

2022 Design For Healthcare

The Brief

Design an innovative product for use in any part of the healthcare sector, whether at home or in the hospital, which retains the necessary properties for demanding applications, but which also exploits the longevity of plastics.

In many sectors of the healthcare industry, plastics perform a vital role in helping to stop the spread of bacteria and infectious diseases by combining innovative product design with their hygienic properties.

The Covid pandemic, for instance, has provided recent examples of products produced from plastics which are used in hospitals, care homes or even in our own houses.

However, the majority of these products are single use and are not recycled because of the risk of cross-contamination and cost or feasibility to re-sterilise.

You are therefore challenged to design an innovative product for use in any part of the healthcare sector, whether at home or in the hospital, which retains the necessary properties for demanding applications, but which also exploits the longevity of plastics. It should be cost competitive and have the benefit of being multi-use or at least have the potential to be re-purposed, as well as being recyclable, thereby minimising the environmental impact of disposal.

Rules

Your entry must be made predominantly in plastic and any suitable polymeric material may be used.

A list of recommended websites and publications is available on the following page.

1. Originality:

Design submitted MUST be your own idea and, to the best of your knowledge, no similar product has ever been on the market.

2. Model / prototype:

Not required at the preliminary judging stage. Models and prototypes are crucial at the final judging stage to show essential working elements.

3. Summary of key points:

Within your four Pdfs you should describe the product, the need for it and the unique selling point.

4. Costing:

Evidence that raw materials and production costs have been considered in ensuring a realistic unit cost has been established

Key Dates

Registration

Register for the award through the DIP website

Registration opens on

Monday 4th October 2021

and closes at

23:00 on Sunday 27th February 2022

After Registration, each Registrant will be given an Entry Number

Submission of Entries

Email your entry to the Award Administrator by

23:00 on Sunday 27th March 2022

Initial Judging

Tuesday 12th April 2022

The Judges review all the entries and select the best six to be finalists. The judges give comments to each finalist on ways to improve their design.

Final Judging

Friday 27th May 2022

The six finalists present their designs to the judges and answer their questions.

Presentation of the Awards

Friday 1st July 2022

The six finalists present their designs to an invited audience and the results are announced.

Judging Criteria

- 1 Adherence To Brief:**
Proof that the design has addressed what is required.
- 2 Originality:**
Innovation in function, form or use of materials, or a radical solution to an existing problem.
- 3 Manufacture:**
Indication that issues of cost-effective and sustainable production have been considered, from tooling and manufacture to marketing and disposal; an imaginative, intelligent and appropriate use of polymers, indicating that research has been carried out into materials and processing.
- 4 Sustainability:**
Evidence that an understanding of the principles of sustainability has been applied to the design.
- 5 Presentation:**
A clear representation of the design and method of construction, and an indication of all the materials used. The first sheet should clearly explain, in five bullet points, why your design answers the brief.

Top Tips

- 1 Be creative**
It is always good to see 'new' or untried ways of solving problems in project submissions.
 - 2 Be practical**
Try to make sure your design will work, and can be made economically.
 - 3 Describe the product**
Pictures are worth a thousand words but competition judges will often refer to written material to clarify a point (but also see point 10).
 - 4 Use renderings, CAD etc. as appropriate**
Good drawings and CAD are very useful but do not let style triumph over content.
 - 5 Describe why you chose the polymers you did**
There should be very good reasons for selecting specific plastics; don't fit the plastic to the design just for the sake of it.
 - 6 Describe the production processes that would be used**
If the volumes or geometry suggest a particular process, say why you chose the one you did.
 - 7 Include a model or prototype, even if non-working**
A simple proof-of-principle model can really lift a complex entry.
 - 8 Stick to the Brief**
The theme is broad enough so that you do not have to go outside it! Please be aware that normally 14% of entries are rejected before judging for this reason alone.
 - 9 Summarise – judges don't have all day!**
With many entries to judge in one day, a summary sheet will help their deliberations.
- AND LASTLY...
- 10 Go for quality over quantity**
Reams of paper will always lose out to elegance and a concise presentation

Terms and Conditions

Entries

This competition is open to all undergraduate students registered on UK and Ireland design courses for the academic year in which the award is taking place.

Every student who intends to participate must complete and submit the online Registration form before the Registration closing date.

Designs submitted must be marked with an entry number which will be supplied by the organisers and must only be submitted by email in pdf format in accordance with the stated process. No designs will be accepted after the 'nominated final date for submission' unless by special arrangement.

The organisers reserve the right to reject any entry that in their opinion fails to meet the competition requirements and conditions. No group entries will be accepted by the organisers. Only individual entries will be valid and a maximum of two entries per student will be allowed. It is expected that tutors will guide students to comply fully with the conditions of entry.

Intellectual Property

The intellectual property rights belong to the entrant who, if successful, will be responsible for taking the steps necessary for protecting those rights.

The viewing of entries by judging and administrative personnel is carried out in strictly confidential settings and is therefore unlikely to be interpreted as entering into public domain. However, the exposure enjoyed by finalists and their entries probably would be considered to be in the public domain.

The entrants grant the sponsors permission to photograph the winning designs and to use those pictures solely and indefinitely in connection with the competition.

For more information on IP, searching for novelty and protecting your design see the competition resource pack

Finalist's Expenses

Where appropriate, the DIP organisation will meet all reasonable travel and hotel costs for the Final Judging and Awards Ceremony. The timing of these events is planned to ensure that students can make best use of off-peak travel. Hotel arrangements are at the discretion of the DIP organisation.

Change Of Address

It is the responsibility of the entrants to keep the organisers informed of any change of address and other contact details.

Awards

The organisers reserve the right to withhold or divide the awards offered according to the standard of entries.

Communications should be directed to:

DIP Award Coordinator

Email: DIP Award Coordinator

Disclaimer

The organisers will endeavour to run the Award as described but reserve the right to modify or discontinue the Award with or without prior notice due to reasons outside its reasonable control. The decision of the organisers in all matters relating to the Award is final and no correspondence will be considered.

The organisers shall not be liable for any failure to comply with its obligations relating to the Award where the failure is caused by something outside its reasonable control and under any circumstances amounting to unforeseeable circumstances.

Recommended Reading for 2022 Brief

Articles:

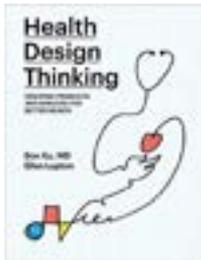
[Plastics Contribution to a Sustainable Future](#)

[Plastics in Healthcare Applications](#)

[Should we be reusing more medical devices?](#)

[Healthcare Plastics Recycling Council](#)

Books:



[Health Design Thinking: Creating Products & Services for Better Health](#)

Bon Ku and Ellen Lupton 2020, co-published by MIT, Cooper Hewitt and the Smithsonian Design Museum

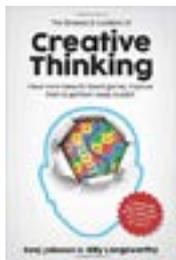
This book applies the principles of human-centred design to real-world healthcare products and services.



[Discovery Design: Design Thinking for Healthcare Improvement](#)

edited by Driver, Katz and Mawer 2019, published by The Risk Authority Stanford

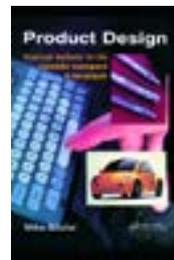
An illustrated handbook for healthcare design innovators



[The Snakes & Ladders of Creative Thinking](#)

Deej Johnson & Billy Langworthy 2019 pub Amazon ISBN 9781916214309

Have more ideas, improve them & get them ready to pitch



[Product Design](#)

Mike Baxter, 1995 Routledge ISBN 9780748741977

The discovery of market needs and the manufacture of a product to meet those needs are integral parts of the same process.



[Product Design](#)

A. Milton & P. Rodgers, 2011 Laurence King Publishing

A broad and comprehensive introduction to the field of product design and the key role of product designers.

Plastics and Processes



[Covestro](#)

Headline industry sponsor of the competition and one of the world's largest producers of polymers and high-performance plastics.

To browse through Covestro materials and find out more about their applications and industries, click here...

[Covestro CMF Library](#)

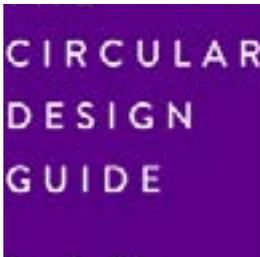


[The British Plastics Federation \(BPF\)](#)

The leading trade association of the UK plastics industry. Its website provides educational information through

Plastipedia, the world's largest on-line plastics encyclopedia, providing an A-Z of plastics. an introduction to processes and applications, animations illustrating processing methods, and a costing guide.

Designing with Plastics



[Circular Design Guide](#)

The design thinking approach that underpins this guide allows you to explore new ways to create sustainable, resilient, long-lasting value in the circular economy – giving you the creative confidence to redesign the world around you.



[Design Council](#)

The UK's strategic body for design providing information about all aspects of managing design, including choosing materials and careers in design.

This web-site offers a significant knowledge base on design practice with a strong focus on inclusive design both for business decision-makers and as an educational resource.



[Ellen MacArthur Foundation](#)

Today's linear 'take, make, dispose' economic model relies on large quantities of cheap, easily accessible materials and energy, and is a model that is reaching its physical limits. A circular economy is an attractive and viable alternative that businesses have already started exploring today.



[Tangram Technology](#)

Consulting Engineers for plastics products. This site provides an Introduction to Plastics and Processing plus downloadable Design Guides for Plastics by Clive Maier, Econology, Ltd

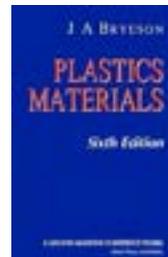
Recommended Publications



[Manufacturing Processes for Design Professionals](#)

Rob Thompson

Design Innovation in Plastics Award winner 2001, Thames & Hudson 2007, ISBN 978-0-500-5137-0. Comprehensive resource with illustrated sections on plastics materials and moulding processes.



[Plastics Materials](#)

John Brydson, Butterworth-Heinemann.

The classic reference for information about commercially available plastics materials. Now in its seventh edition, it includes the latest polymers. ISBN (print): 9780750641326, ISBN (eBook): 9780080514086

Intellectual Property



[Click here to open our Guidance notes on Intellectual Property](#)



[Intellectual Property Office](#)

Essential information from the intellectual property office.

DIP Award – How to submit your design

- Create a single pdf file with a maximum of four A3 pages at 120 dpi resolution.
- For help on how to merge separate pdf files into one file,
see: www.youtube.com/watch?v=iCzNPMBRVDQ
- Name your file: DIP_ Entry Number_ Surname
i.e. if your name is Amanda Windsor and your Entry Number is 875, the file name would be: DIP_875_ Windsor.
- If the file size is less than 3MB, email it to: dip.award@gmail.com
- If the file is larger than 3MB, but less than 6MB, use WeTransfer www.wetransfer.com to email it to dip.award@gmail.com