disabilities to improve their lives through the small but important contribution we can make by bringing our design and innovation (and listening) skills to bear. Our human services practice across Oceania is focused on empowering our communities to achieve better life outcomes, and what we learn from the inspiring TOM experience will help us deliver on that commitment.

**Ruth Owen**

Partner Human Services, EY



**“** ANZ is proud to be supporting the TOM Melbourne Makeathon, which brings together the skills, passion and creativity of people in our community to help solve real life challenges for people living with disability. At ANZ we have a long standing commitment to building a more accessible and inclusive world, and we are excited about the opportunity for our staff to get involved in this unique social impact project.”

**Meg Dalling**

Head of Accessibility, ANZ



**“** The Eva and Les Erdi humanitarian Charitable Foundation is pleased to support TOM: Melbourne. The Makeathon is a great social enterprise with positive results and impact. We are excited to see the new innovations that will come out of the Makeathon and its affect on those living with a disability.

**Phillip Zajac**

CEO, The Eva and Les Erdi Foundation



The Eva and Les Erdi  
Humanitarian Charitable Foundation



**Andrew Henderson**

Mechanical Engineer  
& Manager  
Intermodal, Transport  
Planning, Transport  
for Victoria



**April Staines**

Co-founder & Chief  
Maker Girl Geek  
Academy



**David Jennings**

Mechanical  
Engineer



**Ina Stavril**

Mental Health Clinician -  
Occupational Therapist  
at the Wellness and  
Recovery Centre, Monash  
Health, Owner and  
Principal Therapist at  
Focus on Living



**Emerson Ysayama**

ICT Analyst /  
Technology Sorcerer  
at CLS

TOM: Queensland



**Kelly Schulz**

Customer Inclusion  
Protagonist |  
Human | Optimistic  
Realist



**Alex Graham**

Product Design  
Researcher | PhD  
Candidate |  
Sessional Lecturer



**Ben Soltau**

Chemical/Electronics  
Engineer



**The TOM: Melbourne Team:** From left to right: Ben Shemesh, Abbie Gosling, Erin Dowling (ICON Agency), Kylie Appel, Debbie Dadon.

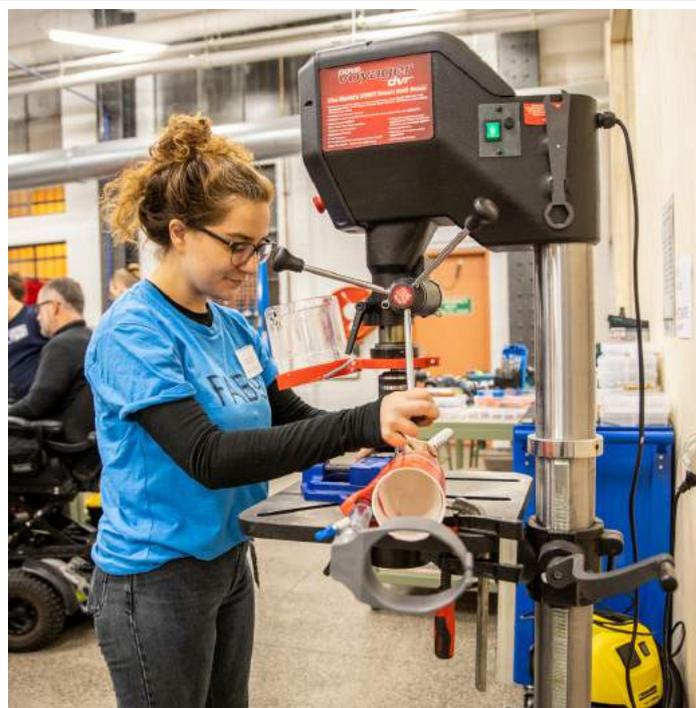


Thank you to our volunteers who helped make both PreTOM and the Makeathon run smoothly and successfully. This year our cohort of volunteers was bolstered by support from Access Inc, Flying Fox and the Australian Jewish Funders.



Thank you to our Need-Knower Ambassadors - Mandy & Rod McCracken who joined the TOM: Melbourne team to help ensure the wellbeing of our Need-Knowers. Both Mandy and Rod have been integral members of the TOM: Melbourne community since 2016. Mandy & Rod facilitated independent Need-Knower PiNG sessions and the delivery of a disability awareness module to ensure the next generation of participants develop empathy and relish the Makeathon experience as much as possible.

This year Michelle Mannering joined the TOM team as the official Makeathon MC. Michelle, also known as the Hackathon Queen, brought energy and enthusiasm, inspiring the Makers throughout the weekend.



Thank you to all of the FAB9 technicians who went above and beyond to help and support our Makers with their problem solving and for overseeing the machinery, workshops and technical inductions.

# SPONSORS & SUPPORTERS 37

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## PRESENTING PARTNERS



## GOLD



## SILVER



## BRONZE



## COMMUNITY

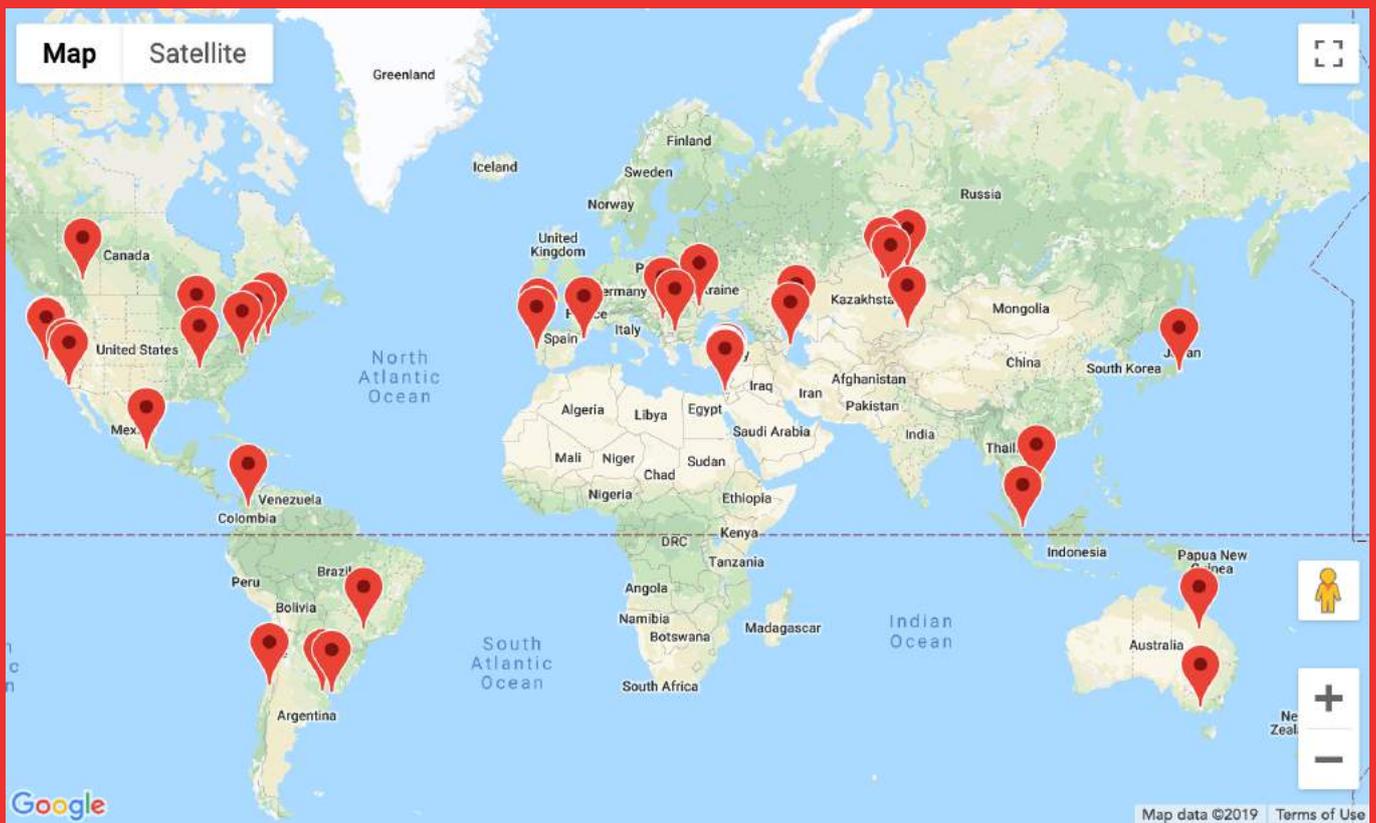


Thank you to all of our sponsors and supporters for making this event possible. The partnership between TOM and its sponsors and supporters is collaborative and mutually reinforces the important role TOM: Melbourne plays in the community to support people living with disabilities.

# THE TOM GLOBAL COMMUNITY 38

TOM was established in Israel in 2014 with a moonshot goal of impacting the lives of 250,000,000 within a decade.

Five years later, TOM has established 35+ communities across 20+ countries, creating 300+ unique solutions for individuals living with a disability.



**Click here to visit the global web-platform and see more about how this vision is being achieved:**



## TIKKUN OLAM MAKERS

### TOM returns for third makeathon

THIS past weekend, 100 engineers, technology and health professionals came together to help those living with a disability by working on solutions for everyday challenges that have a major impact on their lives. Tikkun Olam Makers (TOM) Melbourne hosted its third makeathon event, with the objective of working in small groups to help solve problems faced by eight people living with a variety of conditions including cerebral palsy, multiple amputations and the effects of Thalidomide.



"For many of the people living with a disability who are part of the TOM family, the solution they need is highly tailored and, as a result, there is no market or government solution," said founding director of TOM Melbourne, Debbie Dadon.

Occupational therapist Rebecca Laurie participated as a maker, and worked with a team to enable need-knower Joanne (pictured) to brush her teeth independently. Joanne has a neurological degenerative muscular disease which limits mobility in her arms and legs. "It was probably one of the most amazing things I have done," said Laurie.



## Channel 9 News

### Why this toothbrush is making Ballarat's Joanne Smith smile

Melanie Whelan

Latest News

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ALL Joanne Smith wanted was the chance to brush her own teeth but first she needed a little help from others.

Ms Smith, aged 47, was one of eight challengers selected to present their case to a design team at the TOM Melbourne Makeathon. The team had a 48-hour sprint, working with Ms Smith to create a solution and now a global not-for-profit movement of innovators who create affordable solutions to the overlooked challenges of people living with disabilities.

For Ms Smith the result is the U-brush. Ms Smith, who lives in Ballarat, has a neurological degenerative muscular disease which limits mobility in her arms and legs. She has trouble using her hands due to fixed wrists and poor skin quality but was determined to find a way to independently maintain good oral hygiene.

*"A lot of people take (brushing your teeth) for granted. For me, it's about not depending on others."*

Joanne Smith



REBE: A design team created Ballarat's Joanne Smith a bespoke toothbrush and toothpaste dispenser so she could independently brush her teeth.

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- Weslap Come in today and test drive! \$ 0355... Show Number
- Affidavit Dental We are proud to be partnered with many major health funds. \$ 0353... Show Number

#### LOCAL NEWS

- Push for more apartments in Ballarat to ease growing pains
- More than 150 tickets written as police get tough on drivers
- Yaffle Park Integration side Tim gets second chance at MasterChef race
- Swapping racquets, serving up plays so help put squash back on pilot
- New parking plans reach half way stage

## Ballarat Courier

### Just ask the question: Barriers to disability employment

When Kelly Schulz, who has been legally blind since birth, was offered her first job at the end of an interview, she was thrilled.



Employment and disability panel

## Pro Bono Australia

## Jewish News



### Design offering easier life for disabled

By AUSTRALIAN ASSOCIATED PRESS  
PUBLISHED: 03:36 AEST, 24 May 2016 | UPDATED: 03:36 AEST, 24 May 2016



Brushing teeth is a pretty simple task for most people, but for one Victorian woman it's a challenge too great.

Joanne, 47, has a degenerative muscular disorder that makes it difficult to use her hands and therefore complete some tasks, like brushing her teeth.

She's hoping a meeting of creative minds in Melbourne can help her find a solution, while coming up with answers for several people living with a disability.

A global non-for-profit movement of innovators, Tikkun Olam Makers, hope to be able to find solutions.

"We aim to help the lives of (people) like John, who is a quadruple amputee and little Austin who lives with congenital muscular dystrophy, to live more independently," founding director Debbie Danson said.

Since its launch in 2016, Makers Melbourne has developed 28 prototypes including a universal bottle-pouring device and an adjustable guide dog harness.

They will hold a 'Makeathon' in Melbourne from Friday to Sunday at FAB9 in Footscray which will be attended by designers, engineers and inventors.



## Daily Mail

### Get smart on disability

By Benjamin Millar

Creative problem-solving teams will join forces this week in a brainstorming blitz to tackle challenges faced by people living with disabilities.

The third annual TOM: Melbourne Makeathon for assistive technology will take place from May 24 to 26 at FAB9, the maker space set up at the Dream Factory in Footscray. TOM stands for Tikkun Olam Makers, a Hebrew phrase defined as acts of kindness to improve the world and the community in which people live.

The not-for-profit movement aims to create affordable solutions to the daily challenges of living with disabilities.

Teams in this week's makeathon will be given a brief and then have the weekend to find a solution.

Eight "need knowers" will be matched with teams of "makers" consisting of engineers, designers, software developers and health professionals to come up with devices that help people with disabilities live more independently. Challenges will include devices for exercise, independent eating, teeth brushing and picking items up.

Since TOM: Melbourne's launch in 2016, 28 prototypes have been developed.

TOM: Melbourne founding director Debbie Dadon said previous makeathons had helped deliver solutions for people living with disabilities.

"We aim to help the lives of our need knowers like John, who is a quadruple amputee, and little Austin, who lives with congenital muscular dystrophy," she said.

All plans and prototypes created via the challenges will become freely available in the public domain for anyone to access and download.

## Star Weekly

