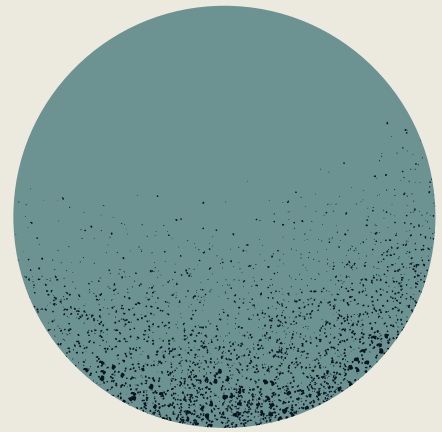




EUROPE



PROSPECTUS

Futures and Foresight at RAND Europe

Department for Science, Innovation &
Technology Futures Framework

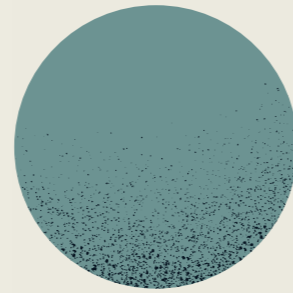


Introduction

In fast-changing times, it is crucial to use evidence-based insights to inform complex decisions, ensure scarce resources are used as effectively as possible, and maximise returns on investments. Emerging trends – such as changes to the geopolitical order, growing climate change risks, increasing inequity, accelerating technological advances and shifts in the workplace, to name just a few – pose new questions that require new approaches. As debates become more polarised, the trust that the public places in expert opinion and empirical research needs renewing. The answer is not to retreat from evidence – which only increases risk and leaves decisions more vulnerable to challenge – but to reaffirm and demonstrate its value.

At **RAND Europe**, we believe that good evidence helps shape sound answers to pressing societal challenges, ultimately making communities safer and more secure, healthier and more prosperous in the future. RAND's name is synonymous with futures studies. No other organisation has contributed as much or for as long to thinking about how to deal with the longer-range future than RAND. Our first research study was on the world's first **space satellite** in 1946, and we pioneered fundamental futures methods such as **systems analysis**, the **Delphi method** and the use of **future scenarios** as a planning tool in the 1950s and 1960s.

Since then, we have continuously worked to equip policymakers, organisations and individuals with the knowledge, skills and tools to better understand uncertainty and make informed decisions for the future. We continue our tradition of developing innovative new methods and approaches, with recent efforts to improve participatory futures research, the use of analytical gaming in foresight, and the optimisation of advanced data, machine learning and artificial intelligence capabilities.



No one can predict what the future holds. But we can help you plan for it.

About RAND Europe

RAND Europe is a not-for-profit policy research organisation with a long and proven commitment to high-quality research underpinned by rigorous analysis. As the European arm of the RAND Corporation, we share its mission to improve policy and decision making through objective research and analysis. RAND Europe combines the impartiality and independence of a not-for-profit, the academic rigour of a university, and the agile, client-oriented delivery and robust project management of a professional consultancy.

Our thematic expertise

We have a 75+ year history of conducting impactful research across all areas of policy (e.g. health, technology, innovation, transport, defence, policing, education, food, energy, environment, research systems), and in the UK, we have over 30 years' experience as a trusted partner to a range of central and local government clients.

Our research programmes in Europe cover four broad areas:

- **Health and Wellbeing (HWB):** Health, wellbeing and public health, improving health and care services, innovation in health and care, health and care policy, and practice evaluation.
- **Science and Emerging Technology (SET):** Research and innovation systems, research evaluation, research impact and culture, trends and impacts of new and emerging technologies, technology oversight, digitalisation, energy and environment.
- **Home Affairs and Social Policy (HASP):** Economics, workforce, skills and employment, social inclusion, gender and equality, population dynamics and migration, drugs and illicit markets, organised crime and law enforcement cooperation, education systems, early years, and school effectiveness.
- **Defence and Security (D&S):** Defence policy, strategy and capabilities, national security, counterterrorism, security and resilience, radicalisation, cybersecurity, technology and innovation, and critical national infrastructure.



CASE STUDY

Tackling societal challenges and guiding the future of research and innovation in Norway

What was the challenge?

The Research Council of Norway (RCN) identified five strategic areas in pursuit of ground-breaking research, radical innovation and sustainable development. RCN required a robust evidence base to help develop long-term, priority missions to help solve one or more societal challenges, as well as underpinning structural measures of the research environment in Norway. The five strategic areas include: Oceans; Green transition; Health and welfare; Cohesion and globalisation; and Technology and digitalisation.

How did we approach it?

We adopted a mixed method, participatory approach involving a variety of research tools such as trend analyses, literature reviews, stakeholder interviews, focus groups, crowdsourcing ideas from experts, a survey of the public, future scenario analyses and workshops.

The core foresight work allowed us to examine what might happen in the next ten years in the different strategic areas and wider R&I system in Norway. Scenarios of future states were used as the basis for workshop discussions to stress test potential missions and structural measures that the RCN could consider developing and implementing in the future.

What was the outcome or impact of the work?

Extensive findings from this research were published in a series of nine reports. The research was cited as evidence in the RCN's input to the 2022 revision of the Long-Term Plan for Research and Higher Education 2019–2028, which specifies the Norwegian government's ambitions, key objectives and priority areas for research and higher education.

The study also helped inform the RCN's internal decision making, strategies and organisational activities. In addition, a summary of the findings and proposals was presented to the relevant Norwegian minister.



CASE STUDY

Assessing labour market and skills demand via horizon scanning and future scenarios

What was the challenge?

To ensure effective provision of skills in the future, it is important to assess what the future labour market in the UK might look like. While quantitative projections are available, the future of the labour market is shaped by many factors, which are often characterised by great uncertainty. This can make planning effective policy intervention aimed at supporting skill development – for example through the right investments in education and training – challenging.

How did we approach it?

In a study commissioned by the Department for Education, we developed five qualitative scenarios of what the labour market might look like in the future. The methodology comprised: an evidence-review of 130 sources, focused on six specific sectors (construction, wholesale and retail, higher education, transport and logistics, health and social care, energy); 23 expert interviewees; qualitative scenario development; and a scenario workshop.

What was the outcome or impact of the work?

The study findings contributed to the policy debate around the future labour market in the UK and will be used in combination with other sources of labour market information, including quantitative assessments and projections.

This breadth of subject matter expertise means that RAND Europe conducts studies for clients across almost all areas of government policy, often with particular concern for the potential impact, risks and opportunities posed to policy by emerging future trends (political, social, economic, cultural, ethical, legal, environmental, technological or otherwise). Our clients include:

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UK government and public sector
(e.g. DSIT, DCMS, BRE, Cabinet Office, Defra, DfT, DfE, DHSC, FCA, FCDO, FSA, Home Office, MOD, Dstl, NAO, NHS, NIHR).
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UK Research and Innovation (UKRI) and its research councils, Research England and Innovate UK.
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Other national governments
(e.g. Danish, Dutch, Estonian, French, German, Norwegian).
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Multinational bodies
(e.g. UN, NATO, European Commission, European Parliament, other EU institutions, OECD).
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Foundations, charities and universities (e.g. Wellcome, Health Foundation, Novo Nordisk Foundation, BCS, Cancer Research UK, Cambridge Ahead).
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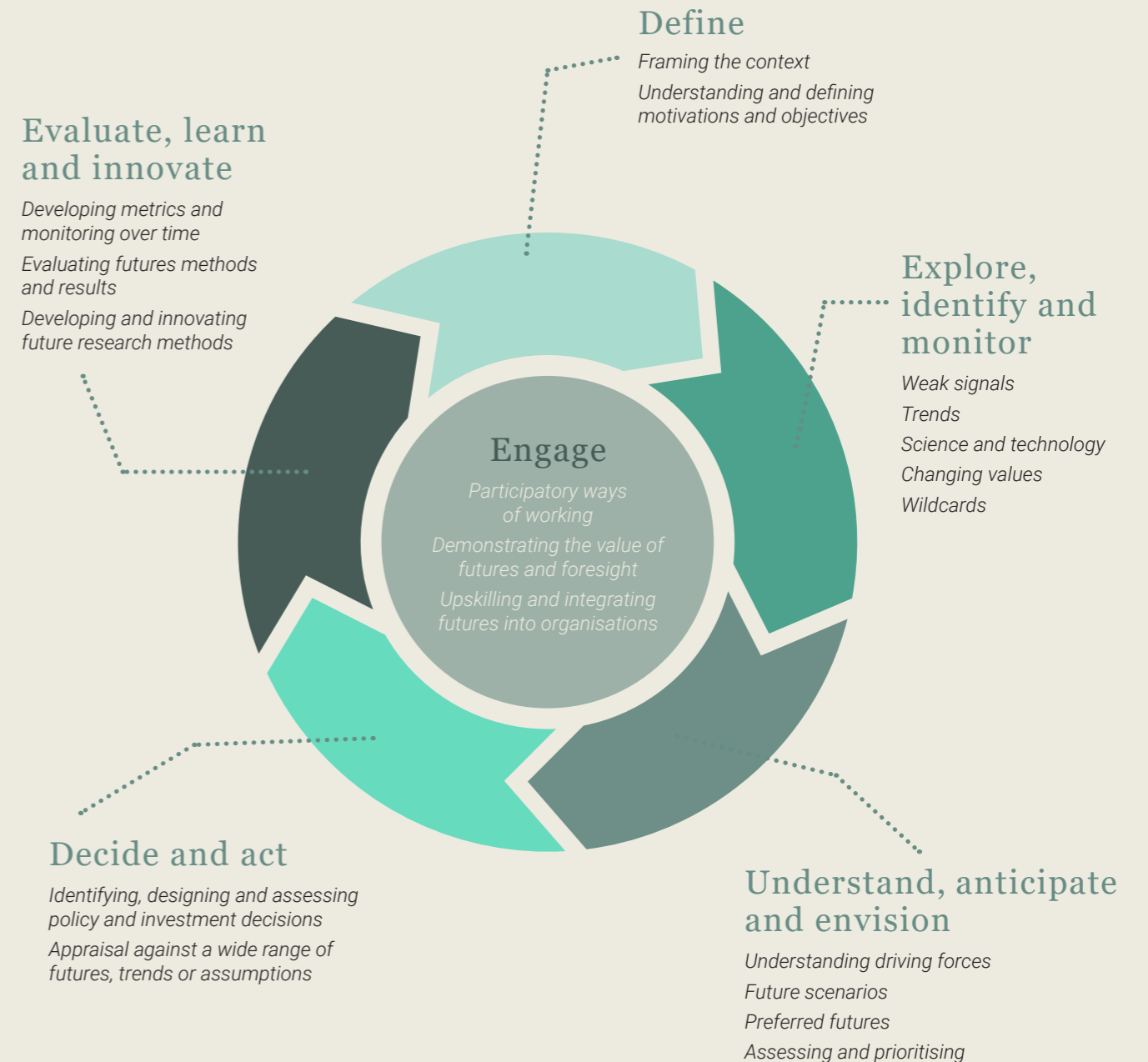
Private sector
(e.g. technology companies, insurance companies, pharmaceutical companies, utilities companies, etc.).

Our futures expertise

Through RAND Europe's **Centre for Futures and Foresight Studies (CFFS)**, we deliver multi-disciplinary futures research and policy analysis to help organisations realise their future ambitions, objectives and values.

In our work, we draw on an extensive methodological toolkit that combines futures and foresight techniques with robust qualitative and quantitative research methods. The figure below shows an overview of how our future work comes together to: explore, identify and monitor change; understand, anticipate and envision different futures; improve decision and policy making; and continuously evaluate, learn and help improve the field of futures research.

Our starting point for our futures work is always collaboration, emphasising the participatory foundation of futures research. Our ambition is not only to identify signals of change, but to help you understand how and why change is happening so that you are better equipped to incorporate futures thinking and practice into your organisation.





CASE STUDY

Future uses of space out to 2050: Emerging threats and opportunities for the UK National Space Strategy

What was the challenge?

Recent years have witnessed major changes in how humans are utilising space. Access to and use of space has become essential to modern digital society and many aspects of everyday life. The number of space-related activities conducted by government, military and commercial actors around the world is increasing. This second 'space race' brings both threats and opportunities to the UK's economy, security, interests, values and way of life.

How did we approach it?

The UK Space Agency asked researchers from RAND Europe's Centre for Futures and Foresight Studies and the RAND Space Enterprise Initiative to explore the possible future uses of space out to 2050, as well as to identify potential 'game changers' and the implications for the UK space sector. Drawing on our horizon scanning expertise, we examined how the way people use space will change, who the key actors in space will be and how well placed the UK is to address future opportunities in the space economy.

What was the outcome or impact of the work?

The study findings contributed to the design and futureproofing of the National Space Strategy, and formed part of the evidence submitted by UKSA to BEIS and the Prime Minister's Office as part of the ministerial signoff of the strategy. The strategy outlines how the UK will build on its national capabilities, international partnerships, and expertise in government, industry and the scientific community to promote new benefits from the use of space and related services.

Our extensive futures and foresight expertise covers a wide range of methods, including those covered in the **UK Futures Toolkit**:

- Analytical gaming
- Assessment and prioritisation of emerging technologies
- Assumptions based planning
- Backcasting
- Bibliometrics and patent analysis
- Causal layered analysis
- Cross-impact analysis
- Choice modelling and behavioural research
- Crowdsourcing
- Delphi method
- Exploratory futures
- Futures literacy
- Future scenarios
- Futures wheel
- Horizon scanning
- Morphological analysis
- Multi-criteria analysis
- Participatory futures
- Policy stress-testing
- Process and impact evaluations
- Red teaming
- Roadmapping
- Robust decision making (RDM)
- Science fiction futures
- Storyboarding
- Strategic foresight
- Systems thinking
- Three horizons
- Training and upskilling
- Visioning
- Wind-tunnelling

Our team

Our diverse, interdisciplinary and multinational research staff enables us to assemble bespoke teams for each project, with approximately 150 staff in our Cambridge and Brussels offices, and the ability to leverage our network of over 1,500 researchers across our US and Australia offices to bring in additional thematic or methodological expertise when needed. Key members of our team for the Futures Framework include:



Erik Silfversten is co-director of the RAND Europe Centre for Futures and Foresight Studies (CFFS) and an assistant director of the D&S team. He works at the intersection of technology, policy and the future and his primary research interest are complex, strategic policy challenges in relation to emerging technologies. He has provided a wide range of futures and foresight research and advice to the UK government, especially to the Ministry of Defence.



Jacob Ohrvik-Stott is co-director of the CFFS and a research leader in the SET team. He has provided extensive futures and foresight research and advice to the UK government. He has also led a range of futures research projects within the third and public sectors – with particular focus on the overlaps between digital technologies, public engagement and human rights – and established and led futures functions in technology think tanks and a digital regulator.



Dr Salil Gunashekar is a senior research leader and deputy director of the SET team. With over a decade of experience in science and technology policy research, his work cuts across multiple sectors, often sitting at the intersection of technology, research and innovation (R&I) systems, policy and the future. He has long-standing experience of futures and foresight methods and is a member of the CFFS steering group.



Dr Sonja Marjanovic is director of RAND Europe's portfolio of research in the field of healthcare innovation, industry and policy. She is a member of the CFFS steering group and has experience in designing and applying futures methods to research studies in areas of healthcare research. Her work provides decision makers with evidence and insights to support innovation and improvement in healthcare systems, and to support the translation of innovation into societal benefits for healthcare services and population health.



Joanna Hofman is deputy director and leads the employment and social policy research portfolio at RAND Europe. She is a member of the CFFS steering group, contributing her expertise on different foresight methods. Joanna co-authored a report on labour market and skills demand for the UK's Department for Education. She has led analysis of strategic foresight activities in the European Union and drafted a practical guide on conducting gender-responsive foresight in the context of the EU Better Regulation agenda.



Stijn Hoorens is a senior research leader at RAND Europe and director of RAND's office in Brussels. He has 20 years of experience in conducting foresight and horizon scanning, as well as designing and implementing futures studies in a range of policy areas.

Get in touch

Let's start a conversation about how we can work together to help you be better prepared for the future.

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RAND Europe is a not-for-profit research organisation that helps to improve policy and decision making through research and analysis.

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