INCLUSIVE ENGINEERING

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INCLUSIVE ENGINEERING

What can and should the network aim for and deliver with respect to inclusivity?

What does the TERC report say?

What does EPSRC require from us?

What do we want to achieve?

And what are the barriers we may need to overcome?

TERC REPORT

Tomorrow's Engineering Research Challenges

HIGH LEVEL PRIORITIES

- Promote inclusive engineering outcomes for all with more diverse input
- Strengthen mechanisms to facilitate and fund multidisciplinary andinterdisciplinary research
- Re-engineer the discipline of engineering
- Convene and connect with the professional engineering community to enhance impact
- Encourage diverse, agile and impactful skills
- Inspire the next generation

CROSS-CUTTING THEMES

- Achieving net zero and sustainability
- Faster digital design
- Greater access and use of data
- Increasing human resilience
- Understanding complex systems
- Harnessing emerging, disruptive technologies
- Underpinning tools and techniques

TECHNOLOGICAL CHALLENGES

1. PROMOTE INCLUSIVE ENGINEERING OUTCOMES FOR ALL WITH MORE DIVERSE INPUT

“**Inclusive engineering is the discipline of ensuring that engineering products and services are accessible and inclusive of all users and are as free as possible from discrimination and bias, and work for everybody ensuring no-one is left behind.**

For the engineering research community, inclusive engineering involves considering diversity of inputs and making sure that engineering outcomes are inclusive for all.

What this means is that engineering solutions should work for everyone, from every social class, every background and wherever you are in the world.”

TERC report page 11

1. **Promote inclusive engineering outcomes for all with more diverse input**

Our consultation involved diversity in many forms, including specific engagement with representatives of engineering Equality, Diversity and Inclusion (EDI) groups. We strongly recommend continuing effective action by UKRI and associated bodies to improve EDI in the research and development community and to empower inclusive engineering. Inclusive engineering is the discipline of ensuring that engineering products and services are accessible and inclusive of all users and are as free as possible from discrimination and bias, and work for everybody ensuring no-one is left behind. For the engineering research community, inclusive engineering involves considering diversity of inputs and making sure that engineering outcomes are inclusive for all. What this means is that engineering solutions should work for everyone, from every social class, every background and wherever you are in the world.

Specifically, we recommend:

1.1 Adopting the principle that all future research endeavours embrace inclusive engineering outcomes;

1.2 Continuing to strengthen relationships with professional engineering institutions (PEIs), Royal Academy of Engineering, industry and academia to facilitate mechanisms for research which are derived using a diversity of views and inclusivity of inputs (e.g. those applying for funding);

1.3 Increasing opportunities and incentives to form new collaborations;

1.4 Making inclusion permeate through the whole of the research framework, informed by an understanding of good EDI practices and the lived-in experiences of minority groups;

1.5 Making further reaches beyond the established advice routes the norm, to draw in even more diverse perspectives;

1.6 Improve the funding model across funders to ensure high-quality research programmes are funded and distributed throughout the UK.

EPSRC – GUIDANCE AND REQUIREMENTS

EDI Plan based around the 6 themes….

1: Develop an approach to embedding equality, diversity and inclusion (EDI) in the research lifecycle

2: Implement good practices in recruitment and/or selection processes to ensure diverse team

3: Ensure diversity and inclusivity in all activities such as events, sandpits, networkings

4: Create an inclusive and accessible environment

5: Ensuring career progression and training for all members of the team

6: Inclusive research

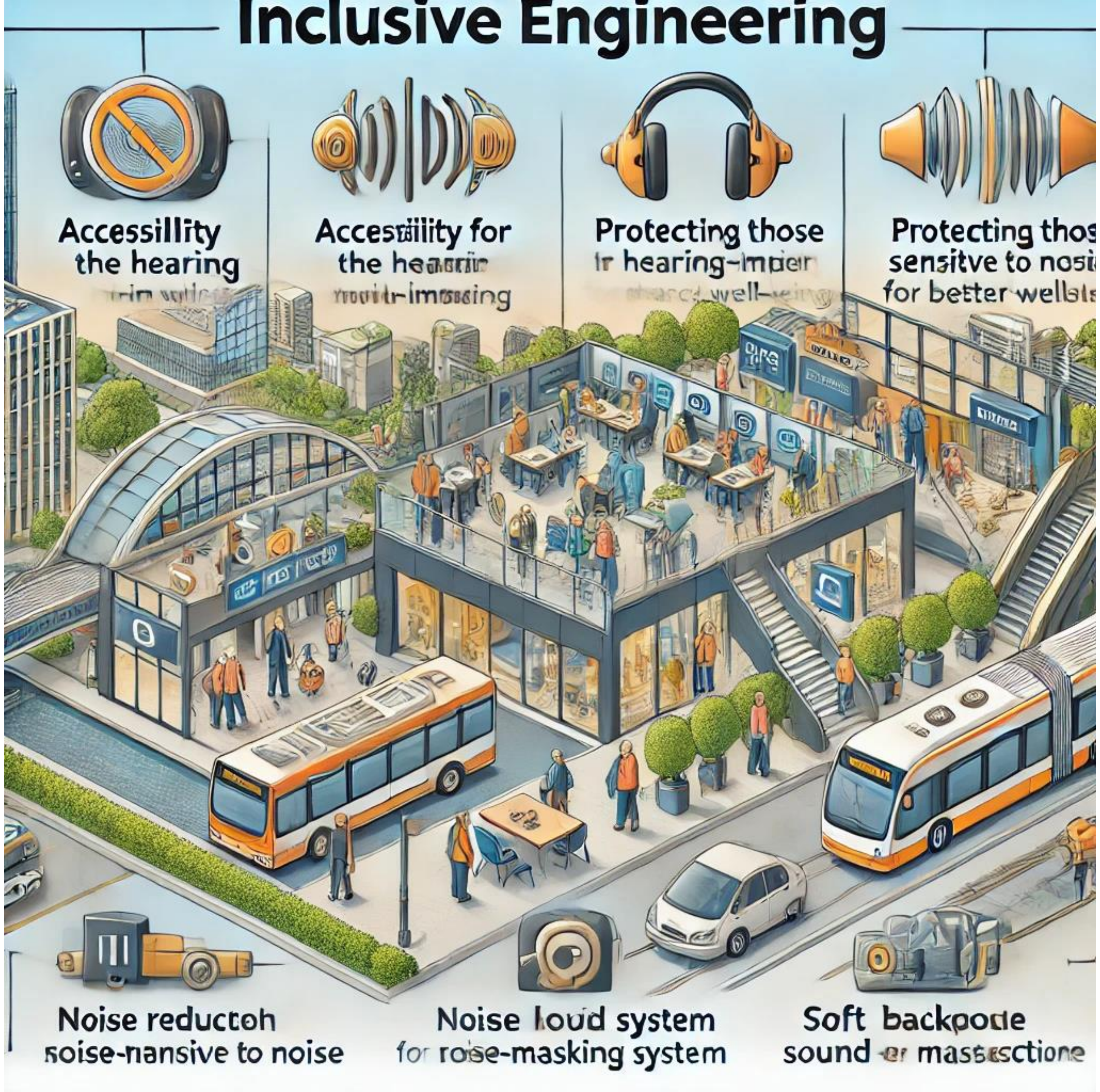
Transforming our World: The 2030 Agenda for Sustainable Development (UN, 2015)

And what does chat gpt think?

Chat GPT

Chat gpt 4o


INCLUSIVE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CAN WE DO BETTER?

In Engineering Education?

Beyond the IoA and small number of specialist degree programmes.

Noise isn’t mentioned in key sustainability tool kits in engineering and engineering education.

If noise is not considered at the outset – the outcomes are unlikely to be inclusive.

We need to address that alongside diversity throughout the process.

KEY CHALLENGES FOR THE NETWORK

Engaging with diverse community beyond acoustics/noise – how do we do that?

Professional bodies and end users – how can we ensure that noise/sound quality is considered from the outset?

To ensure inclusive outcomes – how do we know we have considered all user groups?

To ensure we deliver best practice on EDI within the network – and where we can, innovate. What can we do that is better or beyond best practice?

WHAT ARE WE DOING

First steps:

Drafting our EDI plan – suggestions welcome

Engaging with IoA/UKAN+ EDI Day – bringing together professional bodies to gain their perspectives.

Talking to you and talking to UKAN+ to learn from your experience.

Aim to identify something we can do that would make a change