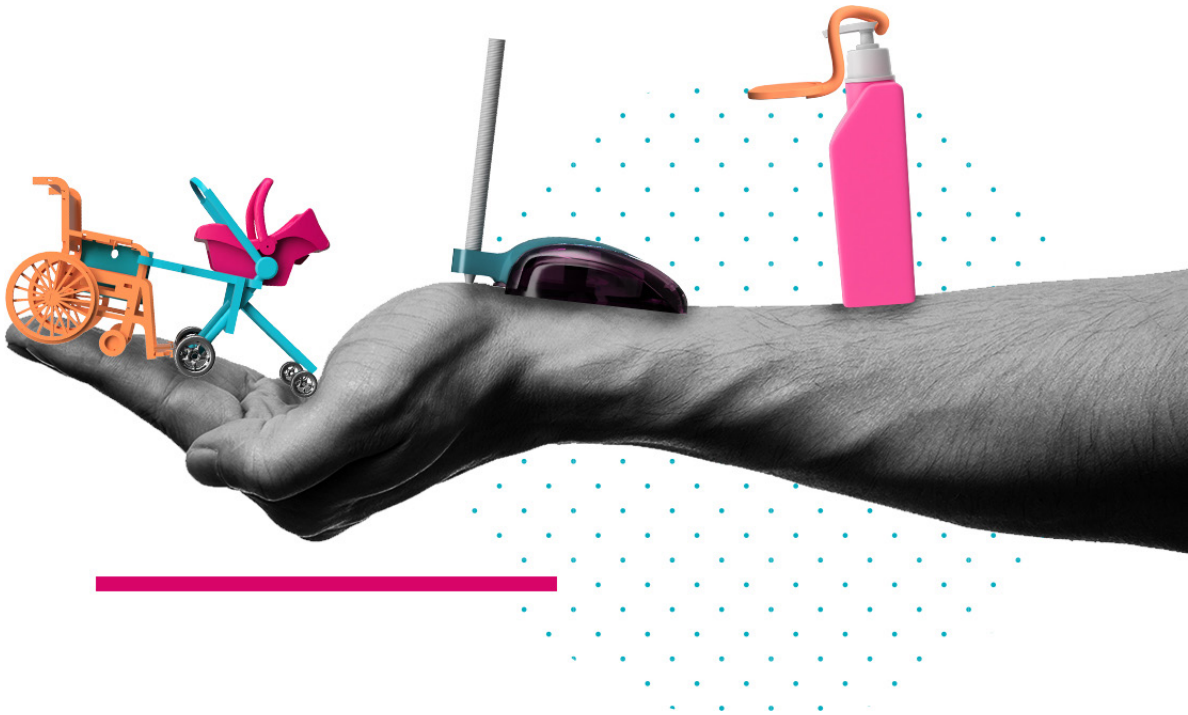
make:able

2027 Brief



PrintLab. AUTODESK

The Brief

A Year-Round Challenge | 2027 Awards Deadline: 15 May 2027

Design and make a 3D printed product or prototype that improves the day-to-day life of someone with a disability or an older person.

Make:able is a free, year-round design challenge. You can register, work through the toolkit and submit your project whenever you're ready. Submissions received by 15 May 2027 will be considered for the 2027 Make:able Awards. Later submissions will automatically enter the following year's awards.



Categories

There are three age categories: under 14, 14–18 and over 18. The over-18 category welcomes students, educators, hobbyists, professionals and anyone else interested in participating.



Teams

You may work in teams of up to 5 people in the same age category.



Audience

You can design a product for a real end user (e.g. someone in your local community), or for a Make:able Champion. Make:able Champions are people with disabilities who have shared their story and day-to-day challenges within the Make:able Challenge toolkit. The Make:able Champions option will be retired after the 15 May 2027 awards deadline. After this date, all new projects must focus on real end users, such as family members, friends or people in your local community.



3D Design

The design process must include the use of either Tinkercad or Autodesk Fusion software and the digital 3D model produced should be 3D printable.



3D Printing

A physical 3D printed prototype must be created. 3D printing can also be combined with other materials and processes, such as electronics, to create the product.



Submissions

You must create a 2–4 minute video, which shows information about your end user, how you developed empathy, how you framed a challenge, the idea generation process, the design-make-iterate process and visuals of the final product in action.

In addition to the video, you will also be required to upload a high resolution image or render of your solution. Full guidance on submissions and the online submission forms are provided in the Share Your Story section of the toolkit.

Design Criteria + Award Categories

You should aim to adhere to the below design criteria throughout your make:able journey.

Empathy

Develop a deep and personal understanding of your end user's disability, challenges and needs/wants.

Creative Idea

Use design-thinking methods to realise a product idea that differentiates itself from existing solutions in the market.

Autodesk Software

Explore multiple tools and features in Autodesk software to help drive your design.

Product Design

Create a refined, functional and visually appealing product with the quality and finish of a commercial product.

3D Printing

Take advantage of 3D printing's unique capabilities to create a product that benefits from this manufacturing process.

Storytelling

Create a polished and compelling video that tells the story of your end user, design journey and final solution.

There will be a total of 6 awards for each age group (under 14, 14-18, over 18). The award categories are as follows:

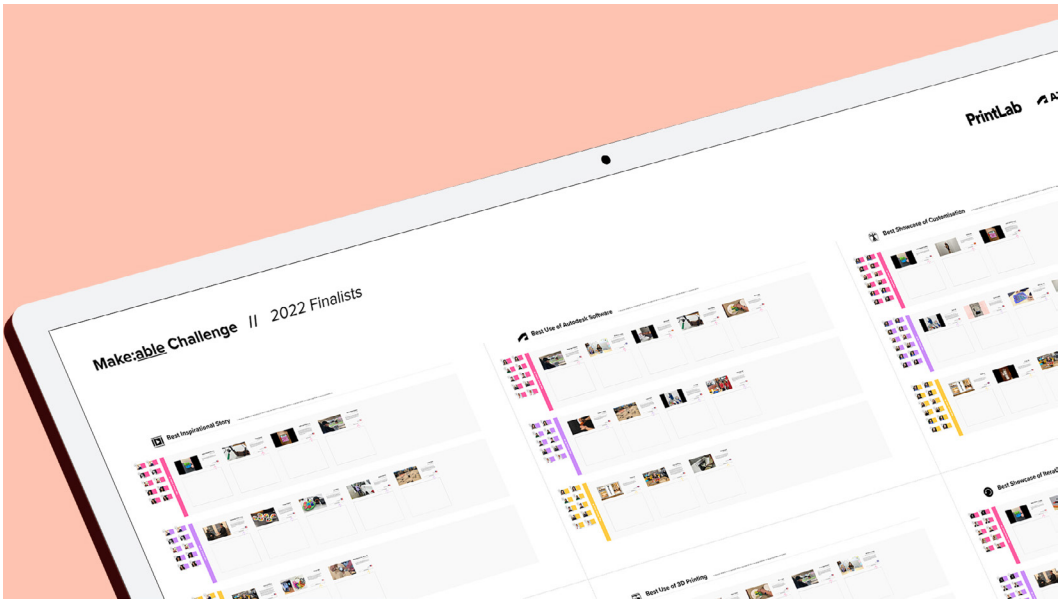
- Best Showcase of Empathy
- Best Creative Idea
- Best Use of Autodesk Software
- Best Product Design
- Best Use of 3D Printing
- Best Storytelling

The awards process is outlined in the next section and as you can see, the award categories directly relate to the design criteria. This means that for the best chance of winning an award, you should aim to excel in all design criteria.

Awards Process

15th May 2027 - 31st May 2027: Following the 15 May 2027 awards deadline, the PrintLab team will review all eligible submissions and shortlist approximately 6 entries for each award category and age group. Finalists will be notified by email.

1st June 2027 - 30th June 2027: A global panel of experts from the medical, education and design industries will review the shortlisted entries. Judges will be assigned specific award categories and asked to select their first and second choices for each category. First-place votes will receive 2 points and second-place votes will receive 1 point. Judges will submit their votes and comments through an online judging platform.



1st July 2027: The points will be counted and the 18 award winners (6 per age group) will be announced on the Make:able website and by email. Winning teams will receive prizes, which may include 3D printers and other technology products. Full prize details will be announced closer to the awards deadline. Prizes for winners in the under-14 and 14–18 categories will be provided to their school or organisation. All participants will receive a certificate of participation.

Please note that all announcements will be sent to the email address you used to sign up to Make:able.

Equipment List

Here is a list of recommended equipment to participate in make:able.



Computers

Computers/laptops can be shared if 1:1 devices aren't an option in your team.



Wifi

Make:able's challenge toolkit is hosted on a website, which can be accessed from any place and time as long as you have an internet connection.



Camera

The key to a good submission is documenting the entire journey with a camera. Don't worry about obtaining an expensive piece of kit - smartphone cameras are more than capable of shooting good quality video.



3D Printers + Filament

Our recommended brands for 3D printers are Bambu Lab and Prusa Research. If you do not have 3D printers available, we recommend contacting local organisations/ makerspaces, who may be able to support you with 3D printing services.



Large Format Paper + Sticky Notes

Large format paper (A2+) and sticky notes are amazing tools that can help teams to collaboratively solve problems, generate ideas and analyse outcomes. The challenge toolkit has several design thinking activities, which encourage the use of these materials. Therefore it is recommended that they are sourced.



Modelling Materials/Clay

Modelling clay and readily available materials (e.g. cardboard) can help you to quickly generate basic ideas before going in to detailed designs. It can be especially powerful to mould clay around objects or hands to drive the ergonomic form of a design.

Software

Select either Tinkercad or Autodesk Fusion software and create an account before starting your design. Both packages are free for education and developed by Autodesk.

Tinkercad

Tinkercad is a free, browser-based 3D design, electronics and coding app made by Autodesk. When using Tinkercad's 3D design workspace, you begin with what's essentially this construction kit of shapes. Think of these shapes as digital LEGO that you can place and adjust, before combining them with other shapes. It's the perfect entry point for people getting started with 3D design, yet it's got the versatility and complexity to design almost anything you can imagine. We recommend Tinkercad for students in the under 14 category and it has a range of classroom management tools to support you. Learn more and get started at:

https://www.tinkercad.com/

Autodesk Fusion

Autodesk Fusion is a cloud-based, full product design platform used amongst innovative and creative industries. Its comprehensive set of tools enable you to design with precision, render realistic images, simulate loads, animate joints and much more. The amazing thing about Autodesk Fusion is that it's intuitive and user-friendly enough for anyone to get to grips with - and it's completely free for education. We recommend Autodesk Fusion for the 14+ age groups and you can learn more and get started at:

https://www.autodesk.com/uk/products/fusion-360/overview

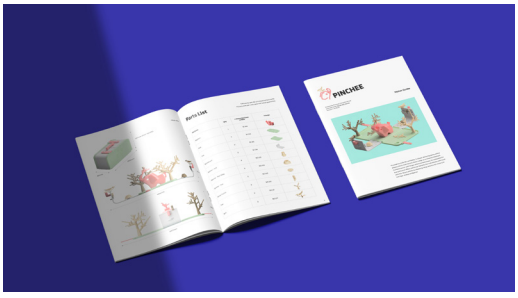
Beyond the Challenge

Your design doesn't just have the power to help one person — when shared as open source, it can support many others around the world. That's the purpose of our Beyond the Challenge bonus toolkit, which you can find after the submission section.

This completely optional stage is all about showing you how to take your project further after completing the challenge - with guidance on preparing files, creating clear documentation, and sharing designs in an open-source format. Inside, you'll find real examples of assistive technology, practical tips for refining your design, and a tutorial to help you create a professional MakerGuide.

At the end, you'll have the option to submit your open-source files for review. Selected entries will be shared with assistive technology organisations such as Makers Making Change, giving your project the chance to be featured on global platforms and make a real-world impact.







Frequently Asked Questions

Here are some answers to commonly asked questions about Make:able.

Cost

Make:able and all associated resources are completely free. We may however recommend supplementary content that may support you.

Time

The Make:able Challenge is designed to be flexible, allowing you to work at your own pace and dedicate as much time as you like to your project. As a starting point, we recommend allocating at least 8 sessions of approximately one hour each, although you can adapt this to suit your schedule.

Experience Required

Experience in 3D design and 3D printing is helpful but not required. A free trial to PrintLab's 3D CAD and 3D printing learning platform is included within the toolkit, which can be used to build new technical skills.

Additional Questions?

If you have additional questions, please email them to hello@weareprintlab.com and we will get back to you as soon as possible!

www.makeablechallenge.com