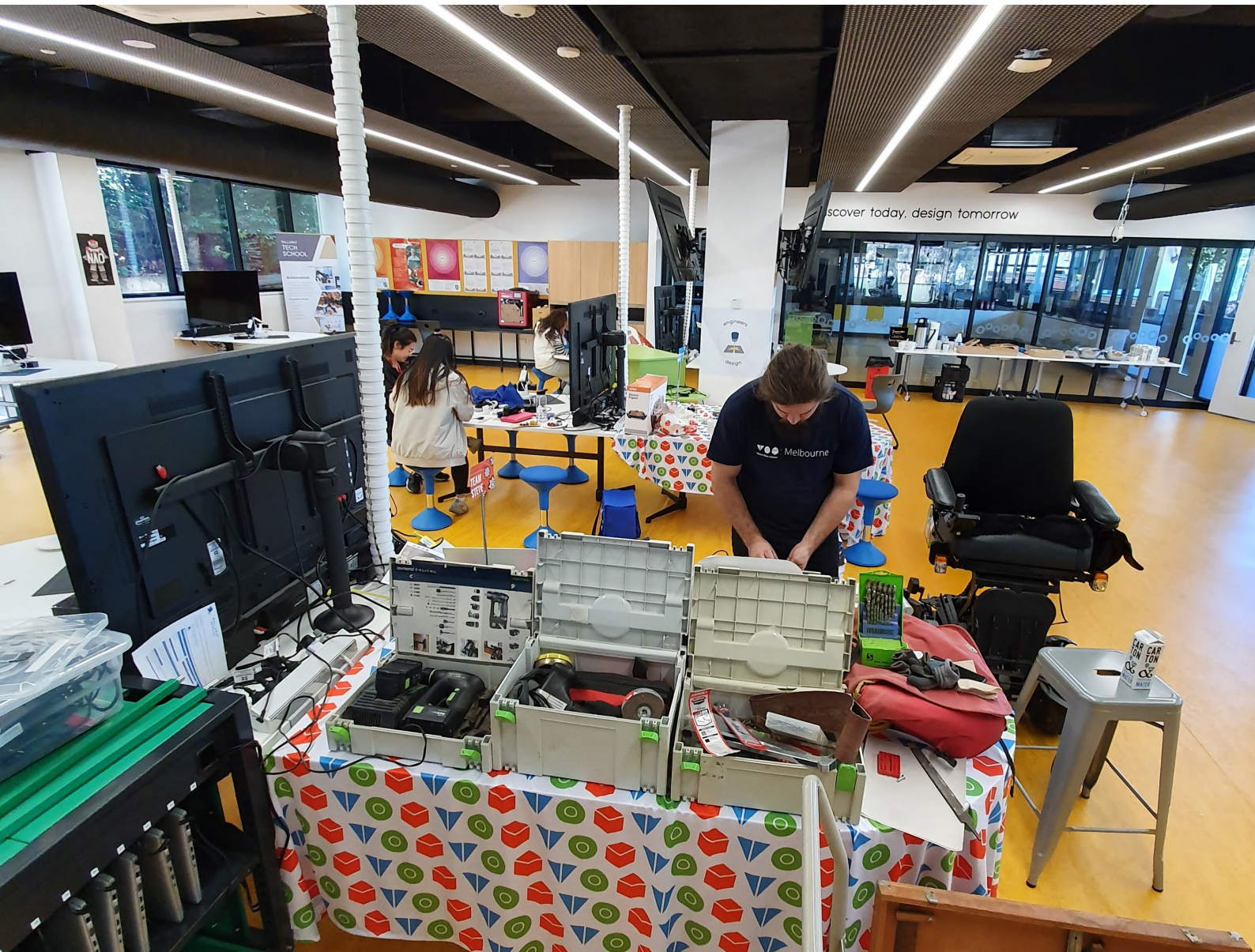


TOM 2.0 BALLARAT REPORT 2019





CONTENTS

Who we are	2
TOM 2.0 Overview	3
TOM 2.0 Ballarat Summary	5
Team Joanne	6
Team Steve	7
Step 3: Dissemination	8
Sponsors and Supporters	9

WHO WE ARE



We create and build products that improve the lives of people with a disability, where there is no obvious or current solution in the market. We focus on making assistive technology more accessible and affordable for people with complex needs.

We work with people with a disability who have a specific need, "Need-Knowers", and connect them with a diverse group of professionals, including engineers, industrial designers, health professionals and tradespeople, "Makers".

Together, they design and build products that solve a complex problem and improve the everyday life of the Need-Knower. Recent prototypes include robotic arms, powered crutches, wheelchair wheel cleaners and bespoke exercise machines. The intellectual property for every product is then shared through open-source Digital Product Files, so others can replicate or iterate it in their own communities around the world.

We focus on making assistive technology more accessible and affordable for people with complex needs.

Since 2016, TOM: Melbourne has developed a range of programs, including holding Makeathon events, building a developer network, establishing TOM @ University and offering STEM workshops in schools.

TOM: Melbourne has seen some great impact so far. We've helped 50 people with a disability, created a network of over 425 "Makers" and partnered with innovative organisations, such as Swinburne University of Technology, PwC and Solve Disability Solutions.

TOM 2.0 OVERVIEW



STEP 1: Prototype
Makeathon



Step 2: Product
TOM 2.0



Step 3: Disseminate
Web-platform

TOM 2.0 represents the second phase of the TOM process known as "Product" during which teams continue working to upgrade prototypes developed at the Makeathon into final TOM products.

A TOM product consists of both a physical product for the Need-Knower and a Digital Product File that is uploaded to the TOM web-platform. This means that the solution can be downloaded and replicated in any community around the world.

The first TOM 2.0 was held in July 2019 following the 2019 TOM: Melbourne Makeathon at FAB9 Makerspace in Footscray. 75% of the original makers returned to further develop and refine 4 out of the original 8 prototypes created at the Makeathon and complete the respective Digital Product Files ready for Dissemination via the TOM web-platform.



JOANNE SMITH
NEED KNOWER

“Now I can put my shoes on and off by myself instead of getting the carers to do it. It feels good that I don’t have to rely on anyone else to put them on”



NICK PERILLO, INDUSTRIAL DESIGN
TEAM STEVE

“This was a good opportunity to return to the project after a bit of thinking and some proper user testing”

TOM 2.0 BALLARAT SUMMARY

TOM 2.0 Ballarat

Saturday 7 December 2019

Venue

Ballarat Tech School, Federation University

After the TOM: Ballarat Makeathon Need-Knower Joanne Smith required some refinements for her shoe applicator after some user testing as well as the implementation of the accessible shoelace system to her other pairs of shoes.

Another Need-Knower, Stephen Kelly from the 2019 TOM: Melbourne Makeathon contacted the TOM team with an issue he was facing with his product. This presented a unique opportunity to conduct maintenance of a TOM product at TOM 2.0 Ballarat.

2

Need-Knowers

10

Makers

48%

Returning Makers

44%

Regional Makers

56%

Female Makers



TEAM JOANNE

Shoe applicator and Accessible Shoelaces

TOM: Ballarat Makethon

Blue Team Joanne created a platform that enables Joanne to independently put on her shoes with a magnetic hook mechanism that holds the shoe tongue open. Green Team Joanne developed a simple and elegant shoelace system that discreetly integrates into her shoes. The team designed a 3D printed piece of TPU (plastic) that can be stitched into the shoe, holding both sides together with the zipper.

TOM 2.0 Ballarat

The two teams came together to attach a set of caster wheels and large brake panels to the shoe applicator so that Joanne can easily and independently transport the device around her home and secure it into position when in use. The team also implemented Joanne's new shoelace system to another two pairs of her favourite shoes.

TEAM STEVE

Wheelchair Bag System A.K.A. the Power Porter

TOM: Melbourne Makethon

Team Steve 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.

TOM 2.0 Ballarat

Steve was having issues with the original motor in his wheelchair bag system as it was wearing down and was no longer powerful enough to bring his heavy bag around to his side. Previous Makers from Steve's team at the Makeathon at FAB9, together with new Makers were able to collaborate together to upgrade the motor to a sturdier and stronger actuator that can bring his bag around without Steve having to twist his body.

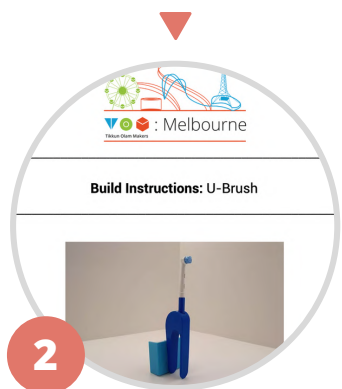


STEP 3: DISSEMINATION



1

Accessible toothbrush built for
Need-Knowers Joanne



2

Digital Product File uploaded
to TOM web-platform



3

Other Need-Knowers purchase
product from TOM web-platform



4

Local makerspace
manufactures the product



5

Costs are included in Need-
Knewer's NDIS plan

What happens after TOM 2.0?

Step 3 of the TOM Process, known as "Dissemination" scales the impact of the hard work of makers in local communities to others with similar needs around the world.

By creating a Digital Product File, as well as a physical product for the immediate Need-Knowers, individuals around the world can have access to the same solutions. Digital Product Files are uploaded to local TOM web-platforms as well as the Global TOM web-platform.

The TOM: Melbourne community is about to launch this groundbreaking new process for creating, developing and delivering assistive technology.

To find out more, visit www.tommelbourne.org

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