

ENGINEERING FOR PEOPLE

DESIGN CHALLENGE

Bringing to life real-world design challenges
in a safe and supported environment.



UK
ENGINEERS
WITHOUT BORDERS



Inside you will find...



Overview

- The problem
- Introducing the programme
 - What is the challenge?
 - Part of the curriculum
 - The design brief
- Universities involved



Impact

- Feedback from educators
- Feedback from students
- Changes in skills



Our packages



The problem

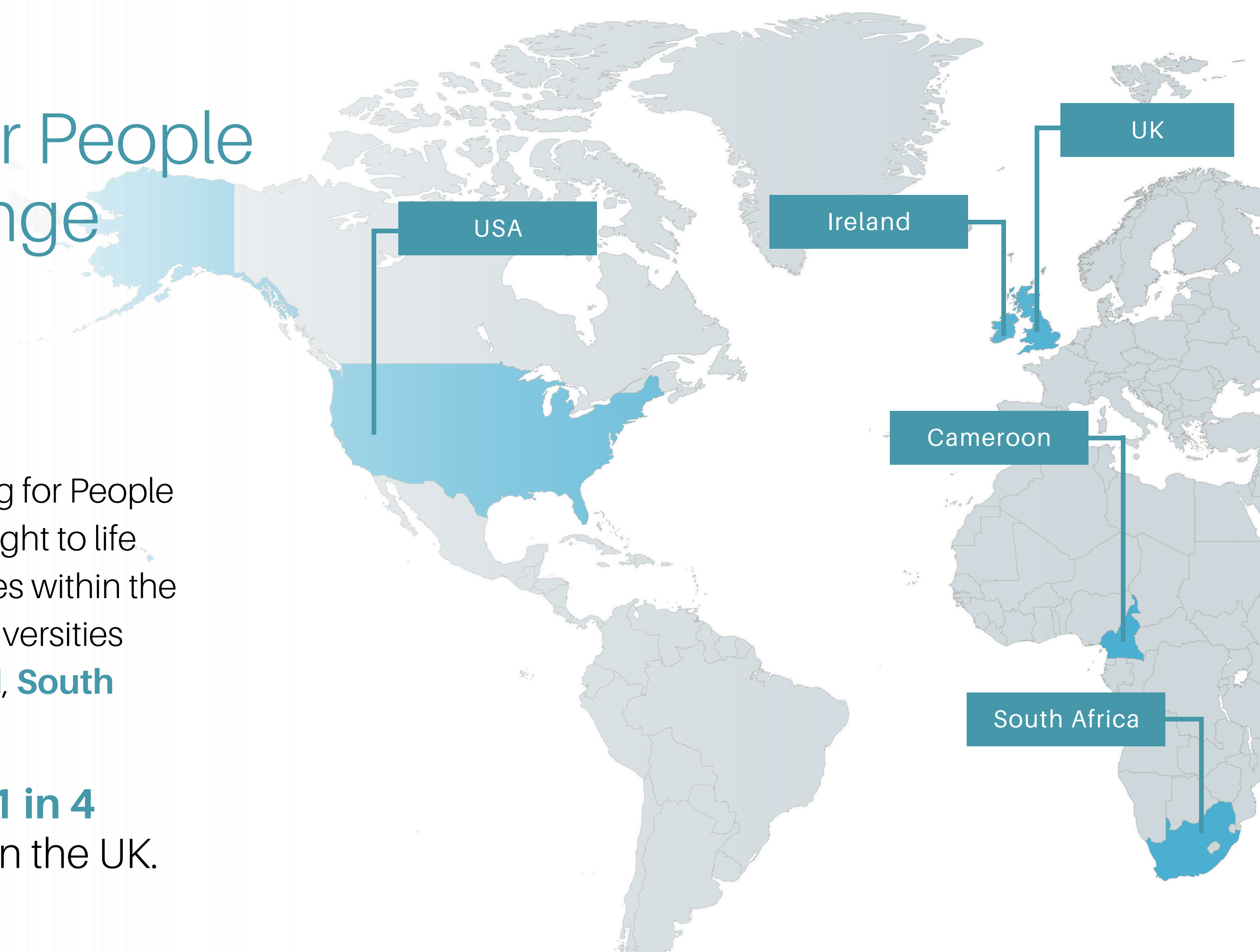
Universities face mounting pressure to provide students with sustainability skills, driven by demand from over 79% of students, employer expectations, a recognised skills gap across industry, and the mandate of AHEP4. Successfully addressing this imperative will not only ensure your institution is helping to meet societal needs but will also enhance your competitiveness in attracting top-tier students.

Our support makes navigating this challenge more achievable.

Introducing the Engineering for People Design Challenge

Since 2011, the Engineering for People Design Challenge has brought to life real-world design challenges within the engineering curricula of universities across **Cameroon, Ireland, South Africa, the UK** and **USA**.

We are now reaching **1 in 4** engineering students in the UK.





The flagship programme takes a **project-based learning approach** to support students to broaden their understanding of the impacts of engineering on people and planet.

To date, the challenge has marked a key milestone for

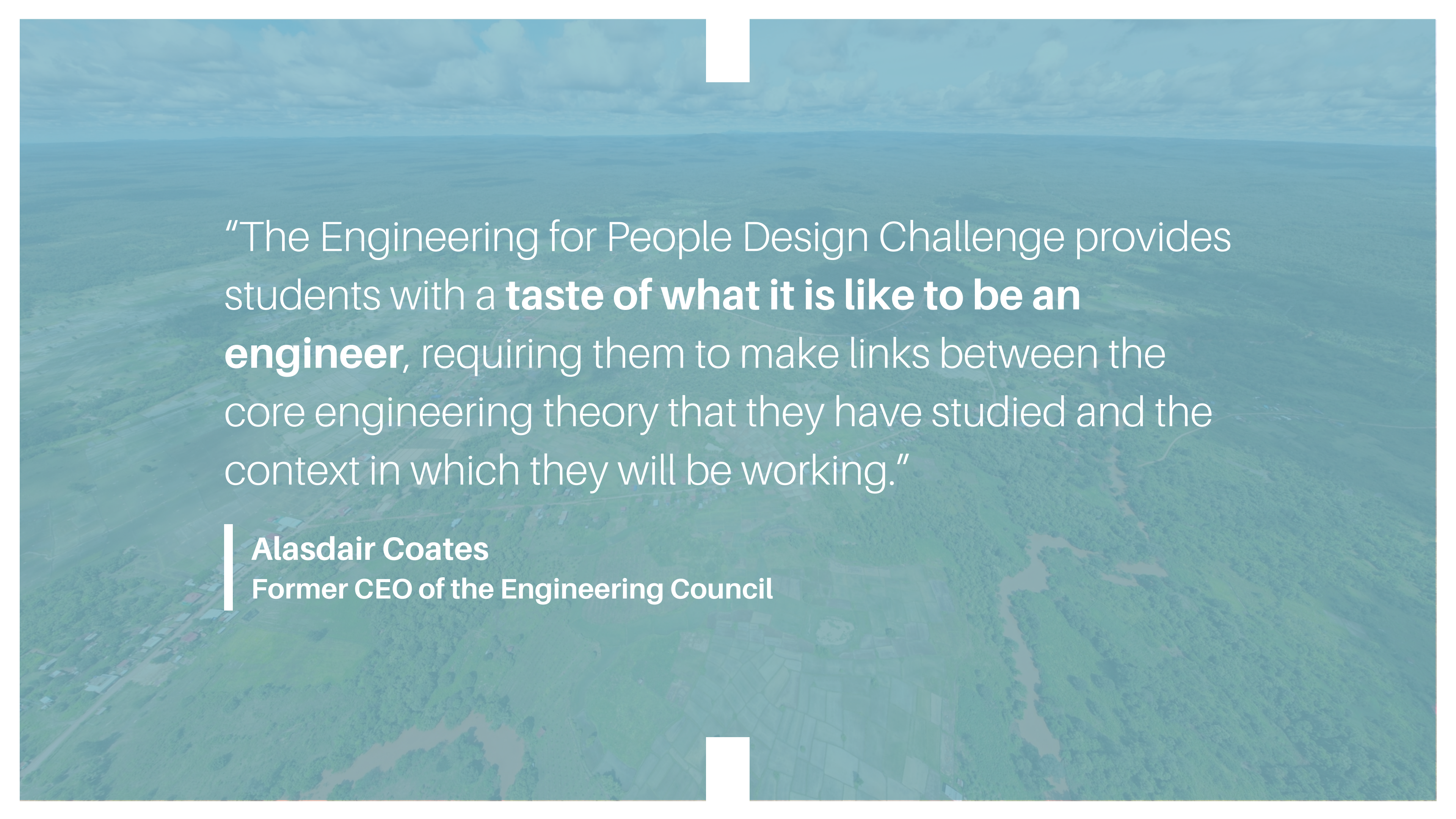
over 80,000

students as they develop the critical skills needed to become globally responsible engineers.

What is the challenge?

In teams, students are asked to address a detailed **real-world design brief** shaped by the insights and reflections of a community. Together, the students work to develop a solution to engineering specific challenges facing the partner community.





“The Engineering for People Design Challenge provides students with a **taste of what it is like to be an engineer**, requiring them to make links between the core engineering theory that they have studied and the context in which they will be working.”

Alasdair Coates
Former CEO of the Engineering Council



Part of the curriculum

We work with educators to run the Engineering for People Design Challenge as part of the curriculum for Foundation, first and second year undergraduates, making it a **mandatory part of the degree course**.

In the UK, the initiative contributes to the Engineering Council Accreditation of Higher Education Programmes (i.e. AHEP4) by requiring multidisciplinary teams of students to demonstrate an understanding of the design process and broaden their awareness of the economic, legal, social, ethical and environmental implications of engineering, alongside technical skills.

Interested in participating with a Master's cohort? Get in touch at **challenge@ewb-uk.org**.

The design brief

Every year, we work in collaboration with a **community partner** to produce a real-world design brief that is shaped by insights and reflections taken from interviews with the local community.

Each design brief contains...





This year's challenge

In partnership with Engineers Without Borders South Africa and Makers Valley Partnership, this year's design brief considers engineering challenges and opportunities in **Makers Valley, Johannesburg.**

The valley has formed an identity rooted in creativity, and creative place-making, representing a hub for social and creative enterprise.



46 universities

around the world delivered the design challenge in 2023/24.



University of Brighton



Logos from the 40 participating universities in Ireland, the UK and USA.


Discover the impact

We take our impact seriously.

Explore impact data from years of surveys, interviews and focus groups to understand why our university partners continue to deliver the challenge.

Click here for the full report.



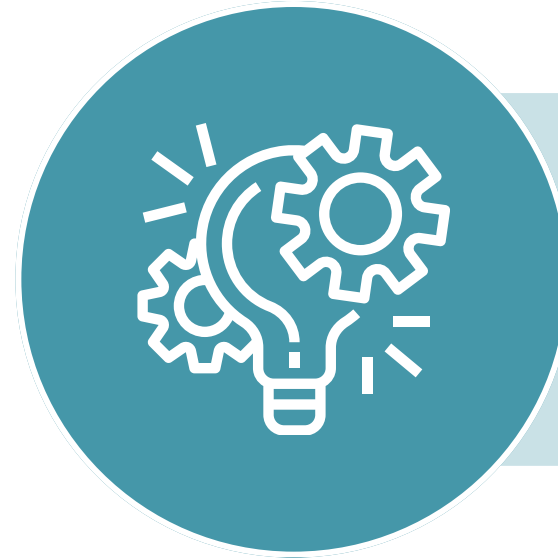
Empowering tomorrow's engineers:

10+ years of the Engineering for People Design Challenge

[Download the report](#)

 **Watch our video report**

Every educator we've interviewed agrees that the programme is **good value for money** - why?



Project-based learning enhances the learning experience for educators and students



Tutors and students benefit from a multidisciplinary and multicultural **community of learning**




Our **resources are valued**, especially for their global dimension and real-world examples



“The Engineering for People Design Challenge provides the opportunity for students to look at how to solve **real problems for real people** using their engineering skills.”

Educator
Aston University



“As attested by our students, **it is a truly motivating and eye-opening experience** that builds their confidence as engineers. The [...] Design Challenge allows students to delve into a particular interest, and the designs are not limited to a specific field of engineering.”

Educator

University of Nevada, USA

The background image shows a group of students in a classroom. In the foreground, a young man with dark curly hair is looking down at a book he is holding. Behind him, other students are visible, some looking towards the camera and others looking away. The entire image has a warm, orange-toned overlay.

“The Engineering for People Design Challenge **builds technical skills**, but also gives students the opportunity to be **creative** and to express their desire to be **involved in communities**.”

Educator

University of Johannesburg

...Siena, Pu Ngaol is a picturesque
wildlife sanctuaries, with Keo Siena being the
... through Pu Ngaol, spanned by a narrow
... pressing issue; residents travel four hours every
... kong River for clean water

10 REDUCED
INEQUALITIES
=

Health and Safety

Uses natural resources and minimises waste

Give to community

Pure (6.5-8.5)



85%

feel they have increased their skills
in team-working, decision-making
and project management



83%

feel confident addressing the UN Sustainable Development Goals (SDGs) in their work



91%

of students believe that the design challenge has broadened their understanding of the importance of globally responsible engineering



"You, as an individual, have the ability to create ideas that have a resounding impact on other people.

It was a mindset change to see that we are actually engineering now. We have relevance and our ideas are relevant ... we have value and influence in the engineering sector ... and we haven't even got to the end of our degree!"


Student at Strathclyde University

Focus group participant

A group of students are gathered around a table in what appears to be a workshop or classroom setting. They are looking at a laptop that has several stickers on its lid, including logos for MIT, Deso, Signals & Threads, and others. The students are engaged in a discussion, with one student in the foreground looking at the laptop. The background shows other students and a wall with some papers or notices. The entire image has a warm, orange-toned overlay.

“I gained an appreciation for the **depth and complexity of engineered solutions.** The issues present around the world cannot be solved through pure engineering. They require a holistic, humanitarian understanding of the complex circumstances and needs present in society.”

Student at Colorado State University
Focus group participant

A photograph of several students sitting around a table in a focus group. They are looking at a laptop screen. The image has an orange tint. The text is overlaid on the image.

“The programme addressed real-world problems that needed innovative solutions. This prepared me for actual engineering problems **that I will encounter in my career.**”

Student from the Cape Peninsula University of Technology
Focus group participant

Our UK packages



Find out what's included in each package in more detail on the next page.

Early Bird Essentials - £4,000

Sign up before September 2024 and save 20% on our Essentials package.

Essentials - £5,000

Everything you need to deliver the design challenge, including launch resources and a virtual workshop facilitated by our team.

Bespoke Face-to-Face* - £5,000+

Including all of the above, as well as a bespoke in-person Launch Lecture and workshop. You will also receive bespoke educator training.

All prices are exclusive of VAT.

* For the bespoke face-to-face- package - geography, number of students and supporting educators will impact the cost and delivery of the session(s).

Our US packages



Find out what's included in each package in more detail on the next page.

Early Bird Essentials - \$3,500

Sign up before September 2024 and save 12% on our Essentials package.

Essentials - \$4,000

Everything you need to deliver the design challenge, including launch resources and a virtual workshop facilitated by our team.

Bespoke* - \$4,000+

Including all of the above, as well as a bespoke educator training session and an additional student workshop.

* For the bespoke package - numbers of students and supporting educators will impact the cost and delivery of the session(s).

Included in our packages

| Core content | Essentials | Bespoke |
|-------------------------------------------------|------------|---------|
| Design Brief | ✓ | ✓ |
| Launch Lecture (Self-directed) | ✓ | ✓ |
| Online Educator Briefing | ✓ | ✓ |
| Video Case Study Interviews | ✓ | ✓ |
| Student Forum Access | ✓ | ✓ |
| Virtual workshop facilitated by EWB-UK | ✓ | ✓ |
| Submission, review and feedback of top designs* | ✓ | ✓ |
| Invite to in-person Grand Final | ✓ | ✓ |
| Storytelling Workshop for finalists | ✓ | ✓ |
| People's Prize online showcase for finalists | ✓ | ✓ |

* 5 teams per university, with at least 1 team progressing to the Grand Final as a finalist.

| Additional student workshops | Essentials | Bespoke |
|--------------------------------------------------|------------|---------|
| Launch lecture in-person* | £ | ✓ |
| Bespoke workshop in-person* | £ | ✓ |
| Latter stage 'solutions' workshop (live, online) | £ | ✓ |

| Additional educator support | Essentials | Bespoke |
|--------------------------------------------------------------------------------------------------|------------|---------|
| Bespoke Educator Training (Online), linked to Competency Compass and/or Reimagined Degree Map ** | £ | ✓ |

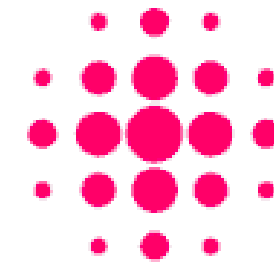
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** You can find out more about our Competency Compass and Reimagined Degree Map at www.ewb-uk.org.

With thanks to our partners

To ensure we can continue to deliver this impactful programme, we have partnered with organisations that share our commitment to ensuring a safe and just future for all.

[Explore all of our strategic partnerships.](#)



PUBLITEK



Group



To learn more about how your university could get involved in this impactful programme, please contact us at challenge@ewb-uk.org.

Thank you!



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