# PROJEC



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# Future-gazing

#### In contrast to the summer issue

of Project, which celebrated APM's 50th anniversary by taking stock of the life-changing projects we've enjoyed since the 1970s, this issue is dedicated to the future. The profession is diversifying as never before, and the energy of a new generation of project professionals is infectious. The talented people in our cover story give a voice to the 20- and 30-somethings who will take the profession into the coming decades.

All care deeply about sustainability, a cause that these leaders of the future are forced to contend with. At our August photoshoot in a humid London, I was genuinely bowled over by their ambition, kindness and optimism. Contrary to my expectations, they told me they feel personally empowered to effect real change for the better and love the profession precisely because they can deliver tangible results in the real world.

Elsewhere in this issue, read our exploration of the cities of tomorrow. Post-pandemic, our expectations of urban working and living have altered. Project considers the major trends for

cities and what impact these will have on project management, whether that's the construction of new buildings or a more sustainable way of thinking about transport.

Management SIG

Speaking of transport, we're particularly pleased to have Mark Wild, ex-CEO of Crossrail, as our Big Interview. He shares the inside story on how he helped to get the megaproject towards the finishing line and tells of his personal journey to the very top of the profession.

#### We continue with the future theme

elsewhere, from a reappraisal of agile, which celebrates its 21st birthday this year, to how to manage Gen Z. In addition, one APM member tells us how she is reaching out to primary school children to inspire them to join the profession. And don't miss our reappraisal of Back to the Future. You'll be reaching for the popcorn for a rewatch, I promise.

I hope you enjoy this issue and, as ever, I'm keen to hear your feedback, so do let me know your thoughts at emma.devita@thinkpublishing.co.uk

**Emma De Vita** is Editor of *Project* 

#### From the editor

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BEN WRIGHT; LOUISE HAYWOOD-SCHIEFER; ALAMY









At MI-GSO | PCUBED, it is our mission to deliver our clients' most important projects and programmes, and we are proud to support some of the most recognisable brands worldwide.

With our UK business nearly doubling in the last two years, we recognise our greatest asset is our people. We place huge pride in building our community of talented people from all backgrounds and disciplines, nurturing diversity of thought and better supporting our clients as a result.

We are committed to providing varied and extensive learning and development opportunities that empower our employees to grow and progress at a pace that matches our ambitions.





# Perspectives

Birmingham 2022 • Old Oak Common station • Benefits realisation • Projectifying leadership

## **Discovering Shackleton's** lost ship Endurance

Nico Vincent reveals what it took to pull off one of the most complex subsea projects ever undertaken



Nico Vincent was Subsea Project Manager of the Endurance22 expedition. On 5 March 2022, using autonomous underwater vehicles (AUVs), his team found the wreck of Endurance, Sir Ernest Shackleton's ship, which sank off the coast of Antarctica 107 years ago.

#### **Q** Could you give us an overview of the project?

A The purpose of Endurance22 was to discover the wreck of Endurance and then to deliver a full survey of the wreck to allow scientific analysis. The wreck is in the Weddell Sea; there is a lot of sea ice in this area and it is quite unpredictable. The reason Endurance was so difficult to find was not because she was really lost, but because access to the area is so complicated. As the wreck is protected by the Antarctic Treaty, we were forbidden to touch anything, so we



needed to produce a high-resolution survey of the wreck to allow scientists and archaeologists to produce a scientific report.

#### Tell us about your role

A The Falklands Maritime Heritage Trust] asked the expedition leader to lead above the surface and me to drive all operations under the sea. However, to run the operation I was obliged to control surface support as well, including navigation, the helicopter flight plan and the ice camp. The project schedule for me

started in February 2019, when the previous expedition lost its AUV on site and I was immediately contacted to build a new solution. The first step was to launch the manufacturing of the Sabertooth AUV, which is a vehicle that is able to reach 3.000m. It's an AUV manufactured by Saab in Sweden, and the main reason why we chose that vehicle is because it's quite versatile. Usually, this kind of vehicle is moving fully autonomous underwater, but for this project we asked to use a tethered one. This is a lesson learned from 2019, which was to keep permanent control and anticipate the need for an emergency ascent in an incident. That's really a game changer on the ice.

#### For such a complex and unique project, was it important to come with an open mind, to find creative solutions and be innovative?

Absolutely. I spent a year building procedures, a scope of work, a task plan, server planning, deployment on ice, helicopter flight plans, time computing schedules. The reason why I was on board is because we were all open that nothing would run as expected. The environmental conditions on site are so complicated that you cannot anticipate all scenarios. Usually in the subsea industry the project manager stays in the office. The complexity of the variables that we faced created the obligation that I be on board.

#### What kind of skills did you need on team for this kind of project?

A Usually in the subsea industry,



FALKLANDS MARITIME HERITAGE TRUST AND JAMES BLAKE

← all the skills or expertise are quite disconnected from each other. People have a very important task and they do not look at what others are doing. When you are doing a project like Endurance22, the opposite needs to be true. People must have very strong connections with each other. The leadership may switch from one person to another according to expertise. That means that your boss in the morning, because you are driving an AUV, can become your support in the afternoon, because you are doing electronics. That is something that allows you to build a very strong relationship between people.

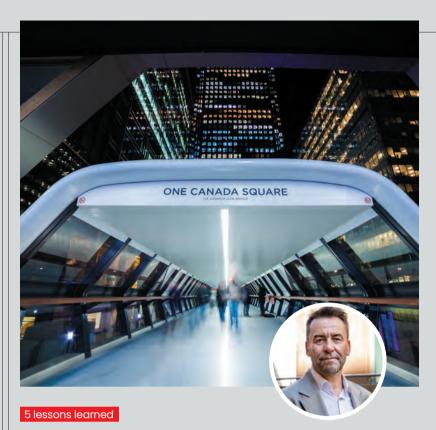
#### **10** What have been the highs and lows of working on Endurance22?

A Highs? The discovery. Lows are a very long list [laughs]. Each dive was a stressful time. You have to keep in mind that the previous team lost another vehicle after two dives. So my goal was not only to find Endurance, but to come back with my vehicle. We had eight emergency ascents over 32 dives. But seeing the vehicle back on deck after the last dive with



the full scope accomplished was an extremely good time. The team faced the worst conditions. We had -22°C with 35 knots of wind, which is equivalent to -40°C. The equipment was freezing on deck; the people were absolutely freezing on deck. They never said anything. They accomplished a huge task and I am very proud of them. Shackleton himself said: "Difficulties are just things to overcome, after all"

To listen to the full interview with Nico Vincent, search 'APM Podcast' on your preferred podcast app



#### Mark Wild, ex-CEO of Crossrail

Reflections on turning around a project that has gone off course

Fixed end dates are deadly. They distort behaviour in the team and generate huge unnecessary pressure. A more mature view of a major project is to use windows of uncertainty that get narrower as a project gets nearer to completion.

Integration is a contact sport. Crossrail's systems engineering was world class; what was missing was systems integration, which is crucial to digital projects. Is it central to the conversations that are happening around the boardroom table?

Modular design matters. There were 37 procurement contracts on Crossrail and they were almost all bespoke. They were also built, tested and commissioned in situ rather than off-site in factories before installation. If I were on HS2 now I would be all over modularity.

Right team for the right risk at the right time. We should have had three squads over the 20 years of the project. A civil engineering squad for the tunnelling, a mechanical and electrical squad for the fit-out and a systems integration squad for the integration. But we persisted with the same skill set and they didn't spot the aggregation of risk.

Be transparent and own the whole. Collaboration isn't enough; you need to transition to 'owning the whole', where people realise that their own success or failure – and that of the project as a whole – is dependent on the success or failure of everyone else involved. It calls for total transparency on risk.

For an in-depth interview with Mark Wild, turn to page 32

## What the 2022 Games brought to Birmingham

Bill Morris, a proud Brummie and Senior Expert Advisor to the International Olympic Committee, on a gold medal opportunity for his home city



#### I found the Games joyously

successful. I say this as a born-and-bred Brummie. I attended the glorious Opening Ceremony and found it moving, thought-provoking, eccentric, diverse, youthful and impressive.

In relation to operational delivery, from my own experience, media reports and testimony from friends and relatives who attended or live in the city, I can only report very significant success. Athletes appeared happy; operations were largely smooth; venues were effective; the city looked and felt exciting, creative and attractive; and the atmosphere was infectious.

The picture on long-term impacts is more complicated and can only be based on conjecture at this point. I should add that, in addition to my work as a Senior Expert Advisor to the International Olympic Committee, I am currently concluding a two-year master's in sustainable urban development at the University of Oxford. Right now, I am writing my dissertation on the topic of 'Assessing and augmenting the potential for global mega-events to support sustainable urban development', so the subject is uppermost in my mind.

I look back at London 2012 and its impacts with predictable and genuine pride (though not universally). However, in relation to the Commonwealth Games and lasting impacts, the Games of Manchester 2002 stand out. If ever a city has turned around its fortunes through a Games, <sup>₹</sup> it is Manchester. Glasgow also

made strides in that direction, but for me Manchester has been the benchmark in terms of long-term impacts.

Birmingham, although a largely successful, youthful and vibrant city, has not enjoyed the same profile or apparent dynamism over the same period - hence the 2022 Games offered



The key assets to look for now are a clear, shared vision, an elegant post-Games governance model and dedicated funding to support it

a gold-medal opportunity. By standing in for Durban late on, the city lost some vital long-term planning time, and other civic difficulties appeared to deflect from horizon-scanning, although the sensibly modest scale of new venue construction should result in no 'white elephants'.

#### In the lead-up to the Games

it was not apparent to me that the city had a sufficiently clear vision and implementation plan for how the Games would catapult it to the next stage of its development, raising its

profile, increasing investment, prompting healthier, more active citizens, inclusive sustainable communities, and so forth. At the risk of over-simplification, the key assets to look for now are a clear, shared vision, an elegant post-Games governance model and dedicated funding to support it. This is not to say these things will not happen or that, behind the scenes, the preparations are not all made. I hope they will be and are.

#### As a Trustee of the Spirit of 2012

charity and a member of its National Inquiry into the Social Impact of Events, we are seeing an opportunity for the UK to take a new leadership role – not just in world-class hosting of major events, but in moving the global model forward so that such events also drive the sustainable social and urban developments we desperately need over the coming decades.

The Games have granted the city a wonderful launchpad, every bit as strong as those in Manchester and Glasgow, but it remains to be seen if the right components and determination are in place to realise all the potential energy garnered. It would be churlish to say the city has done the easy bit, not least because every successful Games represents gargantuan efforts and achievements, but only in 10 or 15 years will we know if Birmingham has won over the really hard yards.

**Bill Morris** is Senior Expert Advisor to the International Olympic Committee

## **What Gen Z** workers really want

Bel French, APM's youngest ever ChPP, on what matters most



It's not an unpopular opinion to say that the past few years have been a reset to everyone's priorities. It would be wrong for me to assume that Gen Z have been the only generation to evaluate their priorities right now. For me, joining project management as a career, interest was the main driver. I hated my time in education and wanted to ensure that my career was something I was going to enjoy. It needed to have the growth to pay my bills, but I wasn't chasing money. Careers are long and with education being as challenging as it is right now, finding careers that bring enjoyment seems to be a common theme.

The return to the office? I started my career having to be in the office five days a week. As a bright-eyed and eager 18-year-old, being in the office worked incredibly well for my development. For those entering the workplace now, having spent most of their work experience and/or latest school years working from home, making this transition to working

in an office will be more difficult. It used to be a treat to have a day to work from home and clear the admin without distractions, or to work around one's personal life. Now, with the higher expectation of flexible working, I can only see the lack of

#### I found the concept of 'hustle culture' to be something that really rang true to me

adaptation to be a hygiene factor to work/life satisfaction. The weekly pub trips might not have the same appeal for Gen Z as with previous generations, with the decrease in drinking culture. For me, the 50:50 split that I have at Gleeds gives me the perfect balance of face-to-face time, as well as enabling me to make smart choices about where I work from and giving me time to see my colleagues and clients in person.

Finally, what about the influence of social media? Social media can

come with negative connotations, particularly linked to being a distraction from productivity. But I think that it has had a huaely influential impact on my generation and not all for the worse. Having listened to the audiobook of Grace Beverley's Working Hard, Hardly Working, I found the concept of 'hustle culture' to be something that really rang true to me. Seeing individuals constantly achieving lots at a young age all over social media leads to even more pressure to achieve wins than ever before. This has brought its own pros and cons. There's a clear drive to be successful and to want to achieve. But we need to be more aware of the pressure that comes with this when looking at setting realistic career goals and work boundaries.

Bel French ChPP is a **Project Manager** at Gleeds



What does sustainable project and programme management look like? Sustainability means balancing the environmental, social, economic and administrative aspects of a project to meet the needs of current stakeholders without compromising those of future generations. It involves both individual and organisational responsibility to ensure that outputs, outcomes and benefits are sustainable over their life cycles and during creation, disposal and decommissioning. Everyone in a project team can have an influence, however small, on sustainability and may be expected to think creatively and act responsibly in their day-to-day work.

## Dealing with difficult people the right way

Conflict resolution expert Amy Gallo gives her expert advice on getting along with prickly colleagues on a project team



#### Even the best structured and

executed projects can go terribly wrong if there's someone on the team who is being difficult. We've all seen it happen: one person derails a team's success by being passive-aggressive, acting overly pessimistic or prioritising their own career over the goals of the project. Here are several principles from my new book, Getting Along, to help you approach a tricky dynamic more thoughtfully and carefully.

Your perspective is just one perspective. Acknowledge that you and your colleague won't always see eye-to-eye. Ask yourself: what if I'm wrong? What assumptions am I making? Don't play the blame game; instead focus on finding a path forward.

**2** Be aware of your biases. Get to know your biases so you can assess when they're affecting your interactions or causing you to unfairly interpret your colleague's actions. Note when you might be falling into affinity bias, gravitating toward people with similar appearances, beliefs and backgrounds. Avoid confirmation bias, the tendency to interpret events or evidence as validation of your existing beliefs.

Don't make it 'me against them'. Imagine that there are three entities in the conflict: you, your colleague and the dynamic between you. Use positive, collaborative visualisations, such as you and your colleague sitting



Note when you might be falling into affinity bias, gravitating toward people with similar appearances, beliefs and backgrounds

on the same side of a table, instead of combative ones to improve the odds of turning your unhealthy relationship around.

Use empathy to see things differently. Give your colleague the benefit of the doubt, asking yourself: what is the most generous interpretation of their behaviour? Assume that there is some rationale behind their prickly behaviour, even if you don't agree with it.

**Identify your goal.** Be clear about what your goals are for the relationship. Write them down and refer to them frequently. Watch out for any ulterior motives that might damage your chances of getting along.

**Experiment.** Come up with two or three tactics to test. Try them out. For example, if you want to improve communication with a passive-aggressive colleague, you might decide that, for two weeks, you're going to ignore their tone and focus on the underlying message. Rather than assuming that's going to fix everything between you, see it as a test and acknowledge that you'll likely learn something. Then, set up another experiment, refreshing your approaches based on what you learn, and be willing to abandon ones that aren't working.

Amy Gallo's new book, Getting Along, was published by HBR **Press in September 2022** 

## Benefits realisation and how it changes project management

Rasmus Rytter and Helena Bograd on how to make it work



and transformation projects only realise a fraction of the expected benefits. Companies and public organisations might manage to build a new IT system, process or product, but that is not enough. To truly succeed, employees also have to change their ways of working to avoid ending up with another benefit-free project. This is not new information to most executives and project professionals. So, the real question is: why are we still struggling with benefits realisation?

Perhaps the reason is that, to make benefits realisation work, we (the project professionals and the executives who own the projects) need to change. To get projects that deliver real and measurable benefits, we introduced a new view on change projects. The Benefits-driven Change Model

(see right) shows the addition to current, mostly technically focused, change projects. The extra layers contain a practical approach to benefits realisation and behavioural change, building on the often well-established practice of producing technical deliverables. The model illustrates the main tracks of a project: the benefit, change and technical tracks. There is work to be done in all tracks from start to finish in the project.

#### The first step is to design the

project in a benefits realisation workshop. Here, we outline the purpose, the desired benefits and what we expect it will take to realise them with the executives who are going to own them. That includes answering six questions. The first three focus on what we want to achieve, and the

final three on what the project must deliver:

- What is the purpose of the project?
- What benefits do we need to realise to fulfil the purpose?
- What new behaviour do our colleagues need to attain to realise the benefits?
- What kind of support do our colleagues need to change their behaviour?
- What kind of competencies are necessary for our colleagues to change their behaviour?
- What kind of technical deliverables are required for our colleagues to change their behaviour?

#### Behind the scenes...

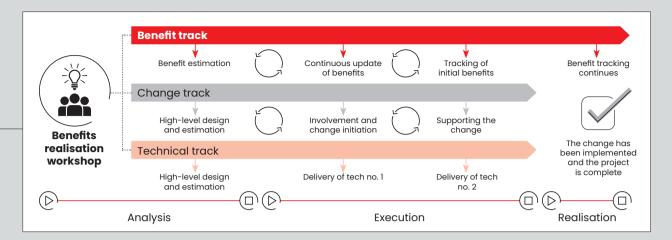
**HS2 Old Oak Common** 

Walk a few hundred metres from the tired-looking East Acton underground station in West London, past a corner shop or two and through quiet suburban London, and suddenly you hit a hive of construction activity on the huge, wedge-shaped site of Old Oak Common. Phase one of three in the construction of the new transport super-hub, which is set to be the largest new railway

station ever built in the UK, is in full flow.

In the current first phase, the underground part of the station (aka 'The Box') will be built; this is where six high-speed rail platforms will be located. Project visited the site in July, along with APM Chief Executive Professor Adam Boddison. just as the concrete panels that will make up the 1.8km perimeter wall of the 850m-long





We have spent at least half a century becoming good at producing technical deliverables. Now it is time to apply the same type of structured approach to benefits realisation and change.

Getting the executives to answer the first three questions is critical to ensure benefit ownership. It is also the first and most important step in the change process, because the ownership it creates for the change is equally important for project success. The last three questions highlight that everything we do in the project is to ensure

the behavioural change that will trigger benefits realisation. The processes, the IT system and the products are essential – but they are not the goal.

The initial answers to these questions are elaborated on in the analysis phase to set the direction for the project and allow for benefit-driven decision-making and leadership, as well as benefit

tracking. We have spent at least half a century becoming good at producing technical deliverables. Now it is time to apply the same type of structured approach to benefits realisation and change. This is a change for us as project professionals, but if we do not change how we work with change projects, we will not realise the full benefits potential of our projects.

Rasmus Rytter is Partner at Implement Consulting Group. His new book, Benefits Realisation, is out now. Helena Bograd is a Senior Management Consultant at Implement Consulting Group.





underground station were being dropped 30m down into place. Once concrete beams are placed on top, the soil contained within can be excavated at a depth of 15m, put on a conveyor belt and sent around the country to be reused.

As excavation begins, the second phase will start, which focuses on the construction of eight overground platforms. As the underground and overground platforms are being completed, the HS2 station and the

surrounding urban area will be built. Everything will be spanned by a vast, lightweight, curved roof, more than 250m wide.

The railway station is expected to be one of the busiest in the country, with high-speed rail

As excavation begins, the second phase will start, which focuses on the construction of eight overground platforms

services to the Midlands, Scotland and the North, access to central London and Heathrow via the Elizabeth Line, as well as services to Wales and the South-west. An expected 250,000 passengers will use the station every day. Old Oak Common is also the UK's largest regeneration project. **Project** was told that while "there is nothing massively innovative" about what they are doing, it is the scale at which they are doing it that is "mind-blowing".

## The value of projectification in effective leadership

APM Chief Executive Professor Adam Boddison discusses change at the top



#### Forty years ago, it could be

arqued that leadership was primarily about delivering BAU (business-as-usual) with relatively limited expectations in relation to organisational change and development. In the present day, the prioritisation of the past is arguably reversed, with almost every leader focused on delivering change effectively. Some leaders describe this situation by saying: 'Change is the only constant.'

The effective delivery of change with a focus on benefits realisation is what project management is all about. In practical terms, this means that leaders who understand the principles of project management are well equipped to deliver change.

Despite this, the reality is that project management does not yet have an equivalent status to other professions that support effective leadership, such as finance, HR and marketing. For example, the standard model for core content in MBA programmes is still primarily about finance, HR and marketing, with project management typically featuring as an optional component, if at all. More recently, some progressive MBA programmes have started to include project management as a fourth pillar of effective leadership, but this is not yet the typical approach.

To be clear, it is not necessary for leaders to be qualified project professionals, much like they do not need to be qualified accountants, marketers or HR professionals. But developing a thorough understanding of the principles of effective project management does make a contribution to effective leadership.

The project profession is at a T-junction. Down one road it becomes a strategic profession like finance, marketing and HR. Down the other road it becomes an operational profession like IT, health and safety and legal. Both routes make a contribution to leadership, but project



The reality is that project management does not yet have an equivalent status to other professions that support effective leadership

management can be much more impactful as a leadership profession that directly drives strategic decision-making.

#### The projectification of leadership

is already occurring. In executive teams, the CPO (Chief Project Officer, or equivalents such as Chief Transformation Officer) is an emerging role. This can create conflict with more traditional roles, such as the COO (Chief Operating Officer), because if change is the only constant, should this be

the remit of the CPO or the COO? This is an indication that there is a broader transition occurring in response to the projectification of leadership roles.

An added benefit of leaders having an understanding of effective project management as standard is that they are better equipped to recruit high-quality project professionals within their workforce. Currently, too few leaders know what to look for when recruiting a project professional. Some look for dated qualifications rather than competence, while others cannot distinguish between an effective project professional and somebody who happens to have the title of 'project manager'.

#### An essential requirement in

providing both effective project professionals and the leaders of the future is a strong talent pipeline. APM has a central role to play in the development of project talent, not least through ChPP (Chartered Project Professional), its corporate partnership programme and its membership community. Together, these APM strands can combine project capability with corporate leadership through a community of practice to deliver meaningful projectification across the public, private and third sectors.

APM is already recognising emerging talent such as Bel French, who made history by becoming the youngest Chartered Project Professional at age 22. This is important because ChPP is on track to become the recognised standard of competence within the project profession, and Bel has



#### **Robin Kwong**

**APM's newest Honorary Fellow and New** Formats Editor at The Wall Street Journal

demonstrated how this inclusive standard has wide applicability. So what are the next steps if the value of projectification in effective leadership is to be realised?

**Organisational leaders** should identify emerging talent within their community of project professionals. In addition to offering project management qualifications, leaders should nurture this talent through establishing ChPP as the expected standard. Both external recruitment processes and internal promotion processes should prioritise candidates with ChPP.

Aspiring leaders should seek to develop a projectification approach into their role to maximise their effectiveness in delivering change. When looking for new roles, they may also wish to seek out organisations that have a demonstrable recognition of and commitment to projectification. This could be apparent through the existence of roles such as a CPO or through other explicit reference to project competency within leadership roles.

MBA leaders should act rapidly to embed project management as the standard fourth pillar of their leadership programmes. This involves ensuring it has an equivalent status to finance, marketing and HR. Where appropriate, it would be useful to consider offering a project management variant of the MBA that allows for further specialisation of this important aspect of leadership.



Prior to joining The Wall Street Journal in 2019, Robin Kwong spent 13 years with the Financial Times in reporting, editing and senior management roles. Kwong is also the creator of the Uber Game, an award-winning online news simulation game, and Co-founder of the Contemporary Narratives Lab, which facilitates projects that seek to create artist-journalist collaborations.

#### What was your reaction to being named an Honorary Fellow of APM?

A I was excited and felt very honoured to be named. I became interested in project management because I wanted to help people work better together. But since project management was not well established within journalism, I always felt that I had to chart my own path and find my own way to become a better project manager. I therefore feel very privileged to be welcomed into the broader professional community and recognised in this way.

#### 🖸 You began your career as a reporter. How and why did you transition to digital delivery and innovation?

A traditional print newsroom is a factory where well-established infrastructures and deeply honed processes keep everything working at a high speed and a high volume. A reporter can focus just on the words for his or her article and trust that the system will turn all the words into newspapers delivered to readers' front doors by the next morning. The internet

Suddenly, digital journalism required cross-disciplinary teams to collaborate with no established playbook and, often, no common language

changed all that. Suddenly, digital journalism required cross-disciplinary teams to collaborate with no established playbook and, often, no common language. Experiments and projects abounded as technology opened up new ways to do journalism and connect with more diverse audiences. I saw project management as a force multiplier and well-run projects to be the only way to develop new best practices and processes.

#### How have projects influenced the current media landscape?

A Media organisations have had to adapt to simultaneous overhauls in business model (from advertising to subscription), customer habits (from print to computers to mobile) and competitors (from other newspapers to Netflix, Facebook and TikTok). Project-oriented ways of working help by giving news organisations the flexibility and adaptability needed to survive these seismic changes. Instead of a factory mindset, they can workshop new ideas, explore and innovate. This applies to editorial formats (i.e. the rise of data journalism or interactive news applications) as well as business practices (i.e. developing metered paywalls). More importantly, projects have

been the main way to bring new skills and disciplines into newsrooms, whether that's software developers, audience specialists, multimedia producers or user-experience designers.

Read more about APM Honorary Fellowship at www. apm.org.uk/about-us/howapm-is-run/honorary-fellows

# PHOTOGRAPHY: BEN WRIGHT

# BRIGHTYO

Project brings together nine young up-and-coming professionals who care deeply about sustainability to uncover their hopes for the future. Make space for the next generation, writes Emma De Vita.

eet the youngest generation of high-flyers. Our second attempt at gathering in a West London studio for our photo shoot is a success. The rescheduling because of extreme heat has put the worry of climate change to the forefront of everyone's minds.

Sustainability is a core purpose for these young professionals, who are making their mark in broad range of sectors. And they're walking the talk. Stacey Bishop, one of APM's youngest ever chartered professionals, now works as a Project Manager at SSE Renewables. "I moved into renewables and that was really my moral compass telling me to move into something that is going to have a positive impact," she says. "Climate change is such an issue, and by working on offshore wind farms I'm directly contributing to tackling that."

For these 20- and 30-somethings, sustainability goes way beyond the personal. "Sustainability matters to everyone now," says Iona Neilson, Senior Sustainability Manager at Formula E, "so project professionals need to make sure it is a consideration in any project they are delivering. Understand that Millennials might only want to work with you if you have an element of that and offer training or at least the space for that individual to integrate the sustainability principles into that project because that's future-proofing it," she warns.

What frustrates them is the slow pace of change. "I have this sense of urgency about climate change and I feel that often with projects it's a really slow process," explains Ashlyn O'Riordan, Assistant Project Manager at Turner & Townsend. "I want people to start pushing their clients to think about sustainability as an essential part now, because the later we do it the worse it will be." She urges those at the top of the profession to "feel that sense of urgency that we do".

Joined-up efforts across companies and industries is the hope, says Daniel Lockwood, Associate Director at Faithful+Gould. "I'd like to influence how we interact as a wider industry across other disciplines to come together to solve the sustainability issues that we have. Working in

construction, there are a lot of changes that we need to make as an industry and hopefully we can make them quickly and become a little bit more innovative and adaptive to change."

This adaptable attitude is what Generation X and younger Millennials now expect from their project leaders. "A good project leader will always stay open-minded, always keep learning and stay really agile," says Peiwen Tian, Project Manager at Gleeds. "You need to expand all your soft skills, working with a huge range of people from more professions than previously. Also, being able to push boundaries – there are some really experienced project managers who think of a data workstream as not part of an infrastructure project. We don't live in the 19th century – infrastructure is not just about pouring concrete any more. It's important to absorb the new elements."

Ollie May, Project Manager at Mott MacDonald, sees a gap between how the older generation does things and how the younger generation would like to try and improve the way things are usually done. "There may have always been a way to do something, but there must be a better way to do it, and it can be quite difficult sometimes for a younger professional to challenge those in a senior position," he explains. "Change is necessary in most things and for sustainability it is about taking an open-minded approach."

This younger generation hopes for more change at the top. "A lot of the top of project management looks very similar," says O'Riordan. "I'd love to see more women at the top, particularly more women of colour. I think that would be really exciting. Something we talk about a lot at work is diversity, but particularly diversity of thought."

Lockwood urges those senior professionals not to fear new voices and new ideas: "There is still some resistance to doing things in a new way and I think that needs to change from top to bottom, and not just chief executives; it's everyone, to the guys building it on-site. By embracing these new ways of doing things, that's how we'll see real change."

# JNGTHINGS



# Stacey Bishop, 25, Project Manager, SSE Renewables

oving from the defence sector to work on the Berwick Bank Offshore Wind Farm project, Stacey Bishop was until recently APM's youngest ever Chartered Project Professional. The project is currently in the development stage, with the construction phase due to begin in 2025. Energy should come online in 2029, delivering a massive 4.1GW to the National Grid.

Specialising in digitalisation, Bishop is responsible for making the project as efficient and effective as possible. "I've written a digital strategy on ways that we can use technology to make the project more efficient; that could be anything from automating processes that are admin-heavy to developing digital twins for when the wind farm has actually been built, and remote asset management to make managing the wind farm easier."

Reflecting on what makes a good project leader, Bishop says communication is key. "Soft skills are really important: being able to "A diverse workforce is an efficient workforce"

communicate clearly, being able to influence your team to help achieve a common goal – which is what a project is. Being able to do that effectively and efficiently without confusion is really important to leading a project."

An up-and-coming future leader, Bishop has a message to those in positions of power: address your bias, whether it's conscious or unconscious, or about age, ethnic background or gender. "Just because someone is younger than someone else, it doesn't mean that they have to be sat on a seat for a year before they can move into a different position – or because someone is younger, it doesn't mean that they can't manage someone who is older than them," she says. "A diverse workforce is an efficient workforce, so getting new ideas into the project management atmosphere is so important."



#### Eleni Antoniou, 30,

#### **Environment Manager, Ørsted**

" ustainability is really important to me. When it came to starting my career I was keen to do something with meaning," says Eleni Antoniou, "Climate change is the biggest issue facing not only the profession but all organisations and individuals. As one person, the climate challenge feels too big to address, so the fact that I can play my part in the green energy transition and work towards something positive for the

environment is incredibly motivating."

Joining renewable energy company Ørsted in 2018 to work on its Hornsea Three offshore wind farm, Antoniou manages its kittiwake compensation requirements (the kittiwake is a kind of sea bird), leading the delivery of artificial nesting structures. "This is the first project of its kind, so I have established a process from scratch and shown resilience through multiple challenges, while setting the standard for the industry and developing proposals entirely focused on biodiversity."

Antoniou manages an environmental monitoring and research programme and coordinates large groups of consultants from diverse disciplines to execute work to a tight programme. While 'project manager' might not be in her job title, project management is what she does. She urges the project profession to support the pipeline of project management skills coming through, as large-scale renewable energy projects cannot be delivered without them.

"The renewables industry is booming," she says. "It's really exciting to be part of the renewables industry and contributing towards the UK government's ambitions for offshore wind. The fact that it is purposeful is really important to me."

Ultimately, if we don't stop climate change then we are going to have even more geopolitical problems," he says.

Lockwood says that he feels supported by his bosses and colleagues to make changes in this area. "I feel really empowered personally, but I suppose where you start to feel a little bit less empowered is when you see COP26 happening and some great headlines that come out of it and what sounds like real tangible action, but then

a couple of years down the line we measure against those targets and we realise that we haven't hit them. There has to be a real mindset change at government level and at the top decision-making levels to not just make these promises but actually keep to them.

"I hope that, because there is such a groundswell of support for sustainability with new generations of people, that will change. I just hope that it's not too late to make the difference we need to make."



#### Amelia Morgan, 31, Legal Project Manager, Pinsent Masons

hair of the newly launched Climate Change and Sustainability Employee Network at law firm Pinsent Masons, Amelia Morgan also manages the One Million Hours Pledge project, which aims to raise one million hours of intellectual capital across the legal industry to be drawn down on projects that seek to arrest climate change.

In her day-to-day role, Morgan coordinates matters in international arbitration, litigation e-disclosure and development consent orders for solar farm developments. Launched in 2021, the Climate Change and Employee Sustainability Network is a global employee group for her colleagues who are concerned with climate change; its purpose is to inform, educate and advocate for the promotion of sustainable, climate-conscious living. "We hope our network bridges the gap between what we tell our clients to do and what we as individuals do," she says.

What does she think the future holds for her and the project management profession? "I would like to be more involved in the delivery of implementation plans to actually get those solutions to spread as far and as wide as possible – with as many companies, industries and people as possible – so that you can make the difference and have some impact," she explains. "There is so much potential and opportunities are just

going to keep coming up for all these exciting new things, and with all these ideas, people will need help putting important change in place. We can be the ones who make it happen," she says.

What's needed right now, she argues, is a clearer path towards action. "There seems to be a real lack of direction in how people can get involved in an impactful way. There is a real gap between having that ambition to make a difference and knowing where to go next. So, I'm working on a green mentoring programme. There need to be more professionals who are willing to educate and support younger people in knowing how to go about getting involved."

"Sustainability for me is just a way of doing and delivering better so that you're forward thinking and future-planning the whole time, otherwise we'll get to a point where we can't turn back"

#### Ashlyn O'Riordan, 26, Assistant Project Manager, Turner & Townsend

A shlyn O'Riordan joined Turner & Townsend in 2021 on the graduate scheme after a stint at The Carbon Trust and now works with Essex and Suffolk Water as an Engineering Construction and Contracts Project Manager, including on its eel works programme, which is about installing eel-screen infrastructure in rivers to improve biodiversity. She also leads sustainability within her cost centre

"It's very easy to get quite depressed by the headlines," she says, "but we are taking steps, and everything you can do, especially in the most polluting industries like aviation and infrastructure, counts. If I can





#### Ollie May, 30, Project Manager, Mott MacDonald

ott MacDonald supports the design and construction of a number of facilities at RAF Lakenheath which are intended for US Visiting Forces. Ollie May was tasked with finding innovative ways to save energy for one of the larger buildings being designed, and he successfully convinced US stakeholders to accept a novel hot-air recirculation system. Capital cost savings of £250,000 resulted and £650,000 per year of ongoing fuel savings were estimated, resulting in a lifetime saving of 116,000 tonnes of CO<sub>a</sub>. "It was a no so many times before it was a yes – it was just ensuring that the right people were shown the right information in the right way," May explains.

"One of the pillars that Mott MacDonald really emphasises is to approach sustainability in a very open-minded way," he says. "Within the sector the client is generally after function over form – it either works or it doesn't – and sometimes you can approach them with these new ideas and you're almost on the back foot; it's new, it's never been done before, but it's about taking them along the journey," he explains.

"Sustainability for me is just a way of doing and delivering better so that you're forward thinking and future-planning the whole time, otherwise we'll get to a point where we can't turn back. Clients trust you to do the best job and you can show them something they've not known about before. Hopefully there will be a domino effect and people will start to see how things have changed and how they are being delivered, and all of a sudden the barriers that were put up because it is the unknown start to just fall down."

change some of my clients' attitudes towards purchasing or the way that they structure their contracts to make them more sustainable, then that is really important.

"I think we have power as project managers over our projects, but also over our clients; we can influence people really well. We have this iron triangle of time, cost and quality, but sustainability doesn't really come into that and I think it's because a lot of clients don't have the buy-in, because 2050 is so far away. They're tight for money and time, so sustainability seems like an expensive add-on. I want to make the iron triangle more of a square – I want to make sustainability another absolute corner of the process as a way of expanding it."

O'Riordan is clearly in the right profession. "I like getting stuff done and managing teams, so project management was built for me. Even though I'm a graduate, I have so much autonomy in my work."





analysis based on human behaviour and teams and it breaks down how to create something out of nothing in the most efficient way," he says. "Engineering and project management are in such high demand, and I'm so fortunate in that because they are so versatile and they are needed now, especially in sustainability."

Sustainability, he says, means everything to him. "There are numerous things you can think about when going into a career based on your own

fundamental goals and values. Do you want money, meaning, a fast-paced job or to influence people? Mine is to make the world a better place both environmentally and for people, and there is a connection between those two."

His dream is to eventually set up his own company to support the billion people in the world who don't have access to electricity. "I want to create some system by which you can go into these places and give them something, like hosting their own solar panel station that purifies water and then they can charge things from their lamps, and then teach them how to maintain it and build a new one."



#### Iona Neilson, 28, Senior Sustainability Manager, Formula E

ormula E is the world's first fully electric single-seater racing series. Iona Neilson joined in 2018 as a technical expert in environmental management and compliance, carbon footprinting and ISO 20121. She also featured as a member of the inaugural Edie 30 Under 30 young sustainability leaders club in 2019

There are two levels to her role, she explains: strategic and operational. "Formula E

aspires to be one of the most sustainable sports alobally, so we have a small team to make sure that this is embedded and integrated into our business. The second strand is more operational delivery, and the project management element of it is to make sure that sustainability is truly integrated into our race product.

"What attracted me to Formula E was that it was really the only sport that had a purpose around sustainability

Peiwen Tian, 27, Project Manager, Gleeds

"Working in

keeps me

motivated

every day to

go into work"

sustainability

aving recently joined Gleeds, Peiwen Tian was seconded with the Heathrow Carbon Programme, where she manages the data workstream, focusing on streamlining the process of capturing, curating and reporting carbon data across the airport. "My role is to build on the current carbon footprinting process

and improve the data quality, as well as automating the process. There is a growing demand from stakeholders for carbon data to be available. The business needs insights on carbon performance in all areas of its operations to make sure we are on the right track for net zero."

Before joining Gleeds, Tian worked on the Greater London Authority's retrofit accelerator programmes in

supported London boroughs on their energy-efficiency projects. She also worked on the Heathrow Surface Access programme for sustainable transport, which included projects to encourage more passengers to use public transport to travel to and from the airport.

Her mini career change to move into sustainability came during the COVID crisis. "I wanted to get involved in sustainability projects," she explains. "When I think about what the purpose of my work is, one of the biggest challenges we all face is climate change. Working in sustainability keeps me motivated every day to go into work, as it is part of solving a problem that would impact our everyday lives and future generations. Some people think the work is all glamorous, but obviously it is not always like that. Once you get into the details, it's not dissimilar to other infrastructure projects, but with different considerations, and lots of topics to learn about as it is quite a new area for most people. I feel more fulfilled in my job working on something I'm passionate about."

London through Turner & Townsend and

and it was in its infancy. We could really mould and shape the sustainability strategy as we saw it. To be involved in projects like achieving ISO 20121 and achieving net-zero carbon from inception, and being part of all of these from the very beginning to the very end, is really satisfying.

"I've always felt that I go to work and I really make a difference in sustainability, not just within the sport but across the whole industry. We're in

such an influential position at the moment - even bringing in hardcore motorsports fans."

Neilson, despite not being a qualified project manager, says project management skills are vital in her role because projects are ultimately what she delivers. The future, though, lies with professional accreditation. "It gives you credibility," she says, and it is something she is certainly considering for the future.



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# FUTURE CITIES **HOW DO OUR CITIES** NEED TO CHANGE TO MEET THE **ENVIRONMENTAL AND SOCIAL CHANGES** WE FACE POST-PANDEMIC AND WITH A CHANGING CLIMATE? AND WHAT IMPACT WILL THIS HAVE ON PROJECT PROFESSIONALS TASKED WITH DELIVERING URBAN PROJECTS? **ALEXANDER GARRETT REPORTS** PROJECT / AUTUMN 2022

#### Constructed on 1,500 acres of

reclaimed land adjacent to the transportation hub of Incheon, Songdo in South Korea is, on the face of it, a city of the future, a model for how all cities could develop. Its streets are lined with sensors that monitor traffic flow: individual homes are controlled by mobile apps that control air conditioning and lighting; its waste management system sucks domestic waste through tubes to a central plant where it is sorted for recycling. And Songdo has outstanding green credentials, with 40% of its space designated as public parks or farming plots.

And yet it would be misleading to see Songdo as a template for how all cities will look in future - especially in a country like the UK, where opportunities for large-scale greenfield developments are few. In many cases, the challenge facing cities is to improve what is already there by enhancing environmental performance, transport or liveability. In the wake of the pandemic, cities are not facing their demise – as some pessimists predicted – but they will need to redefine their purpose to become a lot more efficient and human-centric if they are to thrive in the decades to come.

#### Changing needs

Looking at the big picture, Professor Yolande Barnes, Chair of the Bartlett Real Estate Institute at UCL, says: "We're heading towards 80% of the world's population living in urban areas - that's already pretty much the case in developed countries like the UK." The pandemic appears to have caused only a momentary setback in that process, although it will have a lasting impact, the most important part of which is the accelerated uptake of hybrid working. On the face of it, that means people working at home more, less commuting and companies requiring less office space.

The reality may not be so simple though. "Employers are realising that they have to hang on to their office space," says Barnes. They still need to accommodate their people even though occupancy rates are lower. Offices will



be reconfigured for new ways of working. In some cases, they will become more flexible, accommodating other uses outside working hours.

Houses and flats will also need to be reconfigured to provide more effective space for working from home. And Barnes says she expects to see the emergence of 'third spaces', which are neither home nor office, often located in suburbs and smaller neighbourhoods. "It may be a community workspace, neighbourhood workspace or cooperative workspace. You'll see groups of employers getting together to provide a workspace where people can interact and maybe hold meetings without having to commute."

#### The challenge of net zero

Looking forward, the biggest drivers of how cities will evolve will be climate change, the challenge of meeting net-zero targets and the need to adapt to more extreme weather. Two of the biggest specific challenges cities face in meeting net-zero targets are to reduce carbon emissions from cars and to retrofit houses to make them more energy efficient. On the first question, one answer is that developers no longer provide parking when constructing new high-density buildings, says Sue Kershaw, Managing Director, Transportation, at Costain and President of APM. "That way you actually force the people in those buildings to





As well as having greener buildings and transport policies, cities in future will need to be a lot greener in a literal sense, with much greater planting of trees, buildings softened with foliage and more green spaces for those in the densest neighbourhoods. Much of this is to do with heat. The 'urban heat island' effect occurs when cities replace natural land cover with hard paving, concrete and buildings, all of which absorb and retain heat, making life much more uncomfortable as temperatures rise.

Tim Stonor of Space Syntax says: "The deep shade created by heavy landscape, lots of big trees and the facades of buildings being green, provides heavy cooling and increases the amount of time throughout the year that it's comfortable to walk around." Rooftop gardens are another way of greening buildings while providing a pleasant meeting space. Expect to also see increasing development of green thoroughfares of one kind or another. Lisa Taylor of Coherent Cities says: "I'm from Montreal, and one of the things that's happened there in the last few years is what they call ruelles vertes. It basically means green alleyways. They've taken over concreted back alleyways and made them into green passageways, increasing drainage and reducing the urban heat island and making places much more pleasant."

use public transport," she says. "Or if they need a car, then they have to go and hire one."

Longer term, the introduction of autonomous vehicles will alleviate the need for car ownership, and the appetite to drive is already waning among younger people. Fewer new roads will be built in future, says Kershaw, and there will be an increasing focus on maintaining existing roads, using embedded sensors to identify when work is needed.

At a micro level, far greater investment is needed to encourage people to walk and cycle in cities, says Professor Tim Stonor, founder of the architectural consultancy Space Syntax. "A key focus of ours has always been mobility on foot and on bike and creating better, stronger networks of pedestrian movement across cities," he explains. "The pandemic actually had a big impact on public transport because of people's concerns about being too close to each other and that has alerted local authorities all over the world to the



opportunities to invest in walking and cycling infrastructure."

He wants people to stop thinking about roads that are car-centric and

#### One answer is that developers no longer provide parking when constructing new high-density buildings

to think instead about streets, which are human-centric. This represents a sea change for project management in urban planning. "Converting driving trips to walking trips by building pedestrian crossings and cycle paths – these are very small-scale interventions," says Stonor. "They risk being so small that they lose the attention of the people who are used to investing in motorways and flyovers."

#### Small-scale and replicable

It's an approach that has also been picked up by Bent Flyvbjerg and Alex Budzier, experts in megaprojects at Oxford University's Saïd Business School. They describe how 'smart scale-ups' could be the answer to delivering city development in future. These are small-scale, replicable projects that can be delivered in an agile way. "We know that the big, top-down projects often just don't work," says Budzier. "And it's the ones that are more decentralised, more modular, and where you can learn about what it is that we want to get out of a city, that seem to be a better way to do it."

The approach is to experiment, learn from your experiments and then, when something works, to roll it out around a city. This also takes out a huge amount of risk. He points, as a counter-example, to the massive, futuristic city of Neom being built in Saudi Arabia, which incorporates three levels of access throughout: for pedestrians, cars and service vehicles. "It's something that has been dreamed up by designers without trialling it and seeing how citizens would react," says Budzier. "It's such a high-risk move; it might work, it might not. Who knows?"

While the car industry is expected to gravitate rapidly towards electric vehicles, with all the implications for charging infrastructure that entails, other forms of transport are in prospect. Vertical take-off drones, perhaps autonomous, could become a feature of the city airspace. Stonor sees overhead monorail as a public

transport option with huge advantages over underground trains. "The tunnelling of an underground railway has massive carbon disturbance problems - you're taking out a lot of sequestered carbon. By comparison, monorail is light touch, low cost and can do the longer trips you need in a city."

#### The 15-minute city

In planning terms, transport strategy is closely intertwined with zoning. The notion of the 15-minute city is designed to reduce transport impacts by providing all needs within a short walking or cycling journey. But while it has a role to play, few seem to believe people's lives should be constricted by that. "It's important that you are not isolated and that you still have strong transport connections that enable you to get across a metropolis," says Lisa Taylor, Director of Coherent Cities and ex-CEO of Future of London.

What is likely is that cities will become generally more mixed and less strongly differentiated in terms of distinct

#### "It's important that you are not isolated and that you still have strong transport connections"

central business districts, manufacturing and retail quarters, residential areas and so on. "I live in the City of London and there are more people now living there," says Taylor. "If you look at a development like Bankside Yards on the south side of the Thames, they call it 'hypermixed': there is residential, office and hotel [space] and retail entertainment everything you can think of on the site. And their whole ethos is based around hyperlinks; it's why you would want to rent there as an office or a residential tenant, because there is a mix."

Much of the fabric of cities that exists today will still be there in 20 or 30 years' time. As Chris Rogers, Professor of Geotechnical Engineering at the University of Birmingham, puts it: "The usual mantra is to say 80% of what we have now will still be here in 2050." Below the surface, that may not be the case. Rogers explains: "We build roads and bury pipes beneath them. And if any one of the utilities needs to access the pipes to repair them, the cheapest direct cost, which the water companies, for example, are mandated to do, is to dig trenches. So we create these beautiful structures, and then we dig trenches through them and we soften and weaken the ground."

In future, he says, the answer will be to use multi-utility tunnels that are dissociated from the road surface with sensors that can report on deterioration.



This highlights an important issue: building for resilience.

"Sustainability is about not providing burdens for the future," says Rogers. "And resilience is all about our systems being able to continue to function and deliver their benefits in the face of change." It also highlights another

#### PROJECT MANAGEMENT FOR FUTURE CITIES

In future, urban projects will require a different set of competencies, says Professor Andrew **Edkins of UCL's Bartlett** Real Estate Institute. Far more projects will involve repurposing, he explains, because of changing work patterns, but also because of the embedded carbon in buildings and the increased taxes for demolition.

"That's going to mean that project managers

have to deal with huge increases in uncertainty. The ideal project for a project manager is a greenfield one, because of the certainty of information." Instead of there being one stage of discovery, it will be repeated throughout the project as new issues are revealed.

**Project professionals** will have to master new technologies to gather information and they

will have to sell the cost of this process to clients. "By contrast, demolition does all your discovery phase in one go; it says, 'I discovered everything at this building, and I've swept it all out of the way so I can start with a clean slate.' Well, you won't be able to do that."

**Project professionals** will also become more involved in the delivery of benefits, as contractors are increasingly expected



to be accountable for buildings once they are constructed. As an example, Edkins says, experience shows that buildings often don't perform to their BREEAM assessment once they are in operation and



important principle for those managing city projects in the future. "We tend to work in silos. In cities, where so many different stakeholders are involved, we need to foster transdisciplinary working [and to] make people confident enough in their own abilities to expose themselves to other disciplines."

#### **Desirable density**

Among the many challenges facing planners in terms of housing in future will be to create denser neighbourhoods. UK cities are far less dense than their European counterparts, says Valentine Quinio, Senior Analyst at Centre for Cities. High rise is a less effective way to boost density than many think, because of the space around each building and that taken up by the central core. Quinio suggests a more moderate solution: "There's what we call mid-level, which is three, four or five storeys, as you have in Paris or Barcelona, which gives a desirable level of density and has nothing to do with skyscrapers or Hong Kong-style density."



In UK cities, the suburbs need a major makeover, says Barnes. Too many suburbs have a train station to a city centre but not much else, she says. "They need to become vibrant

places in their own right, with shops and restaurants and buildings where you can work. And there is a major opportunity to redevelop run-down streets of interwar semi-detached houses into terraces with a greater sense of community through the expedient of infilling and expanding existing properties."

#### "It's about being evidence-based and human-focused, so everything is built around the end user"

The issue of making existing homes better insulated is a huge obstacle in the path to meeting net-zero targets in the UK, and one that no government has successfully tackled so far. Rogers says a new approach is needed. "It will probably have to be done through external insulation, as internal insulation becomes incredibly disruptive. We need to find ways of automating those processes and making them far more standardised and less labour intensive."

Finally, digital technology will become a much greater component of how cities are designed and function. Whenever the city of the future is discussed, there's a tendency to talk about smart cities, where technology holds sway and everything is connected to the internet. But what's more important, says Stonor, is to think about how that technology is used. "It's about being evidence-based and human-focused, so everything is built around the end user," he explains. Cities, in other words, are human constructs and the ultimate aim must be to create cities. that work for people.

those managing the project will have to take responsibility. "It won't be long before we end up with the sort of output and outcome contracts that basically hold contractors' feet in the fire."

**Project professionals** may want to just build and leave, but that will no longer be an option, he predicts. They will need to have a greater understanding of the different kinds of value that projects can deliver. It will be less about

short-term economic value and more about sustainability, meeting carbon targets and also less tangible aspects of value to the city as a whole. The relatively small developments that led to the loss of Liverpool's **UNESCO World Heritage** status showed how value can be misunderstood.

Project professionals may want to just build and leave, but that will no longer be an option

and how the value of that status to Liverpool was underestimated.

**Project professionals** will increasingly need to decide whether to become involved in the front-end aspects of understanding value and shaping policy, says Edkins. "For too long they've said: this has nothing to do

with us. But these are projects that will have an impact on people's lives for decades." And in the realm of digital technology, he expects that they will also become more involved in scenarios and modelling, in both construction and other aspects of the project. "For example, what happens if we have a COVID-19 outbreak? How does this building perform? It won't be long before we rehearse the entire project in a digital environment."

# **Mark Wild**

Andy Saunders meets Mark Wild, the megaproject mastermind who helped turn Crossrail around. With the Elizabeth Line still not scheduled to open fully until 2023, ex-CEO Wild explains the human failures that lay behind the troubled project.

It may have become infamous for being four years late and £4bn over budget, but the 'what' part of the Crossrail story is only half of the tale. After all, the unwelcome truth is that most major projects are late and cost more than anticipated. By those measures alone, project failures like Crossrail are much more common – and thus less remarkable – than successes.

What made Crossrail's fall from grace so spectacular was how it happened. Suddenly, a scheme that had been touted by its top team as a paragon of modern project management would not only fail to open as promised in December 2018, it was also going to need a lot more money than its £14.8bn budget if it were going to open at all. And let's not forget that even now, several months on from the 'official' launch date, the Elizabeth Line (as it is now known) is still not fully operational.

Having carefully built up a glittering international reputation as the definitive 'on time, on budget' megaproject, Crossrail lost it almost overnight. Much time has been spent poring over the wreckage and asking what tools, technology and processes might have helped avert the disaster.

There are certainly lessons to be learned at all levels, says Mark Wild, the former Managing Director of London Underground (and a Crossrail director at the time), who was tasked with the rescue mission in December 2018. But ultimately, the failure was human, he reckons.

"The risks were all in our risk registers, and [the project tools] were state of the art. But Crossrail still ended up with a £4bn black hole.

"What happened was that the leadership team created an environment on the board – that I was part of – where failure was not an option. And in an environment where you weren't allowed to fail, people started not measuring the important stuff. At the last board meeting before the collapse, Crossrail was said to be 97.1% complete. It wasn't; it was 60% complete. We weren't measuring the right things. That was a fundamental mistake."

When the truth emerged, it caused as much damage internally as externally. "Crossrail was demobilised, it lost critical mass and we were in a lot of trouble. The project was stalled but was still consuming vast resources. To be honest, it was a very, very difficult situation."

Wild's first thought on taking the controls was to wonder briefly if the whole thing could be stopped to stem the flow of cash and allow some time to regroup, but that would compound the delay and destroy all remaining momentum. Instead, he went cap in hand to his key suppliers in search of a new top team in a hurry. "Key





#### The Big Interview

people had left, so the first thing I did was a rapid re-inflation of people, to get a new senior team in place."

This turned out to be easier than it sounds. Despite its travails, there was a huge desire to see Crossrail succeed among those who had been involved. "I went to the CEOs and chairs of all our supply chain partners and said to them: 'You're going to help me.' My side of the deal was complete transparency; I would try my best and there would be no politics. Their side of the deal was to give me their best people. To a person, they came on board – no one I asked for help didn't help me."

#### Although he is a highly experienced

executive who has worked in urban rail and metro transport for most of his career, in some ways Wild was a surprising choice for the job of getting Crossrail back on track. He happily puts his hands up to having been part of the board that led Crossrail into trouble, but says that an outsider may have had spotlessly clean hands, but would have struggled with the need for urgent action on the one hand and the vertiginous learning curve of a standing start on the other.

"One of the things that made me a good choice was that I already knew about Crossrail and that the project fundamentals were sound. I was running London Underground and I was on the Crossrail board, so I certainly didn't come in on some kind of white charger and sort it out. But I was supported by the Commissioner, the Mayor and the Permanent Secretary. If somebody had landed cold into that situation, I don't know what they would have been able to do."

The established narrative around the Crossrail calamity has already set into a sort of high-tech, high-stakes version of the Millennium Dome saga – too much focus on the 'hardware' construction phase and too little on making a cohesive operational whole. There's truth in that, Wild says, especially when it comes to the challenge of integrating the mass of digital technology that lies at the heart of Crossrail – something that was hugely underestimated by the original team, for whom boring tunnels looked like the hard part of the job.

There were many other contributory mistakes, however, particularly around the failure to identify those parts of the project that were irreducibly complex and to simplify everything else. "Having three different signalling systems was always going to be off the scale – it's the most complex signalling system in the world and there's no way around it. For me, that means everything else had to become simpler and more modular to leave you with the core of what was always going to be an epic integration."

But instead, there was complexity added at every level, he says, from bespoke architect-designed stations with hundreds of different types of doorways to unnecessary gold-plating of the technical specs. "Crossrail is a world-class railway; there's no doubt about that. Some parts of it will blow people's minds - the train control system, the ventilation. But there's also a lot of needless complexity. Crossrail was the first major project to use LED lighting throughout, which is a great positive for sustainability. But all the thousands of LED bulbs are individually condition-monitored, which doesn't reflect how they are actually maintained. That's a good example of complexity that the operator doesn't really need."

With no fewer than 37 procurement contracts, the project design itself was also

#### "I was running London Underground and was on the Crossrail board, so I certainly didn't come in on some kind of white charger and sort it out"

over-complicated and led to a build-up of hidden systemic risk, because no one had sight of the sum of the problems that were accumulating across all those individual parts.

"All of these contracts had what we called an 'element outstanding works list' – things that weren't quite right that had to be addressed. In my first six months at Crossrail, the Technical Director added them all up, and there were 75,000 of them in total, off the books

#### CV: MARK WILD

**1965** Born to a mining family in County Durham 1987 First-class degree in electrical and electronic engineering, Newcastle Polytechnic; joins Northern Electric 1998 Commercial Director, **Integrated Utility Services** 2005 General Manager, Westinghouse Rail Systems **2013** CEO, Public Transport Victoria (Australia) 2016 Managing Director, London Underground 2018 CEO, Crossrail Aug 2022 CEO, SGN

and that the client couldn't see. That's a mind-blowing statistic."

It's also clear that setting a fixed end date many years in advance – which looked like a bold statement of intent – became a suffocating weight. The key to major project delivery in future, Wild says, is going to be managing windows of uncertainty rather than fixed deadlines that may be little more than a guess and will damage external credibility and internal morale when they inevitably slip.

Those windows will be big initially when the uncertainty is equally big – perhaps a year or two in the early phases – but will narrow to months and weeks as completion gets closer and the uncertainty level drops. "The art of project management will be to drive the teams to the front edge [the earlier end of the window]. The later date is your commitment to your stakeholders, but the earlier date is the one you drive the team towards." That way, there is always a bit of wriggle room, whatever stage the project is at.

The son of a Durham miner, Wild grew up in a "classic working-class family", he says. He comes across as down to earth and approachable, but also unafraid to take tough decisions. "I was a bit of a late starter academically. My dad always wanted me to be an engineer, so I went



opened in May 2022

The Canary Wharf Elizabeth Line station

to Newcastle Polytechnic, did electrical engineering and joined the electricity industry." Perhaps his career-defining moment came when that industry was privatised and his employer - state-owned Northern Electric - was bought by Berkshire Hathaway, the investment company owned by Warren Buffet.

His ambition fired by the prospect of international travel and the spice of competition, he left the regulated utility sector and joined the rail industry, where he ended up as General Manager for Westinghouse Rail Systems. He then worked on resignalling the Jubilee Line, before heading in 2012 to Australia, where he became CEO of Public Transport Victoria, responsible among other things for Melbourne's famous green and vellow W-class historic trams. "I realised that I wanted to be a more general leader, but that I didn't have much operational experience. The attraction of Australia was that it was a great place to live, and I got my hands on all of the state of Victoria's public transport network. I also think it's important to have experience of working in both the public and private sectors."

Wild came back to the UK in 2016, lured by the offer of "the best job in the world", Managing Director of London Underground. Now he has handed over an operational - if not quite fully complete - Elizabeth Line to the team at Transport

#### "My decompression is cycling. In normal life I love long cycle rides, but they have had to take a bit of a break"

for London, what's next for Wild? "I was always going to leave when we opened the Elizabeth Line, and now I am heading back to the utility sector as CEO of SGN, one of Britain's four gas distributors. It's a large-scale business operationally, but for me the real attraction is the drive to net zero."

As projects inevitably become more complex and more digital, a new breed of project professionals and leaders will be required, Wild believes, and despite Crossrail's manifold failures it has also shown us the way to future success. "What it isn't about is a single person heroically leading the charge. The modern project leader will be curious; they will understand uncertainty and that some things are unknowable, but they will work to minimise them. They will be people who can listen, convene and create an environment where there is no fear."

He's also hoping his new role will leave him with a bit more time to get out on his bicycle, which has been gathering dust

during the Crossrail years. "Crossrail was all-consuming, seven days a week. My decompression is cycling. In normal life, I love long cycle rides, but they have had to take a bit of a break."

But despite the rise in remote working and the change in people's travel habits that has arisen during the pandemic, Wild remains a firm believer in the transformative power of public transport. "I travel the world and everywhere I go people are interested in the Elizabeth Line. It's catalytic." He is also convinced that the project will ultimately produce its promised £42bn of economic benefit for London and the rest of the UK.

"There might be a bit of a delay [in realising the benefit], but we built Crossrail for a 120-year design life. It'll still be here in 250 years. It's globally recognised as probably the world's leading railway. In one way, we've kind of won the cup, but what happened was very serious and we did let people down - that matters. We can't afford another major programme black hole like this, which is why seeking the truth is so important."

With legacy projects, the proven long-term benefits quickly wipe from the collective memory any budget and deadline overruns. As BBC presenter Evan Davis told Project earlier this year: "[People] get annoyed when they see Crossrail was meant to open in 2018... but the truth is the public swoon over some of the great achievements that project managers do, and they love it when projects go right." And Crossrail, we suspect, will be one of those.

Listen to Mark Wild's interview on the APM Podcast at bit.ly/3Ca7UAD

# ACOLE DE LA COLETA DEL COLETA DE LA COLETA DEL COLETA DE LA COLETA DE

DAVE WALLER CHARTS THE PROGRESSION OF AGILE FROM ITS BIRTH 21 YEARS AGO IN A UTAH SKI LODGE TO ITS CURRENT MATURITY AS AN ITERATIVE PROJECT LIFE CYCLE. WHERE MIGHT IT BE HEADED NEXT? AND WHAT WILL THIS MEAN FOR THE WORLD OF PROJECTS?

Last year, when Duena Blomstrom went to get an 'agile' tattoo on her forearm, her London-based tattooist wasn't convinced. Blomstrom's proposed design featured lots of tickets under the headings 'to do' and 'done', but only two under 'doing'. The artist thought it looked unbalanced. "I had to spend an hour explaining the whole concept of agility and work in progress," says Blomstrom, co-founder of software start-up PeopleNotTech and author of People Before Tech: The importance of psychological safety and teamwork in the digital age, who points out that a key principle of agile is to keep the number of active tasks to a minimum.

"In the end she agreed that just a few tickets under 'doing' is better than many. That was a lesson for me: even a tattoo artist can appreciate the principles of agile eventually," she explains. What may be harder for the reader to appreciate is that someone would want to get a project management methodology tattooed onto their arm in the first place. Blomstrom calls it an "agile fetish". She's not alone.

#### The early days

It's now over 21 years since a group of organisational architects met at a ski lodge in Utah, frustrated that top-down, documentation-heavy processes were impeding their software work, and came up with the *Agile Manifesto* (see box). At its core, agile is about maintaining a fixation on the customer and delivering them increments of value – fast. This is achieved by breaking project work down into defined sprints and allowing teams to self-organise, harnessing a process of estimation, tracking and continuous improvement.

"Companies so badly want to be agile, but when you really look under the hood, many aren't exhibiting those core principles"

"There's no process that can't be done with agile at the core," says Blomstrom. Indeed, the iterative life cycle of agile has since been adapted and applied as a project management methodology everywhere from marketing to aviation, often by organisations seeking a better response to a turbulent and uncertain global marketplace. Yet this widespread adoption has also led to dilution. Many organisations have taken on the concept, often at great expense, without truly

understanding it: leading to clashes with project professionals' need for bigger-picture clarity and thoroughness, and passing off traditional linear life cycle 'waterfall' habits, such as asking for clearance before starting new tasks, as agile.

"Companies so badly want to be agile, but when you really look under the hood, many aren't exhibiting those core principles," says John Carter, a Silicon Valley-based consultant whose past clients include Apple and Amazon. "Someone gets some agile training and adopts two-week work schedules in their team, and leadership sees that and tells all their teams to do the same. But they're not self-organising teams. They're not doing customer demos, estimation or so many things that really define agile. The fall-out is they can't deliver on time, and they don't delight their customers."

#### More than two pizzas

To those companies, it may simply seem like agile itself isn't working. And in some respects, even when it's applied as intended, it isn't. For example, the leading players in Silicon Valley are still wrestling with the question of how to get agile to scale. Amazon CEO Jeff Bezos has described the ultimate agile unit as a "two pizza" team. Meaning every scrum team,



one of the basic building blocks of agile, should be able to be fed with two pizzas. Carter, who has worked with Mozilla, the company behind the Firefox browser, points out that it takes 1,000 people to write code for a browser. By Bezos's measure, that's well over 100 scrum teams: a lot of pizzas, and a huge amount of coordination, which opens the door to some very un-agile complexity.

"When scrum teams have to coordinate, they get hit with dependency," explains Carter. "One team depends on another to get a certain task done. But agile is not a milestone-driven technique; it's interval-driven - you ship whatever is done at the end of each interval. So if one team starts carrying things over to the next sprint, the dependent team may be dead in the water because it needs that other team's product in order to work."

Back in 2011, Spotify published a framework designed to tackle this very issue. Known since as the Spotify model, it added terms like Squads, Tribes, Chapters and Guilds to the agile lexicon, and put a greater emphasis on teams' autonomy. And it was duly lauded by countless imitators around the world. Yet the Spotify model should serve as a cautionary chapter in this broader story of agile adoption: its authors have since revealed

## "I looked at them and wondered why they were using a hammer to put a screw into a wall... It's the wrong tool"

it was never intended as a published framework for other companies to copy. And it's been criticised for assuming people are competent collaborators and failing to strike the right balance between autonomy and alignment.

In fact, according to Joakim Sunden, an agile coach who worked at Spotify from 2011 to 2017, Spotify didn't even use its own model. "Even at the time we wrote it, we weren't doing it," he has said. "It was part ambition, part approximation. People have really struggled to copy something that didn't really exist."

Carter describes the IBM-originated Disciplined Agile framework as "the most clunky, heavyweight, process-rich disaster I've ever seen"

## THE AGILE MANIFESTO (2001): SIX KEY PRINCIPLES

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference for the shorter timescale.
- **Build projects** around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- Agile processes promote sustainable development. The sponsors, developers and users should be able to maintain a constant pace indefinitely.
- At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behaviour accordingly.

## How to make agile work

There have been other efforts. Carter describes the IBM-originated Disciplined Agile framework as "the most clunky, heavyweight, process-rich disaster I've ever seen". But it helped spawn the industry's current standard, the Scaled Agile Framework for the Enterprise (SAFe). And in 2019, Atlassian, the company behind agile project management tools like Jira and Trello, rolled out Jira Align, a cloud-based platform designed to "connect business strategy to customer outcomes at enterprise scale". Yet the task of figuring out how to make agile work on a bigger scale remains very much an active ticket.

Back in the land of project management, Adrian Pyne, author of Agile Beyond IT, has had a front-row seat for agile's journey beyond the tech world. In 2008, he was brought in to troubleshoot at an insurance company that had introduced scrum for project management and was struggling. "I looked at them and wondered why they were using a hammer to put a screw into a wall," he says. "It's the wrong tool. Scrum is software development. Project management is project management. And scrum does not contain about 80% of what project management does."

## **Tipping points**

Pyne's initial observation sparked a period of deeper investigation. The more he talked to people, the more he realised that there was "this massive misunderstanding about adapting agile practices into project management". Yet he acknowledges there's plenty of reason why these companies should try. As everything from technology to regulation and consumer demand changes fast, companies have to be able to respond and adapt quickly, and innovate more quickly than their competition. Hence agile remains the de facto framework in Silicon Valley.

A 2021 report by PA Consulting, The Evolution of the Agile Organisation,

found that the top 10% of financial performers were 30% more agile than the competition. Companies are more likely to be successful if they can remain close to their customers and adapt to changing conditions. "In many sectors, companies are going to reach certain tipping points where they either move towards being agile organisations or they simply won't survive," says Pyne.

Amazon is one Silicon Valley company that's given a lot of thought to survival. In a famous letter to Amazon shareholders in 2017, CEO Bezos wrote: "Day 2 is stasis. Followed by irrelevance. Followed by excruciating, painful decline. Followed by death. And that is why it is always Day 1."

## Refining agile

Refining agile remains a key factor in maintaining a start-up mentality. Organisational network analysis is used to audit Amazon's team structures, examining how communications, information and decisions flow through its informal employee relationships, helping to avert bottlenecks in decision-making and other issues. Amazon also employs a Working Backwards process, where teams write press releases, FAQs and product manuals for products that haven't yet been approved, to test and improve their quality and customer fit.

Carter reports how his clients too are honing their use of agile by ensuring they retain a laser focus on their customer - to ensure products and services are helping them get their most important jobs done. "That's a very powerful way to take agile principles that maybe aren't fully working and put them in the right space, getting greater customer feedback throughout development," he says. "That will improve your course."

Another powerful development lies in DevOps, an extension of agile that takes its innovations in development and

"The type of extreme collaboration seen today requires the team to feel safe to take interpersonal risks with each other"

## TO AGILITY AND BEYOND: NEXT STEPS FOR **FUTURE-PROOFING YOUR PROJECTS**

- Know where you're struggling. Get feedback from every team member on the problems caused by company culture, process and structure – whether that's poor communication between teams, or leadership's insistence on using slow waterfall techniques.
- **Take the parts that work for you.** Most projects combine agile with other methodologies, so you don't need to strip down your organisational chart and rebuild it completely to fit the agile model.
- Adjusting your way of working isn't enough. Agile is a mindset, so people's mentality has to change to embrace the new working methods too.
- Run an audit of your teams' psychological safety. Are your people fearful? Are they empowered? As work gets faster and more unpredictable, psychological safety becomes a key condition of successful agile teams.
- It's about delighting your customer. Project management is all about delivering value. So is agile. And that value comes through ensuring your customer, and their needs, are guiding decisions.

applies them to operations processes. Yet like agile, DevOps struggles with larger tasks, so its use in project management necessitates a combination with more traditional linear life cycle methods to achieve the necessary oversight and governance.

For Blomstrom, meanwhile, Silicon Valley's approach to agile now sees organisations putting their own people at the centre of everything they do. This includes investing time in concepts like psychological safety, which, says Blomstrom, is "crucial for any type of agile enterprise".

"The type of extreme collaboration seen today requires the team to feel safe to take interpersonal risks with each other," says Blomstrom, "to tell each other when they think something's wrong and change direction, and to go together as fast as possible as a unit, often not doing the work they were hired for. I'm a big believer in the fact that agile is the only way to go. But teams can't be high performing

without this healthy dynamic, based on psychological safety."

### Where next?

It's unlikely that Blomstrom will be getting a cover-up for her agile tattoo any time soon. Silicon Valley is still in thrall to its principles, and its advance beyond the tech sector is sure to continue, as change in everything from tech to supply chains and regulations keeps getting faster. The future of projects means adopting agile right: changing the organisational culture and mindset, keeping the customer front and centre, and ensuring teams are set up psychologically to handle the rapidly changing demands of work. And that's plenty to keep project professionals' minds focused.

"Agile is something that keeps evolving," says Pyne. "So it's pointless wondering what's next after agile. You'd just as well ask what's next after project management. Let's do it properly first, and then take it where it goes."

# The future of artificial intelligence in project management

NEW RESEARCH FROM APM REVEALS SOME IMPORTANT TRUTHS ABOUT HOW PROJECT PROFESSIONALS PERCEIVE AI TECHNOLOGY, ITS USEFULNESS FOR PROJECTS AND WHETHER AI CAN EVER LEARN TO BE A PROJECT PROFESSIONAL

New APM research provides insights into the critical conversation about the role of artificial intelligence (AI) technology in project management. For the individual project professional, the current low use of AI in projects opens up opportunities to get ahead of the competition and gain valuable skills before the technology becomes widespread. The professionals who recognise AI's opportunities and potential early on are likely to be the ones who demonstrate its increasing value and implement its use for positive project outcomes. According to a new APM research report, Artificial Intelligence in Project Management: A review of AI's usefulness and future considerations for the project profession, the opportunities and challenges of using AI surround:

■ **Training.** The number of project professionals who have received training in AI is significantly low, yet the demand for AI-skilled individuals is high. This is an important finding since a large majority of the survey

participants stated training in AI is important in order to use it for projects. Project organisations are not providing training in AI at a sufficient level. However, organisations that provide good AI training will reap the rewards.

Many project professionals have a limited understanding of how AI can be used in projects, so developing expertise in AI will give professionals and their organisations significant advantages and opportunities.

■ A high degree of novelty. AI is still unproven in many project sectors and real-life case studies of AI used by project professionals are scarce. However, this creates opportunities for businesses that are successful in this field to take a leading role.

### Ambiguity of the impact of Al.

Although project professionals believe AI will impact the project profession, there is some ambiguity around what the consequences of this impact will be. If employers successfully communicate the change and impact AI will have on professionals' roles, organisations have an opportunity to build a trustworthy workplace and support professionals when exploring this novel technology.

Ease of use. Professionals state that using AI is a challenge because it's not easy to use. This becomes a barrier for implementation and can slow down the overall adoption of AI. Some of the challenges of AI are inherently difficult to change, such as reusing data and AI models for different problems. However, this becomes an opportunity for early adopters to improve AI's ease of use.

## What action should project professionals and organisations take?

## 1 Offer AI training

Project organisations need to make training in AI more available for professionals. It is key for organisations' senior management to focus on increasing professionals' AI skills.

### 2 Create a 'why' for using AI

To use AI successfully it is crucial for project organisations to justify why this technology is necessary through an organisational 'why'. This will set the correct expectations and create a common purpose for using this technology.

## 3 Define a clear Al problem formulation

Our research shows that AI can



benefit decision-making and support problem-solving functions. To enable this, it is important for professionals to be specific in how to use AI. We suggest professionals and organisations should articulate a clear problem formulation for the objective of using AI that will enable better use of resources for data management and identify suitable AI techniques for solving specific problems.

## 4 Develop effective data management processes

Having suitable data is crucial for effective AI. To adopt and implement AI, project organisations need to establish sufficient data management processes. This may include sharing data between internal project teams, managing historical project data and using external project databases.

## 5 Create an open learning **Al environment**

Project professionals do not find AI easy to use and project organisations should aim to make AI more accessible. To achieve this, organisations should create an open and inviting learning environment where learning about AI is encouraged across the whole organisation.

This is an edited extract from the APM research report Artificial Intelligence in Project Management: A review of AI's usefulness and future considerations for the project profession by Professor Nicholas Dacre and Fredrik Kockum, University of Southampton Business School (June 2022)

## Can Al learn to be a project professional?

According to the APM research report Can Artificial Intelligence Learn to be a Project Professional? Potential implications for the professional status of project management, no matter whether human project professionals or an AI tool are considered, there is no conflict in terms of the targets of human project professional learning and AI learning. The fundamental target is to enhance project management performance and deliver project outcomes. Of course, who owns that learning and the uses it is put to are another matter.

To deliver, project professionals need to master both hard skills and soft skills to deal with clients' requirements and dynamic business contexts. Since the soft skills of dealing with team members and stakeholders were considered an important competence, one of the main learning inputs of project professionals is the experience of interacting with peers and stakeholders. This situated, 'word-of-mouth' learning resource would be difficult for AI to replicate in terms of obtaining the input data as a prerequisite

to developing the behaviour. Hence this creates a certain protection for the career status of project managers versus AI, provided that the practices being passed on are still of value.

Current AI mainly uses historical data to predict future performance. However, when dealing with human beings, project professionals' irrationality based on subjective experience is too unpredictable to be digitalised within an algorithm as input for AI's learning.

## The practitioner using Al could become the most important person on a project, providing a 'sixth sense'

Trust and reputation based on emotional reliability cannot be earned by AI as it can with human beings. However, with its learning ability and a suitable database, AI can collect changing requirements and characteristics of different clients and generalise data from different projects.

Therefore, it could support a human project professional in predicting the behaviour or preferences of a client.

Data availability and quality are the main concerns in developing project management AI, which is a significant barrier. AI will have an active role in simulating project performance when there is sufficient data available. This aligns with current research into the functions of project management AI in predicting project success, monitoring cost and time, validating safety and forecasting demand, hence acting in an effective, but passive, decision-support role. AI is a knowledge-based platform, so in terms of enhancing the knowledge communication, AI can make a difference and contribute to 'best practice'.

In terms of learning, there are possible impacts on the transfer of practices from senior to junior. As AI learns and historical data on project professional performance accumulates, forensic insights into team performance are possible. However, based on this, a predictive recruitment AI may decide which projects a worker gets to participate in or who is considered effective in what context. This will have

## **HOW USEFUL COULD AI BE FOR PROJECT PROFESSIONALS?**

## It enhances decision-making

Al does not find the correct answer to problems every time. However, when used in an efficient way, professionals suggest Al can enhance the decision-making process in projects, which could be one of the most beneficial elements of Al.

## It supports problem-solving functions

A key benefit of using Al in projects is to support problem-solving functions. This can be done through analysing large sets of data and identifying potential solutions when problems arise. One professional said: "We often get behind schedule, and we then need to manage and reassess our resources. Using the AI predictions can help us manage our resources better."

## It is most likely to be used during project planning

The analytical capabilities of AI can improve planning activities, and with its efficient data management an AI tool can be highly beneficial for project professionals.

## It improves efficiency when analysing large volumes of data

We humans are limited in our cognitive abilities and most of us have difficulty processing large sets of information from multiple sources. Professionals stated that AI is an important tool when analysing large data sets.

It has the potential to increase project success and mitigate project failure

Professionals believe
Al has the potential
to increase project
success and reduce
project failure. This also

results from the benefits of improved decision-making, problem-solving, project planning and analysis of large data sets.

There is a positive correlation between the level of project complexity and Al's perceived usefulness

Professionals believe complex projects benefit more than simple projects from Al. This indicates that there is a positive correlation between project complexity and the perceived usefulness of Al. Additionally, during research interviews



serious consequences for learning and the kinds of high cost but potentially high value learning that comes from failure. Although, conversely, it could raise barriers against poor performance which might improve the reputation of the profession in a company or in society.

The project practitioner using AI could become the most important person on a project, providing a 'sixth sense' and 'superpowers' to avoid variance and identify which activities and work breakdown structure components

we found examples of professionals who preferred to use Al for complex projects rather than other projects. One professional said: "Complex projects consist of many unknowns, and the unknowns are increasing in our projects. We can see that using AI technology reduces some of our unknowns. For a simple project, we do not see the same need for Al."

**Source:** Artificial Intelligence in Project Management: A review of AI's usefulness and future considerations for the project profession (APM, June 2022) are more predisposed to variance. Leadership can have earlier warnings of emergent issues.

To obtain the benefits of AI for and defend against the threat of encroachment that is not on professionals' terms, human project professionals and their professional associations should:

- demonstrate and develop codes of ethics, particularly around negotiation and convincing of clients;
- motivate project professionals towards ethical conduct and soft skill development;
- develop and reward the use of soft skills in the workplace, particularly motivation and recognition of peer excellence;
- master data management skills to create better data sources as data quality can impact both human and AI development;
- master basic AI knowledge in order to maintain control of and work with AI and deliver successful projects;
- strengthen senior-junior relationships and peer-learning approaches, building mentorship between senior and junior project professionals; and
- promote new learning opportunities for juniors, especially if the more routine activities become digitalised.

This is an edited extract from the APM research report Can Artificial Intelligence Learn to be a Project Professional? Potential implications for the professional status of project management by Dr Kun Wang and Dr Ian Stewart, University of Manchester (June 2022)

## IS AI REALLY THE FUTURE OF 'BIG' PROJECT MANAGEMENT?

## Brett Parnell and Merlin Stone provoke the profession to ask some critical questions

There is no doubt about the impact of AI in many areas of business. Wherever there is lots of data about repeated events, AI can be used to find patterns, predict what comes next, diagnose problems and so on. This also applies to projects where the same activities are repeated many times. However, for large and/or complex projects, or for ones which are full of 'first of a kind' situations, AI's utility is less clear. Here, the role of the project professional managing the people who deliver the project - will remain. Or will it? At the centre of the debate on AI in project management lie several questions:

## What are project managers' competencies, and which are relevant in different types of project?

You might have thought that the answer to this first question has been documented clearly in bodies of knowledge. However, it may be appropriate to re-evaluate competencies, particularly the distinction between behavioural (especially emotional intelligence, creativity and ethics) and other competencies, but also to review the competencies in light of how AI is developing, so that competencies can be classified according to whether AI replaces or supports the competencies or threatens their deployment. This applies particularly to complex projects, where the relationship between competencies and project success is most critical.

## What do project professionals actually do during project planning and implementation and how do they do it?

What project professionals do is generally understood, although the time and effort spent on different activities varies between projects,



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between the roles of different project managers, between levels of seniority and in other ways. Research into the role of AI should avoid generalisations, but focus on specific examples of deployment of AI to replace or support project professional activity.

## How is this work affected by general developments in technology?

This area is well understood, with technology facilitating increased efficiency and reduced time spent on routine tasks, making non-routine activities more rewarding and (ideally) successful. It is one of the focuses of APM's research project Projecting the Future, and here a key recommendation is for project professionals to develop their understanding of new technologies.

## In which of these tasks can project professionals be replaced by AI or supported by AI to do tasks better and/or faster?

A key issue is how human roles can be combined with AI, as opposed to being replaced by it. The idea is that AI can be used to improve predictions of outcomes of particular project actions, including enhanced risk analysis. However, there is not much reliable and deep public evidence of how project planning and delivery have been affected and, more importantly, what tools and techniques have been deployed in practice and how they should be developed and implemented.

## What data development is required to ensure the deployability of AI?

AI thrives in the world of big data. AI needs



## The idea is that Al can be used to improve predictions of outcomes of particular project actions

big volumes of data, bigger than currently used in megaprojects. If AI is to improve project management, it will need much more data from projects, perhaps even by-the-minute reporting of project status. Much of the extra data needed for AI to be deployed successfully is unstructured, e.g. project professionals' opinions about risks (perhaps even their sentiments, building on the sentiment analysis so common in the social media world), and may not even be captured now. So, much effort will be needed for identifying and collecting many different sorts of data - structured and unstructured. There is no presumption that these new data sets will be perfect. The key is to identify and make use of them, learning through AI which data sets are useful, and in what forms, and where improving the quality of the data might bring returns, including identifying where the data may be inaccurate or wrong.

### How will AI be deployed to analyse and predict?

Data analysis may best be done by combining human and artificial intelligence, e.g. by humans initially identifying the meaning of data and then training the AI to generalise from these classifications - so-called 'supervised learning'. Once all the data becomes analysable, the idea of a digital twin for a project comes into its own. Digital twins thrive in situations where high volumes of data are used to optimise management of technical artefacts (e.g. buildings, airliners). The question is whether, in projects that involve substantial behavioural change, the digital twin approach can be used to plan, model and manage delivery.

## What will the benefits of the deployment of AI be?

The benefits of applying AI to project management are expected to include:

- creation of a stronger and more widely shared basis for decision-making;
- increased rationality, especially via removing/reducing decision-makers' cognitive bias;
- more accurate forecasting of project progress and completion;
- increased speed of decision-making, especially in response to new data being available, e.g. about the status of the project, changes in expected costs or benefits or changes in stakeholder requirements;
- improved identification of missing or imperfect data;
- better incorporation of learning from experience; and
- higher quality management of projects and resulting higher success rates. Our understanding of AI has developed greatly in the past few years, but we must dig deeper to understand how AI can improve project management, other than by substituting automated analysis for routine tasks. The main focus of our work should be on the most central element of project performance, the human factor. We believe more research.

Brett Parnell is Principal Consultant at MI-GSO PCUBED, and Professor Merlin Stone is Principal at Merlin Stone Consulting

into this is needed.

## **RESOURCES**

Artificial Intelligence in Project Management: A review of Al's usefulness and future considerations for the project profession, Professor Nicholas Dacre and Fredrik Kockum, University of Southampton Business School (APM, June 2022), bit.ly/3PVydyz

Can Artificial Intelligence Learn to be a Project Professional? Potential implications for the professional status of project management, Dr Kun Wang and Dr Ian Stewart, University of Manchester (APM, June 2022), bit.ly/3zQeWsK



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## PEER TO PEER

## **HOW TO MANAGE GEN Z**

COACH SCOTT HAY TELLS YOU EVERYTHING YOU NEED TO KNOW ABOUT HOW TO WORK WITH YOUR YOUNGEST COLLEAGUES

## Whether you're a project manager

or team leader, it's important to know how to manage Gen Z workers. Aged up to 24, they are the future of the workforce, and they have different expectations and needs than previous generations. Here are some tips for managing Gen Z employees effectively:

## Seek to understand your young people

Gen Z were born after 1995. While they share characteristics with Millennials, their early years have been influenced by a very different world, which is what helps set them apart. Here's how:

- Digital natives. Gen Z were born into the world of technology, the positives being that an abundance of information and the opportunity to connect is literally at their fingertips. That helps them to enhance their knowledge and learning. The downside is too much time spent on devices can result in feelings of isolation and less developed social skills.
- Equality, diversity and inclusion. Gen Z are values-driven and care about equality, diversity and inclusion. They want to work for organisations that they morally align with. They value 'allyship' groups and being around like-minded people.
- Mental health. Gen Z were impacted by mental health challenges before the global pandemic, which exacerbated these challenges. More time isolated, with less time developing



and sustaining meaningful relationships, has taken its toll.

■ Politically astute. Gen Z are politically progressive. They are very open to sharing opinions and more likely to be activists. They believe that governments should take more responsibility for solving societal problems.

## Understand what Gen Z workers want from their career

Gen Z are quite clear about what's important – money is, undoubtedly. However, more so than any other

generation, they want an alignment between personal and company values. If there is a disconnect, they either won't apply for jobs or it won't be long until they get itchy feet.

They value flexibility, work-life balance and want to feel like their work is meaningful. They want to roll up their sleeves and get actively involved in solving the root cause of big challenges. Expect Gen Z to want to be involved in projects that are making a meaningful difference.

Gen Z are often keen to explore new ways of working. They like

**3ROUND PICTURE/SHUTTERSTOCK** 

to challenge the status quo. They'll look to you to offer them the opportunity to get involved in continuous improvement projects. Offer them opportunities to learn new skills and work on interesting projects.

In the early stages of their career, Gen Z workers don't want to have complete independence, but they do aspire to that. They will benefit from more intensive hands-on support throughout the onboarding stage. Don't underestimate the positive impact role modelling can have on your young people. And that includes how you manage your wellbeing.

Provide regular, specific feedback and encourage them to see it as a great opportunity to learn and grow. Have open, honest and constructive conversations when mistakes are made. You don't want them to feel like they can't discuss mistakes. In time, they will want autonomy so it's more about intensive support in the short term for longer-term gain.

Key to all of this is good communication, which really matters to Gen Z in light of the shift from working in the office to working from home or hybrid working. When allocating tasks, be clear about your expectations, including:

- how they'll go about completing the task, including next steps;
- timescales and deadlines;
- whom to turn to for support and the importance of not leaving it too late;
- when and how you will communicate; and
- any possible obstacles and how to overcome them.

Agree with each individual and collectively with the team how and when you will communicate. Notice the team's preferences; e.g. you may find Gen Z prefer online messaging rather than phone conversations or email. And don't forget the importance of connecting socially; it doesn't always have to be about work. Having open conversations will

help multi-generational teams get to know each other and form a positive way of communicating.

## Give the right welcome and onboarding

We recently supported an organisation to transition its young recruits into working life. They changed their approach to recruiting by personalising their communications. When inviting them to an interview, they included photographs of the interviewers and shared a bit about them. The interview itself had a lighter feel to it. That set the tone for the experience they wanted their young people to have. Starting a career is a significant milestone and those early impressions matter. Once recruited, you want to ensure that their onboarding process goes well. Consider:

■ Thinking long-term. Too often, organisations see the onboarding stage as the first few weeks, when key information

## Young people in your project team may not feel confident enough to speak up in meetings or know how to communicate assertively

is shared along with some basic training. Instead, build a robust onboarding plan for the first 12 months. If you provide in-depth support during their first year, you're far more likely to reap the rewards in terms of staff retention, progression and loyalty.

- Self-learning. Gen Z are digital natives so self-learning is the norm for them. Content available online and on-demand is very helpful for them to learn about project management skills and team working.
- Giving support. Help them to

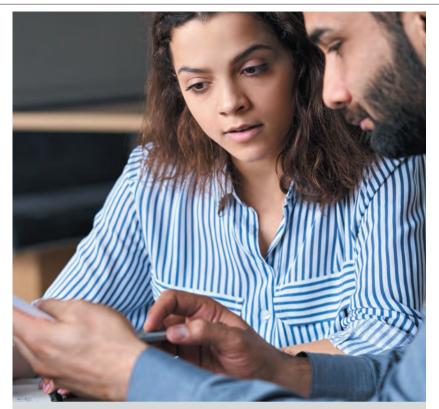
create an onboarding support network. It's common practice for organisations to find mentors or buddies. They can be extremely helpful; however, also encourage them to create networks, stakeholder relationships and other learning opportunities.

**Develop their confidence** Young people in your project team may not feel confident enough to speak up in meetings or know how to communicate assertively. They are confident talking to people online, but when it comes to face-to-face, they may feel less confident. Here are some tips to help:

- Coach and mentor them through potential discussions. It really helps them to think and talk through scenarios in advance.
- In meetings, draw them into the conversation by asking them a question they know the answer to or talking about something they feel confident discussing.
- Encourage them to practise talking through what they're going to say in advance.
- Ask them to take on a role they're comfortable with in the meeting, e.g. capturing flip chart notes or collating completed Post-it notes.
- If you want to ensure their opinion is included and considered, invite the group to share thoughts on Post-it notes or in the chat box if online.

## Plan, organise and be proactive

The brain isn't fully developed until we reach our mid-20s. That means young people don't always access the rational, thinking part of their brain in the same way as older adults. So, they need support to think through plans, actions, risks and mitigations. Take time to talk through and plan out thoughts, behaviours and actions. Help them to work through risks, consequences and mitigation actions. They're far



## 20 DOS AND DON'TS OF MANAGING GEN Z

## DO

- 1 Be patient, compassionate, empathetic and a great listener. 2 Communicate well and
- frequently. Be open, honest and transparent.
- 3 Performance-manage them effectively.
- 4 Support them in managing their mental health and wellbeing.
- 5 Leverage their strengths and help them develop key skills to progress in their careers.
- 6 Work closely with them throughout their first year while appreciating that, longer term, they value autonomy.
- 7 Monitor their workload. They may not know their limits in terms of what they can and can't deliver within timescales.
- 8 Give them opportunities to learn new and different things.
- **9** Be an example. Role model the behaviours, actions and language you want to see in them.
- 10 Encourage them to look for better ways of working.

## DON'T

- 1 Leave them feeling unsupported with nobody to turn to.
- 2 Ignore or not listen to them. It's important to Gen Z to have their voices heard
- 3 Treat everyone the same; everyone is unique and brings something different to the team.
- 4 Leave them feeling like they aren't valued.
- **5** Be vague or infrequent when communicating, particularly when setting expectations.
- 6 Shirk responsibility when things go wrong. Be open, authentic and show vulnerability.
- 7 Lack focus and direction. That's what the team is looking for from you.
- 8 Be distant. Be around and available for them, particularly over the first six months.
- 9 Mistrust. Start with a position of trust until it is proven otherwise. 10 Fail to react to situations and make decisions. Otherwise those problems will fester if ignored.

## Good communication. really matters to Gen Z in light of the shift from working in the office to working from home or hybrid working

more effective when they have a better idea of the roadmap ahead.

Set clear expectations around behaviours and outcomes you want to see when it comes to showing initiative and being proactive. Help them to understand what you mean by that, bring it to life and role model it. Remember, for young people new into the workplace, they often don't know what they don't know. As their experience grows, give them more autonomy and the scope to show more initiative and be proactive.

## Leverage their strengths and energy

Gen Z have great strengths, such as adaptability, digital skills, innovation, creativity and problem-solving. They also bring with them a youthful energy and enthusiasm. Look for and target the energy they show for different tasks and opportunities. What lights them up? How can they get more of what they want? Help them to identify the skills that will leverage their career and create development plans to support their learning and growth. Encourage them to diarise and protect development time.

Trying to evaluate the behaviours of an entire generation is tricky. However, by following these tips, you can create a workplace that is attractive to Gen Z and set them up for success in your team. Good luck!

Scott Hay is a coach and CEO of Potential In Me CIC, a social enterprise that provides programmes to support young people and the adults who live or work with them

## **FUTURE THINKING**

IN THE CONSTRUCTION OF UNIVERSITY COLLEGE HOSPITAL GRAFTON WAY BUILDING, A TECHNOLOGICALLY PIONEERING CANCER HOSPITAL. MUCH MORE RESTED ON THE PROJECT TEAM'S SHOULDERS THAN DELIVERING ON TIME AND ON **BUDGET, EXPLAINS AECOM DIRECTOR SAM DANOUAH** 

## The way the success of huge

construction programmes is measured is changing and nowhere is this more evident than the delivery of University College London Hospitals' (UCLH's) new Grafton Way Building.

While the construction industry project professional's mantra of 'quality, on time and on budget' is still central to our work, achieving sustainable, optimised outcomes is now more critical than ever. And when the project will deliver one of only two proton beam therapy (PBT) centres in the UK to treat complex cancers and blood disorders, the stakes don't get much higher.

## Creating a landmark

The centrepiece of the £380m building is a state-of-the-art PBT centre. It will treat 650 people with cancer and benign tumours each year. One of Europe's largest dedicated haemato-oncology hospitals, the building also includes eight operating theatres, a surgical recovery area, a surgical ward, an imaging centre, a 10-bed critical care unit and three floors of in-patient haematology wards.

The outcomes set at the beginning of the project were to support the national NHS PBT service, with the advanced treatment meaning patients don't need to travel abroad for treatment - relieving patients and families of the stress of travel and offering better financial value

for the NHS. The facility would enable pioneering research, attracting world-class specialist clinicians, researchers and staff. It contributes to UCLH's strategic vision to become a world-class centre for the treatment of cancer and other conditions, clinical and technical research, and teaching.

UCLH employed AECOM as NEC project manager, risk manager, programmer and infrastructure advisor to administer the construction contract, provide governance and manage in-house project consultants. Our project management approach was largely waterfall, with project controls and governance embedded at day one and constantly communicated, ensuring effective change management and escalation processes to deliver consistent time, cost and quality reporting and benefits realisation. We started work on the project in September 2015, and completion

was done in stages, with the first patients being treated in the PBT unit in December 2021, and HRH The Prince of Wales officially opening the building in March 2022.

## **Going underground**

Project scope meant that the 34,600sqm building would need to be constructed in a constrained site within the Bloomsbury conservation area, close to two Grade II-listed UCL buildings and just metres away from London Underground lines. To respect protected views and surrounding heritage, five of the 13 floors would be constructed in a 28m-deep basement to house the PBT facility.

The actual site was once a cinema and I clearly remember standing on the site once it had been demolished and thinking about how we would excavate something the size of the Royal Albert Hall below. It is at times like





You put faith in the process and remind yourself how important it is to invest in getting systems and plans right up-front, but also to engage and collaborate



Clockwise from main image: The proton beam therapy centre, one of just two for the NHS; the hospital's garden; the Grafton Way Building's entrance; Sam Danquah

this, as a project professional, that you put faith in the process and remind yourself how important it is to invest in getting systems and plans right up-front, but also to engage and collaborate - and importantly following it through, with the drive and passion to make it work.

The building was designed by Scott Tallon Walker Architects in association with Edward Williams Architects and constructed by Bouygues UK. This complex project involved more than 3,000 people in its construction, which included the removal of 80,000 cubic metres of earth from the site.

## No going back

The day the 90-tonne cyclotron, which delivers the PBT, was delivered was a landmark for the project. Weighing the same as seven London buses, it was craned and manoeuvred into place with a surgeon's precision. But the delivery was an example of just how complex this project was. This technology simply wouldn't work unless the groundwork had been done to ensure it could be tested and commissioned – which takes months - while construction on the building above ground was continuing. The extremely sensitive equipment works at -269°C, so the installation of resilient temporary services such as an electrical supply was of vital importance. There was no going back once the cyclotron was in situ.

Following the installation of the PBT equipment, above-ground construction consisted of a seven-level concrete-framed structure that formed the L-shaped 'perimeter' building as well as the lighter steel-framed courtyard building.

## **Getting started**

We started with a 'conditions for success' workshop to set and agree project KPIs, behaviours, protocols and deliverables with a common aim, rather than a series of individual outputs. It was hugely important to embed a team culture from the outset. Of particular importance was the use of clear language and a transparent process, given the diversity of the project team. Contractors and suppliers were from Turkey, Germany, France, Ireland and America, while we had UCLH representatives and multiple stakeholders who were not construction professionals, yet were highly experienced in their fields.

One of the biggest challenges was ensuring the one-team approach on a project where more



## The Prime Minister announced the first lockdown on 23 March 2020, and as a project team, we needed to quickly recalibrate

than 3,000 people were working on it at its peak. We needed to ensure the roles and responsibilities matrix was adhered to and reviewed as needed.

As a modern construction project, the digital aspect of delivery was key. We ensured there was a robust employer's information requirements (EIR) document. The early adoption of a digital approach ensured the resilience of the team

and project processes when COVID-19 impacted the project, with our project management plan including online risk management/ registers and interdependency trackers. It meant delivery was consistent and we were able to manaae risks. We could review expectations and deliverables within the context of the pandemic and the supply issues that would inevitably arise. Through the development of a mitigation plan, the team was able to achieve buy-in from all stakeholders and the delivery team for a revised plan.

Our early work also included ensuring that the project's sustainability and environmental performance was a primary focus. The final project achieved a BREEAM Excellent, which in the context of the high energy needs of the building, because of equipment to administer treatment such as the cyclotron and high-tech imaging, demonstrated what can be achieved when sustainability is factored in from the start.

## **Exceptionally diverse** stakeholders

Early stakeholder mapping was undertaken, alongside a stakeholder responsibilities matrix to ensure the right information was sent to the right people at the right time. An unusually high level of reporting had to be maintained, with tailored content ranging from the UCLH Trust Project Board and NHS England through to the UK Nuclear Authority and the Anti-Terrorism Unit.

Internal and external project stakeholders were exceptionally diverse: NHS England, Public Health England, patient reference groups, clinicians, the PBT equipment provider, residents, local businesses, the London Borough of Camden, the Environment Agency, UK Power Networks, the Metropolitan Police Anti-Terrorism Unit, the UK Nuclear Authority, Transport for London, Thames Water and international PBT centres.

We worked in close collaboration with UCLH's

## **TOP TIPS FOR COMPLEX** CONSTRUCTION PROJECTS

- 1 Collaboration. It may not be original, but it is truly vital for success. The full delivery team embraced the NEC spirit of mutual trust and cooperation - a one-team approach.
- 2 Early engagement and tailored communication. Deliver the relevant information to the right people, especially bringing in specialist stakeholders, such as fire safety, early. If everyone is ahead of the game in terms of what's happening with the design and on site, problems can be identified and mitigated earlier.
- 3 Conflict management. Less experienced colleagues learnt

- the importance of identifying and efficiently managing conflict, learning moderating skills and facilitating dialogue to ensure optimal outcomes.
- 4 Technical expertise. Good building design and construction doesn't just involve built environment professionals. In this case we sought experts in areas such as radiation and healthcare.
- 5 Project processes. Clear and effective processes from the outset are critical for key activities, such as design submissions review, change control and defects close-out, to enhance decision-making and ensure a rigorous audit trail.



communications team, which was essential to ensure all stakeholder communication provided accurate and timely information.

On site we worked with Bouygues UK (the main contractor), UCLH stakeholders and clinicians together with UCLH's supervisor team, comprising specialist consultants in architecture, MEP, structures and radiation shielding. Our regular face-to-face meetings helped us dissect and agree ways forward for complex matters and maintain effective progress. Meetings were recorded, with notes displayed on screen to ensure clear, concise communication, and post-meeting notes swiftly issued.

Regular meetings were held between project principals from the trust, the contractor and our project manage...

team to ensure emerging and our project management

## The technical complexity and innovative thinking pushed our project management skills further than ever

issues were identified early and escalated for swift resolution. A group was formed including the PBT equipment supplier to ensure seamless collaboration to minimise impacts on its delivery, installation and commissioning. Quarterly resident meetings were held to provide progress information.

## Global headwinds

In ordinary times, the scale and complexity of the project would be immense. But our project management team also faced the external challenges of delivering through the pandemic, as well as the UK's departure from the EU and the associated impacts these would have on labour and supplies. This was a nationally important project and, reflecting that significance, we placed relationships, attitudes and management of dependencies at the core of the project. This meant physically being on site, alongside key trust and contractor partners. However, it will come as no surprise to learn that, as the COVID-19 pandemic hit the UK, this strategy was put to the test.

The Prime Minister announced the first UK-wide lockdown on 23 March 2020, and as a project team, we needed to quickly recalibrate. The design element of the project was complete, so our on-site presence was mainly to work with Bouygues UK on problem-solving issues as they came up. We moved to online meetings and the construction team was given key worker status and able to continue. By May 2020 we had a clear plan to get suppliers to prioritise our project, which involved the client (UCLH) leveraging its connections so that we could get manufacturing and production slots, particularly for the specific medical components.

This was a prestigious project that would deliver remarkable outcomes for patients. It was hugely rewarding to work on. The technical complexity and innovative thinking required to work through it pushed our project management skills and systems further than they have ever been pushed, presenting challenges we never knew existed. So, while it was of course important that the project be delivered within the agreed funding and timeframes, the real measurement of the project's success is that, despite the complexity and challenges, the facility is now changing outcomes for patients.

## STAY IN CONTROL

## A NEW APM GUIDE EXPLAINS WHY SENIOR MANAGERS SHOULD INVEST THEIR TIME AND THEIR ORGANISATION'S RESOURCES IN PROJECT CONTROLS

### Project controls can save you

time and money. They help you take a structured, formal approach to delivering a project, both in the planning phase and through delivery. Project controls are recognised as the analytical element of project management. Effective project controls aim to establish data that forms a 'single source of truth' for projects to track progress and make decisions against. When done correctly, data integrity is assured and data sets are integrated to provide holistic management information.

If you apply effective project controls you will increase the likelihood of successful outcomes, improving the basis on which projects are launched, identifying delivery issues earlier and getting the opportunity to take action to address them.

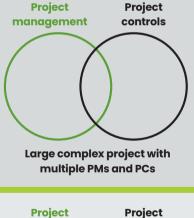
## What are the project controls capabilities?

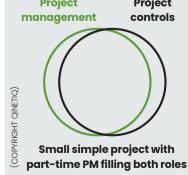
Working with wider functions such as finance and commercial teams, the full range of project controls capabilities enables project professionals to determine how they will deliver their outputs and check performance through to delivery. Once the scope is established, then the core elements of project controls include:

- managing time;
- managing cost;
- managing risk (threats and opportunities);
- managing change;
- decision-making and performance management;
- information management; and
- associated communications. For each, the scale of application should be tailored to the environment, recognising factors such as size, risk, complexity,

contract type, methodology and life cycle stage. The scale and complexity of a project or programme will influence the need for dedicated project controls staff. The project manager may need to cover both disciplines in small projects. At the other end of the spectrum, there will be programmes of a magnitude that justify a team of multiple project managers and project controllers with specialists such as planners, schedulers, risk managers etc. (see box below).

> **Project controls sizing showing** how the scale and complexity of the project will influence the demarcation of the roles





## **Projects without control**

The absence of project controls would be akin to 'making it up as we go along'. In reality, it's all about degrees of application, from light touch approaches that cover the key bases through to more comprehensive systems to manage large complex projects. Projects fail through poor scope definition, poor execution, poor estimating of cost and schedule, failure to deliver on time and therefore overspend, with reputational damage to the organisation. Without project

## The absence of project controls would be akin to 'making it up as we go along'

controls to monitor the project, there can also be a failure to deliver project benefits to the stakeholders. They often fail because costs and schedules are not monitored adequately, variances are not identified and corrective action is not implemented promptly.

## **Project controls deliver**

The following 12 factors, taken from APM's research report Conditions for Project Success, provide a framework for project success that defines the environment in which projects can be delivered successfully. Each of the 12 was identified as playing a crucial role in the formation and delivery of a project. Well-implemented project controls can support these factors.

## **Effective governance** The project has clearly identified leadership, responsibilities, reporting

lines and communications between all parties.



**Goals and objectives** The goal of the project is clearly specified and recognised by all stakeholders; it is not in conflict with subsidiary objectives. Project leaders have a clear vision of the outcomes.

## **Commitment to** project success

All parties are committed to the project's success; any lack of commitment is recognised and dealt with. Project leadership inspires commitment in others.

Capable sponsors Sponsors play an active role; they assume ultimate responsibility and accountability for the outcomes.

**Secure funding** The project has a secure funding base; contingency funding is recognised from the start and

Without project controls, there can be a failure to deliver project benefits

tight control of budgets is in place to ensure maximum value is realised.

## **Project planning** and review

Planning is thorough and considered; there is regular and careful progress monitoring; the project has realistic schedules, active risk management and a post-project review.

**Supportive organisations** The environment in which the project operates is project-friendly; the organisation provides support and resourcing (including financing) and access to stakeholders.

**End users and operators** End users or operators are engaged in the project's design; the project team engages with users who can take on what the project has produced effectively and efficiently.

Competent project teams Project professionals and other team members are fully competent; the project team engages in positive behaviours that encourage success.

Aligned supply chain All direct and indirect suppliers are aware of project needs, schedules and quality standards. Higher and lower tiers of supply chains are coordinated.

## **Proven methods** and tools

Good-practice project management tools, methods and techniques are applied in a way which maintains an effective balance between flexibility and robustness.

**Appropriate standards**  Quality standards are actively used to drive the quality of outputs. Adherence to other standards is regularly monitored to ensure delivery is to best-practice levels.

## **Project controls** support the team in reducing and controlling scope creep

## **Benefits of project controls**

- Continuous monitoring gives the project team and stakeholders insight into performance. This identifies areas that are performing well (on time and cost) and any that may require closer scrutiny or change. This proactive approach gives an easy-to-interpret view of work completed, work yet to be done and if corrective action is required.
- A reduction in costs results from the ability to make timely decisions based on performance data, increased visibility of financial performance and forecasts, and efficiencies in processes enabling the project controls system to become the one version of truth for multiple reporting formats.
- **Increased standardisation** is achieved across your organisation or portfolio, simplifying the process of reviewing project data across a range of projects. Project controls resources transfer between projects through the familiarity of the process, while progress and performance data is easier to analyse, ensures information is easy to find, and supports decision-making and lessons learnt.
- Project controls support the team in reducing and controlling scope creep, understanding the impacts of customer-driven change, and provide mechanisms for assurance.

This is an edited extract from the APM publication Senior Manager's Guide to Project Controls by the APM Planning, Monitoring and Control SIG, which will be published in autumn 2022.

## DELIVERING INNOVATION AT THE MOD



JAMES GAVIN IS THE SENIOR CIVIL SERVANT IN CHARGE OF THE FUTURE CAPABILITY GROUP WITHIN DEFENCE EQUIPMENT & SUPPORT, PART OF THE UK MINISTRY OF DEFENCE. HE SHARES HIS EXPERIENCE AND LESSONS FROM DELIVERING PORTFOLIOS AND PROGRAMMES FOCUSED ON INNOVATIVE OUTCOMES.

## The role of the Future Capability

Group (FCG) – part of the UK Ministry of Defence's (MOD's) capability procurement arm, Defence Equipment & Support - is to explore and deliver better and more innovative solutions for operational advantage. FCG's mission statement is to "iteratively explore and develop new technology and novel ways of working into exploitable capability for operational advantage". Capability that can help front-line commands (FLCs) be prepared to fight and win has never been more important than it is today, and this needs to be done quickly to remain relevant.

In early 2021, FCG developed a better strategy to deliver its FLC



customer needs. Using Richard Rumelt's 'Strategy Kernel', as published in Good Strategy, Bad Strategy, the team identified the most important blockers, opportunities, policies and strategic actions. The team were only allowed a few things in each category. While it is tempting to write a long document that is never consulted again, it was a key lesson learned that having a few policies and actions to focus on is far more effective to energise teams and customers.

## **Best practice**

In creating the strategy, FCG conducted an MoP (Management of Portfolios) health check, based on the useful but often

## It was a key lesson that having a few policies and actions to focus on is far more effective to energise teams and customers

overlooked MoP book Annex A: Portfolio management health check assessment. This review helped inform the four areas of the 'Strategy Kernel' and helped focus the team upwards on MoP and MSP (Management of Successful Programmes) benefits and outcomes best practices, rather than getting bogged down in over-detailed project-level thinking.

Key blockers and threats that were identified included the time-consuming nature of some MOD processes, a lack of exploitation of low TRL (technology readiness level) science and technology, and increasing competition on the global stage. It was felt that addressing these challenges mapped well onto the opportunities category, keeping the strategy even simpler.

## **New ways of working**

The use of agile values and principles, and governance derived from MoP/MSP, formed the core FCG ways of working. Customers are now tasking FCG to work with them to deliver better benefits and outcomes, whereas in the

Main: A Rheinmetall Mission Master autonomous unmanned ground vehicle. Below: A robot dog manufactured by Boston Dynamics.





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past customers were tasking on technology-focused projects. Projects can now 'fail fast' with funding and resources, then focus rapidly elsewhere, or projects can be tasked to develop better capability more iteratively.

In the old model, over-detailed project requirements did not allow iterative development or the refocusing of resources onto new areas that will deliver more value. It was hard for customers to turn off legacy projects and to refocus tasking quickly onto new areas.

It has proven a perfect match for FCG to work with its customers to blend MoP and MSP governance based on enabling and assuring benefits and outcomes, with agile values and principles. The bottom line is that in FCG's innovation scope area, project and programme outcomes work better and deliver better results if they:

- focus on customer benefit and outcomes;
- use 'agile by default' governance and ways of working; and
- have a collaborative narrative and mindset.

Creating a collaborative narrative across MOD innovation stovepipes (i.e. where information flows up/down through lines of control) is also seen as a key opportunity, particularly FCG working with FLC



innovation teams, where each can play their roles to best effect. Modern innovation is all about networking and collaboration sharing ideas and best practice, and teams playing their best part in overall outcomes. Innovation for FCG means "getting novel ideas and capabilities into practice", not 'innovation tourism', which has gripped the western defence innovation ecosystem.

One piece of advice is to focus project, programme and portfolio assurance on the core benefits. Will the work deliver the highest 'bang for the buck'? If not, refocus onto

## Focus assurance on the core benefits. Will the work deliver the highest 'bang for the buck'? If not, refocus onto other things

other things at pace: operational advantage, efficiencies and meeting government policy.

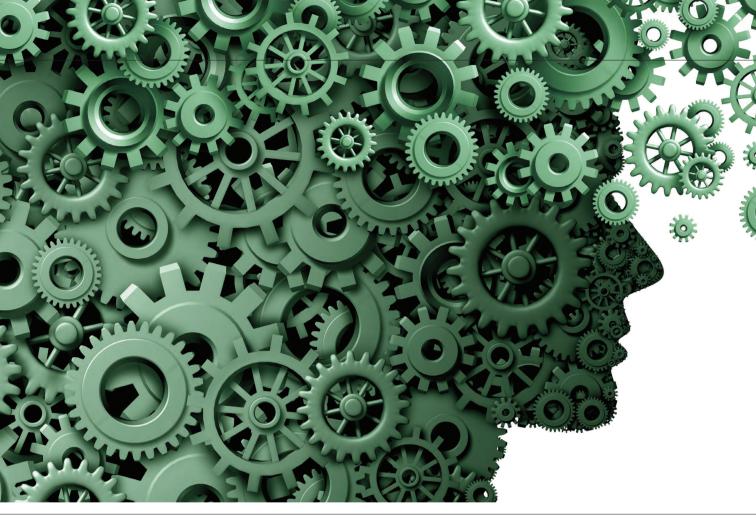
## Speed to value

As a result, FCG is a more efficient and effective team, with a clearer identity and stronger mission message. It is delivering more project and programme outcomes with fewer resources per project, at a faster pace. FCG has stronger relationships with key customers, who are jointly embracing the adoption of agile governance and a focus on benefits and outcomes. FCG's engagement with the wider defence ecosystem is more collaborative, and a positive communication campaign means FCG acquisition competitions are more widely known to supply chain bidders. Overall, by blending past best practice with new, FCG is better able to deliver 'speed to value'.

## 3 TOP TIPS FOR INNOVATION PORTFOLIOS AND PROGRAMMES

1 Use best practice models such as MSP (Management of Successful Programmes) and MOP (Management of Portfolios). Focus on the customer's benefits and outcomes, and work with them to build agile-based portfolio and programme governance mechanisms. 2 Establish the right foundational culture. Create and nurture a team

and stakeholder culture based on agile values and principles. 3 Running the team should be just 'table stakes'. More effective leadership requires a strategy that looks outwards to create a collaborative narrative with the wider innovation ecosystem, as modern, effective outcomes depend on collaboration and working with others.



## **TOP TIPS ON SETTING UPA KNOWLEDGE NETWORK FROM SCRATCH**

**DEE TAMLIN AND HELGA BUTCHER HELPED CREATE A SUPPORT NETWORK OF PROJECT** PROFESSIONALS IN THE LEGAL SECTOR. HERE, THEY GIVE THEIR ADVICE ON HOW TO SET **UP YOUR OWN IF YOU FIND YOURSELF IN AN** INDUSTRY NEW TO THE PROJECT PROFESSION.

### Legal project management is

coming of age, but the discipline is still in its early stages. In recent years, a cohort of professional legal project managers has started to emerge, but practitioners around the world are still grappling with what best practice looks like, how to measure success and how to demonstrate value to clients of law firms and the business associated with in-house legal teams.

But first, it might be helpful to clarify what legal project management is. While many people think it is managing projects in a law firm to keep the law firm working (e.g. software upgrades, new office openings), legal project management actually deals with the judicial process in relation to client instructions to solve business challenges. For in-house legal and legal operations teams, it means solving legal challenges for the business.

The Legal Project Management Network has been set up through



the collaboration of a group of law firms, including Ashurst, Baker McKenzie, Clifford Chance, Pinsent Masons and White & Case, and Barclays. We are both part of the steering group. With this experience under our belts, our advice in relation to setting up a network starts with treating the set-up like you would any project. As the saying goes, failing to plan is planning to fail, so if you want to deliver something by a certain date, wrap it up in a project.

## Get senior management buy-in

Academic research is abundant on the importance of getting sponsorship and buy-in from the most senior people in your organisation. You will need to have a business case demonstrating how your project aligns with organisational strategy. A business case doesn't always need to be a lengthy written document; it may just be clarity on what the business drivers are to support your venture.

As the saying goes, failing to plan is planning to fail, so if you want to deliver something by a certain date, wrap it up in a project

## **Get collaboration** approvals

If you are collaborating with other organisations in your sector or cross-sector, determine whether people require approval from their organisation to be involved, as this can be time-consuming to obtain.

## **Clarify roles and** responsibilities

Ensure a project manager is appointed and clarify the roles of all people on the steering group and wider project team. Typically, when setting up a knowledge network, people on the project team will be

doing this off the side of their desks. The workload therefore needs to be shared and people must not be overloaded. It's advisable and sometimes necessary to rotate roles, like the project manager, from time to time. Be prepared to be flexible and plan ahead for these changes.

Have clarity of goals Ensure everyone on the project team understands the goals. Have a mission statement, understand the purpose of your network and detail the high-level deliverables early on.

Forget commerciality

One of the key principles underpinning a successful network launch is to keep it strictly non-commercial, not for profit. Clearly state these goals as part of your mission statement and in your communications. Discourage organisations or individuals with commercial interests from diluting your network's mission.

## While there will be a lot of early engagement and excitement, understand how you are going to harness that enthusiasm over a long period of time

## Create a high-level timeline

It is useful to consider what your timeline to launch may look like. While there will be a lot of early engagement and excitement in setting up the network, it is important to understand how you are going to harness that enthusiasm over a long period of time. Small incremental gains are a useful way to progress.

## Establish a meeting cadence

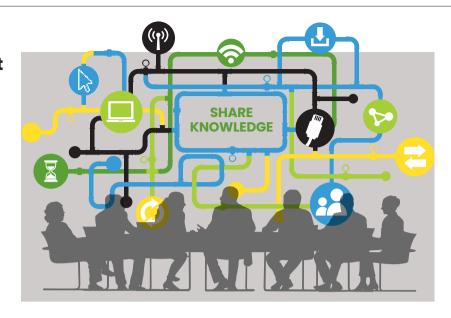
People are busy so ensure you are organised when steering group meetings and other project meetings are going to take place, and get them diarised. This is especially important when collaborating with people from different organisations.

## **Agree communication** planning and marketing

Communication planning for the project team is essential, but agreeing how you are going to market your network, whom you are going to market it to, and when, is key. To engage with people, little and often has proven successful.

## **Track actions**

So often, we attend project meetings and they end up being a talking shop. The project manager should make a note of all actions and these should be shared with the project team, either through a collaboration portal or simply by email. Actions should contain the task, who is responsible and when it should be completed.



Listen to Dee and Helga on the APM Podcast at bit.ly/30WNGNC

Nail down technology If tech is going to be used, identify what tech, the cost of licences and who has the skills to own it. Also, if there is a change of people in the project team, understand what the tech contingency may be.

Create a handbook Draft a handbook containing key information about the network, such as its purpose, goals, who is on the steering group and other roles,

e.g. champions.

Give everyone a voice Seek advice, guidance and ideas from lots of people in different roles and at different stages of their careers. Diversity of thought brings better solutions. Consider involving a professional body or education provider.

**Share knowledge** Capture the knowledge you want to make available to your network. You can do this on a collaboration platform or in the form of documents which can then be shared with the wider network. e.g. via social media posts. Factor

in discussion and review time of the content before it's ready for sharing.

## Make knowledge accessible

Consider offering interactive versions of your content and knowledge. We used the Bryter platform to create an online version of the Legal Project Management competency framework. Events are a great platform for launching and discussing content.

## **Secure resources** and budgets

You'll need to rely on your steering committee members' organisations to support the network launch by providing specialist resources, e.g. designers, email marketing, venues.

## Have fun

Creating a knowledge network in your chosen field can be great fun and can lead to excellent knowledge exchange, learning and sharing best practice. The network may want to meet for a breakfast or lunch meeting. Ensure variety in your network activities, e.g. written material, the opportunity to network in person, hybrid events, panel events, etc. Remember to celebrate milestones and successes!

Dee Tamlin is Director of Legal Project Management at White & Case and Helaa Butcher is Head of Client Solutions at Ashurst Advance

## **PUBLIC REGISTER OF ChPPs**

The following individuals make up the latest cohort to achieve Chartered Project Professional status with APM. Congratulations to you all, from those based in the UK and Norway to Oman and Australia! Full details of the criteria for achieving chartered status and the routes to get there can be found at apm.org.uk/chartered-standard, where you can also view the full Register of Chartered Project Professionals.



Name Co	untry
Imran Abdul-Majid	NOR
Madalitso Alfazema	UK
Paul Anderton	UK
Lisa Arding	UK
Paul Armitage	UK
Jessica Arrowsmith	UK
David Ball	UK
Thomas Barker	UK
Alex Bendix	UK
Louise Benwell	UK
Robert Brewer	UK
Ewan Brodie	UK
Rebecca Brown	UK
Anna Butler	UK
Tim Cambourne	UK
Steven Cannon	UK
Elaine Cawley	UK
Nigel Piers Cheverton	UK
Wilson Chiu	UK
Graham Clayton	UK
Richard Cole	UK
Stephen Coles	UK
Luke Colwill	UK
Darren Cook	UK
Alex Crichton	UK
Joao Fernando Da Silva	UK
Kerry Daly	UK
Paul Danks	UK
James Doble	UK
Michael Donnington	UK
Emma Downey	UK
Mark Duddy	UK
Deborah Elliott	UK
Leanne Evans-Flinn	UK
Anne Evison	UK
Rachel Farrow-Gent	UK
James Fishburn	UK
Rachel Foden	UK
Bel French	UK
William Fretton	UK
Horace Fu	AUS
Aimara Fuenmayor	USA

Name Co	untry
Laura Galpin	UK
Hannah Gibbs	UK
Alan Glennie	UK
Tim Goatcher	UK
Shalendra Mani Gounde	n FJI
John Graham	UK
Clarisse Grother	UK
Stephen Hardie	UK
Terri Harrington	UK
Lydia Harris	UK
Susan Harris	UK
Josh Hartley	UK
Elliot Hayes	UK
Alison Healy	UK
Stephanie Henderson	UK
Charles Heseltine	UK
Chris Hickey	UK
Jimmy Highton	UK
Philip Hill	UK
Julie Hindmarch	UK
Linda Hodgson	UK
Anita Holmes	UK
David Holmes	UK
Colin Hopkins	UK
David Hutcheon	UK
James Irvine	UK
Prashant Jagdale	UK
Robert Johnson	UK
Amy Jones	UK
Julie Jones	UK
Sarah Jones	UK
Jyothi M Kaisare	IND
Wayne Kelly	UK
Jacinda Kemps	UK
Jennifer Kerr	UK
Marjan Kheradmand Far	d UK
Mehran Kheradmand Fa	
Emma Killip	UK
Susan Kizito	AUS
Clare Lambert	UK
Alexander Lazarev	GER
Youwen Li	SGP

Name Co	untry
Paul Lidster	UK
Susan Mackenzie	UK
Johan Malm	UK
Richard Malyon	UK
Chris Martin	UK
Rachel Massey	UK
Charlotte Mccallion	UK
Gary Mead	UK
Ben Mills	UK
Cameron Mills	AUS
Victoria Morley	UK
Marny Moruzzi	UK
Helen Nasser de Anastas	UK
Kevin Newton	UK
Darren Nicholls	UK
Maureen Nwafor	UK
Nwabueze Nwandu	NGA
Calum O'Keefe	UK
Jacqueline Okuyemi-Dan	iel UK
Alexander O'Leary	UK
Henrique Oliveira	1.112
Herrique Oriveiru	UK
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Name	Country
Hannah Sanderson	UK
Phillippa Saunders	UK
Thomas Selby	UK
Melchor Serrano	UK
Jaime Sevilla Benitez	UK
James Simonds	UK
Anthony Small	UK
Alasdair Smith	UK
Gareth Smith	UK
Theo Smith	UK
Richard Spalding	UK
Christiane Spencer	UK
Marianne Stables	UK
Stelios Stylianou	UK
Scott Telford	UK
Kristian Thaller	UK
Jason Thorne	UK
David Tozer	UK
Paul John Trainer	UK
Nicholas Tsui	UK
Nicholas Tulip	UK
Uwem Udo	UK
Jonathan Walker	UK
Alexander Waller	UK
Emily Walters	UK
David Watson	UK
Damian Wheeler	UK
Harvey Whittaker	UK
Jonathan Wildish	UK
David Wilson	UK
Michael Wilson	UK
Neil Workman	UK
Christopher Wright	UK
James Wright	UK
Bruce Hjalde Wulff	UK

## **PROJECT ME**

WE ASK PROJECT PROFESSIONALS WHAT THEIR HOPES AND EXPECTATIONS ARE FOR THEIR CAREERS AND THE FUTURE OF THE PROFESSION

## The future is bright

Craig Scott ChPP, Senior Project Leader, Eurofighter

I believe the future is incredibly bright, particularly with APM heavily promoting Chartered Project Professional (ChPP); this opportunity to become chartered demonstrates the right for project management to be internationally recognised within its own right. With project management taking a focus on more modern methodologies, I hope that the profession can fully nurture the transfer from mainly software-focused project management into a hybrid approach with manufacturing and/or traditional project management. I aspire to work with universities to offer fully robust development plans, from an introduction to project management on a route-map towards achieving ChPP, which I believe organisations would strongly benefit from.

Elevate the profession Jane Clayson ChPP, Head of Digital Delivery, York & Scarborough **Teaching Hospitals NHS Foundation Trust** 

My career started in banking. I didn't even know what a project manager was! My path took me through the public and private sectors and into project delivery. I've spent my project professional career trying to raise the bar, highlighting the need to treat the work with the professional approach required to make it successful. Too often I've seen corners cut, project management work given to those with a substantive day job to just 'add it on', and project management regarded as an overhead to be minimised. I hope that I can help continue to bring about the requisite change still needed to elevate the profession to realise the benefits of its effective application and the growth of a future workforce.

**Deliver positive** benefits for society Jacob Cooper ChPP, **Associate Director,** Management **Consulting, KPMG** 



Plenty to be excited about Aisha Cajee, Project Manager, **Turner & Townsend** 

Being a young non-white female in construction means that there is plenty for me to be excited about. I aspire to be a director sitting alongside a diverse workforce. I also see opportunities for the industry to diversify to the point that it is no longer obvious that I work in 'construction'. Not only because of the people, but also the nature of projects and clients we take on. The chance to contribute to sustainable projects will be a personal success, but it is also about accelerating the revolution of industries and mindsets to make a positive long-term environmental, economic and technological impact.

The environment we live in today is one of increased uncertainty and constant change, and the need for interventions across all of society is significant. Whether it be helping to combat climate change, achieving net-zero carbon, modernising healthcare, transport, and infrastructure, or helping to deliver defence capabilities more efficiently, the diversity of projects will be vast. For project professionals, I think this provides a huge opportunity to develop and deliver projects and programmes that can result in a real positive benefit for society, and provide long-lasting benefits for millions of people's daily lives. As a result, I see the need for, and recognition of, the project profession continuing to grow. This will provide a great career opportunity for existing and emerging project professionals.

## More help is given

Kolawole (Daniel) Odediran, Project Manager, **ASDA Technology** 

Starting my project management journey at university, I had very little help and most of the knowledge I acquired was gained through extensive research and from helpful lecturers and mentors. My hope is that APM or similar organisations are more successful in providing help to students in similar situations. Every time I travel, I see adverts for project management courses at universities or companies offering services to aid with qualifications. While this might be useful, my expectation for the future will be the development of other engaging methods to communicate the necessity of the profession. I am currently noticing a great wave of diversification in the roles and opportunities being created - my hope is that this will continue.

## **DEAR SUSANNE**

Having just kicked off a new project, I find that many of my stakeholders are unavailable and hard to engage. How do you recommend I gain their attention and buy-in for the project?



### Lack of support from your

stakeholders sometimes happens because they are under time pressure and simply don't have enough time to devote to your project. If this isn't the case, then they may be unsupportive because they have some deeper concerns about the project. The only way to find out what is really going on is to spend time in conversation with them and to show genuine interest for each stakeholder.

If your stakeholders are frantically busy it can be difficult to find this airtime, but a first step could be to show genuine concern for their workload and seek to understand how you can help. Why not ask them how you can make it easier for them to contribute to your project? Maybe you need to move certain meetings around or change the way you provide them with information. Find out how they would like you to keep them updated and how they would like you to escalate issues to them. Would they prefer an occasional email, a formal progress report, a regular catch-up in person or something completely different?

## Don't avoid a challenging conversation

If your stakeholder's lack of engagement stems from a deeper-rooted problem rather than a time management issue, you will have to take a closer look at the emotional component and the reasons that drive their unsupportive behaviour. What are the underlying needs that they feel are not being met? Could it be that their voice isn't being heard? That the project isn't giving them what they had hoped for? Or do they in some way feel threatened by the project and what it will bring about?

What can you do to uncover the real reasons for your stakeholder's scepticism? Many project professionals steer away from unpleasant conversations and only interface with sceptical stakeholders when they have to. But the only way to improve the relationship is by having an honest discussion so that you can understand the real issue and build a foundation of trust.

## Ask for advice and feedback

A great strategy would be to ask your stakeholder for advice and feedback. That gesture can instantly open up the relationship because you show that you care and that you are humble enough to ask for their opinion. Just imagine how they might react if you say: "I would like to ask for your feedback about the project. I value your opinion on how you believe we can work more effectively and deliver a better product or service to you. Would that be okay? Are there any aspects you feel we have overlooked? Which tips and suggestions do you have for how we can improve? What else?"

These questions have the potential to work wonders for you but only if you show up with an open mind and take the time to really listen to the answers. If you walk into a meeting that aims to build trust with mistrust, you will undermine the process. If you fundamentally don't trust or respect the other person,

### Susanne Madsen is an

internationally recognised project leadership coach, trainer and consultant. She is the author of The Project Management Coaching Workbook and The Power of Project Leadership (second edition now available). For more information, visit www.susannemadsen.com

they will quickly detect it. So, take a moment to reflect on what your true feelings are towards some of your stakeholders. Do you look up to them, down on them, or do you fear them? Do you unintentionally exclude them from emails and meetings, or do you tend to speak badly about them to other people?

Have a long and hard look at the emotions and attitudes you hold, as they affect your interactions with people even if you would like them

Building relationships is a two-way process and realising that you have a role to play in changing a relationship for the better is a powerful first step.

Do you have a question for Susanne? Email mail@susannemadsen.com

## **READER OFFER**

Enjoy a 25% discount on The Power of Project Leadership, second edition, when you order the book from Kogan Page at www.koganpage.com **Quote code: PROJ25** 

## PROJECT: TO INSPIRE THE **NEXT GENERATION**

CHRISTINA BAKER, PROJECT MANAGER FOR YUNEX TRAFFIC, VOLUNTEERS AS A STEM AMBASSADOR TO GET PRIMARY SCHOOL CHILDREN LIT UP BY A CAREER WORKING ON THE PROJECTS OF TOMORROW

When I started my career as a project manager, I was sure of a few goals I wanted to achieve. One of those was making a positive impact on others. My interest in giving back to our community sparked from a very casual conversation with a colleague. I had so many innovative ideas for helping others but nowhere to put them, so they suggested I become a STEM ambassador – and that is exactly what I did.

## **Engaging the young** stakeholders

In 2019, I decided I wanted to create and deliver a STFM workshop. Although I had little experience in project management at the time, I worked through it as a project. The first opportunity to kick-start creating my own workshop was when a colleague's daughter, who is a primary school teacher in West London, reached out for help to run an interactive STEM session for her class of 20 children in Year 6 and one other group of 20 pupils. Immediately I grabbed that opportunity and started the stakeholder engagement. The timeline was one month; I began my research.

First, I needed to understand the scope. The key objective here was to ensure it was interactive enough to keep the students engaged but also spark their interest in STEM subjects for future careers. It was a challenge to find the right balance



while researching, as I had little understanding of how advanced a Year 6 pupil's knowledge is. But I stuck to it and learnt about the subjects and what would be applicable to them. Eventually, the final scope of works was to gather the necessary equipment, learn how to build an electrical circuit and how to teach children to build them, prepare presentations, deliver fun experiments (I chose three different ones) and finally deliver the full-day workshop to two classes.

## Moving from creative to linear thinking

Once my scope was clear, I was able to establish the requirements. This was a real learning experience for me. I love to jump between ideas and kick-start things, so I really had to discipline myself to focus on one thing at a time to deliver my workshop. I began by writing up the presentation

and prompt notes. This was very time-consuming to do alone, so I made the executive decision to ask for help. Sometimes I strive to do everything on my own, but by being vulnerable and asking for help, the results usually prove to be better.

I asked around but not many people were interested, and this became a blocker. Until I met Cameron. Cameron was a graduate engineer, the exact person I was looking for. Someone to help me with the technical aspects of the workshop planning and execution. Quickly, we came up with a more strategic way of delivering - instead of focusing on presentations, we made the slides interactive by teaching pupils each STEM topic through games and fun activities.

Now that we had a plan of action, we started our implementation. Cameron and I gathered our equipment to start trialling the activities; we also presented them to our managers for feedback. As we used some of our working hours on this, we had to ensure stakeholder engagement was done in the workplace. By involving our line managers, our goal was to give them a sense of involvement and receive governance support. It definitely worked, as they were both impressed with our initiatives and also let us have a bit of extra time out of our workdays.





Finally, it was event day. I felt well prepared and excited to put my hard work into action. Receiving feedback from children is much easier than from adults - they will either show it through their expressions or simply tell you when they are bored. This made it much easier to manage activities based on what was and wasn't working.

My biggest highlight of the day came when we demonstrated how pressure works by blowing up balloons and releasing them. We all released our balloons at the same time and the kids laughed as the balloons flew around the room in all directions. There was so much joy in that specific moment, I will remember it forever.

### **Future project managers**

As well as promoting STEM careers, I wanted to highlight the importance of project management and how they could potentially become project professionals. I explained project management in simplistic terms through the analogy of building a house. I gave each of the students a whiteboard and pen to draw a house. We went through each part of the house step by step, which made them realise how many things need



my very first project

to be considered, e.g. how the foundation of the house needs to be laid, which requires a concrete supplier, then we need bricklayers to start the walls, window suppliers, electrical workers, etc. This worked well, as they managed to wrap their heads around the basics of project management.

### The benefits of giving back

As we wrapped up, a few kids stopped to ask me if I would come back to do more – one ran up to me with a big hug. This really melted my heart and made me realise how much of an impact I had on them. Most of the time, the focus in promoting STEM or project management careers is on school leavers or university students, but maybe we should be focusing on younger groups. Nurturing the future generations from a



One of Christing's STEM outreach activities asked primary school-age children to envisage the project management process through the analogy of building a house

young age could help towards the continuous development of the professional world.

The feedback was amazina: I felt that the headteacher was very happy with our workshop, the students showed they enjoyed it, our managers were satisfied with us contributing beyond the job and all stakeholders seemed to be pleased. I learned so much about myself and developed my soft skills.

Without even knowing it at the time, I had just planned and delivered my very first project. Now I am a more experienced project manager, a STEM Ambassador, a volunteer at Dorset Careers Hub. an APM education ambassador and a volunteer at my workplace's careers events. I rotate through these volunteer roles and pick things up whenever I have a free evening or can use up some of my at-work volunteer days. I believe my outreach work is a success if I help just one individual find their path to success.

## RESOURCES

## WHERE PROJECT MANAGEMENT M POPULAR CULTUR **MANAGEMENT MEETS** POPULAR CULTURE

HERE'S A STORY OF A BRILLIANT SCIENTIST WHO DOESN'T PLAY BY THE RULES AND HIS OVER-ENTHUSIASTIC YOUNG ACOLYTE.
TOGETHER, THEIR RECKLESSNESS ALMOST COLLAPSES TIME ITSELF. PROOF THAT IF YOU WANT TO AVOID MESSING UP THE FUTURE, YOU REALLY NEED A PROJECT MANAGER, WRITES RICHARD YOUNG

Time travel films have an amazing pedigree. Classics from The Time Machine to Interstellar have used the paradoxes and 'what ifs?' of temporal dislocation to make us think, wonder and laugh. But two film franchises stand out from the crowd: Terminator and Back to the Future. Before we get to today's case study, it's worth remembering John Connor's message of resistance from the future to his own mother in Terminator: "There's no fate but what we make for ourselves." It's a rallying call, not just for putative time travellers, but for all of us. And it has a special relevance for project professionals looking to the future.

We make choices that determine the future. Our ability to plan, coordinate and predict is the secret to not turning our present into the botched history of a nightmare future. And that project management mindset is precisely where Doc Brown and Marty McFly fail so miserably in Back to the Future (1985).

For the uninitiated, Marty is a bright but frustrated teen growing up in a dysfunctional household. He loves his band and his skateboard, but wants a bigger life than his small-town upbringing allows. An early-hours meeting with his pal and local eccentric Emmett "Doc" Brown - who's stolen some terrorists'

plutonium to power a time machine built into a DeLorean car - results in him witnessing the scientist's murder and accidentally travelling back to 1955, where the vehicle runs out of fuel, stranding him in his parents' past.

The film charts his desperate attempts to get back to the present while undoing the potentially catastrophic changes to his own history that his blundering time travel has caused. For project professionals, it's a warning from history (or should that be the future?). Look at what happens when you allow a techie and a creative to do what they want without proper organisation. Great Scott, it's chaos!

### Call yourself a scientist?

The warning signs are there from the start. Doc's theft of the plutonium would fall foul of any organisation's procurement policy, and not just on the grounds that the supplier audit hadn't been completed. ("I'm not trying to be difficult, we just don't seem to have 'nameless Libyan terrorist group' on our list of pre-approved suppliers...") Storing it under his desk has health and

Even if we allow for Doc being an agile kind of guy, making the first test a life-or-death decision was overly rash





safety implications that would shred any half-decent risk register.

Then when Doc and Marty test the DeLorean for the first time, they stand right in the path of the vehicle, even though the technology is far from proven. Sure, we can argue about why adequate prototype evaluation wasn't factored into the project plan well ahead of user testing. But even if we allow for Doc being an agile kind of guy, making the first test a life-or-death decision was overly rash. One thing we can credit Doc for is insisting Marty videotape the

experiment. Documenting the project is obviously good practice, both from a scientific and administrative point of view. Had Doc and Marty been run over, at least the project could have been reassigned. But good documentation isn't an invitation to risk life and limb just because it makes succession planning a bit easier.

onboarding and

skills evaluation

are all over the place. And when the terrorists arrive in a VW campervan looking for their stolen plutonium, it's no surprise that Doc ends up dead. Marty uses the DeLorean to get away and accidentally hits 88mph, the magic speed for time travel. Since the top speed for a VW camper is 65mph, we can only assume that Marty either didn't listen to the project briefing or is just a bad driver - he could have comfortably escaped in third gear. It's yet another reason Doc should have had a project

Risks and red flags

Of course, it goes deeper than that. Doc decided in 1955 to launch a project to invent time travel, but in the intervening 30 years he's absolutely failed to answer the question any PMO or supervisory board would ask: why? Dreaming up the

flux capacitor might be a moment of genius. But did Doc ever stop to think about the purpose of his invention? About the risks? He needed a decent project manager, not just planning his research, but considering the implications of its possible success.

Health and safety issues are a sideshow, in fact. Trying to harness the power of a lightning strike - the only way back to the future - is reckless but at least it's a pre-condition of eventual success. It's Marty's interference with his own parents' courtship that is the starkest reminder that techies and marketing people are often thoughtless. Most of the film is taken up with his attempts to stop his own mother falling in love with him

instead of his dad, which any half-decent project manager would have red-flagged as a major risk right from the off.

## Vanishingly unlikely to succeed

Marty deserves some credit for eventually righting the wrongs. When he and Doc finally sit down for a situation analysis in 1955 and manage to work out the downstream consequences of their actions, they do at least come up with a series of solutions. Sooner or later even the most instinctive genius recognises the need for project planning. And while you could hardly say the family photo in Marty's wallet is a 'dashboard', exactly, at least there's some kind of project monitoring going on at this point. Seeing his own image slowly vanish as he fails to hit the critical stage gates in the plan is just the kind of motivational tool any project manager would kill for.

A charitable reading would say that the end of the film reveals the purpose to all this time tomfoolery: Marty's dad is no longer a dweeb in 1985; his mum is a confident, happy pillar of the community; his nemesis a blithering has-been. But even this is accidental (a result of Marty's botched plan to get his future parents together by literally sexually harassing his own mother, causing her to #MeToo him in favour of nice George). And it also results in bully Biff becoming the bullied one in the future. Is that fair?

### Gantt help falling in love...

In the end, the frustration for the professional project manager in Back to the Future comes from the way it breaks the rules. Not Doc's hopeless project safety or Marty's impulsivity - or even the lack of a coherent project purpose. Time itself is the fundamental constraint of project management, and it's the thing that makes the discipline both hard and rewarding. Sure, time travel can throw challenges into the mix – although in Back to the Future and its sequels, these problems are still principally driven by ill-discipline on

## **FUTURE** PARADOXES FOR **PROJECT PROFFSSIONALS**

So what does Back to the Future teach us about the future of project management?



1 Not doing something is a decision... This has become a popular aphorism in the 'move fast and break things' culture, usually to chide managers for being slow to act. But sometimes not doing something is a great decision. Project managers sometimes take flak from techies or marketing people for doing things procedurally. But a stable and sustainable future relies on considered choices and discipline under pressure. The projects we choose not to do are important too.

2 ... but you can make your own future. Back to the Future also reminds us that small decisions now – in how a project is specced, resourced, designed and targeted – can have a vast impact in the future. They say time travellers shouldn't even step on a butterfly in case it changes their own future through a cascade of effects. The decisions you take even in simple things like the choice of project methodology or apps will shape your project's destiny. Choose wisely.

3 Just because you can, doesn't mean you should. Doc should never have fooled around with time travel – but once he invented it, he couldn't help himself. It's the same in project management: if you say something is doable, someone will do it. In Back to the Future, the only person in the entire franchise who has a genuine vision for time travel is bully Biff Bannen in Back to the Future Part II, and his grand plan is defrauding bookmakers. Just because a project is feasible, doesn't mean you should help it happen.

### The project manager's ideal superpower? The ability to control time

the parts of Doc and Marty. But once you can pop back or forward to tweak things that didn't go right, the whole concept of planning discipline goes out of the window.

We end up in a world where the passing whims of the business, of marketing, of the user - these all become actionable. Some people might argue

Time itself is the fundamental constraint of project management, and it's the thing that makes the discipline both hard and rewarding

that's a good thing. But as anyone who's tried to explain 'agile' to less-than-savvy business users or project sponsors will tell you, the nightmare is people thinking that just because you can adapt to shifting realities as you go, you can change project fundamentals whenever they fancy it.

In short, don't diss the Gantt chart. Having a coherent plan for when things have to be done, what those milestones allow you to do next, and where you're heading makes life a lot simpler. Time travel is real, but we can only move into the future - and only at a predictable one day at a time. While Doc and Marty are jumping back and forward to clean up their own messes, project professionals in the real world know that the past is a firm foundation under the present's plan for a future that needs reliable shaping. Over to you.



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## **NEW BOOKS,** RECOMMENDED **FAVOURITES** AND PODCASTS **TO KEEP YOU ENTERTAINED**

LAND SPEED RECORD HOLDER RICHARD NOBLE ON THE ART OF TEAMS, AND DR RONALD DYER ON THE IMPACT OF ARTIFICIAL INTELLIGENCE

## **Project Management Techniques: Artificial** Intelligence

Rory Burke (Burke Publishing)



This book covers all the fundamentals required for practising project managers. Its comprehensive 30-chapter exploration of everything from the project life cycle

to organisational structures provides readers with deep insights regarding the what and how of project management. Readers can expect the basic introduction to core project management concepts, progressing systematically through each subcomponent in detail - e.g. chapter 3 on life cycle approaches provides a balanced perspective (PMBOK and APM) of methodologies. Illustrations further support useful examples of various types of project.

Another benefit is the inclusion of a detailed chapter regarding business

case strategy, a requisite component for aligning projects with the overall organisational strategy. Here the author walks readers through a step-by-step process, commencing with the corporate vision and its requisite elements, all the way through to a series of useful questions at the end of the chapter supported by a full business case structure.

However, the true value of this edition is the addition of the artificial intelligence (AI) perspective on the project profession. The impact and trajectory of AI across all aspects of business have now become common themes, and projects are no exception.

The second chapter provides a brief historical perspective on the changing landscape of technology and its influence on project management, as well as introducing the role of AI and walking through various facets of this domain, from the internet of things (IoT) to AI software and robots.

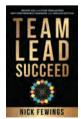
"As we enter the early stages of the fourth industrial revolution, the use of AI algorithms is creeping into almost every aspect of project management techniques." This opening sentence provides much-needed context for integrating various aspects of AI into projects. Using Table 2.4, which explores how AI impacts planning, the author attempts to provide insights into various planning aspects specifically related to projects utilising AI to support implementation objectives. Further examples exist in chapter 15, where the author discusses IoT integration in the project schedule. Overall, the book attempts to frame AI integration in project management through a mix of usefully interspersed examples to support professional implementation.

A useful next step would be to develop a workbook for practitioners present and future that can assist better AI adoption in the profession.

Review by Dr Ronald Dyer, **Programme Director for Sheffield** University Management School's Executive MBA



**Team Lead Succeed: Helping You and Your** Team Achieve High-Performance Teamwork and Greater Success



## **Nick Fewings** (self-published)

It's not often that we get a chance to find a new book dedicated to teamwork - a subject that is so critically important to group and corporate

development, and which is so often poorly developed. So, when Nick Fewings' book arrived, I was delighted to review it. Fewings has spent some 10 years and 500 courses leading/teaching teamwork.

As a result of this, he has accumulated a prodigious mass of experience from which the reader benefits.

We have all been to meetings that don't work - and it's a painful experience, particularly if the self-imposed leader fails to bring the team to a decision and there is much disagreement. Hopefully this book will help team leaders get the message and stop wasting their teams' time. (Important to send a copy to Downing Street.)

There are, however, points in all this that need clarification. To enable a team to really work, it must have its own free identity. It's never 'your team' or 'my team' - it's always 'The Team'. It's not for nothing that the one and only Bob Dylan called his musicians The Band. No feudal ownership there.

Fewings gets confused over team dynamics - believed by many to be the most important element of all in mature teams. It is the psychological interpersonal group relationship that develops when mature teams have to fight closely for progress and over key issues. To experience it is a real joy - and so often the team comes up with radically different and far better decisions than the imposed leader.

Many of Fewings' courses appear to have been led by him and led by example. Frankly, in an established team, the leadership should change according to agenda subject - and each leader should stand down and hand over as soon as possible so that there are no lifetime hierarchy leaders. Teams and leaders soon get the message and the quality improves dramatically. A formidable amount of work went into this book and it's a nice handbook to own. I am holding on to my copy.

Review by Richard Noble, author of Take Risk! and an Honorary Fellow of APM



## **My Bedside Books**

Debbie Lewis, Program Portfolio Manager, Fujitsu Global

## **Turn the Ship Around! A True Story** of Turning Followers into Leaders

## L David Marquet (Penguin)

This was recommended to me when I was facing some challenges preparing to lead a transformation programme that was as much about winning hearts and minds as it was about implementing the changes and the benefits. Discovering the workings of the US Navy was an interesting aside also (it's the setting for the book). I struggled with it at times but persevered as it did make me assess and think differently about my approaches.

### **A Promised Land**

### Barack Obama (Viking)

A continuation of my personal love and admiration for the Obamas. Having read Michelle's book Becoming, it's really interesting to

read the personal relationships and thought processes in relation to American politics and eventually becoming US President from Barack's perspective. He provides some truly personal insights and also inspires one not to give up, despite adversities and prejudices which can be encountered.

## **Our Iceberg is Melting:** Changing and Succeeding **Under Any Conditions**

## John Kotter and Holger Rathgeber (Pan Books)

An easy read which uses the most unusual analogy I have read. The learning points are very clear and summarised well at the end of each chapter. Personally, I made a note of each of the learning points as each chapter ended so I could easily refer to them going forwards. In summary: fun while you learn.

## We're all ears podcasts to listen to

### **APM Podcast**

Listen to the ex-CEO of Crossrail, Mark Wild, reveal what it took to put the megaproject back on track - and how one goes about leading such a complex turnaround. Wild took over as CEO in 2018 at a time of highly publicised budget and deadline overruns. Fast-forward to May this year, and he stepped down as CEO following the long-delayed but much celebrated opening of the Elizabeth Line. Wild is refreshingly honest on what went wrong, and gives valuable lessons that any project professional can take something from and apply to their own work.

## **The Digital Project Manager Podcast**

Co-founder of the Digital Project Manager Galen Low chats with subject-matter experts, real-world digital project managers and all manner of industry insiders. Listeners get guidance on theory, tactics, methodologies, best practice and other expert contributions. The most popular episodes include 'Tales of a Remote Project Manager' and 'Stop Pointing Fingers'.

### **BBC's All in the Mind**

A programme that explores the limits and potential of the human mind. It provides food for thought for both work and life beyond office hours. Presenter Claudia Hammond has covered everything from 'The Psychology of Regret' and 'Post-pandemic Mental Health' to asking 'Can Bosses be Kind?'.

**Carry On Sustainably** 

**EDDIE OBENG MUSES ON WHAT 'SUSTAINABILITY'** SHOULD REALLY MEAN, AND WHAT MAKES A PROJECT TRULY SUSTAINABLE

lon Musk's dream of sustainability is to ensure that life can extend beyond Earth to another planet and then on to entirely new solar systems.

You will lead projects that will propel the future of the world, so what's your dream of sustainability? Do you gaze into the future and see sustainability as an adventure of each person living their full life forever? Or do you dream of a controlled set of guidelines making people do 'the right thing'? Perhaps you focus beyond homo sapiens to a global habitat for all living beings? Most likely, you're too busy to pay attention.

### A silent room and shuffling feet

The first time I heard my insurance client say 'sustainability', I made a fool of myself. While I was growing up, my mother fought to set up an Institute for Aquatic Biology to ensure the creation of the world's largest man-made lake on the Volta River in Ghana didn't repeat the ecological and human carnage of the previous record holder, the Aswan Dam project. After the 1972 UN Conference on the Environment in Stockholm, she became Director of the UN environmental programme. Gaia was in my baby milk.

Back to my insurance client... I blurted out excitedly, "That's a huge new market for you, but who will pay the premiums?" The room went silent; feet shuffled. They meant sustaining profits, not exploring the interdependent complexity of ecosystems and human activity. I was so embarrassed.

I just keep misunderstanding what people mean by sustainability. Recently, two huge plastic wheelie bins, the weight equivalent of about 10 years' worth of use of plastic bags, were left

on my drive as a 'sustainable solution to carbon'. Giggling to neighbours, I called it crazy. None of them laughed. Design mentor David Kester, persuading me to work on an HS2 sub-project, addressed my objection to felling ancient woodland, saying, "They may be felling a 500-year-old oak tree but they're planting 500 new one-year-old oaks!"

"A shame for the beetles who have lived for 400 generations in the same tree-home, but we must end privilege!" I laughed. He didn't.

Now my council hands out free wildflower seeds while approving the demolition of sound, 50-year-old homes that would last another 100 years to develop Parthenon-style, faux palaces from imported stone and wood, paving over gardens with carbon-hungry concrete. I see black humour everywhere, but everyone else sees #sustainability.

## What are the project principles for sustainability?

Although sustainability is critical, popular approaches are dire. Elon Musk says he ignores 'what everyone knows' and starts from first principles. What project principles should drive our vision for sustainability?

Perhaps stakeholder management? Projects fail when narcissistic project managers who think that they know best psychopathically force a solution onto stakeholders. We should instead discover the stakeholders' views on sustainability and deliver for them. I feel we have vocal and silent stakeholders. Vocal stakeholders are human; silent stakeholders include my family of beetles. To engage the silent stakeholders, we will

**Professor Eddie Obeng HonFAPM** is an educator, TED speaker and author. You can join his masterclasses, courses and workshops on the QUBE #SuperReal campus: https://QUBE.cc

need humility to study the complexity of their needs and then we must innovatively shape projects we lead to ensure sustainability.

Providing plastic bins to reduce a single element in the atmosphere is not sustainable. It does not sustain the fish who eat or get entombed in plastic. Like good marketers we need to stand in the shoes of our silent stakeholders to protect them forever (although I'm not sure beetles wears shoes).

Perhaps risk prelimination? Seventy per cent of projects fail or underperform. Such huge waste is not sustainable, and we must learn to deliver perfect projects. We must FutureMap deliverables, checking the project solution fixes the stated problem without collateral damage. After all, most of today's problems come from yesterday's solutions.

### Conserve and don't waste

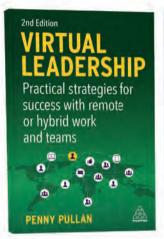
I dream of sustainability as a spinning top. It's like evolution over the past three billion-plus years, always changing and vet always staying the same. It's like in Alice in Wonderland, where the Red Queen describes Wonderland as a world where, "it takes all the running you can do to stay in the same place".

So, stop projects that chase progress - a focus on opportunities and challenges is too narrow. Sustainable projects are scoped to include all the additional activities required to conserve what existed before the project starts and are executed without waste. Sustainable projects ensure that every stakeholder, vocal or silent, will give you the thumbs-up and say, "carry on sustainably"!

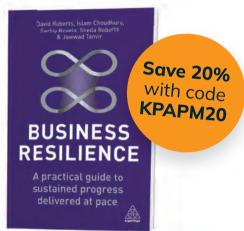
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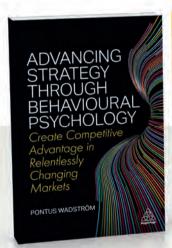
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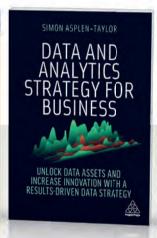


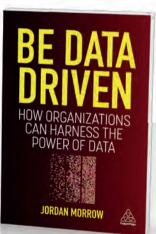












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