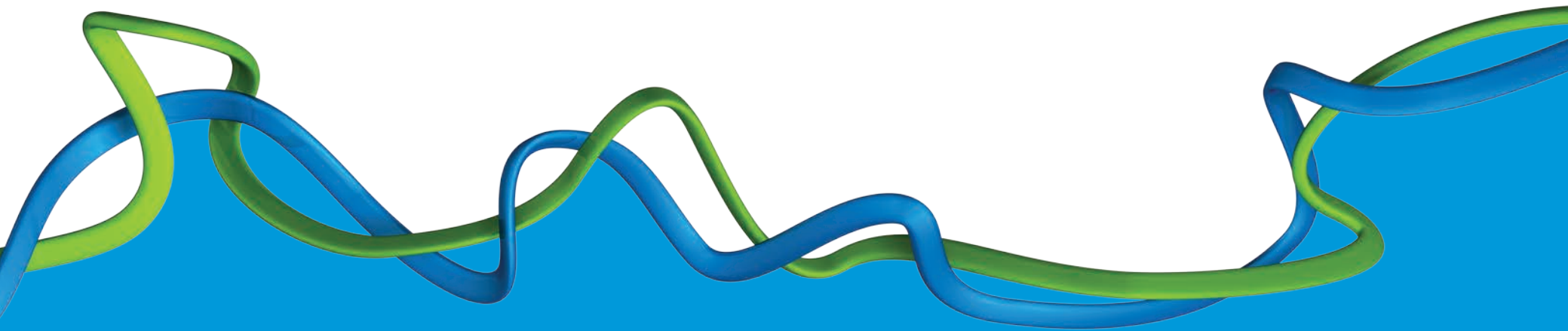


Strategic Plan



2015–2020



The context

Throughout human history, successful civilisations have responded to opportunities, challenges and threats by means of innovation and change. We face many great challenges today – from the provision of food, water and ever-improving healthcare for rapidly growing populations, to providing clean, low carbon and secure energy while preserving and enhancing our environment. Human advancement in these and other endeavours depends on global economic, technological and cultural progress. Businesses must innovate

at an escalating pace if they are to meet society's expectations and maintain competitive advantage. Changing employment patterns in an increasingly knowledge-based economy place a premium on high-quality education and training.

Engineering is central to the wellbeing and economic development of every nation and is pervasive in our modern society. It enables every sector, including communication, entertainment, finance, healthcare and, more visibly, construction,

manufacturing and transport. Engineers apply their knowledge, experience and creativity to devise scientifically informed, real-world solutions – to lead, shape and drive progress. They improve the human condition while creating wealth and value through successful engineering innovation and competitive businesses.

This is the context within which the Royal Academy of Engineering has set its strategy for the period to 2020.

In this document we set out our:

Purpose
what we are

Vision
the future we work for

Role
what we do

Values
what we believe and how we behave

Strategic challenges for 2015–2020
and how we shall address them

Purpose

As the UK's national academy for engineering, we bring together the most successful and talented engineers from across the profession for a shared purpose:

to advance and promote excellence in engineering for the benefit of society



Our vision

Engineering is at the heart of a sustainable and prosperous society, improving lives and opportunities

In our vision for 2020 and beyond, the UK will increasingly be known across the world for the quality of its engineers and engineering and its deployment for the benefit of humanity. The UK will be seen as a global leader in innovation, creating and building engineering and technology businesses at scale and attracting investment and talent.

Engineering will have improved the quality of life for many more people. Solutions for many of today's problems will have been engineered by talented people in both developing and developed economies and new opportunities grasped with confidence. Better, more sustainable ways will

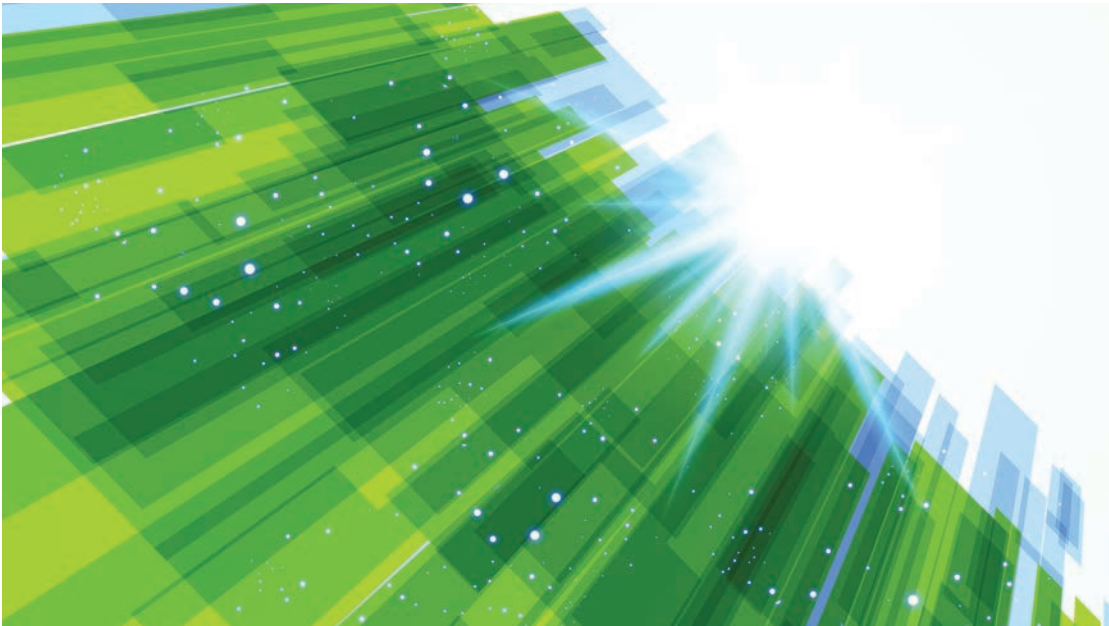
have been found to meet our energy needs.

In the UK, the engineering profession will be widely respected. The role of engineers in supporting national policy will be deeply embedded across governments. Public perceptions will reflect the vibrancy, creativity and breadth of engineering and it will feature much more prominently in popular culture. Recruitment of talented young people from all backgrounds to engineering roles will be thriving and engineering skills shortages will no longer inhibit the UK's growth, prosperity and reputation as a powerhouse of great engineering. The education of engineers, from technician to graduate level, will be world-leading and the profession will increasingly reflect the diversity of our society.

The Academy will play a leading role in catalysing these changes. We will have grown our capabilities and will have significantly greater influence in government and parliament, industry and the media. As the leader of the engineering profession and a body that embraces and values all engineering disciplines, sectors, industries and universities, we will provide a portal into the expert advice available in it. We will be acknowledged for our leadership and partnerships within the research and innovation communities, ensuring that engineering plays its full part in harnessing knowledge to create opportunity.

Academy Fellows and their achievements will be recognised worldwide.





Role


We enhance the engineering performance of the UK by:

- **shaping** national policy through independent study and debate as an impartial adviser to government
 - **leading** the profession, harnessing the strengths of the engineering community
 - **investing in** a body of world-class, commercially useful research and the researchers to create it
 - **supporting** entrepreneurs and innovators in bringing their ideas to market
 - **communicating** the key role of engineering in the growth of wellbeing and the economy
 - **inspiring** young people through engineering excellence, innovation, role models and outreach
- **driving improvement** in engineering education and skills to meet the UK's needs through policy advice and programmes that enhance teaching and learning
 - **leading programmes** that embed diversity in engineering
 - **enhancing global leadership** of engineering with other world-leading academies.
 - **promoting and celebrating** engineering excellence in all its forms
 - **and electing** a diverse Fellowship that embodies excellence to lead and inform all of our work.

Values

- we are **inclusive and open, collegial and team-based** in the way we work.
- we undertake our role with **integrity, transparency and efficiency**.
- we are committed to **excellence, quality, equality of opportunity and diversity**.
- we strive for **continual improvement**.
- **partnership working** is critical to our success.





Strategic challenges for 2015 – 2020

and how we shall address them

Strategic challenge 1: MAKE THE UK THE LEADING NATION FOR ENGINEERING INNOVATION

Our aim is to support the development of successful engineering innovation and businesses in the UK in order to create wealth, employment and benefit for the nation.

We will achieve this by:

- marshalling the expertise in our Fellowship and networks to deliver substantial improvement in the environment for the creation of successful, innovative, wealth-creating UK businesses at scale
- growing our investment in research that brings together industry and the best engineering researchers in UK universities
- developing our Enterprise Hub as an engine for a vibrant, well-networked and supportive community for growing innovative businesses and as an exemplar of support for innovation and entrepreneurship in engineering and technology
- deploying our Fellows and networks to bring a strong engineering influence to bear on EU, national, regional and local industrial policy.



Strategic challenge 2: ADDRESS THE ENGINEERING SKILLS CRISIS

Our aim is to meet the UK's needs by inspiring a generation of young people from all backgrounds and equipping them with the high quality skills they need for a rewarding career in engineering.

We will achieve this by:

- working with partners to recruit many more women and other underrepresented groups to engineering
- influencing positive structural change and innovation in education, training, recruitment and retention of engineers and technicians
- working with partners to transform the effectiveness of engagement activities that bring an understanding of and aspiration for engineering to young people
- helping teachers to embed engineering in schools and colleges through programmes that support teaching and learning and bring real-world engineering into all stages of the formation of engineers
- promoting the importance of environmental, economic and social sustainability in engineering practice and education
- recognising and nurturing future engineering leaders.

Strategic challenge 3: POSITION ENGINEERING AT THE HEART OF SOCIETY

Our aim is to improve public awareness and recognition of the crucial role of engineers everywhere.

We will achieve this by:

- leading a broadly based campaign to create a cultural shift in how engineers are perceived across the whole of society
- convening the most influential people for debate and discussion to find and shape engineering solutions and provide a clear and consistent voice for engineering
- advising UK and EU governments in all areas of policy that have an engineering dimension to delivery
- engaging with the public and other professions and sharing the value of engineering
- increasing the media profile and impact of the Academy and engineering
- developing our network of engineers into powerful advocates for the profession
- recognising, celebrating and promoting excellence through awards and prizes
- supporting the Queen Elizabeth Prize in raising its profile to the level of a Nobel Prize.



Strategic challenge 4: LEAD THE PROFESSION

Our aim is to harness the expertise, energy and capacity of the profession to provide strategic direction for engineering and collaborate on solutions to engineering grand challenges.

We will achieve this by:

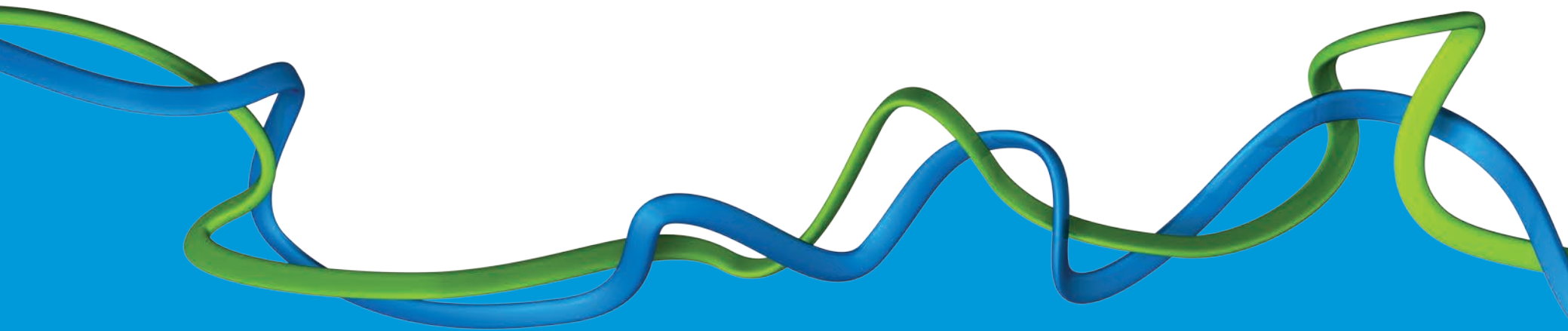
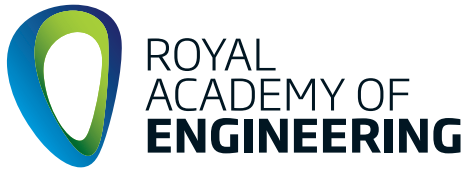
- establishing a shared vision and articulating clear and consistent messages on behalf of the profession
- working with professional bodies to ensure that engineers are equipped to meet the demands of a future in which technology will have an increasing impact
- leading a programme, with industry, academia and professional institutions to create a more inclusive culture and to transform the diversity of the engineering workforce such that it reflects UK society
- working with professional bodies to ensure that they are equipped to meet the changing needs of society and the profession they serve
- supporting public policy through the expertise available across the profession
- harnessing international partnerships to promote better policy solutions to global grand challenges and build engineering capacity in developing nations
- raising wider debate and discussion on engineering and its impact on society so that the profession understands public points of view.

Strategic challenge 5: GREATLY ENHANCE THE ACADEMY'S DELIVERY CAPABILITY

Our aim is to ensure that the Academy has the Fellows, staff, partners, funding and influence to deliver a substantially greater contribution to the nation.

We will achieve this by:

- electing an engaged Fellowship of outstanding engineers who reflect the full diversity of society and the profession
- making the Academy an organisation that the best people want to work for
- increasing the numbers of our partners and supporters
- raising more funding support from government and third parties, in particular from the private sector
- engaging more influential young people including alumni of Academy programmes
- continually improving our communications
- working to embed our values in staff, Fellows and partners including
- embedding diversity within the Academy and its programmes
- ensuring that our programmes complement those of other funders and draw on the unique capabilities of the Academy
- providing high quality business tools and services to enable staff and Fellows to deliver their work effectively and efficiently
- routinely evaluating our work and measuring our progress.



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