

# PROJECTING THE FUTURE

A big conversation about the future of the project profession

FEEDBACK PAPER 4

**THE FUTURE OF  
MOBILITY AND TRANSPORT**

SEPTEMBER 2020

**#projectingthefuture**

## INTRODUCTION

Projecting the Future was launched by APM in June 2019 as a 'big conversation' about some of the major trends reshaping the project environment and their implications for the future of the project profession.

This paper briefly summarises some of the contributions to that conversation. Those contributions include social media comments in response to APM posts, particularly from APM's network on LinkedIn; emails received from APM members and corporate partners in response to the Projecting the Future Challenge papers; perspectives presented at APM events during 2019-20; and a variety of blogs and articles from a range of authors that were published by APM during this period.

The summary is not comprehensive but it aims to give a flavour of the views and insights shared by those participating in the big conversation and some of the conclusions that the Projecting the Future Group have drawn as a result. These inputs have all fed into our overall views about the emerging themes and the big ideas shaping the future of the profession which are presented in our report on the adaptive professional, also published along in September 2020.

[www.apm.org.uk/projecting-the-future](http://www.apm.org.uk/projecting-the-future)



## THE SIX CHALLENGES



### THE FOURTH INDUSTRIAL REVOLUTION: ROBOTICS, DATA AND ARTIFICIAL INTELLIGENCE

80% of today's project management tasks could be automated by 2030



### CLIMATE CHANGE, CLEAN GROWTH AND SUSTAINABILITY

The UK aims to be a world leader in the green economy having adopted a target for net zero carbon emissions by 2050



### THE FUTURE OF WORK AND SKILLS

Four out of five UK businesses need more high-level skills in the years ahead



### DEMOGRAPHICS AND AGEING: THE 100-YEAR LIFE

10 million people alive in the UK today can expect to live to 100



### THE FUTURE OF MOBILITY AND TRANSPORT

The UK market for autonomous and connected vehicles could be worth £52bn by 2035



### URBANISATION, CONNECTIVITY AND BUILDING SMART CITIES

The world will have 43 megacities by 2030; global spending on smart cities could hit \$135bn by 2021

## WHAT OUR CHALLENGE PAPER SAID

- *"How people travel and how goods are transported around the world are set to be revolutionised in the years ahead. The digital technologies that are driving the fourth industrial revolution (4IR) are set to have a profound impact on mobility and transport."*
- Transport infrastructure is a major priority for the UK government. Part of the 2017 industrial strategy, it was also at the heart of the new government's agenda for 'levelling up' following the December 2019 general election. Many major transport projects are already underway across the UK.
- Significant change can be expected across all modes of transport in the coming years, but technology is likely to have a hugely transformative impact on road transport over the coming decade or so – affecting both commercial haulage, and personal travel – with the rise of autonomous connected vehicles. Complex transport and mobility projects will both demand technical expertise from the project profession, and, we wrote, "a real emphasis on the people dimension, including engaging stakeholders with diverse and potentially challenging views".

## KEY QUESTIONS WE ASKED

**What skills and capabilities do project professionals need to deliver the future of mobility and transport?**

**Do project professionals have the expertise and experience needed to manage the digital aspects of mobility projects?**

**Are high-value megaprojects – such as transport infrastructure – doomed to cost and time over-runs, or can delivery be improved?**

## POINTS FROM THE BIG CONVERSATION

- There is deep uncertainty across the transport sector about the future direction of transport and mobility, according to Andrew Hugill of the Chartered Institution of Highways and Transportation (CIHT). The 'UK Connected and Automated Mobility Roadmap to 2030' from Zenzic provides a useful view of what will be needed to deliver automated mobility: it identifies six 'golden threads' including cyber resilience; legislation and regulation; safety; connected and automated mobility (CAM) services; public acceptability; and infrastructure.
- A "holistic" view is badly needed, Hugill argued. Transport and mobility projects have to deliver benefits across four social dimensions: not only growing the economy, but also delivering on climate change commitments, reducing inequality, and supporting health and wellbeing.
- Transport is closely associated with jobs density. Higher accessibility of city centres to cars is associated with lower job density. Future jobs growth in cities such as Manchester, Birmingham, Bristol, Leeds, Edinburgh, Glasgow and Cardiff is at risk of being constrained by inadequate transport infrastructure.
- The relationship between climate change and transport is key. Managing transport emissions downwards will be critical to achieving net zero emissions. A report from the Urban Transport Group, which represents the seven strategic transport city bodies for the UK's city regions, argued that policy makers need to "join the dots" and "move beyond a siloed approach to reducing carbon emissions" when it comes to the links between transport, the climate, and a host of other policy aims – including cost savings and improving city life. One contributor suggested that, if reducing the impact of transport on the planet is a priority, then "surely the best way to do that is to find ways to avoid the need for transport, or at least reduce volume".
- Climate change also means building the resilience of transport systems, as Craig Higgins of Jacobs pointed out: "with increasing populations and extreme weather events, the transport network will come under even greater levels of stress, with less capacity to deal with problems".

**“As the pandemic underlines, the wellbeing and prosperity of everyone in the UK depend critically on how we build our economy and transform our infrastructure and public services for the future. Delivering major projects successfully and consistently has never been so important.”**

**- Government Ministers Lord Agnew and Rt Hon Jesse Norman MP – foreword to the Infrastructure and Project Authority's Annual Report on Major Projects 2019-20**

- The increased role of digital technology in transport and mobility will put a premium on risk management. How is information managed and owned? How are risks handled? How is safety and security assured? How is public trust maintained? One contributor felt that “the real advance will come once EVs/cars will communicate with cars near to them to negotiate the way forward”, which is likely to happen before fully automated, non-human-monitored driving is implemented.
- One LinkedIn contributor welcomed the Projecting the Future paper as “Good blue skies thinking”, but argued that there is a gap in the “current fundamentals” of project management’s core body of knowledge. He argued: “I believe that before we get swept away exploiting the advantages offered by advances in transport we need to spend some time and effort on applying the fundamentals of supply chain management and logistics in the project arena.” Another commenter observed that project professionals face diverse demands: “project managers are having to prove their adaptability and flexibility to deliver in more than one field”.
- One implication of greater speed of travel could be allowing project professionals to more easily spend time “on the ground” at projects, suggested one contributor. Despite technological improvements and tools enabling remote working, the “personal touch” will still be essential in future, it was argued – and faster travel could make it easier to provide.
- Another contribution noted the challenges inherent in mega projects: “With major projects clearly not meeting muster at this point in time, there needs to be greater preparation and research into the projects before approval is sanctioned. This involves bringing project specialists in at an earlier stage and having the fundamentals, such as requirements and scope, truly understood before sign off”.
- Vip Vyas, managing director of Distinctive Performance, told us: “Megaproject success ultimately comes down to five key factors: a value-adding governance process, a business case which tells the ‘truth’, an aligned-upon end-point that stakeholders support, a procurement process that pulls for quality not just cost, and exceptional delivery capability. Historically, megaprojects have failed on many of these factors. Bringing authenticity and leadership is what will ‘bend the future’, if we are interested in creating a new era of project success.” Watch his webinar for APM at [apm.org.uk/news/turning-around-the-performance-of-major-and-mega-projects-webinar](https://apm.org.uk/news/turning-around-the-performance-of-major-and-mega-projects-webinar).

## IMPLICATIONS FOR THE FUTURE OF THE PROFESSION: EMERGING THEMES

- Stakeholder engagement and ‘customer centricity’ in designing and delivering transport and mobility projects will be particularly important, and particularly challenging, given the scale and complexity of such projects. For many transport and mobility programmes that will begin with political leaders – national, or regional and local – from whom clarity about objectives and intended benefits will be crucial, along with honesty about potential costs and downsides (such as impact on those in the path of construction works).
- Clarity in the scope and design of projects, and what can be achieved here and now (or in the near future) will be more important to realising benefits for end users than a focus purely on technology and the more radical possibilities. There are similarities here to the ‘smart city’ Challenge.
- Transport and mobility is a critical sphere for the application of thinking about climate change and the goal of achieving net zero emissions. For individual project professionals, this is a field in which asking challenging questions, as set out in the section on the climate challenge, is particularly important.
- Clarity of aims in transport is essential – and so may be building in flexibility, given that long-lived projects can be overtaken by events. The changes in behaviour caused by Covid-19 in the short term – which may endure into the medium and long term – shows that assumptions about future mobility needs can change dramatically.
- Increasing the adoption of the conditions for project success is essential, to ensure that projects deliver intended benefits – and minimise waste of public money. APM is initiating an update of its 2015 research on the conditions of project success; for infrastructure, the IPA’s new principles for project success (July 2020) are essential.