

2018 6th Singapore International 3D Printing Competitions: Personal Mobility Vehicles

Design Brief

Personal mobility vehicles are the perfect solution to Singapore's transition to car-lite transportation. Not only is the cost affordable for many commuters, the speed and portability of these devices make travelling an enjoyable experience. Designed with the latest cutting-edge technology, these amazing devices help you get to your destination in style. This increasingly popular mode of transport has spurred numerous innovations and introduced a range of devices into the market geared to every whim and need, from trendy e-scooters to electric wheelchairs. In addition, city dwellers are also resorting to mobility devices as a sustainable and green alternative form of transport. With 3D printing, personal mobility vehicles with custom-made parts for better maneuverability and stability can now be produced.

This year, we challenge aspiring designers to 3D print versatile, sleek and light personal transportation vehicle that can be tailored to suit users of various age groups. The competition calls for harnessing the potential of 3D printing to spur innovative concepts for enhancing personal mobility.

Submission

- The design should be submitted to Singapore Centre for 3D Printing by **30 March 2018**. Results will be announced on 2 May 2018.
- This competition only accepts printed physical parts as submissions. The entry package should contain the following:
 1. Printed and signed Registration form and Description Template. Incomplete forms will be disqualified.
 - Please include Entry details (Design name, AM Technique, AM Material) and Picture of design.
 - Please also include description the design, disruptive and new elements, assembly method (if any) and fabrication process, in English, on template attached (Description Template)
 2. 3D printed physical part for submission
 3. A labelled CD containing the following:
 - Softcopy of the original and editable design file and .stl file
 - Rendering of the design (tiff, png, jpeg formats)
 - Registration form and Description Template

- Please send the entry package to:

Nanyang Technological University
School of Mechanical & Aerospace Engineering
Singapore Centre for 3D Printing (Staff Office)

50 Nanyang Avenue
North Spine, N3.1-B2C-03
Singapore 639798

Attn: Ms Khwang Jing Wen
Contact: (+65) 6790 5542

Terms and Conditions:

- The design must contain more than 50% 3D printed components.
- The final printed part should be able to be used as a device to move from point A to point B. A minimum distance of 5m should be demonstrated.
- There is no limitation on the materials of choice.
- The final printed product should require minimal manual assembly and minimal post-colouring. If manual assembly is required (e.g. snap fit, bolts, screws or glue), please provide a description on the techniques used to assemble the final part.
- All entries must be participants' original work, have not been in production or otherwise previously published or exhibited.
- The design including picture, icon, symbol within, shall not in any way infringe any third party's right, including but not limited to copyright, logos, trademark, or other proprietary rights
- There is no limit to the number of submissions from each participant.
- Team entries are welcome. If a team wins, there will be only 1 prize per team and the cash prize will be transferred to the team leader, who will be solely responsible for the distribution of prize among team members.
- The winning design belong to the organizer who reserves the right to print, use and alter it in any manner deemed fit, without payment of any fee.
- All entries sent to this competition will be retained by the organizer.
- The winner or a representative from the winning team must be present in person to collect the prize in Singapore at the prize giving ceremony on 2 May 2018.

Eligibility

- There are three categories for participation. Each design can only be submitted under one category.

Category	Eligibility
Open category	All, regardless of age, gender, nationality etc.
Singapore school student category	Students from Singapore primary schools, secondary schools, junior colleges and Institute of Technical Education (ITE).
Singapore tertiary student category	Students from Singapore polytechnics, universities and tertiary institutes e.g. LASALLE College of the Arts and Raffles Design Institute.

- Employees of Nanyang Technological University are not eligible to participate.

Judging Criteria

- The design should fit the theme of the competition.
- The judges will be looking for an innovatively unique design, which is able to showcase and bring out the immense potential of 3D Printing. Judges will also evaluate the form and how it is taking advantage of 3D printing technology.
- The final printed part should be able to be used as a device to move from point A to point B. A minimum distance of 5m should be demonstrated.
- It should inspire and enable discussion on the implications of 3D printing for the world.
- The panel of judges includes experts in 3D printing, engineering, art and design.

Prizes

- Only one winning design from each category will be selected.

Category	Prizes
Open category	Top prize of \$10,000
Singapore school student category	Top prize of \$5,000
Singapore tertiary student category	Top prize of \$5,000

- Winning designs will be displayed in Nanyang Technological University (NTU).
- Winning designs will be mentioned and showcased during speaking engagements, demonstrations, displays and interviews pertaining to the subject.

Fine Print

- NTU reserves the right to amend these rules at any time. Any amendment to competition rules will be announced.
- The decision of the jury will be final.