



About Foresight

Arup Foresight helps organisations understand trends, explore new ideas, and radically rethink the future of their businesses. We examine the many forces shaping the future of the built environment. We developed the concept of 'foresight by design', which uses innovative design tools and techniques in order to bring new ideas to life, and to engage all stakeholders in meaningful conversations about change.

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Mission

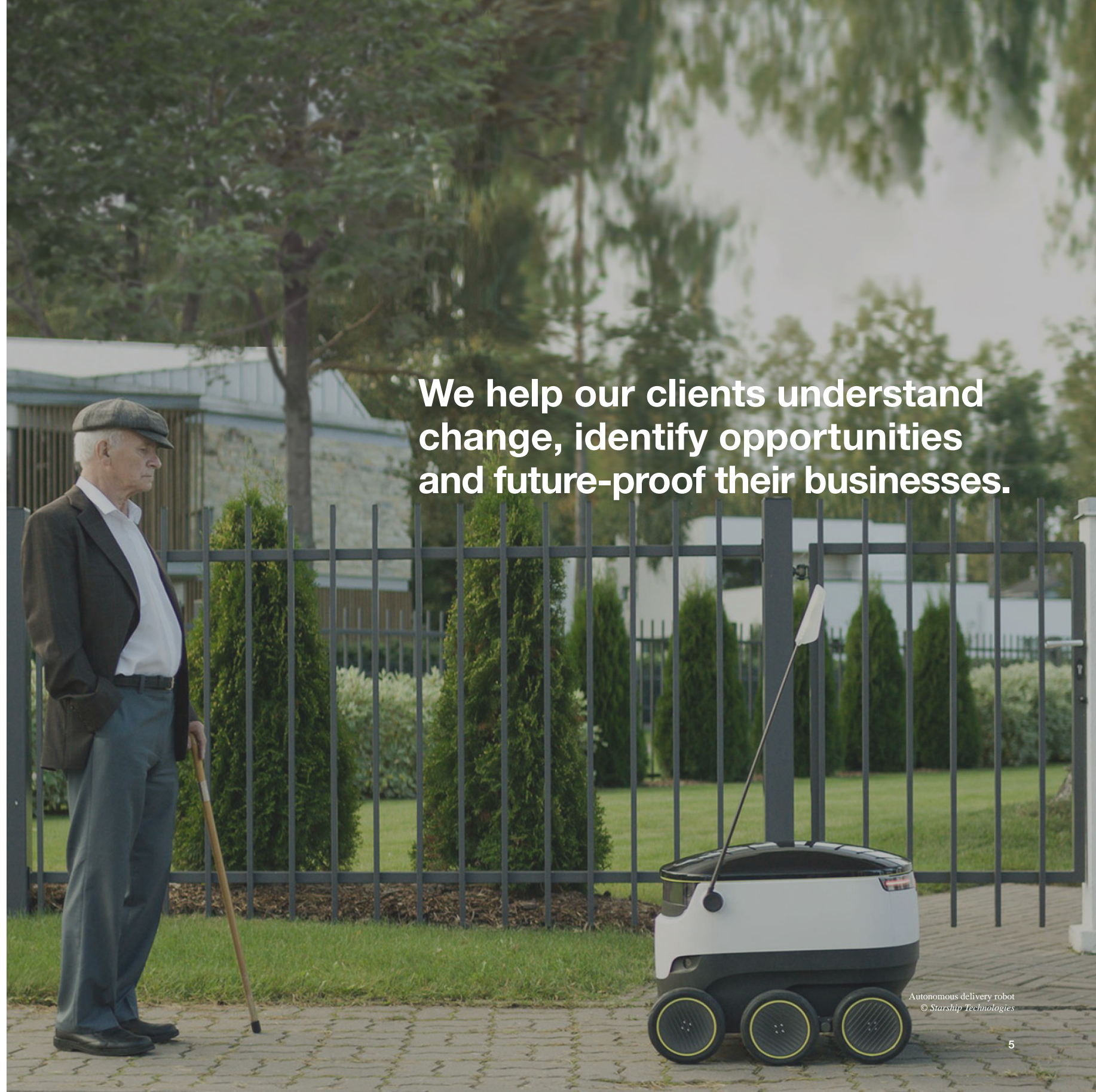


Our mission is to help our clients understand change, explore new opportunities and make decisions that build resilience for the future.

Our world is changing rapidly, with more complexity and interconnections than ever before. As such, the past has become an unreliable predictor for the future. Recent economic, social and political shifts have seen rulebooks discarded and old assumptions cast aside. The speed of change can be shocking. Artificial Intelligence with machine learning is progressing so rapidly that many established industries are now at risk of disruption.

In a world where change creates major challenges and opportunities, it is more important than ever that we understand and explore what is relevant to us. Managing this requires a team of professionals that have the capability to help our clients explore, navigate and shape an increasingly complex future.

Josef Hargrave
Global Foresight Manager



We help our clients understand change, identify opportunities and future-proof their businesses.

Autonomous delivery robot
© Starship Technologies

02

Approach



We deliver an approach that is holistic, outcome-driven and tailored to respond to the unique expectations of you and your business.

We are a multidisciplinary team of designers, researchers, scientists and consultants. Our specialist knowledge in foresight is complemented by Arup's global network of engineers and consultants. This allows us to combine design thinking and corporate foresight with specialist expertise across the built environment.

Our projects range from research into the future of logistics to rethinking the design and operation of a city district. We answer complex questions about the future to push boundaries, deliver new value, and help shape a more sustainable and prosperous future. In our aim to shape a better world, we have committed to aligning our firm with the United Nations' Sustainable Development Goals.




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Services



We help our clients understand trends, explore new ideas, and identify future markets.

Our services range from trend research and benchmarking to the delivery of client-specific strategies and visions. We provide custom workshops, stakeholder engagements and innovation programmes. Our services help individuals and organisations explore and shape their future. This includes understanding key drivers of change, possible projections into the future, and the implications of change on specific businesses or projects.



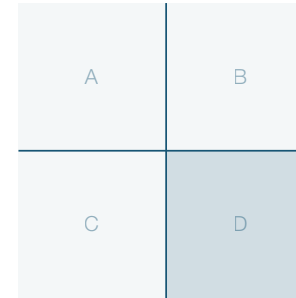
Foresight's set of capabilities give you unrivalled support to explore, define and shape the future of the built environment.

03 Services



SCENARIO PLANNING

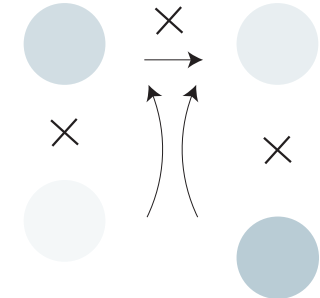
How can we be better prepared for an uncertain future?



Scenarios present a hypothetical illustration of the future. We develop diverse scenarios of the future to challenge 'business as usual' thinking and facilitate strategic decision-making.

STRATEGY AND VISIONING

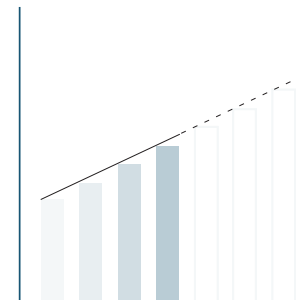
How can we future-proof designs, strategies and solutions?



We specialise in co-creating strategies and visions to provide an overall direction and framework for an organisation, project or initiative. We create a common vision to build resilience against uncertainty.

MARKET INSIGHTS AND TRENDS

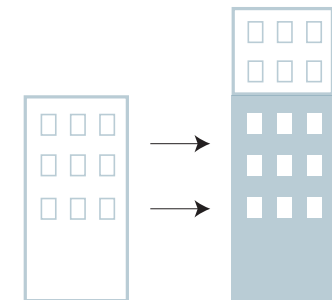
How can we identify emerging risks and opportunities?



Our team scans a global network of sources for new trends, insights and cutting-edge thinking. We analyse the most important trends and identify the potential impact for a specific business, market or project.

DESIGN AND INNOVATION

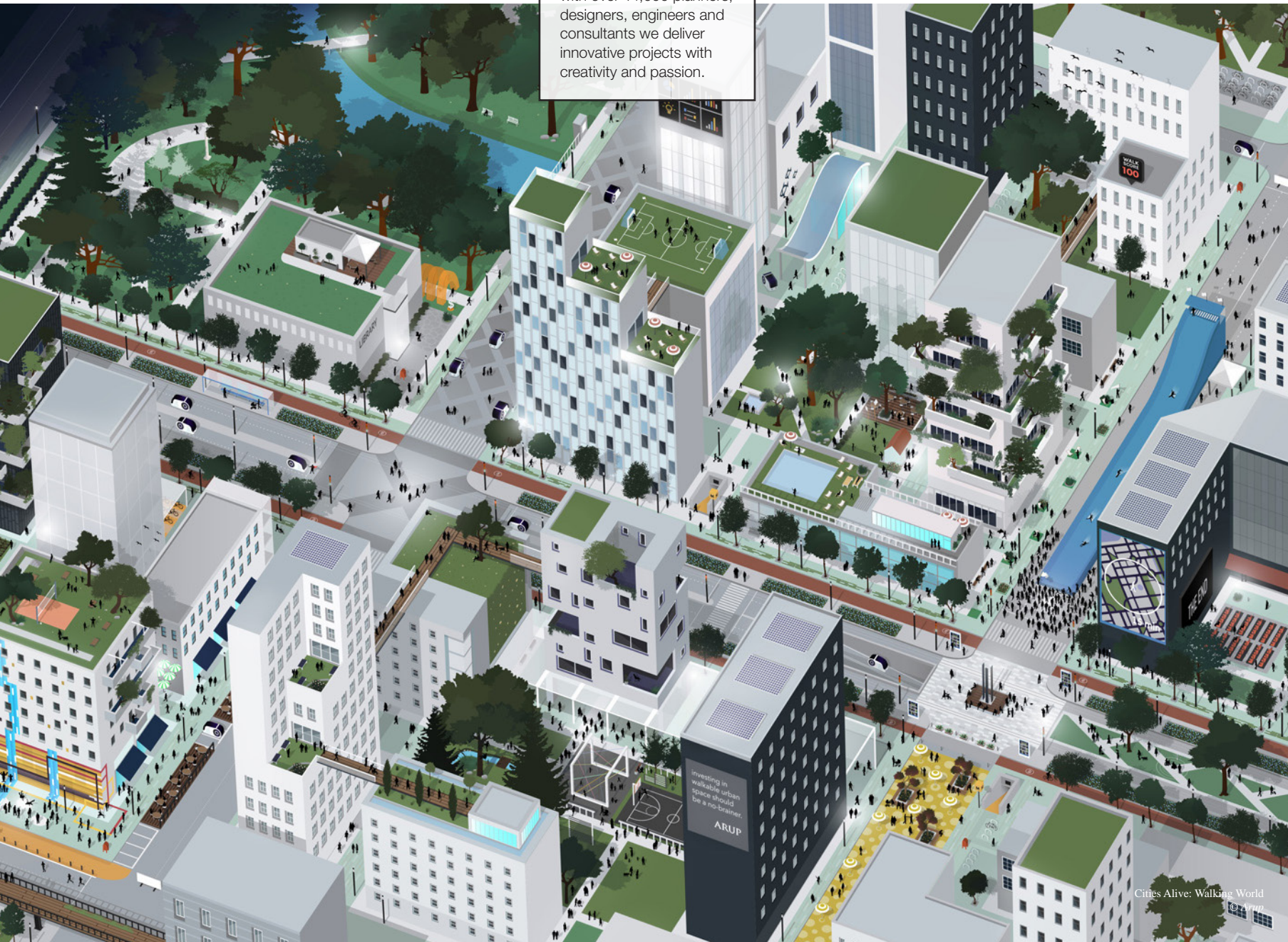
How can we develop new components, business models and solutions?



We help companies understand the impacts of trends and develop strategic road maps, including identifying growth fields, innovation opportunities, or new products, services and markets.



Arup is at the heart of the most prominent projects in the built environment. Working in 140 countries, with over 14,000 planners, designers, engineers and consultants we deliver innovative projects with creativity and passion.



Cities Alive: Walking World
© Arup

CONNECTED STREETS

Qualcomm, United States of America

Qualcomm was interested in how technology could enable the creation of a 'connected street of the future' and the value of this in the context of their smart cities agenda. They wanted a futures-orientated piece of thought leadership to talk about change and engage with the smart city ecosystem worldwide. Arup Foresight worked with their smart cities team to develop a series of workshops in China and the US. We hosted and facilitated these workshops, bringing in public, private and NGO stakeholders. This enabled Qualcomm to map the benefits connected streets could bring to the firm. Our work culminated in a report on the future of connected cities and different future scenarios including, among others, the healthy street, the environmentally friendly and the serendipitous street.

Foresight brings value to clients who understand that change is both constant and necessary.

“Foresight is best applied in situations where we need to understand the implications of change for business strategy, innovation or project delivery. Achieving this requires a comprehensive and integrated foresight process, where we move from research on trends to specific implications for our clients. The result is a tangible roadmap or a set of principles that outline the impact of change for their business, their operations, and their people. This is very much a partnership and a collaborative design process for all the primary stakeholders so that they are all invested in a shared future.”

Francesca Birks
America's Foresight Leader



Wind Turbines
CCO P.xhere



Hy-Fi Mushroom Brick Tower
© Arup

▲ THE CIRCULARITY LAB

Turner Construction, United States of America

Initiated as an Arup research project, this collaboration between Arup, Google, 3XN/GXN and Turner Construction aims to demonstrate how to achieve a circular economy across the built environment. This includes increasing the reuse and repurposing of components and materials, focusing on increased spatial utilisation, and developing radically new approaches to acquiring materials, planning construction, modelling costs and executing projects.

◀ FUTURE OF HYDROGEN ECONOMY

United Kingdom

Partnering with specialists in energy technology, programme management and advisory, Arup Foresight developed a vision and roadmap for Arup and its clients on the future of the Hydrogen Economy to 2050. The work has been validated by government and industry, and will help shape investments into further research and projects.

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Client value

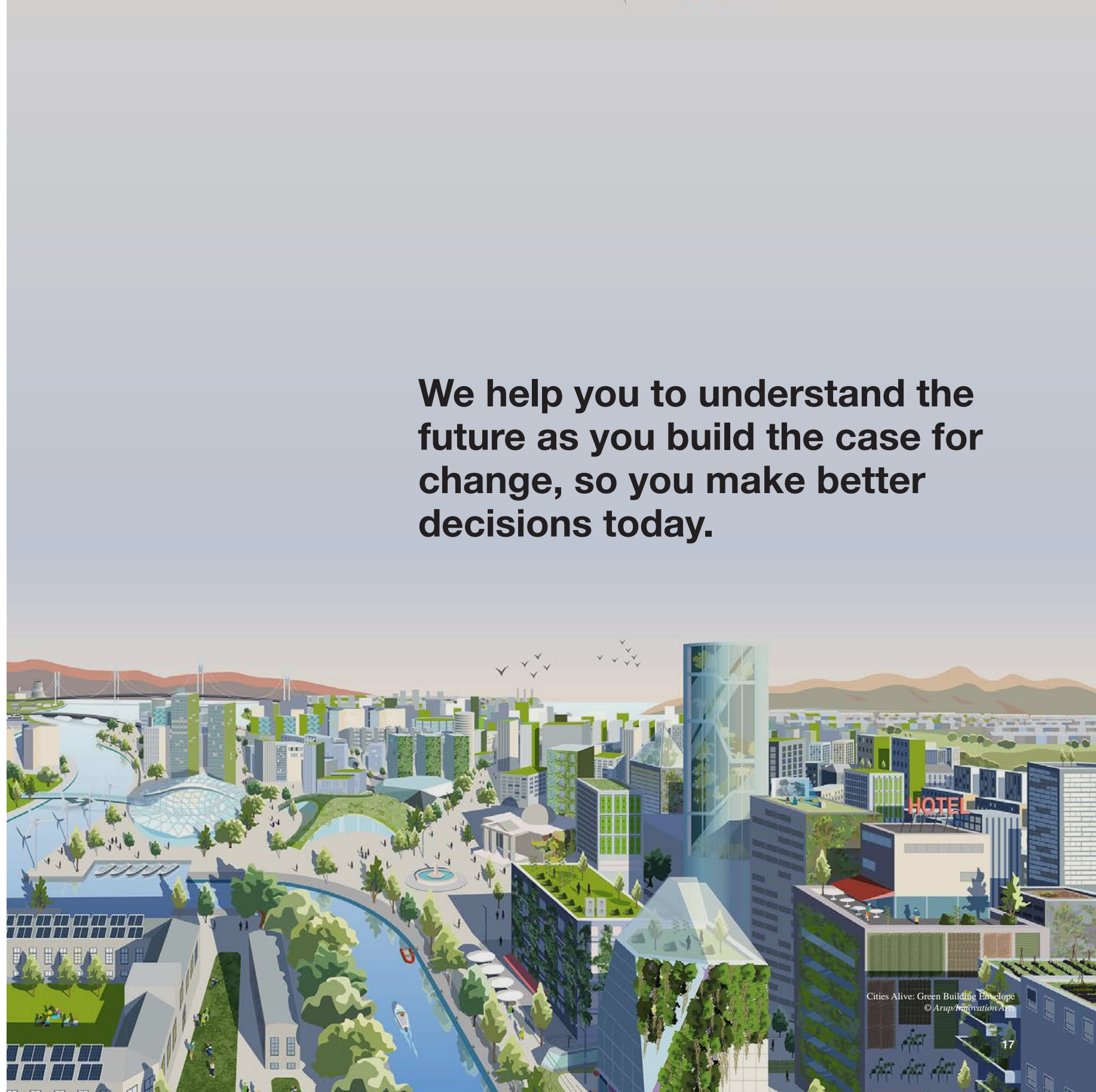


We do not predict the future. We develop strategies to help future-proof your business in a fast changing and uncertain world.

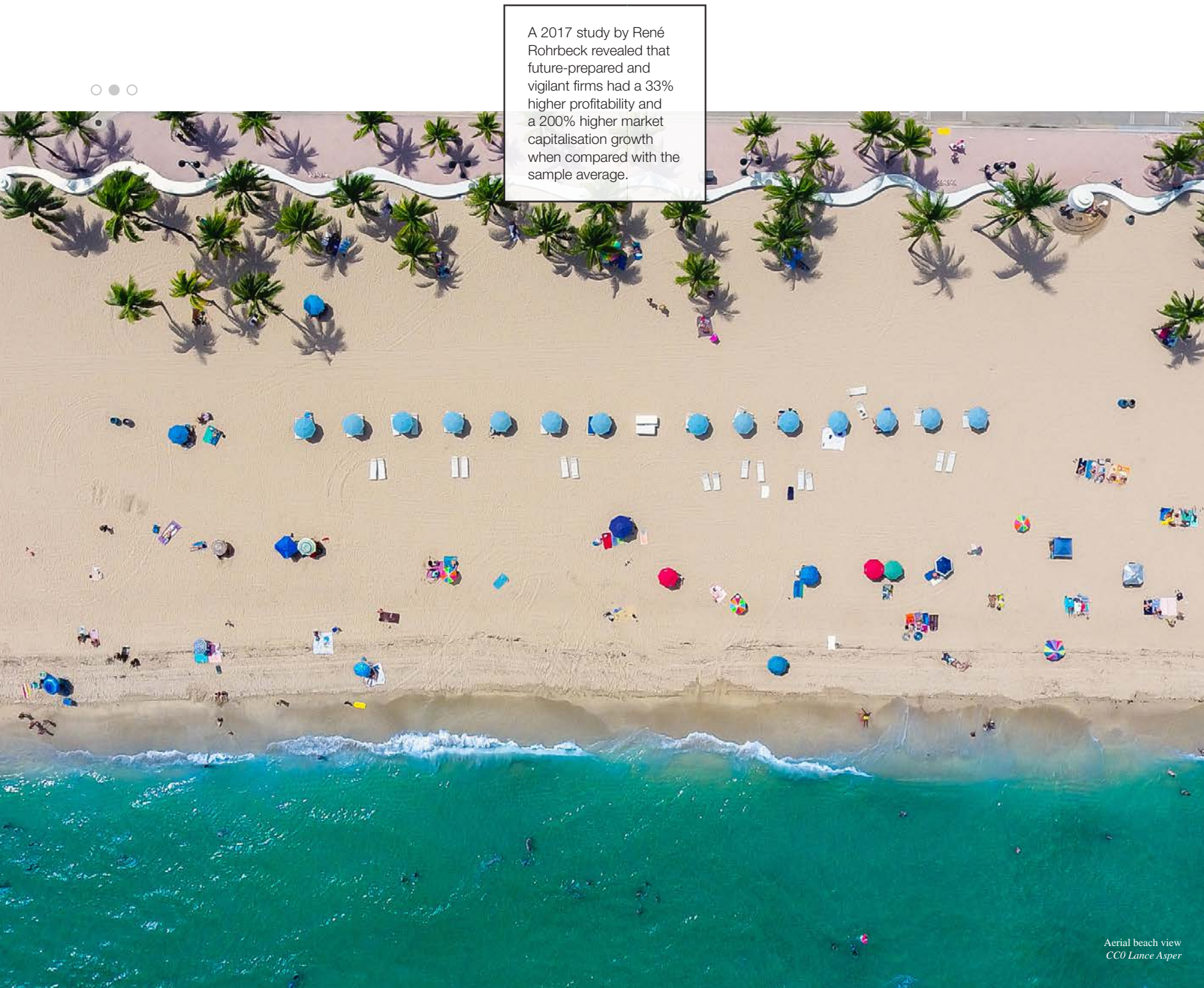
We contextualise trends for your business, your clients and your sector. We examine change across all scales and domains – from social megatrends, such as urbanisation and an ageing population, to technology trends like robotics and automation.

There is no template and no standard answer. Our work is custom-built and is always tailored to your needs. We work with you to select the right approach, ranging from creative design thinking tools to evidence-based interaction with stakeholders. Everything starts with a conversation about change and your objectives for the future. What do you really need to know? What decisions do you need to take and influence? What do you need to know about the future to make the right decisions today? That is where foresight makes the difference. It is not just any future, it is your future.

We help you to understand the future as you build the case for change, so you make better decisions today.



Cities Alive: Green Building Envelope
© Arup/Innovation Arts



A 2017 study by René Rohrbeck revealed that future-prepared and vigilant firms had a 33% higher profitability and a 200% higher market capitalisation growth when compared with the sample average.



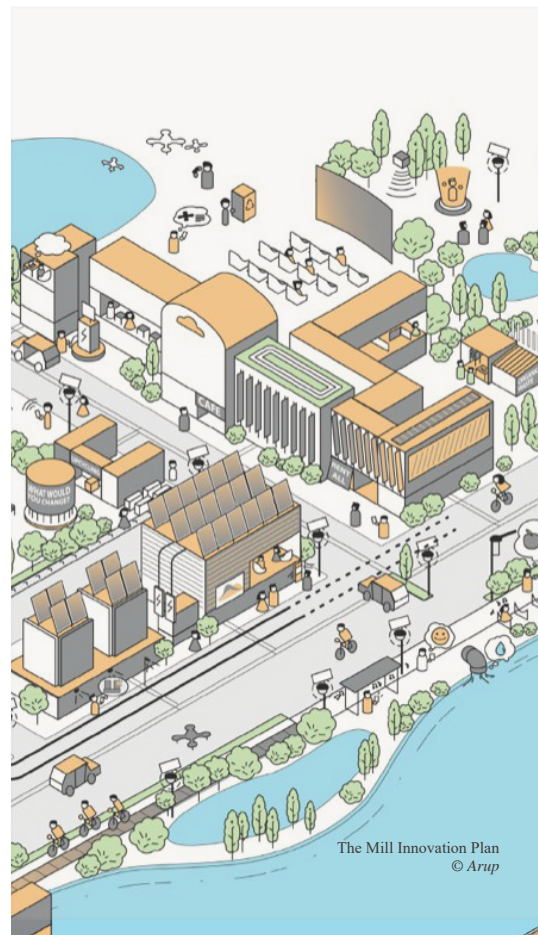
FUTURE WATER SECTOR *SEQ Water Industry, Australia*

Reliable, high quality water supplies and strong water security allow society to flourish and the economy to prosper. Arup is helping the water industry tackle the challenge of planning for an uncertain future. Seqwater partnered with Arup and the South East Queensland water service providers to deliver a landmark future planning program. Arup designed and facilitated a series of workshops with over 50 participants from diverse organisations. The workshops used Arup's foresight approach to identify a range of plausible futures, based on major forces shaping the region over a 50-year planning horizon, and test the implications of these scenarios for the region's water industry. The scenario planning project was a truly collaborative planning process, fostering knowledge-sharing and a deeper mutual appreciation of the challenges faced by different stakeholders. The final output of the scenario planning will not only inform Seqwater's Water Security Program, it will be made available to the broader SEQ water industry to provide a useful, relevant and consistent basis for a range of planning and decision-making activities.

Foresight helps clients understand challenges and real opportunities within a context.

“We offer the strategic perspective, enabling our clients to set a vision for the future and outline what they need to achieve it. It helps them to avoid jumping straight into a technology solution. Aviation, for example, tends to be a quick adopter of technology and is ahead of other industries. When new developments become operational, our work supports the operational readiness assessment (ORAT) work, in particular for the human aspects of this sort of change. We can anticipate the conversations that need to happen, the planning that needs to be done, and the change management that will stem from that. It’s about using foresight methodologies to look at the future but also to design methodologies to help create the roadmap to that future. I like that we have a tangible impact in our foresight work.”

Anne Kovachevich
Australasia’s Foresight Leader



The Mill Innovation Plan
© Arup



Circular House, London Design Festival 2016
© Arup

▲ CIRCULAR HOUSE

London Design Festival, United Kingdom

Foresight worked with a range of design and engineering teams at Arup to develop a circular building. The Circular House explored how we can begin to work towards zero waste in London. The prototype was an example of how buildings can support a circular economy.

◀ A FUTURE UNIVERSITY INNOVATION PLAN

The Mill, Moreton Bay, Australia

Arup Foresight developed an innovation and sustainability plan for a new university in Brisbane, Australia. We delivered a series of stakeholder workshops and gained a comprehensive understanding of the main design features for the new university. Looking at a range of categories, we detailed possible technologies for inclusion in the university. We worked backwards to create a plan to determine what decisions must be taken to achieve the vision of the future.

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Engagement

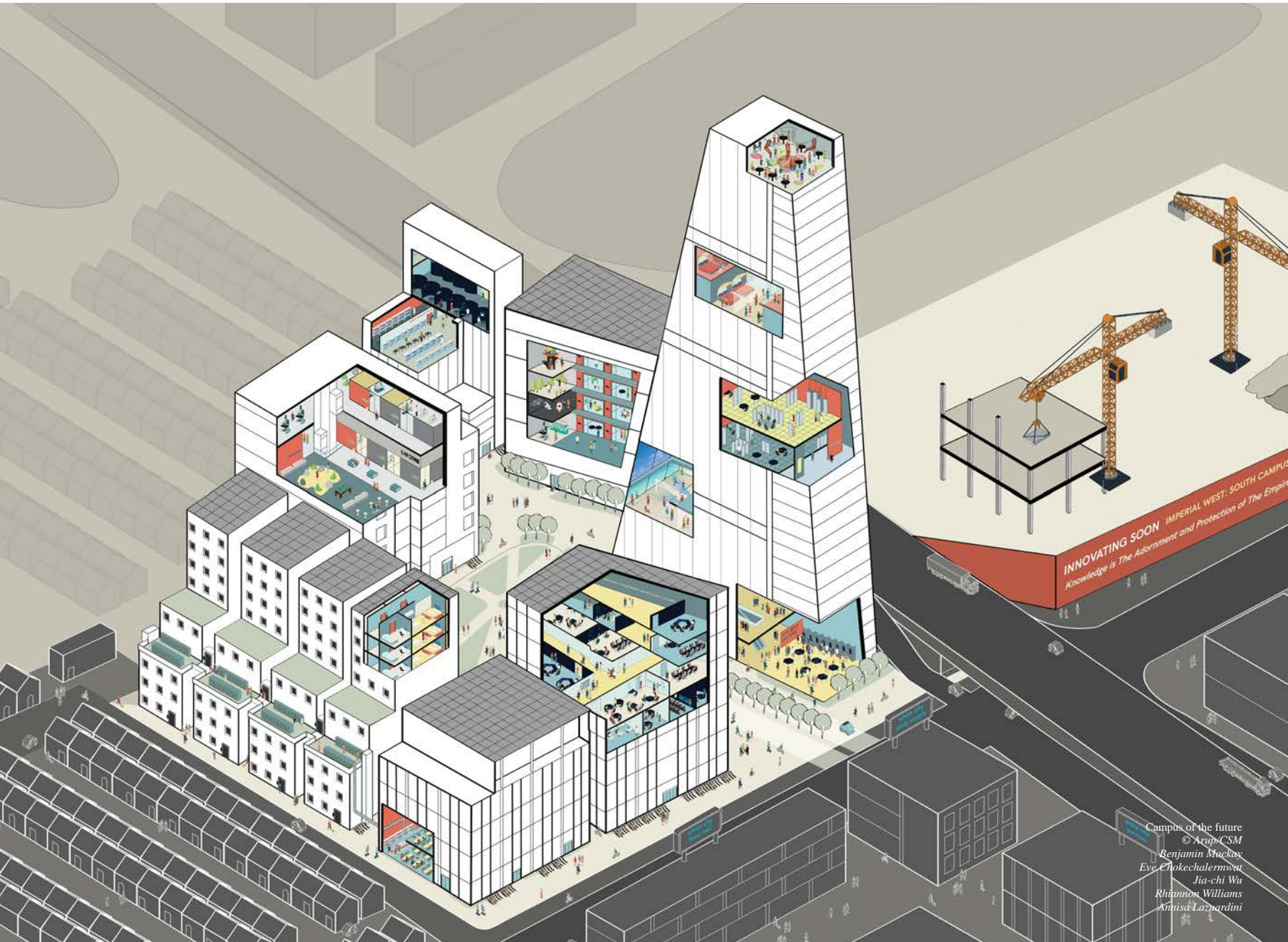


A key question for our clients is always 'Who?' Who is making the decision? Who are your stakeholders?

Foresight is not just about giving you an answer, it is about helping you to explain the probable futures and the opportunities to your decision makers and partners. We help you to gain buy-in from your stakeholders and identify what is needed to take them on a journey into the future. When you are trying to tell a compelling story, you need compelling evidence. We can be your trusted partner to help you build the case for change, and influence your decisions today.



We provide frameworks to discuss, explore and determine brighter futures in an uncertain world.



Campus of the future
 © Arup/CSM
 Benjamin Mackay
 Eye Chokechalermwat
 Jia-chi Wu
 Rhannon Williams
 Annisa Lazuardini

CAMPUS OF THE FUTURE

Vocational Training Council, Hong Kong

The Vocational Training Council (VTC) is planning the construction of a new campus that will combine sites into a world-class campus for vocational training. The project has provided a unique opportunity to reconsider the future of vocational training and the long-term vision and ambitions of the VTC. As a Hong Kong government body, it was critical for the VTC to create the case for change as part of the wider approval process.

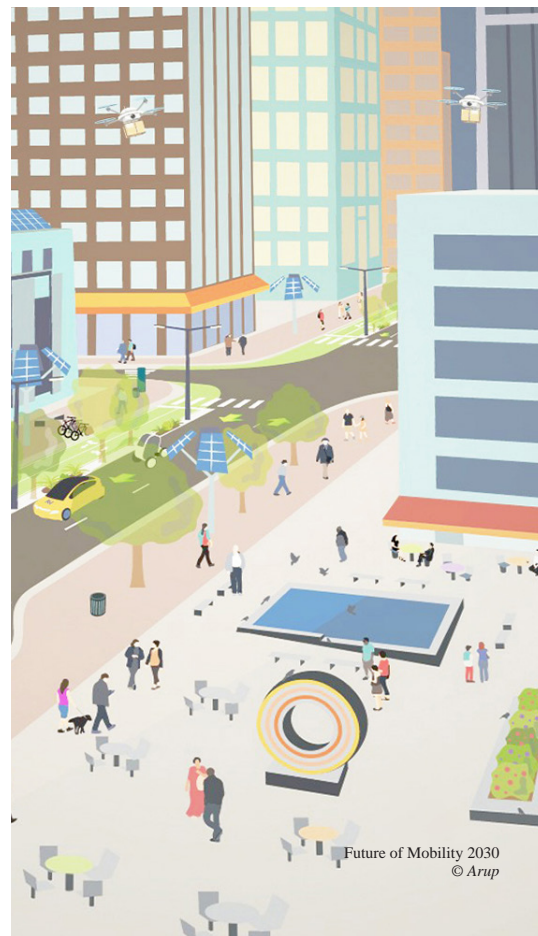
Arup Foresight explored the key trends impacting the VTC, conducted site observations, and delivered benchmarks for international university campuses. Further insights were drawn from the 'Campus of the Future' research developed by Arup Foresight. We outlined what the future campus should provide for students, teachers and visitors, and how facilities should be designed and operated. These design principles were used to develop the architectural brief for the new building.



Our clients need tangible data, a clear vision and realistic solutions.

“Our region’s clients need particularly tangible data. Therefore, all the research and methodology for a piece of foresight work must be backed up with detailed evidence. Many projects are seeking approval from a government body and we help them develop a compelling story. They are interested in Arup’s view within the industry and the fact that we can tap into any expertise we need for our clients anywhere around the globe. It is not just about digesting desk research, it is about adding value through our people to put together a piece of work that is future-proof.”

Yannick Lenormand
East Asia’s Foresight Leader



▲ FUTURE OF LOGISTICS

Hongkong Post, Hong Kong

Arup Foresight delivered a programme of research and workshops to explore the future of mail and parcel logistics and the implications for their air mail distribution centre. We explored a broad range of trends, combined with market research and benchmarking on current innovation and best practice. The outcomes were analysed to identify specific implications for the design, operation and experience of the new centre.

◀ SMART CITY VISION

Brisbane City Council, Australia

The client wanted to consider how smart, connected initiatives could assist them in achieving their future vision. Arup Foresight ran a series of workshops with the council's executive management team. The output of the engagement was a report which included a common language and assessment framework for evaluating initiatives. This framework has been adopted in future strategies that the council has developed.

06


Global reach



We are your gateway to Arup's knowledge and expertise.

With over 14,000 members globally, across a wide range of disciplines, Arup Foresight opens access to multidisciplinary specialists and the latest sector knowledge. We also have an extensive network of global collaborators in industry and academia. We will find the right mix of skills to support you as your trusted partner.

Arup is at the forefront of research into the planning and design of the built environment. Our research plays a fundamental role in defining how we anticipate and make the most of emerging business opportunities.

An aerial photograph of the Sydney Opera House, a large, white, shell-shaped building situated on a peninsula in Sydney, Australia. The building is surrounded by water, and several ferries are visible in the harbor. In the background, the Sydney city skyline is visible, including several high-rise buildings. The sky is blue with some clouds.

Arup's global network provides access to specialists and the latest sector knowledge.



Emerging ideas and case studies from around the world are curated by Arup Inspire and our global network of scouts. We share insights from those who are curious about things to come.



Future of Regent Street
© Arup



FUTURE OF REAL ESTATE *The Crown Estate, United Kingdom*

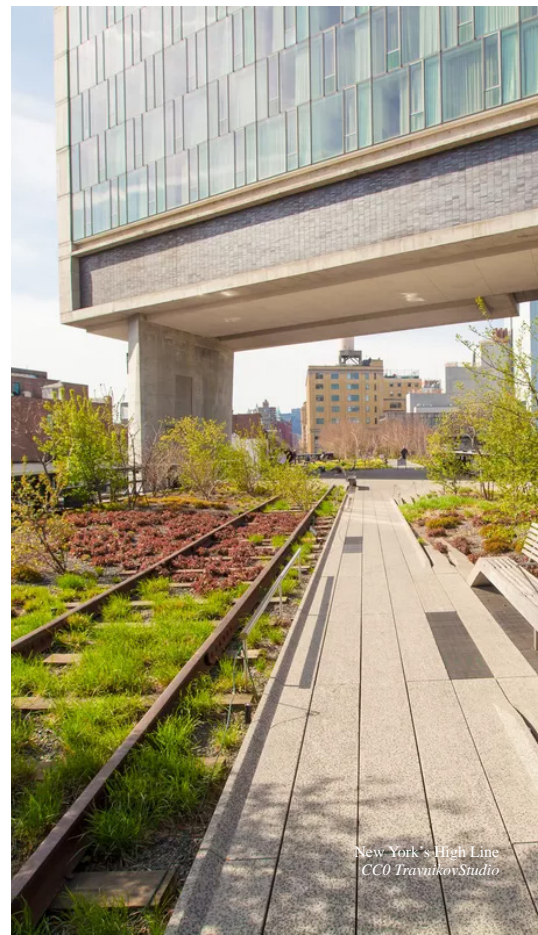
Arup Foresight acts as a strategic advisor to the Crown Estate to understand and identify potential opportunities for retail and leisure. One project focused on the development of a vision for the Crown's central London estate, while the other explored the future of over 20 of the Crown's regional retail and leisure destinations. The client valued our ability to explore the future from a broad range of angles, facilitate impactful workshops with a range of internal and external stakeholders, create a clear structure across priorities and actions, and present outcomes in a visually engaging way.



We combine foresight methodology with Arup's design knowledge and technical expertise.

“Our region’s clients often ask us to develop thought leadership around specific issues or challenges. Our work successfully challenges perceptions about the future, and inspires audiences to think about what could be possible. We help foster collaboration, creative thinking, design innovation and a shared multi-stakeholder commitment to a future trajectory or vision. We provide clients with strategic direction. Over the years we have influenced client organisations, policy and wider opinion across a raft of subjects from resilient infrastructure to better placemaking.”

Marcus Morrell,
UKIMEA's Foresight Leader



New York's High Line
CCO TravnikovStudio



Hong Kong Island North Coast
CC-BY-SA Prosperity Horizons

▲ FUTURE OF RAIL AND PROPERTY

MTR Corporation, Hong Kong

Arup delivered a programme of research and a series of workshops in collaboration with the corporate strategy division of MTR Corporation. The project focused on identifying and analysing key trends shaping the future of MTR's rail and property businesses to 2030. Key changes included the impacts of an ageing population, the future of station design, climate resilience, and the firm's digital transformation. The project resulted in a set of strategic actions that will make sure the business is better prepared for the future.

◀ FUTURE OF INFRASTRUCTURE

Kent and Medway County, United Kingdom

The county of Kent and Medway needed to look at future infrastructure needs out to 2050 and how these would relate to transport, access to healthcare, jobs, water, waste, energy and more. Arup Foresight developed contextual scenarios to support policy making with specialist input from Arup experts in different sectors.


07

Programmes



Our approach is always tailored to each client's situation and every solution will be unique.

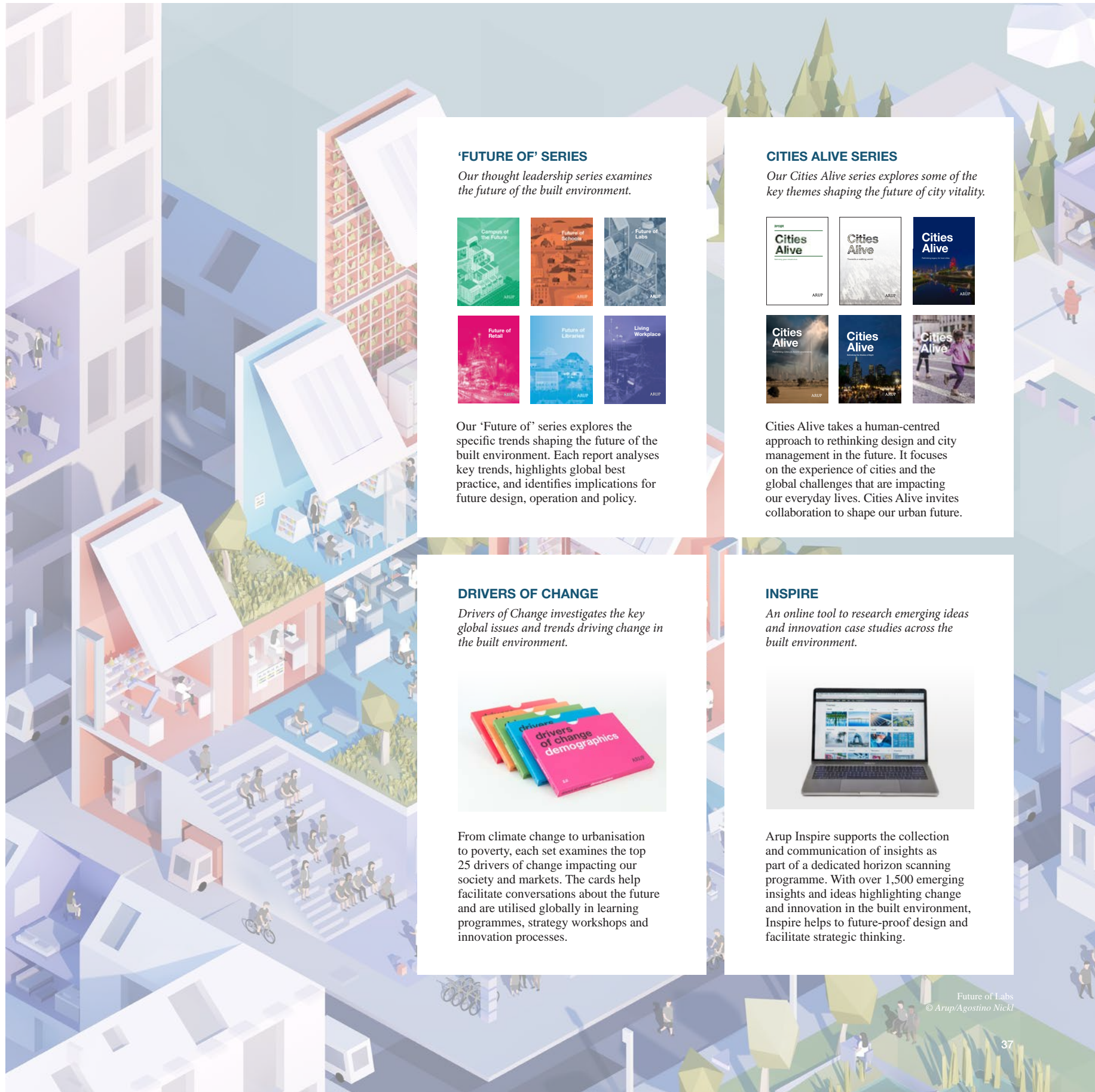
We develop a shared vocabulary with our client to describe possible futures and the impacts they might have on their organisation. Where we can, we share our knowledge widely and publish insights on the Arup website. This includes a wide range of published Foresight research delivered by our team. Many of our tools are also available for you to use directly, including the Inspire database, Drivers of Change cards, and our Cities Alive trend cards.



Foresight has a set of approaches, tools and skills that help clients explore, envision and shape the future.

07

Programmes



'FUTURE OF' SERIES

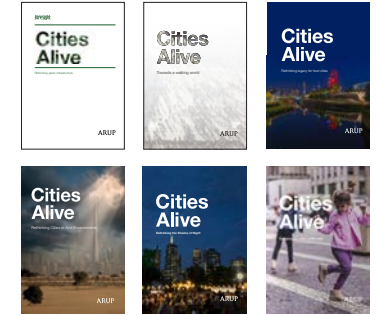
Our thought leadership series examines the future of the built environment.



Our 'Future of' series explores the specific trends shaping the future of the built environment. Each report analyses key trends, highlights global best practice, and identifies implications for future design, operation and policy.

CITIES ALIVE SERIES

Our Cities Alive series explores some of the key themes shaping the future of city vitality.



Cities Alive takes a human-centred approach to rethinking design and city management in the future. It focuses on the experience of cities and the global challenges that are impacting our everyday lives. Cities Alive invites collaboration to shape our urban future.

DRIVERS OF CHANGE

Drivers of Change investigates the key global issues and trends driving change in the built environment.



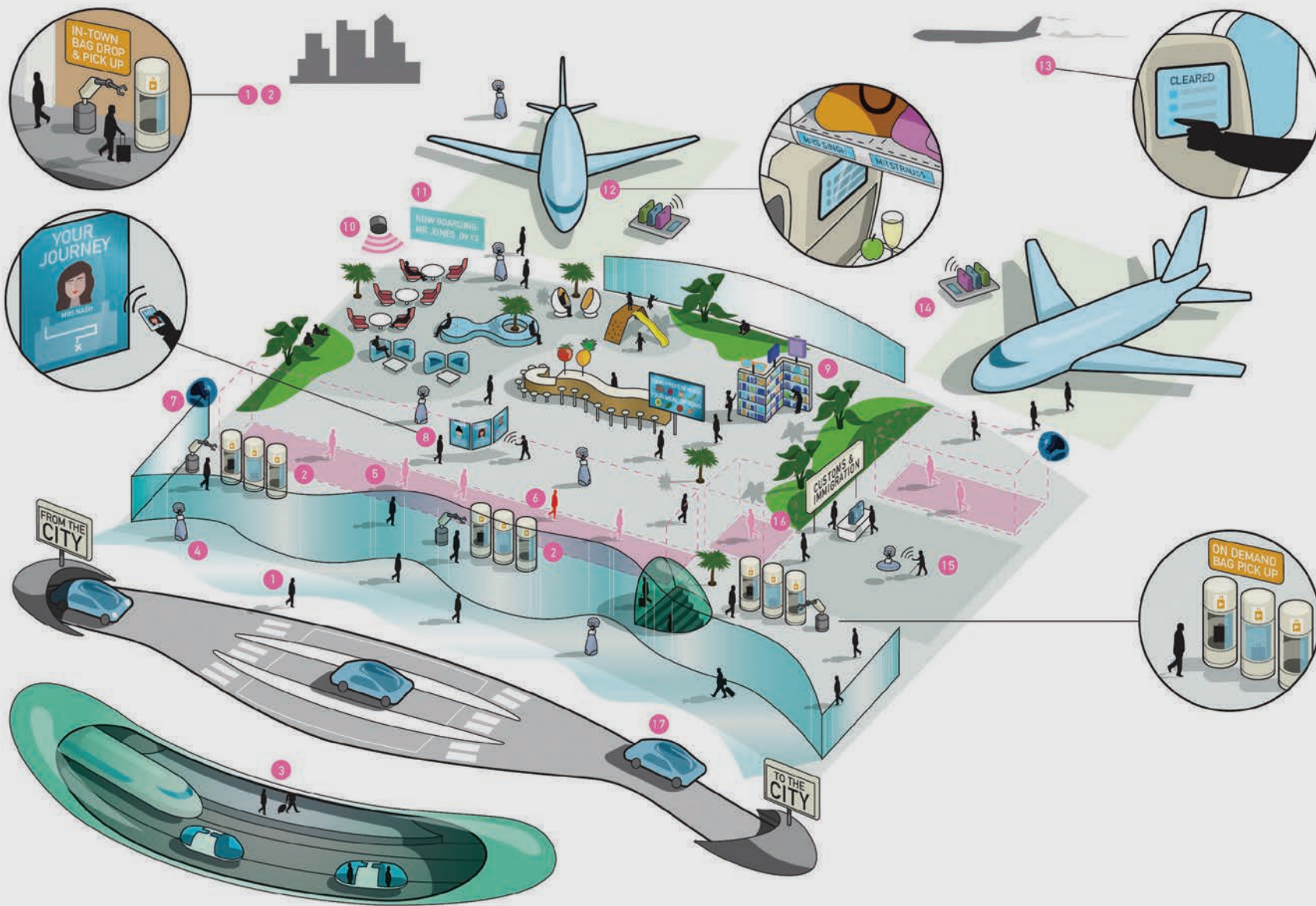
From climate change to urbanisation to poverty, each set examines the top 25 drivers of change impacting our society and markets. The cards help facilitate conversations about the future and are utilised globally in learning programmes, strategy workshops and innovation processes.

INSPIRE

An online tool to research emerging ideas and innovation case studies across the built environment.



Arup Inspire supports the collection and communication of insights as part of a dedicated horizon scanning programme. With over 1,500 emerging insights and ideas highlighting change and innovation in the built environment, Inspire helps to future-proof design and facilitate strategic thinking.



Future Airport Experience
© Arup/Innovation Arts

TEGEL AIRPORT VISION

City of Berlin, Germany

The City of Berlin wanted to explore future opportunities and design approaches for Tegel airport and its surroundings. The aim was to develop a forward-looking vision that could be implemented following the planned closure and repurposing of the airport and its facilities. Using workshops and other methodologies, Arup Foresight collaboratively developed an integrated vision for water, resources and energy. This will be used to inform the future of the site and determine associated technology and design choices.



We apply multiple strategic methods to understand the bigger picture.

“Strategic Foresight is about embracing change in a VUCA world, where volatility, uncertainty, complexity, and ambiguity are all increasing. In this context, Foresight is not always about providing the ‘right’ answer, but about encouraging the right questions and about challenging assumptions. Sometimes it is the process of exploration itself, the shift in perspective, and the questions that were asked that have the most lasting impact on a client.”

Gereon Uerz,
Europe’s Foresight Leader



Indoor Wooden Flooring
CC0 Senior Airman Brittany Perry



Child-friendly landscape architecture
© SCAPE Landscape Architecture D.P.C. / Ty Cole

▲ CHILD-FRIENDLY NEW ORLEANS

Cities Alive, United States of America

Arup Foresight’s report entitled *Cities Alive: Designing for urban childhoods* looks at how a child-friendly approach to urban planning is vital for the creation of cities that work better for everyone. We are exploring how to apply that research into a planning framework in collaboration with the City of New Orleans and other partners.

◀ FUTURE OF FLOORING

Tarkett, Germany


Technology is radically transforming the manufacturing and construction sector. For Tarkett, the opportunities offered by trends such as prefabrication could deliver numerous benefits. Arup Foresight explored the future of Tarkett’s markets, materials and technologies and developed a set of possible business opportunities for key stakeholders. The work supported Tarkett in its strategic decision making and led to new product innovations.



You can access our foresight services through a network of regional consultants around the world.

Wherever you are based, we can help you look beyond your sector to explore new sources of inspiration and identify opportunities for growth. To find out more about our work visit foresight.arup.com

To find out more about Arup Foresight services, please contact us at: foresight@arup.com



“Arup Foresight managed to guide us through a complex analysis of trends and their implications on our business and markets.”

Denise Kee, General Manager
Head of Corporate Strategy, MTR Corporation Limited

“Arup Foresight’s work is the best and clearest articulation of potential positive futures that I have seen.”

Dr. Iarla Kilbane-Dawe
Head of Office for Science, Department for Transport

In a world where change offers such vast challenges and opportunities, it is more important than ever to try to understand and explore what is relevant to us. Managing change requires a team of professionals that have the capability and capacity to help explore, navigate and shape an increasingly complex future.

This is the role of Foresight.