

Reaching the **tipping point** for globally responsible engineering

Our 2021-2030 strategy



UK

ENGINEERS

WITHOUT BORDERS

We urgently need to balance the needs of all people with the needs of our planet. Together, we will put global responsibility at the heart of engineering, ensuring a safe and just future for all.

Our planet is in a perilous position.

We are draining natural resources, destroying ecosystems, and to avoid further climate crisis, emissions must drop drastically in the next decade. Meanwhile, there continues to be vast inequality across the world, with millions of people still without their basic human rights met.

Engineering has played a significant role – both good and bad – in getting humankind and the planet to where we are today. Typically, the engineering community still relies on unsustainable practices and materials, with limited consideration of the broader impact. The building and construction sector alone is responsible for 38% of global emissions*. Engineering education and practice used to evolve with the needs of society. Evidence shows that this has stagnated, with a recent survey finding that 93% of UK engineering companies with a sustainability strategy do not have staff with the skills to fulfil it**. This has to change. We need to move away from outdated working methods and prioritising profit over people and planet.

*United Nation Environment Programme, "Global Status Report for Buildings and Construction", Globalabc.Org, December 16, 2020,

https://globalabc.org/sites/default/files/inline-files/2020%20Buildings%20GSR_FULL%20REPORT.pdf

**The Institute of Engineering Technology, "IET skills for net zero and a green recovery 2020 survey", www.theiet.org, February 2, 2021,

<https://www.theiet.org/media/7605/iet-skills-for-net-zero-and-a-green-recovery.pdf>



With a different approach

the engineering community has
the power to rapidly transform
our world for the better.

Our 2021-2030 strategy provides a strong, persuasive plan to enable this to happen.

When developing our strategy we took an open, honest look at our past and considered where we should direct our efforts. This has led us away from local projects with positive-but-limited impact, towards systemic change. We are now focusing on reaching the tipping point where global responsibility becomes integral to the way all engineering is taught and practiced.

By 2030 we will build a movement of over half a million people, powerful enough to radically transform the culture of engineering.

As society moves towards the deadline to meet the UN's Sustainable Development Goals (SDGs), we will inspire the engineering community to commit to global responsibility. We will drive change, collaborating with companies, universities and a wide variety of organisations to mainstream globally responsible engineering.

This is an ambitious strategy but the scale of the challenge demands this. By bringing together thousands of people and organisations, we will develop unstoppable momentum towards achieving social and environmental justice through engineering.

Whether you are an engineer, academic, university student, or involved with engineering in any way, we want and need you to be a part of this movement for change.



Vision

Society balances the needs of all people with the needs of our planet.

Mission

To put global responsibility at the heart of engineering.

Strategic goals

Inspire – Upskill – Drive change.

Globally responsible engineering

Our strategy sets out **four key principles** for globally responsible engineering. These will be critical in ensuring a safe and just future for all.

We want these principles to be adopted across the engineering community and embedded in the culture of how all engineering is taught and practiced.



Responsible

To meet the needs of all people within the limits of our planet. This should be at the heart of engineering.

Purposeful

To consider all the impacts of engineering, from a project or product's inception to the end of its life. This should be at a global and local scale, for people and planet.

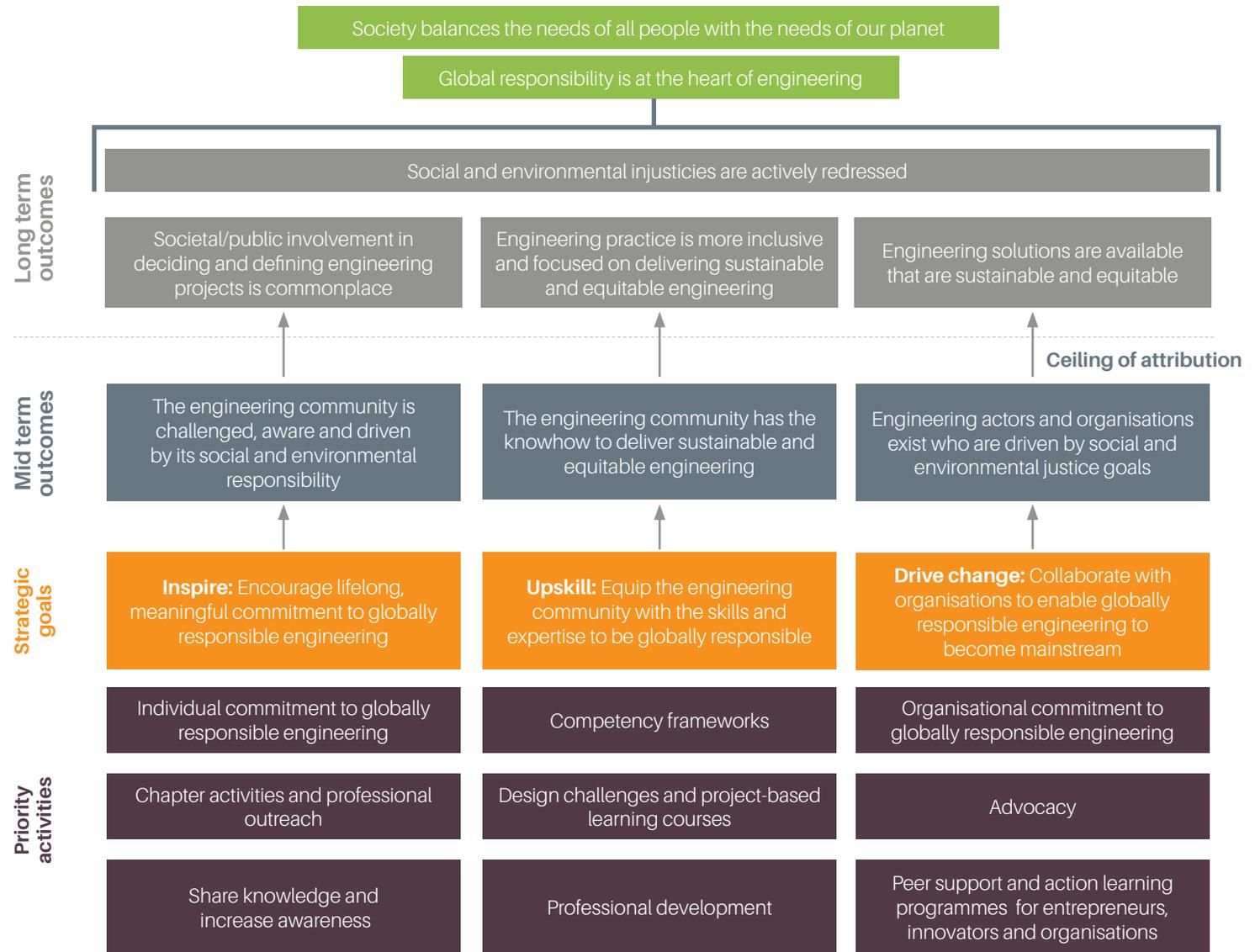
Inclusive

To ensure that diverse viewpoints and knowledge are included and respected in the engineering process.

Regenerative

To actively restore and regenerate ecological systems, rather than just reducing impact.

Our theory of change



Note that the strategic goals will likely contribute for to more than one change outcome. For simplicity this diagram shows the change outcome the strategic goal will have the greatest impact on.

Goal 1

Encourage lifelong, meaningful commitment to globally responsible engineering.

We have three major goals for the strategy. The first is to encourage the engineering community to look at their practice differently.

We want to help students, academics, engineers and all in and around engineering to recognise the crucial role they play in challenging current practice and creating positive change. Our target is to inspire at least 500,000 people to adopt the principles of globally responsible engineering.

Through our thought pieces, presentations, workshops and campaigns, we will increase the number of people introduced to a broader understanding of the role of engineering and raise awareness about the pressing need to commit

to globally responsible engineering.

We will build on our successes. To date, we have sparked over 50,000 students to consider the social and environmental impact of their work through our in-curriculum design challenges. We will grow the scale and impact of these so that even more individuals develop this essential mindset from the start of their career.

We'll expand the number and reach of our activities and resources outside of curriculum so that more people can learn about global responsibility, including students, early-mid career professionals, senior leaders, entrepreneurs, innovative thinkers and experts.

Inspire



Goal 2

Equip the engineering community with the skills and expertise to be globally responsible.

It's our mission to provide people with the tools to put global responsibility at the heart of their engineering practice.

Our strategy sets a target to upskill 250,000 people in the engineering community, deepening their competency and confidence in creating sustainable and equitable outcomes.

We will continue to develop competency frameworks that build on the principles of global responsibility, providing specific competencies required in engineering practice. These will be designed with the potential to integrate with existing frameworks. Transparent progression pathways will provide a clear roadmap from basic to advanced ability.

In the first few years alone, we'll engage thousands of engineering professionals through one or more of our learning

resources, including training programmes, workshops and talks. They'll expand their knowledge of the likes of the UN SDGs, evidence-based and innovative technologies and approaches, and the impact of engineering on different habitats and community collaboration. Our networks will provide access to expert advice from company leaders and innovative entrepreneurs.

Through our ever-growing design challenges, Chapters and project-based learning courses, we'll upskill tens of thousands of university students to be well-rounded, responsible professionals who are able to tackle social and environmental injustice through engineering.



Goal 3

Collaborate with organisations to enable globally responsible engineering to become mainstream.

Our strategy isn't just about educating individuals, but companies and organisations, too. They, after all, are the ones who make the critical decisions and shape industry cultures and standards.

We are already a prominent voice within the sector, working with the likes of the Royal Academy of Engineering and the Engineering Council to influence their approach, policy and their interactions with government. We have strategic partnerships with major companies and universities. Our Change Makers campaign has demonstrated how

entrepreneurs and innovators are incorporating global responsibility into day to day practice. Over the next decade, we want to significantly expand our influence, persuading numerous organisations to commit to global responsibility.

By collaborating with value-aligned organisations, we will accelerate progress towards the UN SDGs and ensure global responsibility is a strong cultural feature in engineering.

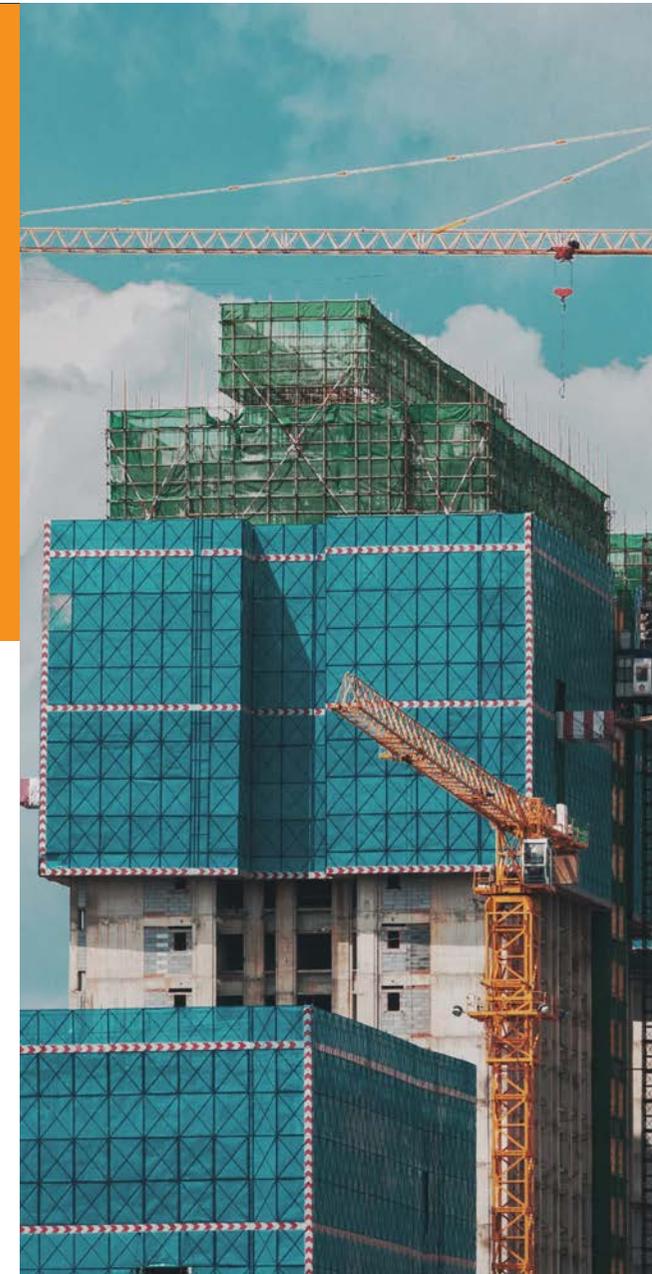
We'll support entrepreneurs, innovators and organisations that have a focus on social and environmental justice, exploring

everything from mentoring and facilitating peer-to-peer advice to collaborating on specific initiatives.

There'll be a renewed emphasis on working with universities and standards bodies to update courses and qualifications so that they align with current and future global challenges.

We'll use the strength of our movement and collective voice to advocate that this fresh approach will benefit us all.

Drive change



Our approach

We are calling for a radical change in the culture of engineering. It is imperative that the Engineers Without Borders UK movement leads by example - **how we approach what we do is just as important as what we do.**

A movement for change

We believe that a diverse group of people brought together by a common goal is key to driving change. We are a movement that equips and mobilises the engineering community from within to meet current and future challenges.

Partnership

We know we cannot achieve our goals alone and see great value in collaborating with strategically aligned organisations.

Better and best

We recognise that the challenges of overcoming social and environmental injustice are complex and difficult. So, while remaining ambitious, we celebrate progress towards being better, rather than just recognising the best.

Learn, collaborate and act

We want everyone in the engineering community to not just learn about the ways they can make a positive impact, but to take urgent action.

We seek diverse values and ideas and will always try to build consensus behind various positions and initiatives. We will often challenge preconceptions and the “normal” way of doing things to move engineering practice forward. We accept that total agreement on some issues may not be possible.

Join the movement

Reaching the tipping point where global responsibility becomes integral to the way all engineering is taught and practiced will not be easy.

But together we are a powerful force that can and will achieve a safe and just future for all.

ewb-uk.org/join