Engineers 2030: Vision and Principles Consultation Report

Introduction

In March 2024, the National Engineering Policy Centre (NEPC) launched a public consultation to review a proposed new Vision and six guiding Principles designed to shape the future of engineering through 2030 and beyond. The aim was to collect input from a broad spectrum of stakeholders, including individual engineers, educational institutions, professional bodies, and industry representatives. The feedback received during this consultation provided valuable insights into how the engineering profession should evolve, emphasising the need for a balance between forward-looking goals and recognition of historical achievements. Key themes, such as inclusivity, sustainability, and the need for a clear and accessible Vision, emerged as critical elements for shaping the future of engineering.

Consultation Overview

The Engineers 2030 consultation had several aims. It sought to determine the level of support for the proposed Vision and Principles, to identify potential areas of improvement, and to outline avenues for further investigation in the next phase. The consultation process attracted a significant response, with 101 written submissions, predominantly from individuals rather than organisations. The overall response from individuals within the engineering community showed high engagement with the proposed Vision and Principles, reflecting widespread interest in the future direction of the profession. However, the comparatively lower participation from industry representatives suggested that the Vision and Principles may be perceived as somewhat disconnected from practical, day-to-day commercial concerns within the sector.

Key Findings and Themes

The responses highlighted several recurring themes and areas for refinement. Firstly, there was a call for greater clarity and simplicity in the language used in the Vision and Principles. Respondents stressed the need for clear, accessible messaging that resonates with diverse audiences, from experienced professionals to the general public. This feedback indicated that, while ambitious, the Vision should also be relatable and specific enough to communicate engineering's role and aspirations effectively.

Another prominent theme was the need to balance innovation with tradition. While the Vision aims to be forward-facing, respondents highlighted the importance of acknowledging engineering's past contributions, especially regarding critical areas such as climate action and technological advancement. By doing so, the Vision can present a more comprehensive and cohesive narrative that bridges engineering's legacy with its evolving role in society.

Educational Transformation

A substantial portion of the feedback emphasised the need for transformative changes in engineering education. Respondents advocated for an education system that equips future engineers with a broader range of skills, including

technical and non-technical competencies, to better prepare them for the complexities of the modern world. Many stakeholders highlighted the importance of resilience, adaptability, and commercial awareness as essential skills for engineers, alongside the integration of sustainability principles and digital proficiency. There was also a call for an education system that promotes interdisciplinary learning and fosters adaptability, enabling engineers to respond to emerging challenges and opportunities effectively.

In terms of specific skills, digital and data literacy emerged as crucial components of the engineering curriculum. While there was strong support for these skills, some respondents cautioned against overemphasising digital competencies at the expense of traditional technical knowledge. They argued for a balanced approach that would integrate digital skills without overshadowing core engineering disciplines, thereby preserving the technical rigor that defines the profession.

Sustainability and Urgency

Sustainability was a recurring theme across the consultation responses and workshop discussions. Stakeholders expressed a strong desire to see sustainability embedded as a foundational element within the Vision, with a focus on addressing the pressing challenges of climate change. However, some respondents voiced concerns that sustainability has become an overly broad and generalised term, potentially diluting its impact. They emphasised the need for a more focused and actionable definition of sustainability within the Vision to ensure it remains a tangible and achievable goal.

Inclusivity and Public Engagement

The consultation also underscored the importance of inclusivity and diversity in the engineering profession. Respondents advocated for efforts to attract a wider range of talent to the field, suggesting that increased public awareness and educational outreach could help foster a more inclusive view of engineering. There was a strong emphasis on the importance of diversity, equity, and inclusion as core values in the Vision and Principles, with a call for the profession to actively promote diverse perspectives and experiences. Additionally, respondents noted that clear communication and public engagement are crucial for building trust in engineering and enhancing its reputation as a positive societal force.

Workshop Feedback

In addition to the written responses, the consultation included a series of workshops with stakeholders, ranging from industry and Professional Engineering Institutions representatives to educational providers and government bodies. These workshops provided an opportunity to test and refine the Vision and Principles, allowing stakeholders to discuss and validate the language and intent of the proposed Vision in a collaborative setting.

Key themes from the workshops echoed those found in the written responses, with participants highlighting the importance of sustainability, diversity, and public trust as critical aspects of the Vision. Workshop attendees also emphasised

the need for the Vision to be both aspirational and practical, with clear messaging that resonates with both the engineering community and the broader public.

Participants at these workshops were also asked to share their views and ideas on policy and programme recommendations that could be implemented to reform education and skills systems and deliver the Vision and Principles. Further information was gathered during the workshops regarding programmes that could promote engineering as a viable career option.

Moving Forward: Policy and Educational Reforms

The Engineers 2030 consultation highlighted the need for policy and educational reforms that align with the evolving demands of the engineering profession. As the project moves into its next phase, the focus will shift toward developing concrete policy proposals that address the insights gathered from this consultation. This includes rethinking educational frameworks to promote a more flexible, inclusive, and interdisciplinary approach to engineering education, preparing future engineers to thrive in a rapidly changing world.

By incorporating these recommendations, Engineers 2030 aims to create a framework that is not only inclusive and forward-looking, but also grounded in the rich history and technical rigor that define the engineering profession. The insights gained from this consultation will serve as a foundation for developing policies and educational initiatives that produce engineers equipped to meet the complex challenges of the future.

Conclusion

The Engineers 2030 consultation has underscored the importance of a clear, accessible, and balanced Vision for the future of engineering. By addressing the feedback received, the final Vision and Principles will aim to inspire both engineers and the public, highlighting the positive contributions of engineering to society.

Phase 2 of Engineers 2030 will focus on educational reforms and policy development to ensure that the UK's engineering sector is prepared to meet future challenges. The aim is to conclude this phase between Easter and early summer 2025. This consultation marks a significant step forward in redefining the profession for a new era, but its success will ultimately depend on the collaborative efforts of the entire engineering community.