

PROJECT

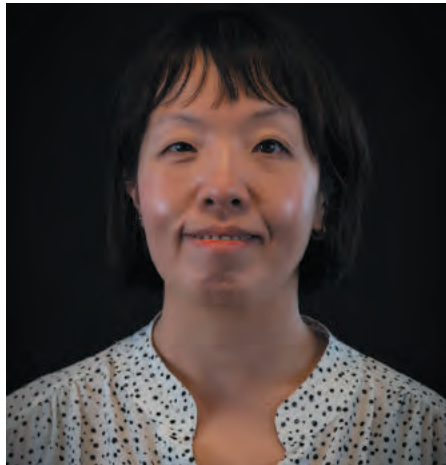
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PLUS

The Big Interview: East West Rail's CEO Beth West
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Building a profession for tomorrow

This issue has a focus on women's work. And by that, I mean leading and managing projects and programmes across construction, infrastructure and transport. It still surprises me to hear from women in the project profession who work in traditionally male-dominated sectors like construction that they find themselves the only woman in the room, or having their authority and expertise questioned by older men.

This issue of *Project* will land as APM focuses its attention on its annual Women in Project Management Conference (read keynote speaker Dame Inga Beale's leadership lessons in 'Perspectives'). So when better to take a look at the project successes women are achieving in construction and infrastructure, industries that suffer from low numbers of women entering and rising to the top?

The problem starts early when girls at primary school still fall for the old stereotype of construction and engineering being men's work – which is why I am so pleased to be presenting the work of She Builds UK on the cover. It's a photography and outreach project that is signing up women in all kinds of roles in construction and engineering (we are just showcasing the project professionals) to talk about their ambition, their careers and their advice. Please read their stories and pass them around.

COVER PHOTOGRAPHY: NEIL PERRY

The problem starts early when girls at primary school still fall for the old stereotype of construction and engineering being men's work

BEN WRIGHT

Another article that I hope will be shared around the office is our guide to dealing with menopause – both for the individuals concerned and for project colleagues and managers who'd like to know how to approach the subject in a kind and sensible way. It's been a life event that has been hidden from the workplace for too long, so I hope we give you some practical advice that will give you the confidence to support those who need it.

If there's another hot topic that's dominating the workplace headlines, then it's artificial intelligence (AI), but behind the hype, what we really wanted to find out was how and where AI is being used in projects right now. Read Antonio Nieto-Rodriguez and Ricardo Vargas's account of how some future-minded organisations are taking advantage of AI across their projects. And if that isn't enough for one issue, then there's also James Garner's look at the latest developments in 'Perspectives'.

While we're an optimistic bunch at *Project*, we recognise that some readers appreciate the darker side too, so don't miss our 'Offline' look at the film *Armageddon* and the lessons it holds for the project manager. If you're having a bad day, it might just make you smile. Enjoy!

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In the picture

Hong Kong International Airport is 25 years old



Hong Kong International Airport opened in 1998 at a critical moment for the city and region, just one year following the transfer of sovereignty from the UK to China. Construction of the airport began in 1991, part of a programme that also included a new high-speed airport railway and a third cross-harbour tunnel to Kowloon. One of APM's 50 Projects for a Better Future, it was built on a large artificial island formed by flattening and levelling two islands and reclaiming 9km² of the adjacent seabed. The site added nearly 1% to Hong Kong's total surface area.

According to Douglas Oakervee, Project Director, and Y Yanagisawa, Chairman, of the joint venture supervisory board: "The formation of the site was a complex engineering task, taken forward within demanding budgetary and time constraints against

a background of political change... Collaboration between employer, engineer and contractor, and the development of effective working relationships at all levels, were key factors in achieving common objectives."

Since 2010, the airport has been the world's busiest cargo airport. According to the International Air Transport Association's estimates, the airport will handle 102 million passengers, 8.9 million tonnes of cargo, and 607,000 aircraft movements annually by 2030. To meet growing demand, its operator Airport Authority Hong Kong came up with the Master Plan 2030, which outlined development plans for the airport, and included its expansion into a three-runway system. A new 3,800m-long runway was constructed last year. The entire expansion project is scheduled to be completed next year.

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Perspectives

Project management in newsrooms • Diversity in the space sector • Key lessons on resilience

How to tie in sustainability and data analytics to deliver successful projects

Dr Jo Jolly, Deputy Director and Head of Project Futures at the Infrastructure and Projects Authority (IPA), argues that everything is touched by projects, so it's time to step up and put the UN's Sustainable Development Goals at the centre of everything you do



Q At APM's Change Changes conference, you talked about the need to transform project delivery so that it would become powered by data and would value humans. What did you mean by that?

A The best place to point people to is the *Transforming Infrastructure Performance: Road Map to 2030 (TIP)* on gov.uk. It talks about five themes: digital and data, sustainability, capability and leadership, market capacity and commercial models. What it talks about is the system of systems, so the natural environment and the built environment and how they're both innately connected and how projects intervene in those systems to deliver services.

In the case of infrastructure, we build hospitals to provide healthcare, we build schools to provide education, but at the top of the TIP diagram are the UN's 17 Sustainable Development Goals (SDGs), which are described as the outcomes of the projects. So that's saying that through the work we do, through the projects we deliver, the outcomes are ultimately the UN's SDGs. I think that's huge – that the top of that diagram isn't GDP or benefits or cost. It's the UN's SDGs, and that document has been approved by the Treasury and the Cabinet Office. This is really significant.

It's an incredibly insightful, thoughtful and meaningful piece of work and my team is going all out to work with the community on this.

Q In the real world, how do you see tech like AI helping project delivery?

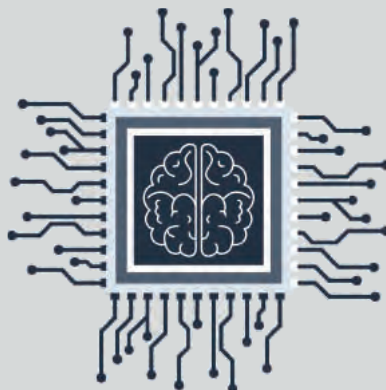
A I think we're a long way off at the moment. What's great about things like ChatGPT is it has got people engaged, genuinely interested and fearful. As humans, we don't change unless there's a huge goal to go towards or a threat that makes us change. And I think we're feeling a bit of that now, so that's good and we've got to capitalise on it. But what I find baffling is how it is that in our lives outside of project delivery, the world has moved along, so we've got apps, smartphones,

sat nav. I can access my banking data whenever I want to, but why is it then that I can't access the carbon data on my project if I want to? Or why is it I'm looking at a spreadsheet with some average-quality data in it? And why, as project professionals, do we not say: this is so weird? I can Google anything and yet if I want to find out something about project delivery, there's no search engine for that yet.

All the tech exists – we can easily do that, and it's something we started doing while I was at the Environment Agency. We were using graph databases to set up a database of projects that are happening and then you can interrogate it. It's a piece of work that I really want us to continue now with the IPA; effectively to have a community tool that connects people. I could see who's working on improving benefits realisation right now and chat to them, for example.

Q How do you change the systems and processes so that projects can be done in a way that's more successful, taking advantage of data analytics and collaboration?

A Knowledge and awareness. It has got to be awareness, awareness, awareness.



Listen to APM Podcast's interview with Dr Jo Jolly on Spotify, Apple or Google



5 lessons learned

Dame Inga Beale, Portfolio Director, former CEO of Lloyd's of London and WiPM keynote speaker

What are her most important leadership lessons from a stellar career in business?

1 Be courageous

Believe in your own ability and have the courage to make difficult decisions. As a modern leader, you should be inclusive and involve others in designing and decisioning but, at the end of the day, you need to make some of the decisions yourself. You do not need to be everyone's friend – you need to be respected.

2 Communication is key

People have access to so much information that it is important to

communicate constantly in a way that is as dynamic as possible. As a leader, you will be expected to show the way and inspire others to follow you, so communicate in an open, honest and authentic way. Respect will come when you are trusted and show some vulnerability – it is OK not to know all the answers.

3 Energise to keep resilient

Change is constant and challenges will come at you from all angles. It is important that you can

keep going despite what gets thrown at you. So find your own way to re-energise and keep your resilience high. Each individual needs something different – it could be time on your own to meditate, physical exercise or spending time with others who will inspire and give you the energy to keep driving forward.

4 Embrace differences

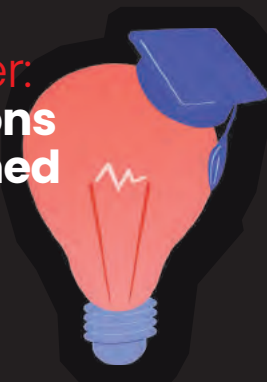
I'm lucky enough to have worked in several different cultures during my career. A good leader must always try to understand where the other person is coming from. Try to understand how another person who is not like you wants to be treated. Never assume that what works for you will work for the other person too. Research shows that diverse teams are the most innovative and the most successful in moving into new markets. So remember that fantastic, amazing teams come about through embracing differences.

5 Keep learning

However senior you are, always remember to keep learning. Even as the CEO, you do not know all the answers. Use every opportunity that comes along to grow and develop yourself and be open to learning from others. Things that worked for you 20 years or so ago may not work today, so keep adaptable and curious.

Learn more about the APM Women in Project Management Conference at apm.org.uk/apm-wipm-conference

Myth buster: Lessons Learned



Lessons learned are the documented experiences that can be used to improve the future management of projects. They can be valuable in pre-empting what factors are likely to have the biggest impact on future projects. The idea of lessons learned is popular, but many organisations report that although lessons may be documented, they are not reliably learned and practices adjusted to capitalise on the learning. Learning – the creation and use of knowledge – is a people-based practice. One effective way of people coming together to share knowledge, challenge perceptions and create new knowledge is through a community of practice. Lessons learned as part of a post-project review are fundamental to ongoing knowledge management.

SHUTTERSTOCK

Comment

What does AI mean for project delivery?

James Garner considers how to prepare for a digital future and ponders what Alan Turing would make of modern AI



In his 1950 paper 'Computing Machinery and Intelligence', the godfather of computer science, Alan Turing, posed the question: can machines think? He cannot possibly have known then how far technology would come in the 70 years that followed.

What is artificial intelligence?

In a lecture in 1947, Turing is recorded as saying "what we want is a machine that can learn from experience" and that the "possibility of letting the machine alter its own instructions provides the mechanism for this". Arguably, this would represent the beginning of the meaningful exploration of artificial intelligence (AI).

In its infancy, programming mostly focused on puzzles and games. Today, AI has implications for almost every sector and every aspect of our lives, and construction is no exception.

AI for project delivery

Projects in all their forms are vital for growth and economic prosperity. Yet, according to research by Professor Bent Flyvbjerg and Alexander Budzier of the University of Oxford, the probability of delivering a major project within the sanctioned cost, time and benefits envelope is only 0.5%. AI has the potential to change all that.

The primary benefit of AI in project delivery lies in its ability to process enormous quantities of data. By analysing past and current project data, AI can enable more effective decision-making around project delivery – better predicting the future performance of a project by considering all the variables.

Will AI in project delivery render humans obsolete? I would argue

that there will always be a place for us as decision-makers – and thanks to AI we will have considerably more information at our fingertips.

AI for the real world

So how is AI manifesting itself on today's projects? Rapid advancements in capabilities of technology mean we're seeing a huge increase in the number of AI tools and services coming into the project delivery space. Tools like nPlan use machine learning to review the realism of project delivery plans with a view to identifying any unforeseen risks. To give one example of its impact, on a major liquefied natural gas (LNG) project with a project outturn of US\$50bn, nPlan correctly forecast a 15-month delay. Had nPlan existed before this project was commissioned, it predicted the owner could have saved US\$1bn through optimal project selection, greater certainty and cost savings from avoidance of overruns.

Hackathons

If you've never heard of Project:Hack, you'd be forgiven for imagining teams of computer geeks trying to break into the Pentagon from their basements – but you'd be wrong. Hackathons are essentially events where a group of people come together to find a digital solution to a given challenge. From leveraging blockchain technology for smart construction contracts to revolutionising the recruitment process and exploring the potential of natural language extraction, the creativity and ingenuity on display is truly inspiring. These hackathons are a great way of helping project professionals to better understand AI and learn how it can be applied to project delivery.

We're sponsoring another event in October, and I'd highly recommend getting involved.

Educate and inform

There are also a number of bodies entering the space seeking to educate and inform. The Construction Data Trust is a not-for-profit that brings together data from across the industry, collaboratively and securely. Its aim is to reform how projects are managed and to provide industry professionals with the confidence to deliver them successfully.

The advancement of technology is happening faster than we as an industry can adapt, but what is clear is that digital skills should be a core competency for all professionals entering construction. At Gleeds, we have taken proactive steps to prepare for this by launching our own data academy called Upskill.

The future of AI in project delivery

The big paradigm shift is not just in doing things digitally, but in totally reinventing how we do those things. AI is important because it is allowing us to think outside the box.

Going forward, instead of taking a process that exists and asking how we can do it digitally, what we need to ask is: why are we doing it like this in the first place? What would it look like if we were to reinvent it from scratch?

I often wonder what Turing would make of today's advances in AI. Since he first observed that all tech development is exponential, I don't believe he would see it as a big leap from his Enigma machines to ChatGPT. He may be surprised it's taken so long.

James Garner is Global Head of Data and Intelligence at Gleeds

Comment

Project management in newsrooms

Enterprising journalists are now taking on project work, writes Robin Kwong



I still remember the first time I visited a newspaper printing plant, in Hong Kong's industrial Tai Po District, nearly 20 years ago. As a junior reporter fresh out of university, I marvelled at the scale and regimented efficiency of the operation. The factory hummed and shook with the spinning of the rotary presses. Serpentine conveyor belts ferried printed sections of the newspaper to their next station. It was hard to imagine that a process that began with me receiving my reporting assignment that morning ended with these massive machines loudly whirring to life around midnight.

That production chain, which manufactured more than a hundred thousand newspapers daily, was well understood, rigid and reliable. So long as everyone performed their specialised roles, the infrastructure was in place to print and deliver the newspaper to newsagents and people's homes every morning.

The news industry is in a completely different world now. In the past two decades, technologies like the internet and smartphones have spurred changes in consumer habits and upended news production. We now tell the news through a variety of formats (video, podcasts, data visualizations) and reach audiences via multiple channels (website, mobile app, newsletters, social media). Business models transformed from advertising-based to subscription-based, and we think of our journalism not just as content and information, but also as news products.

It's a brave new world where we have to discover new best practices and build new infrastructure through experimentation and collaboration. The old factory model was out; projects were in.

This transformation is reflected in my own career trajectory. After a series of reporting and editing roles, I became the *Financial Times'* Special Projects Editor in 2016. In my current job as New Formats Editor at *The Wall Street Journal*, I work with product, sales and marketing colleagues to devise and execute projects that grow our newsletter and ranking portfolios.

Unfortunately, newsrooms are not hotbeds of project management expertise. News organisations don't have a tradition of hiring professional project managers. Journalists have



Project management skills are critical to the continued survival of the news industry

an ingrained faith in their ability to 'wing it', which makes them inclined to see project planning as a burden and a waste of time. The traditional divide between editorial and business units – intended to preserve editorial independence – also means that there often isn't a single senior-enough stakeholder to fully sponsor a project and secure buy-in and resources across departments.

Despite these challenges, better project management skills are critical to the continued survival of the news industry. Technological change continues apace (generative artificial

intelligence like ChatGPT introduces new threats and opportunities), while news organisations around the world face existential crises of falling trust and audience apathy, according to the Reuters Institute for the Study of Journalism's latest *Digital News Report*.

Robust project management skills can help newsrooms tackle these challenges by improving their ability to execute complex work that crosses multiple teams. But even more importantly, the project discipline, through prioritising documentation and reflection, improves the organisation's capacity to learn and grow.

This is why I worked with APM to write a newsroom project management guide for reporters and editors. Enterprising journalists are increasingly entering into project work because they want to make a bigger impact by doing something out of the ordinary, or because they see the need to bridge different teams to better meet audience needs. But there are no dedicated learning resources available that address the unique mix of challenges presented by project management in a newsroom context. This guide hopes to correct that.

"I've referenced many project management resources over the years, but this is the first guide I've found that centres on the newsroom experience," said Alexandra Smith, Audience Director at The 19th, an independent news organisation. "Our team didn't have to wade through jargon to grasp the tools provided, and have already tried out some of the strategies."

Download Robin's guide, *Project Management in Newsrooms*, published by APM, at bit.ly/3q8pYYp

Comment

Reaching for the stars

Martina Blake, Head of the Office for Project and Programme Management at the UK Space Agency, on why international collaboration makes for stronger projects



“If you can see it, you can be it.” It’s a simple quote that has inspired many women over the years to aim higher and reach for the stars. There is no better place to do that right now than the space sector.

The UK Space Agency was founded in 2010 and is at the heart of the growing space sector in the UK. It delivers on key ambitions set out in the UK’s National Space Strategy by catalysing investment into the space sector, delivering missions and capabilities, and championing the power of space to improve services across the economy and inspire the next generation. The UK Space Agency also manages the UK’s investments in, and membership of, the European Space Agency, an inter-governmental organisation independent of the EU.

Global partnerships

Having delivered complex and high-risk government major projects and programmes for 15 years, I jumped at the opportunity in 2021 to join the UK Space Agency. I now advise on its transformation into a successful delivery department and lead the project delivery profession and cadre of project and programme specialists. As you can imagine, delivering an infrastructure programme here in the UK can be a little different than delivering an international multi-lateral space mission such as Artemis, a mission that will land the first woman and first person of colour on the moon.

My role involves collaborating nationally across UK government and with the Infrastructure and Projects Authority to lead on the implementation of project and programme management policies, procedures and standards for the Agency. I also work globally in

partnership with international space agencies and industry to share best practice and create a shared understanding and alignment on how project and programme management operates within the space sector.

Creating a diverse community

One of those international partnerships is with Dr Mary Coan Skow, Strategic Evaluation Program Manager at NASA. She is responsible for strengthening NASA’s oversight and implementation of project and programme management policies, processes and best practice. Together we are immensely passionate about project and programme management and increasing equity, diversity and inclusion in the profession, and more broadly across the space sector.

Mary and I are both mentors and advocates for all genders across the profession and the space sector, helping people to achieve their goals. We both love creating a sense of community, networking and connecting people to bring together diverse individuals from various backgrounds.

A factory of discovery

NASA and the UK Space Agency have a history of international partnerships that have played a crucial role in advancing space exploration, scientific research and technological innovation. This not only fosters collaboration and the exchange of knowledge, but also enables countries to pool their expertise and resources to achieve common goals.

For example, the UK Space Agency and NASA have a partnership agreement for the Interstellar Mapping and Acceleration Probe

(IMAP). The agreement allows for Imperial College London to design and build a magnetometer called MAG, one of IMAP’s 10 instruments that will observe and map the Sun’s heliosphere – the volume of space filled with particles streaming out from the Sun, known as the solar wind – and study how it interacts with the local galactic neighbourhood beyond.

Another example is from the Astronomy Technology Centre in Edinburgh, which built one of the instruments on NASA’s James Webb Space Telescope. The production of the telescope generated technology not just for space science but also for ophthalmologists here on Earth, who are using it to help guide laser eye surgery. There are remarkable things happening across projects and programmes in the space sector which make it a factory of innovation and discovery.

More boundaries being pushed

The relationship between the UK Space Agency and NASA emphasises how diversity in talent and perspective fosters innovation, propelling both space exploration and the advancement of women in science and technology to new frontiers. The space sector is becoming a more diverse sector to work in, including NASA’s growing diverse pool of talent, and others like Rosemary Coogan, who recently became the UK’s third ever astronaut.

Women in all sectors around the globe continue to inspire and push boundaries to achieve what used to be the impossible. As Katherine Johnson, NASA’s ‘human computer’ providing pivotal calculations during the Mercury and Apollo missions, once said: “Women are capable of doing everything men are capable of doing.”

Comment

The rise of resilience: Three key lessons

Sara Ulrich, Resilience and Wargaming Expert at PA Consulting, on what project professionals should be doing right now to improve project resilience



Project management has never been easy. But for many, it's never felt quite so uncertain. It's an environment that means those involved in projects and programmes need to deliver not just project success, but project resilience: the ability to protect, detect, withstand, handle and recover from disruptive events. Our new survey *The Always-On Advantage: How transport leaders can embed and elevate resilience* found that 88% of leaders believe resilience is now a strategic imperative, but 79% also told us that sporadic, ad hoc responses to incidents and disruptions are no longer sufficient.

Instead, true resilience needs to be an always-on priority during good times and bad. This means project professionals need greater awareness of resilience-building projects within their organisation, stronger and more

permanent resilience in their own projects, and greater awareness of internal and external events that could jeopardise delivery.

Embedding and uplifting project resilience

The good news is that those involved in projects have improved their resilience levels over the past few years. While our research focused on transport modes across Europe, it indicates an uplift in resilience awareness and interest across projects and programmes of all types and across all sectors. Given the current climate and the strategic importance of resilience, it's now a

Our research indicates an uplift in resilience awareness and interest across projects of all types

key time for project managers to seize the learnings of the past few years and ensure they permanently root resilience in their projects and programmes. Our research identified three ways they can do this:

1 Embed a project resilience mindset

Project managers are the glue that organisations rely on to provide continuity during periods of change. They're also, based on the hard-fought battles of the past, the least likely to be susceptible to optimism bias. However, our research found that three-quarters of respondents believe the importance of resilience is already waning. Project managers have a key role to play in creating a permanent level of resilience, not just one that is activated on demand. A resilient project environment is one where

Comment

The view from Europe

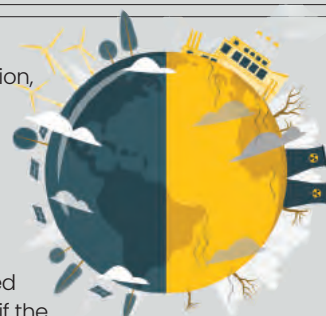
Lysan Drabon, Managing Director for PMI's Europe region, shares her thoughts on how the project profession can tackle the challenges society faces

The world has gone through a period of unprecedented change and there may be more to come. Organisations have had to learn to adapt quickly to remain competitive, and the changes needed to succeed in an increasingly uncertain world will continue to become apparent. There is not much we can be sure of in business at the moment – but we do know that we will need to be ready to adapt to change and meet challenges head on. These challenges include

climate change, digital transformation, remote/hybrid working and geopolitical threats.

Despite the importance of good project delivery in meeting these challenges successfully, McKinsey estimates that 70% of large-scale transformations fail. We need certified and experienced project managers if the transformations vital to society are to be successful. But our research indicates that there will be a shortage of 25 million skilled project managers by 2030.

Most companies already know that they need to develop their workforce if they are to succeed. The most successful organisations know that technical skills alone are not enough in today's workplace. Through talking to our global community of almost 700,000 people we have identified a number of skills that are common to the successful delivery of projects.



people feel psychologically safe to speak up, share ideas, ask questions and raise concerns without fear of negative repercussions.

2 Train your project resilience muscle

Always-on project resilience calls for speed and structure. Protocols, rules and frameworks can help keep resilience front-of-mind and to respond in a coordinated, flexible way. Any plans should be tested and stress-tested in wargaming exercises – making them real and testing absorption capacity against multiple incidents at key project and programme milestones or gates. Plans need to be in place across all time horizons, factoring in both traditional project risks and the wider array of evolving threats.

These immersive wargaming sessions are also a great way to focus on finding where investment is needed, and to test and leverage

An ecosystem understanding is needed to be able to see ‘the forest and the trees’

new technologies; for instance, the potential for artificial intelligence to help swiftly wade through large chunks of project- and risk-related data to inform the project resilience response.

3 Consider the project ecosystem

Project professionals are experts when it comes to oversight of project resilience within their domain. But often, wider organisational, market or external factors act as blockers. In today’s world, there’s a clear correlation between the complexity of a project or programme and the need to more widely coordinate with a range of partners, stakeholders and suppliers. An ecosystem understanding is needed to be able to see ‘the forest and the trees’.

To drive project resilience progress, project managers should not only be conscious of the context and demands of the needs of wider stakeholders and partners, but also actively engage with regulators, investors, customers and others fundamentally important to maintaining resilience.



Following these steps, project professionals can manage their projects so that they become more resilient, in doing so adding strength and value to the organisation. It starts with a mindset focused on resilience and conscious of the pressures that projects face. It continues with regular wargaming exercises, testing plans that train the project resilience muscle. Finally, resilience is embedded across the business with a lens on the wider organisation, ecosystem and external environment.

Explore the research and join the conversation at paconsulting.com/the-always-on-advantage

These are skills that can never be replicated by artificial intelligence and used to be considered ‘soft’ skills. Because of their importance, we call them ‘power skills’. They are communication, problem-solving, collaborative leadership and strategic thinking.

Why do they matter? Organisations that focus on power skills report very different success measures than those that don’t. Two-thirds of organisations that prioritise power skills report high project management maturity versus 32% of organisations that don’t prioritise power skills. Half of organisations that prioritise power skills report high organisational agility versus 16% of organisations that don’t prioritise power skills. Those are huge percentage differences and when you transform those percentages into monetary value you can imagine the vast sums that are being saved or wasted on large-scale transformation projects.

We need to be agile and adapt to change if we are to meet the societal and economic challenges we face.

Digital transformation, climate change and demographic shifts can all be tackled effectively, but they require large-scale transformation projects to be successful. Our research shows that to avoid the 70% failure rate calculated by McKinsey, we need a workforce that is properly equipped with project management skills – and not just technical skills, but the power skills that are proven to drive successful project delivery.

We also know that we are facing a global and local shortage of skilled project management professionals that could see the European economy lose out on around US\$83bn of GDP by 2030. That is too big an opportunity to miss. We need to tackle it by upskilling our workforce, creating a climate for life-long learning and encouraging women, young people, career returners and career changers to take on project management roles. With a changing future on the horizon, it is clear that this is a great time to be a project manager, so let’s make sure we are the best project managers we can be.

Professor Adam Boddison

Distinctively APM

What qualities make us the association we are?



Last year I was asked to open APM's Women in Project Management (WiPM) Conference. On the one hand, I felt privileged to be asked and, as the Chief Executive of APM, it felt like an appropriate thing to do, as I do this for a whole host of APM events. On the other hand, I confess I had some doubts.

While I knew the organising committee had invited me to open the conference, others might not know that. I was concerned about what kind of message it might send for a man to be opening the WiPM Conference. Would attendees at the event interpret this as failing to champion women by not having a female leader from APM open the event? It is not like we have a shortage: 50% of the APM leadership team are women, as are the vast majority of the elected APM Board of Trustees.

I shared my concerns with several people both on the committee and within the APM community more broadly. I spoke to my mentor and to my coach. The message that came back was unanimous. It is absolutely essential for the Chief Executive of APM to champion the important issue of the under-representation of women in the project profession, particularly in leadership roles.

The fact that I happen to be a man was seen by some as irrelevant and by others as an important advocacy opportunity. As one APM member put it to me: "The WiPM Conference started over 20+ years ago as a safe space for women, but we're well past that now. Now, it's about changing the

whole project profession to make it inclusive for all genders. We need your advocacy and we need men to come and be part of the conversation too."

The next WiPM Conference is happening shortly after this issue of *Project* goes to print, so



The thoughtfulness, warmth and reflexivity that come from human interaction should not be underestimated

I am taking this opportunity to congratulate the WiPM committee for the valuable work they have done over many years. I want to highlight the role that APM is playing to support career development at every stage so that all project professionals can achieve their career ambitions. Whether that be to secure a specialist role or a leadership role, APM is a vehicle to support your career advancement.

Returning to the theme of gender equality (and indeed diversity, equity, inclusion and belonging more broadly), one of the areas we have been focusing on at APM is language

and terminology. It is so easy to inadvertently use words or phrases that are loaded with historical interpretation or inherently biased. For example, I recently watched the musical *Six* with my family, which tells the stories of the six wives of King Henry VIII from their perspectives.

They make the point that 'history' is too often limited to 'his-story', and my 12-year-old daughter rightly championed the need for 'her-story' to be just as important. It made me reflect on the expression 'project management' and whether the use of 'man' in this context has a gender bias. As it happens, I tend to refer to 'project professionals' more often than not, but it's certainly given me food for thought.

What I do know for certain is that professional bodies and membership associations have an important role to play in shaping an inclusive operating environment for their respective professions. I sometimes hear discussions about whether professional bodies and membership associations will be needed in the future given advances in artificial intelligence and more access to information than ever before. The reality is that they will be needed more than ever. The thoughtfulness, warmth and reflexivity that come from human interaction should not be underestimated. These qualities are abundant within the APM community. These qualities make us 'distinctively APM'.

Professor Adam Boddison
is Chief Executive of APM

Matthew Johnson, Head of Communications, APM



APM recently launched its Future Lives and Landscapes campaign. The campaign is exploring the current and future environment for projects and programmes that are creating social benefits in the UK. It also considers how the profession needs to adapt to continue delivering change that improves people's lives. *Project* spoke with APM's Head of Communications, Matthew Johnson, to find out more.

Q What is Future Lives and Landscapes about?

A The power of projects is in their ability to drive change that improves people's lives. But the project profession has challenges of its own if it's to meet society's evolving needs. Future Lives and Landscapes is about exploring the current picture for delivery of projects intended to deliver a social benefit. Do the people delivering these projects have the funding, skills and resource they need to do so successfully? Our research into this shows the regional differences that exist across the UK. The findings can be seen on the campaign's web page.

Q What is it trying to achieve?

A Identifying a problem is only ever half the picture. We also need to offer solutions and make sure people have resources that will help them take any steps they may need to. It's not just project and programme managers either; those responsible for recruitment and budget decisions that affect project teams must understand the importance of having enough people – with the right skills – to enable these 'social value' projects to succeed. Over the course of the campaign, APM will be working with academics and conducting research into the future of the project profession. This insight will be shared with our members, the wider project community and government representatives to highlight the need to invest in projects that will benefit society.

Q When most people think about social benefits, they probably think about healthcare or environmental projects. Is this campaign relevant to people who work on other types of project?

A Definitely! The campaign's definition of a 'social value' project is one that will help people live a longer life, a more fulfilling life, improve their living standards, improve their well-being, enhance social equality or reduce geographic inequality. Looked at through this lens, all projects are capable of delivering an element of social value, even where it might not seem obvious. For example, a new road might reduce air pollution by easing congestion and shortening people's journey time. A new manufacturing project might create local jobs and provide an economic boost to communities. Our call to project professionals and business leaders is to ensure their teams/organisations have the knowledge and resources they need to deliver social mobility over the long term, and to consider the social value of a project at its outset.



You can read more about the Future Lives and Landscapes campaign on the APM website at bit.ly/APMFuture

BREAKING DOWN BARRIERS

THERE IS A DEARTH OF FEMALE PROJECT PROFESSIONALS IN CONSTRUCTION. PART OF THE REASON IS THE GENDER STEREOTYPE THAT CONSTRUCTION IS THE PRESERVE OF MEN. ONE CAMPAIGN AIMS TO CHANGE THINGS. EMMA DE VITA REPORTS

The **She Builds UK** photography project is the brainchild of Neil Perry, a photographer specialising in architecture and the built environment, who was prompted by a chat with his seven-year-old daughter one afternoon, who told him that girls couldn't be builders, because only men are builders.

Perry decided to do something about this persistent stereotype and embarked on a portrait photography project with the aim of inspiring females of all ages to consider a career in the construction industry. "By celebrating a diverse group of women who already work in the industry and bringing them into the spotlight, I hope to create role models that younger girls and women can be inspired by," Perry explains.

Construction project manager Anita Suji, Regional Director at consultancy

Aecom, caught wind of Perry's work last year. "I wanted to change the perception of the type of people who work on the Aecom project management team," she says, "and this was a way of doing so industry wide." Only 15% of the construction workforce is female, according to the Office for

"There are some parts of the industry that aren't used to seeing a woman leading a project. Sometimes women have to work a lot harder to get to the same position as men"

National Statistics. Suji volunteered to be photographed for Perry's project and ended up offering her project management expertise to help him expand it.

The project now has over 60 female volunteers signed up. Participants who were photographed include architects, engineers, project managers, planners and urban designers. Here, we feature the project professionals. While one objective of the project is to bust the stereotype that women don't work in construction through sharing their portraits and career stories, another is outreach to schools to make clear to girls that careers in construction are open to them. So far, 200 schools have registered an interest in having volunteers come and speak to them.

"When I became a project manager, that's when I started to find it quite difficult being a woman in the construction industry because there are some parts of the industry that aren't used to seeing a woman leading a project," Suji says. "Sometimes women have to work a lot harder to get to the same position as men."

Suji's fellow **She Builds UK** co-founder is Marwa El-Sheemy, Diversity and Inclusion Project Manager at Bechtel. El-Sheemy is a chartered civil engineer who moved into project management and has been in the construction industry for 13 years, having joined Bechtel on its graduate programme. Her first assignment as a project manager was five years ago, working on HS2. "There have definitely been situations where it's been tough and I feel like I've had to be →



PORTRAIT PHOTOGRAPHY: NEIL PERRY

Anita Suji

Marwa El-Sheemy

**Yaeger Irwin, Founder,
Bloom Project Management**

Being involved from a project's concept then throughout its delivery and seeing it complete is very satisfying. Within all of our projects now, we are also increasingly being given the opportunity to make sustainable inputs for the environment and socio-economic environment that will leave a legacy for the future.

Being underestimated can be a challenge. Being a young female in a male-dominated industry, I have experienced others' unconscious bias in assuming I don't have the knowledge or ability to handle tough situations or characters. Women are phenomenal. We have the capacity to take on extreme amounts, be it with a family or not. During the time of senior management, women are also going through health changes and they need the support, flexibility and equality to continue to deliver.

Women should be valued financially as much as men – there is still a divide here. If a woman knows her worth she should not continue to work for less – this needs to be recognised and be balanced alongside flexibility. There are many ways of working and the world is changing – we should continue to embrace this change to keep women in senior positions.



my own cheerleader,” she says, extolling the virtues of having a close network of female colleagues who are in the industry.

El-Sheemy has three young children, including two-year-old twins. “When I was pregnant with my twins, people said: ‘You’re going to want to take your foot off the pedal.’ That really bothered me because people assume you don’t want particular roles because you have a young family, and I feel like I’ve always had to say I’m still interested in my career. Bechtel has been great in helping me find a role that works for me.”

El-Sheemy is tasked with helping to enhance culture and belonging at Bechtel. “It’s not going to be an overnight thing. It is only with being more intentional with our actions that we will drive a change with diversity, inclusion and equity in the industry. Building an inclusive culture is key in achieving our diversity goals and it is vital that all organisations

“People assume you don’t want particular roles because you have a young family, and I feel like I’ve always had to say I’m still interested in my career”

ensure alignment from head offices to projects, from recruitment to retention and culture.”

She got involved in She Builds after a lightbulb moment when she realised that the number of women in the applicant pool for jobs was so low. “I felt the need to start thinking about the bigger picture, outside of Bechtel,” she explains. “There are lots of people doing things separately and so it makes sense to work collectively to make a real change. The risk is that, if people aren’t working collaboratively, we won’t move the dial. It needs everyone to make a change.”

Project manager Caroline Ojo, Chair of APM’s Women in Project Management Specific Interest Group, agrees that having the right project culture is key. “It is only by increasing the representation of women in project management that we can create a culture that values competence, skills and performance over gender, breaking down traditional barriers and fostering a fairer workplace for all,” she says.

“Having more women represented increases the diversity of thoughts and cancels out the bias. By advocating for more women to join the project management profession, we are encouraging new perspectives and solutions to complex challenges in the industry, which ultimately leads to improved project outcomes and higher efficiency.”

To get involved or find out more, visit shebuilds.uk/get-involved



Lih-Ling Highe, Senior Project Manager, Bechtel

When I was a child, I wanted to be an astronaut, probably driven by a natural curiosity and a need to understand how things work. I love problem-solving and delivering solutions to big, complex problems. That and working with other collaborative and innovative people makes so much sense, having been an engineer in construction.

As a woman there are some challenges. For example, being a minority in the room is an obvious one, but occasionally we are the majority in the room, so the demographic has seen some shifts over the years. If you like resolving issues, working in teams and being part of something big, give construction a go!



**Katie Cardwell, Project Manager,
Wates Construction**

I have worked in the construction industry for 10 years, having studied civil engineering at university. I have worked on a wide range of projects, from large-scale pharmaceuticals to high-rise residential apartments. I really enjoy the dynamic, ever-evolving nature of the industry. Every day has a different challenge to solve and there are lots of opportunities to meet and work in a variety of teams. Also, it's not all hard hats and high-vis vests. From design, sustainability and engineering, to surveying and operations, there will be a role that suits you.

Don't be afraid to speak up and be confident. Diversity in teams is so important to having new ideas, creating a positive work culture and ultimately delivering successful projects. It's vital to be willing to get involved, push yourself out of your comfort zone and ask questions. Understanding the full functionality of the entire team – where they find their success, and what their pain points are – is the best way to be a successful leader.

**Celia Jenkins, Graduate Project Manager,
Aecom**

The power that those operating in the construction industry have, to ultimately leave a mark on civilisation, has always been exciting for me and I wanted to be a part of this change. I wanted to see a project come alive from the drawing board and be able to say: 'I did this.'

There are times when you are the only woman in the room or on site. Standing up for yourself, challenging someone, particularly if they are male, and having the confidence to speak up are all incredibly difficult. This is something I believe women face at all stages of their career, not just early on like me. Whether it be joining the industry or changing industry, women have the power to reshape the profession.

Remain true to yourself – utilise your characteristics, skill set and personal qualities to shape your own leadership style to guide your project team to success. Women approach situations differently to men and have an alternative perspective, which can be advantageous to a career in project management and should be celebrated. Inclusion needs to be ingrained in company culture industry-wide.





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Project Management

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Ed Watson ChPP



Because when projects
succeed, society benefits

Lina Slimpi, Project Co-ordinator, HDR

Being a woman in the construction industry is not always easy – especially as a young professional. You are likely to feel like your knowledge and opinions do not carry the same weight as your male counterparts. The lack of women in the industry is also a big challenge, as it can lead to both unwanted treatment from men and also feelings of isolation.

Although there have been promising developments for women in project management, much more still needs to be done. I believe a big part of changing existing stereotypes and allowing women to accelerate their careers can come from supporting and empowering each other. Women in project management need to create and promote networking opportunities or even develop mentoring programmes to build strong networks of successful professionals and inspire each other.

I would advise women starting their project management career now to not be afraid to show their personality and capitalise on their strengths. Society has made us believe being talkative, soft or even pleasant is not appropriate in the work environment, and that women should 'toughen up' to be effective professionals, but I don't find this to be true at all. On the contrary, I think these qualities allow women to build effective communication, which is a huge part of what makes a project manager successful.



Hannah Stotter, Senior Project Manager, Bechtel

The industry is full of interesting people and unique challenges, and this is what I love about it. My career has not been anything like I expected, but it has lived up to the expectation of being able to play a part in projects that will change cities and improve lives.

Being a woman in this male-dominated industry has its challenges. However, it is also full of allies and it feels great knowing that we have a real opportunity to influence change within it. Throughout my career I have been fortunate enough to have worked with some incredibly supportive and inspiring women who continuously raise up the woman around them. So, it is a formidable network, albeit a small one, which has helped me forge my career so far.

We need to stop expecting women to behave like their male counterparts and then criticising them when they do. Industries are generally not as inclusive as they need to be. Therefore, while we ask woman and other minority groups to be part of the change to a more inclusive environment, it is important that we promote the strengths that they bring to their teams.



**Winnie Yiu, Project Manager,
Bechtel**

I'm a design manager/project manager and have worked in a number of different areas in the industry, including water supply, flood risk, oil and gas, security, nuclear and rail. Working in construction allows me to be part of projects with real tangible results that have lasting impacts on people and the environment. This could be providing shelter, water and power or transport systems, flood defences and green space regeneration.

The industry needs a wide range of skills and not everyone is suited to doing detailed technical calculations. While a technical background is certainly helpful, my key skills are being able to see and effectively communicate interfaces and shape the technical detail, cost, programme and resources to deliver a real-world project.

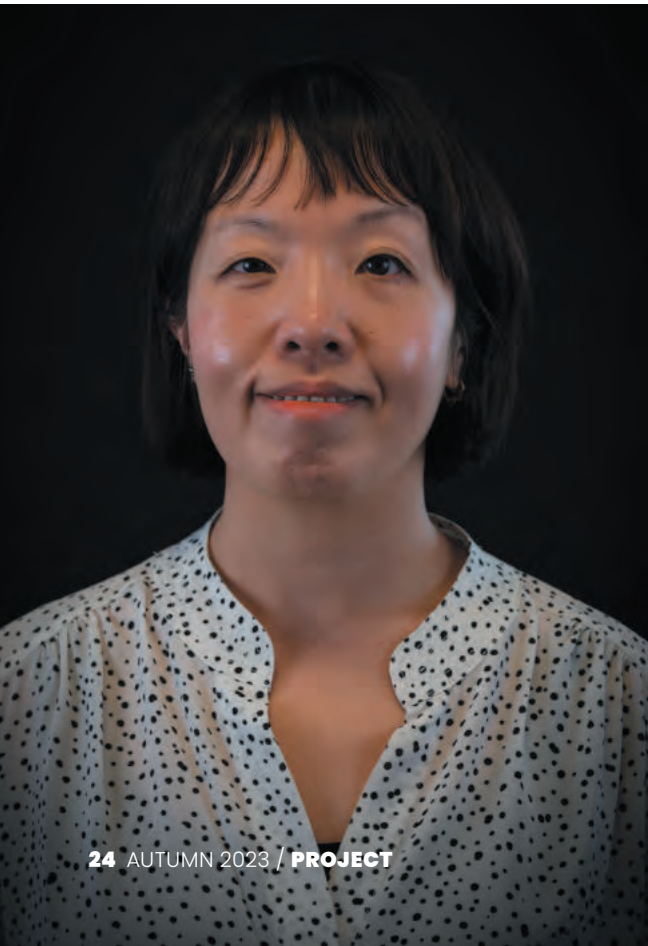
Women starting in the industry still face some older, established prejudices that they need to work a bit harder to overcome compared to their male counterparts. Gain as much practical knowledge of the industry as possible, including the different types of disciplines and roles, through placements or site visits.



**Kelley Byars, Associate Director, Project
Management, Turner & Townsend**

My excitement about the construction industry started at university with an undergraduate degree in architecture and my master's degree in engineering, construction management. I started working for a large general contractor where I had the opportunity to work on exciting construction projects from biotech to animation studios, from large technical firms in Silicon Valley to financial institution world headquarters.

I think one of the challenges in getting more women into the industry is exposing the opportunities in the industry earlier in education. I wouldn't have even known my role existed without the help of some of my professors and mentors along the way. There isn't one pathway to work in construction. Everyone brings a unique perspective and my hope is that they have the opportunity to be heard. There is no better feeling than passing by a project that I've helped build.



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Beth West

Emma De Vita meets the CEO of East West Rail, who sees the project as part of a bigger picture to grow the UK's economy and improve peoples' lives

Beth West was born and raised in Detroit, Michigan, the historic centre of the US motor industry and the birthplace of Motown. Diana Ross, Francis Ford Coppola and Aretha Franklin are famous Detroiters, and as West explains, the city's people are known for their plain talking (she tells me her spiritual home here in the UK is Yorkshire, where she appreciates the directness of the locals). West comes from a family of women with an adventurous spirit, and her career has taken her around the world. The cricket-loving Anglophile now finds herself CEO of the East West Rail (EWR) project, which she joined in April 2022.

EWR is a railway line that, through three phases, will draw an arc between Oxford and Cambridge, via Milton Keynes and Bedford, connecting two globally important life sciences and tech clusters. The ultimate aim, explains West, is to not only improve the connectivity across this part of England, but to create an economic growth corridor that will connect businesses and people.

WILL ANILOTT

Phase One – a line between Oxford and Bicester – is up and running, while a connection between Bicester and Bletchley is currently under construction by a Network Rail alliance. The EWR company was set up in 2018 “to be something different from Network Rail and to really look at what could be done differently in the rail sector”, explains West. She’s talking about “reconnecting train and track” to make cost efficiencies and allow faster delivery of rail infrastructure.

The business case for the link from Oxford to Bletchley has been made, while a community-run line between Bletchley and Bedford is to be upgraded. That leaves a new line to be built between Bedford and Cambridge, which is charging ahead, says West, despite a couple of “hiccoughs” along the way, including a strategic review in 2021, and not forgetting a period of rapidly changing governments.

In May this year, following support from Rishi Sunak’s government, EWR announced its preferred route, allowing it to move towards submitting its Development Consent Order after the next general election (to be held no later than January 2025). Although the project currently enjoys cross-party support, West acknowledges the disruption politics can bring, hence her keenness “to make sure we deliver as quickly as we possibly can so we can minimise the number of election cycles”.

West says there was deep uncertainty about the future of the project when she joined. “We weren’t sure if we were going to have a project. My first 100 days coincided with the prime minister [Boris Johnson] resigning.” She rallied support by reiterating the project’s importance as a vehicle to create economic growth.

“Infrastructure is there to enable people to live their lives; and the better we provide it, the better that should help people’s lives”

The Big Interview

The line will provide a new commuter belt around Cambridge and link clusters of tech and life sciences businesses together with manufacturers and other industries across – and between – the cities in its arc.

West was drawn to the project for its big-picture benefits. “The reason I’ve been in infrastructure is because I care about what infrastructure does for people. It’s not that I get really excited about roads and public transport... infrastructure is there to enable people to live their lives; and the better we provide our infrastructure, the better that should help people’s lives,” she says.

Although the project is big, it’s not huge, which appeals to West. “It allows us to do some stuff that’s different from other big infrastructure projects,” she says. They have the freedom to engage with local communities – how will passengers travel to the stations? Will there be cycle storage? What about bus connectivity? As West says: “It’s talking to people and really understanding what they want that will create a better outcome because it’s been designed for the people who are going to use it.” It is joined-up thinking at its best.

But West also wants to use the project to experiment with better ways of delivery. “We might be able to try some things out that might be a little bit riskier – not from a safety perspective, but from a delivery perspective,” she says excitedly. “It’s an opportunity to trial some stuff in a relatively controlled environment to see if we can actually do things more cost-effectively.” Up for consideration is how the project can be designed so that less earth is moved. Civil engineering is one of the project’s biggest costs, not only financially but environmentally. “We’ve got a climate emergency – how do we get those benefits with the least amount of impact? Because that’s a winner all round,” she says.

West’s approach to the project is going to be “full-on matrix”, with multidisciplinary teams working from the outset to make sure the scope is right from every perspective, but diversity of perspectives can be hard to work with, she says. “To get to those good outcomes, we really have to listen to different voices. There might be things you don’t want to hear. We really need to lean into that

difference because that is how we get to better, faster outcomes. But it takes us longer to get there at the beginning.”

West joined EWR from City of London Corporation’s Open Spaces division, where she was Interim Director, having previously been the Regional South Managing Director at Balfour Beatty. Before that, she had worked as Commercial Director at HS2 and spent nine years at Transport for London. Her career has zigzagged across the public and private sectors, including stints in banking at Société Générale and commercial roles at Landsec and Thames Water. Her first job after university was at Capitol Hill, where she worked as a Staff Assistant at the US House of Representatives before pursuing an interest in development, studying at Bologna University then teaching English in the former Yugoslavia the summer after.

“I like to think that I take everything and put it in my backpack and bring it with me,” she says with a smile. “Every experience is a useful experience, even if it’s not directly applicable. What I took with me from my banking days is that there’s no upside in debt. It’s all about how you manage your downside risk. I tend to approach everything with, ‘OK, what do I want to achieve and what are my risks of not achieving that?’ And then I try to create a solution that is suitable.”

Unsurprisingly, money is the biggest challenge the EWR project faces. “The economy, as we all know, hasn’t been in a great shape. This is a growth project but there are still a lot of other challenging commitments across the board that

“We’ve got a climate emergency – how do we get those benefits with the least amount of impact?”

the government’s going to have to face. It’s trying to get into that prioritisation because... to get to that growth in 10 years’ time, we need to put in the investment now... we’re going to have to continue to make our case even if we do have great cross-party support.”

BETH’S CV HIGHLIGHTS

Apr 2022–present CEO, East West Railway Company
2021–2022 Interim Director, Open Spaces, City of London Corporation
2020–2021 MD, Regional South, UK Construction Services, Balfour Beatty
2017–2019 Head of Development, London Portfolio, Landsec
2012–2017 Commercial Director, HS2 Ltd
2012 Head of Commercial, Thames Tunnel, Thames Water
1997–2003 Transport for London and London Underground
1995–1997 Société Générale, Credit Suisse and US House of Representatives

When it comes to leadership, West says, “it’s about being who I am. There is a perception of what a leader is supposed to be like, that alpha dog type who is assertive, aggressive and super outgoing.” She disagrees: “You don’t have to shout at people. You don’t have to be that kind of person. You find your own leadership style... People do find me approachable and they will tell me stuff and that’s how we get things done,” she reflects.

How does she think being a woman has impacted her career? “It’s made a huge amount of difference because I’ve always worked in male-dominated industries. One of the things from the outset is that I knew that I was going to be memorable irrespective of what I did. When I was in New York, it was just being a young woman. When I moved to London, it was being a woman with this accent. I didn’t want to be memorable for the wrong reasons, so I wanted to be the cleverest person in the room.

“Because I’m so noticeable, I’ve probably been bolder than I might have otherwise been because my head was already above the parapet. So I might as well say what I think – you’re halfway there, so you might as well be all the way there. It’s emboldened me to be more outspoken than I might have been otherwise. Not that I’m shy!”

West knows she is a product of where she was brought up. “There’s a certain

Making meaningful connections



“There’s a certain amount of American optimism that runs through me... if you just work hard enough, you sort it out”

amount of American optimism that runs through me, maybe it’s confidence or that you know if you just work hard enough, you sort it out,” she says. An only child, West was raised in a family of female explorers. “All the women in my mum’s family are massive adventurers. They all travel like crazy people,” she says. Her own adventuring gene was switched on by watching *The Sound of Music* as a child; after studying the EU at Bologna, she taught English to refugees in Croatia.

WILL AMIOT

“After being in a country at war, I decided I wanted to work in economic development... I came across infrastructure and I worked in project finance for about eight years because infrastructure doesn’t have any cultural values. It is just a thing that allows you to live your life better.” She spent six years in New York and then moved to London. “I decided after a couple of years in banking that I wanted to go on to the client side, and that’s when I moved into transport.” West has enjoyed a zigzag career, following opportunities that she decides are interesting and that allow her to learn.

Outside of work, she volunteers with her two sons’ cricket club, where she lives in Wimbledon. “I don’t do a lot, but it’s

the small things that you do and the fact that you’re doing some stuff that helps some people get into a sport.” It’s the small stuff, the everyday relationships, that West appreciates. “I was a very academic, ambitious person and I thought, especially during my banking days, that it’s just about the work. And it’s not just about the work, it’s about how you have good relationships. How do you use those relationships to deliver good things?”

Listen to Beth West’s interview with APM Podcast at bit.ly/44jCLVD





ANTONIO NIETO-RODRIGUEZ AND RICARDO VARGAS CONSIDER THE PRACTICAL IMPLICATIONS OF ARTIFICIAL INTELLIGENCE FOR PROJECT MANAGEMENT

As a senior project sponsor, you oversee a complex portfolio of projects with a combined budget exceeding US\$50m. One of these is a high-stakes transformation project to modernise your company's production facilities. As you sit down for the weekly status update meeting, you're greeted by a bot driven by artificial intelligence (AI). It seamlessly synthesises information from multiple projects into actionable insights, providing a clear snapshot of your entire project portfolio.

The AI system presents a health check of your transformation project. A clear visual representation of progress against project deliverables and timelines greets your eyes, along with a comprehensive forecast of upcoming tasks and associated risks. One risk, a crucial piece of equipment with a 60% probability of failure in the next three months, stands out. If ignored, it could result in project delays costing upwards of US\$500,000.

This risk is even more critical because two other projects in your portfolio rely on the same equipment. The AI system takes this interdependency into account and suggests a proactive solution. A preventive maintenance schedule, driven by machine-learning analysis of maintenance

logs and equipment performance data, could reduce the risk of equipment failure to less than 5% with minimal disruption to all projects' timelines.

Simultaneously, the AI bot anticipates a 20% spike in resource demand across your portfolio in the next quarter. This is partly due to the transformation project entering a critical phase and two other projects ramping up.

However, the AI bot doesn't just present a problem – it also offers a solution. By reallocating resources from less critical tasks and adjusting timelines, it proposes a plan that could meet the increased demand without overstretching your resources or inflating your budget. Implementing this plan could save US\$1m across the portfolio, avoiding last-minute resource hiring or expensive rush charges.

These AI-powered, data-driven insights put you not just one but several steps ahead, enabling you to anticipate and manage complex interdependencies and resource challenges across multiple projects before they escalate into crises.

How are organisations using AI now?

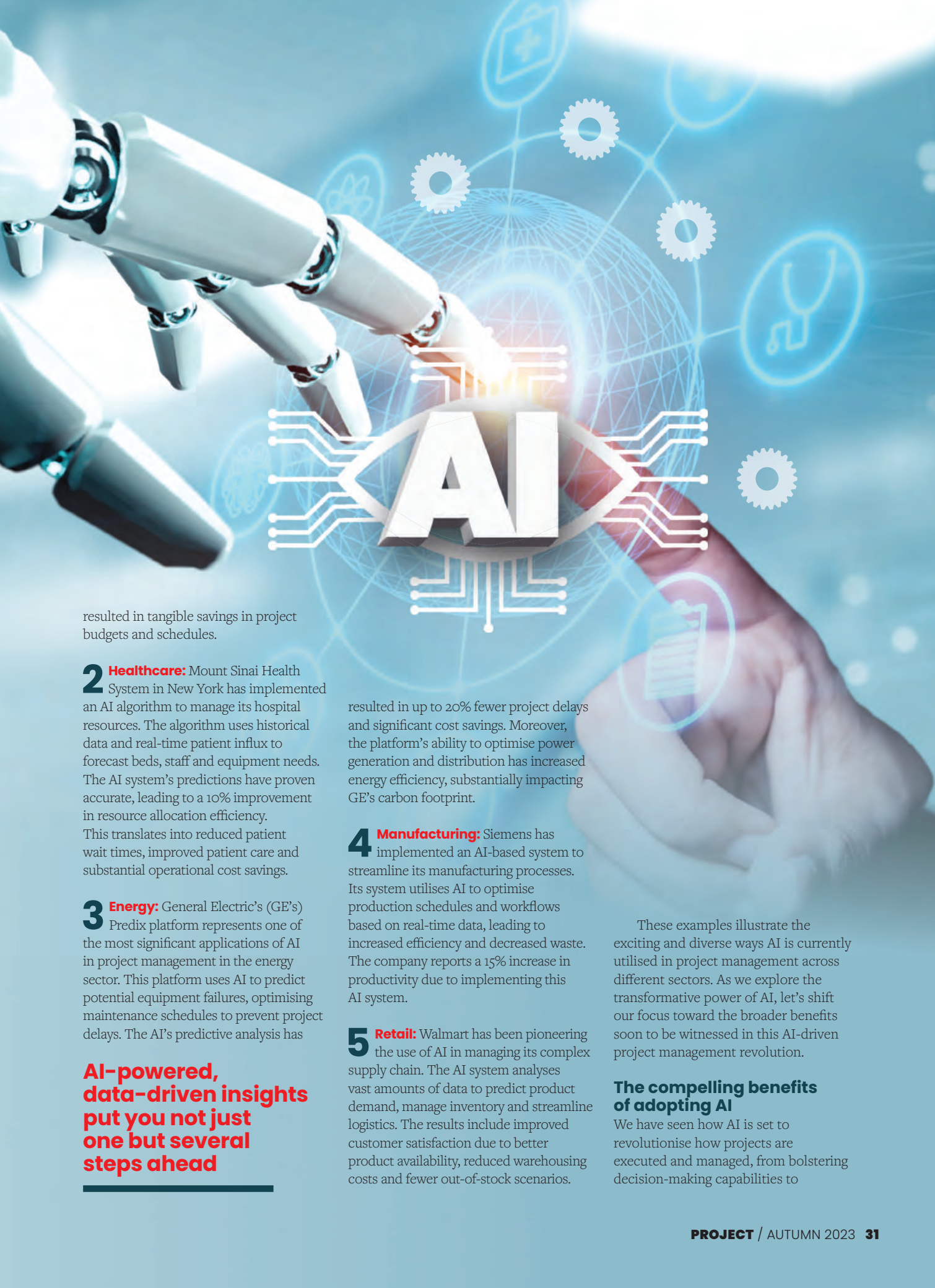
This scenario is no longer a future dream. AI is no longer a distant concept confined to sci-fi movies or elite tech

companies. Today, some organisations are already leveraging AI to navigate their unique project management challenges. AI-powered tools address issues from resource allocation to risk mitigation, ushering in a new era of efficiency and effectiveness.

Here are some examples that demonstrate the transformative power of AI across different sectors:

1 Construction: Autodesk and DeWalt have teamed up to create an AI-driven platform for construction sites. Their system uses image recognition to monitor construction sites, identify safety hazards and ensure project compliance. The result is a decrease in safety incidents by up to 5%, potentially saving hundreds of thousands of dollars in safety-related costs. Additionally, using machine-learning algorithms to analyse project schedules, the system predicts potential delays, reducing them by up to 20%. This predictive capability has

AI: BEYOND THE BUZZWORD



resulted in tangible savings in project budgets and schedules.

2 Healthcare: Mount Sinai Health System in New York has implemented an AI algorithm to manage its hospital resources. The algorithm uses historical data and real-time patient influx to forecast beds, staff and equipment needs. The AI system's predictions have proven accurate, leading to a 10% improvement in resource allocation efficiency. This translates into reduced patient wait times, improved patient care and substantial operational cost savings.

3 Energy: General Electric's (GE's) Predix platform represents one of the most significant applications of AI in project management in the energy sector. This platform uses AI to predict potential equipment failures, optimising maintenance schedules to prevent project delays. The AI's predictive analysis has

AI-powered, data-driven insights put you not just one but several steps ahead

resulted in up to 20% fewer project delays and significant cost savings. Moreover, the platform's ability to optimise power generation and distribution has increased energy efficiency, substantially impacting GE's carbon footprint.

4 Manufacturing: Siemens has implemented an AI-based system to streamline its manufacturing processes. Its system utilises AI to optimise production schedules and workflows based on real-time data, leading to increased efficiency and decreased waste. The company reports a 15% increase in productivity due to implementing this AI system.

5 Retail: Walmart has been pioneering the use of AI in managing its complex supply chain. The AI system analyses vast amounts of data to predict product demand, manage inventory and streamline logistics. The results include improved customer satisfaction due to better product availability, reduced warehousing costs and fewer out-of-stock scenarios.

These examples illustrate the exciting and diverse ways AI is currently utilised in project management across different sectors. As we explore the transformative power of AI, let's shift our focus toward the broader benefits soon to be witnessed in this AI-driven project management revolution.

The compelling benefits of adopting AI

We have seen how AI is set to revolutionise how projects are executed and managed, from bolstering decision-making capabilities to

optimising resource allocation. Let's now look deeper into these benefits, with concrete examples and data, underscoring the potential and tangible value that AI can bring to the project management field.

1 Enhanced decision-making:

AI's ability to handle vast amounts of data at high speeds allows for real-time insights and predictive analyses. Accenture reported that 79% of executives agree that AI is instrumental in creating new insights and better decision-making processes. For instance, Rolls-Royce uses AI to analyse data from its aeroplane engines, enabling it to anticipate problems and make informed decisions that could save millions in potential repairs and downtime.

2 Increased efficiency:

AI's automation capabilities can handle routine tasks and free up team members to focus on more strategic tasks. According to a report by McKinsey, AI has the potential to automate about 50% of the activities employees are paid to do, leading to significant time and cost savings. In project management, IBM has been leveraging its AI platform, Watson, to automate routine tasks and project monitoring activities. By employing natural language processing to handle communication and documentation, and machine-learning algorithms for risk prediction and task prioritisation, Watson has reportedly improved productivity by up to 20%.

3 Improved risk management:

AI's predictive capabilities can identify potential risks ahead of time, allowing for proactive risk mitigation. A report by PwC suggested that AI could reduce project cost overruns by up to 10%.

In a different application, KPMG's AI platform, KPMG Clara, uses machine learning to perform risk assessments. This helps identify financial irregularities and other potential risks before they escalate, allowing teams to mitigate them and proactively reduce project overruns.



4 Optimised resource allocation:

AI can forecast future resource needs, leading to optimal resource allocation. An illustrative example can be found in the construction sector, where ALICE Technologies has developed an AI-driven platform. This platform uses AI to plan, schedule and manage complex construction projects, predicting the resources needed for different tasks and phases of construction. This predictive capability enables more effective resource allocation, with users reporting efficiency improvements in resource deployment of up to 15%.

5 Enhanced stakeholder communication:

AI can generate tailored, up-to-date reports for different stakeholders. This capability enhances transparency and communication, significantly improving stakeholder satisfaction and trust. Microsoft's Project Cortex, for instance, uses AI to provide

personalised, timely updates to team members, improving communication and collaboration.

6 Learning and continuous improvement:

AI's ability to learn from past projects and continuously improve future performance promises a step change in project outcomes. AI-powered project management tool ClickUp has a feature that learns from past task estimates to predict future task durations, enabling better planning and scheduling.

If we add up all these potential savings and improvements, we could estimate that implementing AI in project management could lead to a 50% overall improvement in project efficiency and cost reduction. A portfolio of €1bn means potential savings and efficiencies worth €500m! It's important to note that this is a highly simplified assumption.

These potential savings underscore the tremendous potential AI offers in the realm of project management



Actual savings and efficiencies would depend on numerous factors, including how effectively the AI is implemented, the nature of the projects and the current operational efficiency of the company.

These potential savings underscore the tremendous potential AI offers in the realm of project management. With that said, let's consider the hurdles that come with implementing AI.

Overcoming the challenges

Organisations often encounter hurdles such as data privacy and security, ethical considerations, integration with existing systems, lack of skilled personnel and resistance to change. Here's a road map to these challenges:

1 Data privacy and security:

Given that AI relies heavily on data, ensuring data privacy and security is paramount. Organisations should adopt robust cybersecurity measures, including encryption and secure networks, and adhere to data privacy regulations like the EU's General Data Protection Regulation. Regular audits and data protection impact assessments should be conducted to ensure compliance. Furthermore, AI applications should be

designed to minimise data collection and retention, aligning with the principles of Privacy by Design.

2 Ethical considerations:

AI should be used responsibly, considering ethical implications such as bias and transparency. Biased AI systems can lead to skewed outcomes and unfair practices. Organisations can develop an AI ethics policy and invest in bias-detection tools to ensure fairness. Moreover, AI systems should be designed to be explainable and transparent, helping stakeholders understand how AI makes decisions.

3 Integration with existing systems:

Implementing AI in project management often requires significant changes to existing systems. This can be a complex and time-consuming process. Change management strategies should be employed to ensure smooth integration and user adoption. This can include training sessions, regular communication of benefits and staged implementation. Engaging a cross-functional AI implementation team that includes IT, project managers and end users can also facilitate a smoother integration process.

4 Lack of skilled personnel:

Implementing and managing AI systems requires specialised skills that may not be present in existing teams. Organisations can address this gap through training programmes to upskill their current workforce or by hiring AI specialists. Collaboration with universities or tech firms can also be a way to access AI expertise.

5 Resistance to change:

AI implementation often means a significant shift in workflows, which can lead to resistance among team members. Leaders can address this by fostering a culture of change, emphasising the benefits of AI, and involving team members in the implementation process. Providing adequate support during the transition is crucial, such as additional training or resources.

At a glance

Implementing AI marks a revolutionary shift. With AI, strategic decision-making reaches unprecedented accuracy and efficiency, as demonstrated by Rolls-Royce's engine maintenance or IBM's project monitoring with Watson.

The potential for a 50% increase in project efficiency and cost reduction, akin to the operational enhancements at Siemens or Walmart, could translate into hundreds of millions in savings for more extensive portfolios. These savings signal a significant shift in the value proposition of project management within organisations.

Moreover, AI propels project management into a strategic role within organisations, driving innovation and sustainable growth. As we've seen with GE's Predix platform or Mount Sinai Health System's resource management, AI is a potent tool for future-proofing organisations in an evolving world.

Adopting AI in project management is a critical step into a future of unparalleled efficiency, innovation and value creation. The question for organisations now is not whether to embrace this revolution, but how swiftly they can harness its immense potential.

Professor Antonio Nieto-Rodríguez is founder of the Strategy Implementation Institute and author of the *Harvard Business Review Project Management Handbook (2021)*. Professor Ricardo Vargas PhD is former Director for Infrastructure and Project Management at the UN and author of *Wiley's Project Management Next Generation (2022)*. Both are founders of PMOtto.ai. Download their latest research on the impact of AI in project management at bit.ly/3E8wa66

MENOPAUSE IN THE WORKPLACE

JENNY ROPER SPEAKS TO PROJECT PROFESSIONALS WHOSE LIFE HAS BEEN DISRUPTED BY THE PERIMENOPAUSE AND MENOPAUSE, AND COLLECTS THE BEST ADVICE TO SUPPORT THOSE AFFECTED SO THEY CAN CONTINUE TO THRIVE

Lauren Chiren had always been the sort of person who could hold lots of information in her head, rarely having to take notes. In her early 40s, life – including her career – was good. She was managing multiple projects and programmes in the regulatory and compliance space, then one day, mid-meeting, she found her throat was so tight with anxiety she could barely get any words out. She shrugged this off as a one-off at first, but then found herself upset at the most trivial things, questioning her own judgement at every turn. Chiren eventually left her job, believing the only possible explanation for her symptoms was early onset dementia.

Three months later Chiren was informed by her GP that she was in fact experiencing menopause. The doctor's exact words were "just the menopause", however – a huge understatement of what she'd been through. This inspired Chiren to do her bit in helping to change attitudes; she founded Women of a Certain Stage and now works with employers to create more supportive environments.

A huge brain drain

Certainly there is much work to be done. Research from the Chartered Institute of Personnel and Development (CIPD) shows only

a third of UK organisations have any kind of menopause support or policy framework in place. CIPD research also finds that 30% of menopausal women have experienced being unable to go into work because of their symptoms, with only one-quarter feeling able to tell their manager the real reason. Meanwhile, a 2021 report from 50Plus Choices Employers Taskforce found a quarter of women consider giving up work as a result of symptoms. This represents a huge brain drain given that those experiencing the menopause are typically between the ages of 45 and 55 – so often highly valuable, senior individuals.

The challenge as a senior project manager can feel particularly acute, confirms Rachel Jackson, Lead Planner at Anglo American. Jackson was with a different employer when she started to experience symptoms, and was slightly younger than average – with her menopause triggered at 38 by treatment for cancer. "Identity-wise it was quite challenging for me. It's: how do people perceive you now? A lot of the symptoms can be quite confidence-eroding; you can't remember someone's name, and you're having hot flushes." Jackson reports this felt particularly challenging given – as for many project professionals – the male-dominated nature of her industry. "The last thing you want to do is go to your line manager, who's invariably male, and say: I'm going through the menopause."

The peculiar stresses of project work

Another challenge somewhat particular to the world of project management is the regularity with which teams are formed and disbanded. This – in contrast to working environments where relationships have been forged over many years, with a person's track record as a safe pair of hands



firmly established – can make opening up even trickier, says Jackson.

The typically highly deadline-driven nature of the work is another challenge on top of this. Cathy Hastie was working as a Senior Project Manager at KPMG, specialising in HR transformation, when she hit the menopause. “It was a really pressurised job. You’re client-facing, you’ve got lots of responsibilities... I would have probably four or five projects running at any one time. It was just

overwhelming,” she says. Like many others, Hastie’s experiences spurred her to become self-employed and to found a workplace consultancy – Menopause Working – to improve the experience of others. She has now written a book of the same title and is a lecturer at the University of Derby.


So what can be done to better support those who are struggling? Plenty, apparently – even around those seemingly most insurmountable

challenges, such as the necessarily deadline-driven, multi-tasking dimensions of project work. In fact, the latter doesn’t have to be a necessary evil, feels Hastie. And re-examining the way this work is classically organised would benefit many, far beyond those experiencing menopause.

“There is a bit of a badge of honour around this: the more projects you juggle, the better you are. And that’s how we measure productivity,” says Hastie. “But actually that’s probably not delivering quality work. So let’s just take a step back. Rather than thinking about fixing

6 RATHER THAN THINKING ABOUT FIXING THE
WOMEN, WE NEED TO FIX THE ENVIRONMENT.
HOW ARE WE ALLOWING WOMEN TO THRIVE IN
AN ENVIRONMENT AND IS THAT THE BEST WAY? 9





the women, we need to fix the environment. How are we allocating work in a project environment and is this the best way?"

Jackson agrees that many deadlines are "unrealistic anyway" and it's now time that this kind of work be organised and managed better. Deadlines never need to be so specific that people can't work the part of the day that suits them best, she says. "For many, insomnia is a real challenge, so an 8am meeting won't be great. And maybe that person just needs the flexibility to start later in the morning and work into the evening."

Structural changes needed

Her sentiments are consistent with CIPD research conducted earlier this year among 2,000 employees, which found that, of all the things employers and managers can do to support people facing menopause, flexible working is by far the most helpful. Claire McCartney, Senior Resourcing and Inclusion Adviser, advises that flexible working should never pose an issue performance-wise if this performance is being managed intelligently, rather than based on time spent at a desk or in an office. A robust approach to performance management will also help project professionals navigate that knotty issue of how to respond when someone is suddenly – but probably temporarily – no longer quite at the 'top of their game'.

McCartney advises against having just one annual performance review in most scenarios – an approach that won't be effective for the majority of employees, never mind for project professionals who might have worked with several

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different projects and teams since their last review. "You need to have regular catch-ups to talk about performance, but also wellbeing, so that you're laying the foundations for people to be able to say if there are things impacting their performance," says McCartney.

Chiren adds that bonds between project teams have the potential to be even stronger than those enjoyed by 'regular colleagues' – it just takes some effort up front. "Doing a deep dive into getting to know your team members is highly valuable," she advises. "We used to have an away day at the start of all significant programmes. Often seen as a luxury, or as an additional unnecessary expense, it always paid dividends. It helped expedite bonds that surpassed any business-as-usual roles I had experienced in former careers."

Men as allies

Chiren is also heartened that progress is being made even within highly male-dominated arenas. "Since I began providing training and support to employers in 2014, I have seen a huge change," she reports. "I live in Bristol, well known for the engineering and aerospace industries, so many of my clients are in male-dominated organisations. And the

reality is men are eager to understand what is going on with the people in their life experiencing menopause. I will often have a man say to me after a session that it may have helped save his marriage. I had an apprentice share with me that he thought his mother hated him and he had left home. After hearing me talk, he called her after several years of silence."

Chiren's moving accounts provide a telling indication of the deep misunderstandings and fear that have historically surrounded menopause. Indeed, new research from Henley Business School and the University of Reading, which studied 2,993 articles in the main UK broadsheets and tabloids between 2010 and 2021 to explore how the British media represents menopause, particularly in a work context, found women to be typically portrayed as "the dangerous other, affected by physical and mental abnormalities".

There are many mass media depictions that can be called to mind in this vein. But also hitting television screens recently have been examples such as *Fleabag*, in which Kristin Scott Thomas's character declares the menopause the "most wonderful f***ing thing in the world... You're free! No longer a slave, no longer a machine with parts. You're just a person, in business."

Hastie reiterates the importance of such rare positive portrayals: "There's real drama around tens of thousands of women leaving the workplace, which is understandable and important to highlight. But at the same time it really reinforces the idea of this as a purely very negative phenomenon, when it doesn't have to be."

Organisations need to step up

Hopefully attitudes are starting to shift at a societal level, then. But there are still many organisations with no basic support in place. With the government at the start of this year rejecting calls for menopause to be made a protected characteristic – in line with a disability, or pregnancy and maternity, for example – confusion still reigns as to where this sits and employers' responsibility. But, even where this means an organisation hasn't yet turned its mind to the area, this doesn't stop managers being proactive, says Hastie.

"I'm not a massive fan of HR policies anyway," she says, pointing out that far more important is workplace culture and effective line management. For managers wanting to address this regardless of a lack of appetite organisationally, she advises there is plenty of information out there to use to educate themselves. Then it's about listening sensitively to exactly what someone needs. McCartney adds that it is important for managers to be aware of policies that might help someone, even if not badged by HR as specifically menopause related – reasonable adjustment policies, for example.

Help yourself

But what should individuals themselves do if neither HR nor manager support is forthcoming? Jackie Martin, Director of Education and Lifelong Learning at APM, has been fortunate in experiencing menopause while working at an organisation that, although it didn't already offer anything explicit in this space, was open to her suggestion of kickstarting more activity – including manager training, seminars with external speakers and menopause champions. Not everyone will be so lucky, she concedes.

As such, Martin's advice to project professionals struggling alone is that there is always help to be found somewhere: "Someone recently mentioned a local doctors' surgery that had set up a walk-in clinic – there's so much stuff starting." Unfortunately many women's experience is still not being

taken particularly seriously by their GP. Which is where work can offer a vital lifeline. "My advice would be to chat to a colleague whom you suspect is going through this too," says Martin. "Then you can also go to your organisation together if you want to make a request for something particular. Or failing that, whatever social media platform you use, there are loads of support groups. Just don't ever go through this on your own."

Hopefully, the days of women feeling they have no choice but to battle silently on are numbered. The imperative for them to be empowered to stay in work couldn't be clearer. "Menopause

typically only lasts five to 10 years, but once you've lost these women from the workforce, you've lost them," emphasises Jackson. "We're going to be working for longer because of the cost-of-living crisis and the retirement age increasing," adds Hastie – meaning the challenge is only going to grow for employers and managers keen to hang on to experienced, talented staff.

"It's about creating equity and not expecting those who go through menopause to don the proverbial corporate mask," concludes Chiren. "We must enable them to be seen and heard, fully supported – so they can continue to soar."

IT'S ABOUT RE-TING EQUITY AND NOT EXPECTING THOSE WHO GO THROUGH MENOPAUSE TO DON THE PROVERBIAL CORPORATE MASK

MANAGING THE MENOPAUSE: TOP TIPS FOR PROJECT PROFESSIONALS

- Educating yourself around the wide range of possible symptoms is vital. Many women don't realise for some time themselves that they're experiencing the menopause – with cognitive impairment and anxiety the much less widely understood symptoms, and hot flashes often not occurring until later on.
- Given the varied nature of symptoms, there's no substitute for a personalised approach involving regular, sensitively held conversations between a manager and team member to find out what would best help that individual.
- Having said this, not everyone will want to discuss this highly personal matter with their manager. So having clearly signposted resources available for people to access themselves – including confidential, informal chats with other affected individuals, perhaps via Menopause Cafés or similar – will be key.
- Remember individuals from particular ethnic backgrounds may be particularly reticent to talk about their experiences, especially with a male colleague.
- Thought needs also to be given to the particular experience of non-binary and transgender colleagues also potentially experiencing menopause symptoms. Managers need to be aware it won't only be cisgendered women or those identifying as female going through this.
- Remember that although menopause is typically thought of as a five to 10-year period, in many ways it's an ongoing state, given a person's hormones are permanently altered once they're no longer menstruating – so support needs to be long-term and sustainable.

TATIANA KOTRIKOVA LED THE REHABILITATION OF THE YELLOW LINE SERVICE ON WASHINGTON DC'S METRO AND DELIVERED A SUCCESSFUL PROJECT THAT WAS ON TIME AND ON BUDGET. HOW DID SHE DO IT? ANDREW SAUNDERS REPORTS

It's a well-known fact that the majority of major infrastructure projects are either late, over budget or don't work properly (sometimes a combination of all three). This unhappy norm has been evident on many projects involving metro rail lines, bridges and tunnels – think of the Jubilee Line Extension and Crossrail in London, or Boston's massive 'Big Dig'. All were characterised by delays measured in years, rather than months, and budget overspends running to billions, rather than millions.

But despite the horror stories, one recent example proves that it is possible to complete a complex project featuring all three of these red-flag risks – metro, bridge and tunnel – on time, on budget and with minimal subsequent teething problems.

On time, on budget

What is this paragon of the project management profession? The rehabilitation of the Yellow Line service on the Washington Metro in the US capital, Washington DC. Work on reviving crucial parts of the line's creaking, leaking 1970s infrastructure began in September 2022 and finished bang on time eight months later, on 7 May 2023, and bang on budget at US\$384m.

It's just as well that it did, says Tatiana Kotrikova, Senior Programme Manager at the Washington Metropolitan Area Transit Authority (WMATA), because the line is at the heart of the city's metro – the second busiest mass-transit system in the US, used by over 360,000 passengers daily – and

was closed entirely for the duration. "There were a lot of people waiting for the Yellow Line to be reopened – it is core infrastructure. It crosses the Potomac River and connects Maryland with Virginia via Washington DC."

Key to the project was the restoration of a mile-long steel-lined tunnel under the river and a 3,000ft-long bridge over it. The tunnel in particular was

a key priority – water leaking in through its rusty liner was a growing safety threat to the electrically powered metro trains. These technical challenges were compounded by administrative issues – some 77 permits were required from bodies including the Federal Aviation Authority (due to the proximity of the airport), the National Park Service and even the Department of Defense – and the logistics of getting equipment and workers in and out of the tunnel.

With so much disruption involved, why was the decision taken to order one long closure rather than working out of hours, overnight and at weekends, to keep the line open? "I worked out that even if we used every single weekend it would take four years to complete – but that is entirely theoretical because there is other maintenance to be done, and we can't afford to work the contractor every single weekend," says Kotrikova. "So I think it would probably have taken at least 10 years and cost maybe a billion dollars. But given some of the logistical constraints we faced I'm not sure it would even have been feasible."

A collaborative project model


Conscious of the complexity of the project, WMATA decided to employ a project model known as Construction Manager at Risk (CMAR – see box, page 41). This is a methodology whereby the client (WMATA in this case) selects a key contractor to act as construction manager, which then undertakes to complete the project for a guaranteed maximum price (GMP). In return for taking on this level of financial risk, the construction manager also gets to act as consultant to the client in pre-construction phase, a unique aspect of the CMAR method.

Being both consultant and construction manager ensures that the prime contractor is closely involved even at the early planning stages, says Dave Niedballa, Project Manager at Kiewit, WMATA's chosen construction manager on the Yellow Line. "If you have complicated logistics and you don't have real schedule certainty up front because the scope of work dictates that, then I think this type of model works better because you develop all that together. The contractor assists the designers in developing the solutions."

THE WASHINGTON POST/GETTY



Tatiana Kotrikova

A wide-angle, low-perspective shot of a large, curved tunnel under construction. The tunnel's interior is lined with a complex, grid-like structure of metal ribs and concrete segments. A worker in a dark uniform and hard hat is walking away from the camera down the center of the tunnel. The lighting is dramatic, with strong highlights on the metal ribs and deep shadows in the recesses. The overall atmosphere is industrial and futuristic.

GREEN LIGHT ON THE YELLOW LINE



SUCCESS TIPS FROM THE YELLOW LINE SUBWAY

- 1 Early contractor involvement.** Get the people who will be doing the work involved in developing and testing the design. It may look great on paper, but can the contractor actually do it?
- 2 Collaboration not conflict.** Work together with key stakeholders on the basis that you are there to solve problems rather than apportion blame.
- 3 Escalate fast and decide quickly.** If issues arise that require senior management input, seek that input promptly so that decisions can be made without delay. Don't sit on things until they become serious problems.

It also promotes a collaborative rather than contractual approach to problem solving, he adds. For example, the condition of the tunnel liner, while crucial to the scope of works that would be required, was not known in detail at the time the project began. But despite time pressure to get on with the job, both client and contractor worked together, testing out proposed repair techniques to reduce ongoing uncertainty to more manageable levels. “We trialed welding the tunnel liner and tested the chemical grouting leak mitigation system, to find out how long it would really take and what the impact on the schedule would be,” says Niedballa. Movements of equipment, workers and material were also modelled.

An open culture breeds success

“Instead of fighting about things after the fact, you're both invested and you both want to see it work,” he adds. “It creates a much more open atmosphere.”

The results were more promising than they might have been, with only around 50% of the tunnel liner needing repairs, the rest being in good condition. The bridge, meanwhile, needed track work and the replacement of the 88 bearings that transmit loads from the deck to the pilings set into the river bed.

The tunnel repair method arrived at involved welding in around 1,000 2ft x 4ft steel repair panels and injecting

chemical grout behind the liner to seal any leaks. It's expected to last another 50 years with routine maintenance.

Kotrikova, who had previous experience of CMAR from an earlier platform reconstruction project she had worked on, says that the relationship between WMATA and Kiewit was crucial. “The prime contractor was part of the solution – they did the trials to make sure that what we chose to do would actually work. It helped them to develop the schedule and how we could deliver this on budget.”

CMAR's requirement that a GMP be agreed before work commences can lead to higher initial cost estimates, but they are much more likely to prove accurate in the longer run, she adds. “When I took over the project in June 2021, I discovered some big holes in the original estimates because it was done in isolation by the client. That's one of the reasons we decided we had to work with a contractor.”

“So many projects have issues because your common sense is completely different to my common sense. If you don't know something, just ask”

Potential risks and the appropriate mitigation strategies were extensively tabulated, so that when the unexpected inevitably happened, the team was prepared. Even some spectacular leaks resulting from disturbing the rustiest sections of the tunnel didn't derail progress unduly, thanks to additional drainage and the use of fast-response grouting teams to rapidly step in and stem the flow. “That was one of our biggest concerns, but we did a good job in planning. Nothing happened that we didn't predict, and quite a few things that we did predict didn't happen,” says Kotrikova.

Fast decision-making

That's not to say that it was smooth running all the way. One issue that turned out to be more of a problem than anticipated was the many and varied utility cables attached to the walls of the tunnel, all of which had not only to be removed but also rerouted around the tunnel in order to keep the rest of the network functioning. Managing issues like this was aided by monthly executive meetings with senior management where problems could be aired before they became serious enough to threaten the schedule or budget unduly. “A lot of projects slip because decisions are not made quickly,” says Kotrikova. “But if we had a challenge that needed to be escalated, we could deliver the message to upper management and they would either

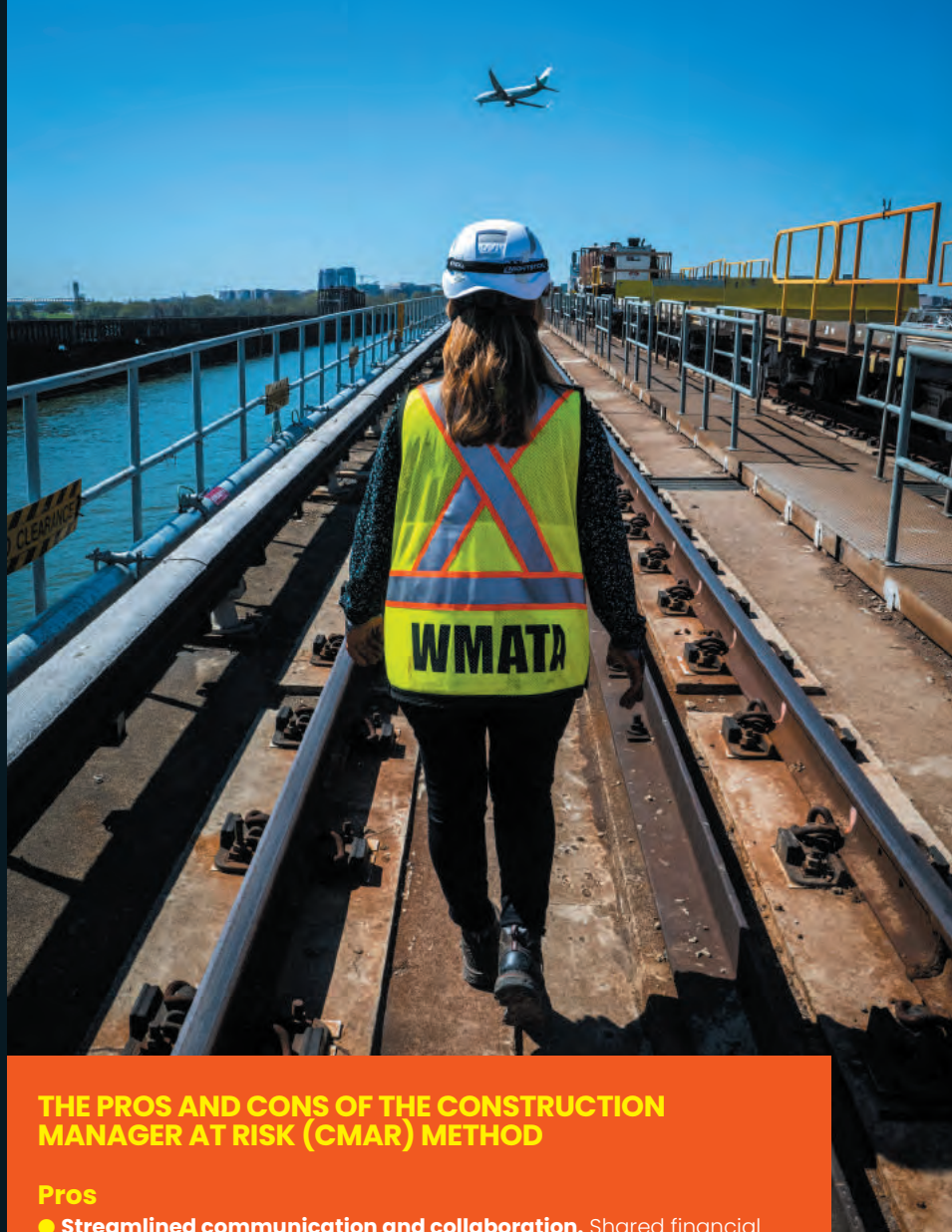
make a decision on the spot or come back with one in a day or two. That's how you stay on schedule."

A similar approach was taken at the project level, with regular team meetings and reviews including the use of a simple project tool called Four Square to track progress and address issues in a timely fashion. The eponymous four squares are red for ongoing issues, yellow for new or current issues, green for positive trends and blue for steady progress items. "It's a one-page document that really works – it allows you to show what is going well, what's not going so well and how we resolve those things," she says.

Now that the line is open once again and running as normal, a final positive aspect of the project has also become apparent – the close-out phase is proving unusually straightforward, and even the normal wrangling over outstanding change orders and so on is down to a minimum. "The total dollar amount left on the system is around US\$3.5m," says Niedballa. "That's only around 1.5%."

The Yellow Line renovation was a project characterised by careful planning, collaborative relationships and meticulous attention to detail. There was no magic bullet, concludes Kotrikova: the closest thing to one was her insistence that a particular phrase should never be heard. "Maybe one of the reasons the project was successful was that I said to the team that no one should ever use the words 'common sense'. So many projects have issues because your common sense is completely different to my common sense. If you don't know something, just ask; don't assume that it's common sense."

For further reflections on the problems that can beset major infrastructure programmes, listen to ex-Crossrail CEO Mark Wild's interview with APM Podcast (bit.ly/3s1Xz6D). Read about Crossrail's Learning Legacy at apm.org.uk/news/apm-publishes-newly-launched-crossrail-learning-legacy-journal



THE PROS AND CONS OF THE CONSTRUCTION MANAGER AT RISK (CMAR) METHOD

Pros

- **Streamlined communication and collaboration.** Shared financial risk means that the construction manager and client work together to provide realistic cost estimates and timescales right from the start. The agreement of a guaranteed maximum price (GMP) eliminates many of the down-the-line surprises common to other project methodologies.
- **Devolved responsibility.** As the client's representative, the construction manager is empowered to take decisions and run the day-to-day working. Delivery is accelerated but the budget is also safeguarded, as the contractor remains motivated to stick to the GMP.
- **Job cost accuracy.** Cost control is better thanks to the construction manager's involvement in design and development, and the client is protected from cost overruns.

Cons

- **Cost risk for the construction manager.** If the GMP is too low, the construction manager may be unable to deliver to the agreed budget.
- **Single point of failure.** Because the construction manager is so vital to the success or failure of the project, everything hinges on the choice of the right construction manager by the client – one that is expert and experienced but also prepared to collaborate.
- **Quality control.** Rigorous quality control is required, as the focus on GMP can lead to the temptation to cut corners and save money.

PROJECT MANAGEMENT IS NOTHING WITHOUT PROJECT CONTROLS, SO WHAT DOES IT TAKE TO EARN A SEAT IN THE CONTROL ROOM? AND WHAT SHOULD BE ON THE PROJECT CONTROLLER'S RADAR? DAVE WALLER REPORTS

For anyone looking to understand the value of project controls, South Carolina's Nukegate scandal offers a stark illustration.

The story concerns two nuclear reactors being built by the Electric & Gas Co and state-owned utility company Santee Cooper, near Columbia, a US\$9bn project due to stretch from 2008 to 2017. By 2017, costs were estimated to have hit US\$25bn. Yet while progress had veered well off course, the project heads kept offering positive projections. Later that year, the whole thing was abandoned, having powered not so much as a kettle.

When Stephen Byrne, a former executive vice president on the project, was sentenced for his role in concealing the cost overruns and delays, he told the court he'd gone into the project thinking it would be "the crowning achievement of my life". As any capable project controller could have told him, things don't always turn out as planned.

Preventing meltdowns

The *APM Body of Knowledge* offers a concise definition of project controls: "Tracking performance against agreed plans, and taking the corrective action required to meet defined objectives". The project controls team – which may include a project controller, controls manager, controls and cost engineers, schedule manager, risk manager or change manager – monitor cost, time and risk, and ensure the project is delivered to deadline, on budget and to the required quality standards. In other words, project controls are there to prevent meltdowns.

Which all seems very sensible and important. Yet as the Nukegate scandal shows, the value of project controls isn't always recognised. APM research has

found that nearly 80% of projects fail to wholly meet their planned objectives.

Critical skills

In terms of skill set, project controls professionals must be adept at planning and scheduling; assessing costs, quality and risk; monitoring change; and distilling and communicating critical information in such a way that their peers in project management will pay heed.

"It's not just about making the numbers add up and producing statistics telling us where we are in the programme, or how we're spending money," says Paul Kidston, lead writer on an upcoming APM book, *Project Controls in the 21st Century*. "It's about giving insights that the project managers and the project team as a whole can use to make correct decisions, so they can rectify problems and exploit advantages. That's where we're going as a profession: becoming more involved."

Indeed, as the nature of projects changes, so does the scope of that work. Some project controllers are being asked to do trend analysis, and track and evaluate factors like corporate social value, stakeholder engagement and customer satisfaction.

But there is one change facing the project controls world that is larger and more obvious than any other: the advanced role of data. Project plans have always had data points. As soon as you label a log with an amber or red

"It's about giving insights that the project team as a whole can use to make correct decisions"



IN THE CONTROL ROOM



status, that's a data point that drives a decision. What's new is the impact of more powerful tools for data gathering and analysis.

"Before, it was a human deciding what that data point was, based on heuristics and gut instinct," says Dale Taft, Practice Lead at MI-GSO Pcbud. "Ten years ago, a project could become red just because someone felt it was risky. The paradigm has now shifted into data that's much better quality, and we're able to get more of an automated assessment. Project controllers can now use predictive analytics and machine learning algorithms to consult historical data. That will show which are running late, and which are likely to hold more risk."

This represents a massive shift towards objective decision-making, with data being surfaced and transferred where possible without human interaction – and in a more consistent, more accurate fashion.

Taking advantage of more powerful tools

Armed with more powerful tools, project controllers should be able to go into projects seeing the risks that lie ahead more clearly.

"We have to manage the risks coming towards us," says Jonathan Williams, Project Futures Lead at the Environment Agency. "We can let the digital tools deal with looking backwards and reporting on that. Because if we're walking backwards into a project, we're not going to manage the next risk until it happens. We need to turn around."

More powerful tools also allow controllers to intervene more promptly when things do go wrong. Rather than waiting until every metric is screaming that the project is a disaster, controllers can use analytics and machine learning technology to tell them to send in the experts to sort things out sooner.

"It's like putting your sat nav on," says Alex Robertson, who works on digital innovation and the future of project delivery at Petrofac, the energy services company. "If there's a crash 10 miles down the road, the sat nav will direct you off somewhere else. Machine



learning is going to nudge us to different paths that we wouldn't necessarily take. It will get us to the end quicker, even if it does take us down some slightly unusual routes."

Another benefit is the ability to assign responsibility for such errors. If the 'driver' has decided to ignore the information they've been given about the road ahead, that will be noted. And they'll be asked to explain exactly why.

"Every project director thinks they're better than the average project director," says Robertson. "But when you look at our performance as a profession, it's shocking. It's not the people delivering it who are shocking. Far from it. Perhaps they're handed a target that's unachievable or full of optimism bias.

"But the tools may look ahead and say: 'The best project in the world did that in 30 days. You're not the best project in the world, so plan on 40 or 50 days. But don't plan on 30 days, because that's unrealistic and unachievable.' If you then take a decision the data doesn't support, you become very accountable."

Time to learn some new tricks

If project controllers can expect a radical shift in their responsibilities, they're going to have to build new skills and expertise too. Project controls roles are going to become much more dynamic and tech-savvy, with professionals able to do things like conduct API connectivity to log software, extract the most pertinent

data and use it to conduct insightful conversations with other stakeholders.

That means many existing project professionals, the 'superheroes' who've been in the role for decades and who rely on tacit knowledge to get a project from A to B, are going to have to learn some new tricks. This may pose a problem. Taft says he's been doing data-driven decision support for a decade, and uses one specific conversation to highlight the scale of the challenge for many senior leaders. "I recently sat with a utilities

"I've seen some skill sets in interviews that even senior project leaders don't seem to know exist"

board and was almost talked down to by the board chair, who said: 'You're trying to tell me that we haven't been making good decisions. You must be wrong, because I wouldn't be in this seat if it weren't for my gut,'" he says.

These days, graduates are coming out of university with a better understanding of the data landscape, including coding skills and data visualisation, than many senior incumbents. "That's what they've grown up with," says Williams. "But the awareness of what skills are coming in and how you can apply that to a use case in real projects is missing [from

the industry]. I've seen some skill sets in interviews that even senior project leaders don't seem to know exist. If I ask how we are doing against cost profiling, or how often we go over our cost profiles, those leaders don't know how to answer. But these graduates will probably come in and say: 'Just give me that bit of data, and I'll have it over to you this afternoon.'

Over at construction company KBR, Simon Davies, Director of Programme and Project Management, has launched an internal analytics innovation academy. This required the team to establish learning journeys for different positions, so they could understand the various roles within data analysis and what is needed to weave them throughout the business.

More data analyst than spreadsheet jockey

"Project controllers need to know how to feed the beast," he says of the added data demands in the field these days. "It used to just be monthly day-to-day cut-offs. Now it's so much more dynamic, and there's much more expectation of near real-time information. You'll never get rid of the fundamentals, like Gantt charts, or cost or finance reporting. But the expectations are exponentially increasing, and people will need to learn how to provide the key insights and outcomes from all that information in a way that's more digestible for others. Project controls professionals will need a new skill set, to do the input, the transformation, the output and the whole feedback loop."

There's reason to believe much of this change will be positive – that it will help to make the role of project controller more appealing to new starters. It may even start to fix a perception problem that the discipline has endured for a long time, and which has arguably hampered recruitment into the field.

"Controllers used to be seen as a 'spreadsheet jockey', someone who can do a mean Excel formula," says Davies. "Now, they may be regarded more as a data analyst. And that's the hottest ticket in the project management industry right now. Most project professionals start on

a £27k to £32k base salary after university, depending on their skills. Data analysts can probably get themselves to £50k within a few years of graduating."

According to Davies, this means that anyone hoping their gut will get them into the more prized senior seats may need to watch out. "You may have young professionals coming in and overtaking middle management very quickly, because the skills we need are actually being taught at school," he adds. "Some of this is not innovation. It's just getting up-to-date. You either get on the train or you're going to be left behind."

A more rewarding future

But those project controls professionals who are willing and able to embrace and move with the developments may find themselves treated to a more rewarding future, in which the machines have freed them from the onerous reporting burden so they can do the stuff humans are best at: mapping outcomes, making decisions and managing stakeholders. The actual nuts and bolts of the project.

"The data coming in is taking out a lot of the grunt work that people have to do," says Kidston. "The dross of using the Excel spreadsheet, downloading stuff, filling it in – that has completely and utterly gone. People will be free to do the human bit, the intelligent bit, the interpretation. They'll have time to actually convert that data into insight and share the best course of action with their peers."

This is going to take some effort. Greater volumes of data will be counter-productive if organisations don't have the systems, the processes and the ingenuity to identify what is most pertinent to the project at any given moment, and the skill to communicate those needs effectively. So while the sat nav is now leading project controls down an exciting new road, that route promises to be a long one. And, as with the embrace of any new technology, there are going to be plenty of tight corners.

"The technology is already all around us, but it could change very rapidly," says Kidston. "It will certainly go into unpredictable areas. The skill is going to be the ability to adapt."

TAKING CONTROL

They say fortune favours the brave. And like professionals in many fields, project controllers are starting to take stock of their skill set and ask what they can do to future-proof their careers in the age of big data. "If you don't keep up with how things are moving in your industry, you will fall behind," says Will Flynn, Senior Planning Consultant at Programme Services Partners, who has embarked on a data science training course. "I'm not going to lie. There's a little bit of fear in that. But it's a really exciting opportunity too."

Flynn said he took this step to "elevate his career in project controls and project management" and help him "harness the power of data-driven decision-making to optimise project outcomes".

And he's very clear on what he'll be getting from his studies, which may last up to 18 months. He says the training will equip him to "extract actionable insights from complex datasets, enhancing project planning, risk assessment and resource allocation". That means leveraging "predictive analytics, machine learning and artificial intelligence techniques, enabling proactive identification of project bottlenecks, improving project performance".

"With the rise of data science and machine learning, it will become more obvious how it can enable better, more informed decisions," he says. "With a huge saving to cost, and a better outcome for the project, whatever it is."

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Because when projects
succeed, society benefits

PEER TO PEER



HOW TO PUT SOCIAL VALUE INTO PROJECTS

NO MATTER WHAT THE ULTIMATE PURPOSE OF A PROJECT IS, ITS SOCIAL VALUE SHOULD BE AT ITS VERY HEART. DAVE WALLER CONSIDERS HOW THIS MIGHT BE DONE

The argument for building social value into projects is getting louder, and it's easy to see why. On a planet with finite resources, growth has consequences, and most human activities have knock-on effects. Nowadays, the prevalence of rolling news and social media provides a constant reminder of the seriousness of these issues and the broader challenges facing society, from economic inequality to the climate crisis.

So what does that have to do with projects? As projects have a broad and deep impact on the people and world around us, they can present a powerful vehicle with which to tackle these issues. At APM's Change Changes conference in Birmingham in June, a panel of speakers reflected the

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increasingly compelling view that, regardless of the ultimate purpose of a project, social value should be incorporated – not as an optional bolt-on, but as a core component.

Why should projects incorporate social value?

Panellist Dr Jo Jolly, Deputy Director and Head of Project Futures at the Infrastructure and Projects Authority, cited Lincolnshire's Boston Barrier – the goal of which was improving flood defences – as an example of a project that delivered social benefits.

"It actually contributed to gender equality, because half of the design team were female," Jolly told the conference audience. "And it contributed to better education, because they went to visit schools and talked about engineering, climate change and coastal erosion."

A genuine social purpose has the potential to foster goodwill with a project's stakeholders, improve its long-term sustainability and boost the morale and motivation of the project team.

But the value of imbuing projects with social purpose runs deeper than that. Jolly reflected on a recent announcement by the World Meteorological Organization that global temperatures now stand a 66% chance of rising to beyond 1.5°C above pre-industrial levels. And she argued that projects are very well placed to effect the necessary change.

"The climate emergency is a systemic problem," said Jolly. "It needs a systemic solution. And I don't know anything more systemic than project delivery." She added that everything in the world is touched by projects. Here's how to go about instilling social value at the core of yours.

1 Plan in terms of outcomes

Mott MacDonald is one organisation that has begun to conceive of its projects in terms of outcomes, rather than simply solutions. It even has a Technical

"We need to look at system complexity and understand the interconnected nature of what we do in the changes we make"



Director of Social Outcomes, Dr James Beard. He explained the rationale to the APM panel.

"Rather than saying 'we've got to build a bridge', it's about consolidating and understanding the purpose of the thing we are doing. By focusing on outcomes, we've inherently found ourselves in a more socially oriented space. Outcomes tend to boil down to what is best for people and their societies, their communities, and the world in which we live. That small encouragement around shifting mindset and language helps us to think differently about what it means to deliver big bits of infrastructure."

There's always a risk when organisations adopt a socially conscious stance that they're doing so because they fear the repercussions if they don't. If social benefit is not a natural fit, there's an argument to say not to force it. Yet if that is the case, it could be argued that there's something wrong in the fundamentals of your project that needs addressing. Especially at a time when the needs of the world are so well publicised.

So too are the social goals any project may wish to serve. At the panel session, Jolly highlighted a UK government policy paper, *Transforming Infrastructure Performance: Roadmap to 2030*, which lays out how projects intervene to deliver key services, such as healthcare and education. At the top of the project outcomes sit the 17 Sustainable Development Goals (SDGs) set out by the UN, covering everything from gender equality to clean water and sustainable communities.

"There was a real boldness in putting that forward," she said. "It's not GDP and pound signs, *per se*, at the top. It's not a cost-benefit equation. It is the UN SDGs."

One common barrier to focusing on social value as an outcome is that it has typically been hard to measure. Jolly also highlighted the Value Toolkit, developed by the Construction Innovation Hub. This tool gauges the value of a project in terms of its societal and environmental benefits, together with the benefits of the scope of the project and how they trade off against each other.



2 Take the initiative

When faced with significant challenges within an organisation, it is natural to look for the green light from someone further up the chain of command before taking action. That only becomes more understandable when the problems faced are those of our wider society. Yet given their current scale and urgency, such an approach may be lacking.

“One of the mistakes would be to say it requires leadership from the top,” said Paul Bradley, Principal Consultant at PA Consulting. “Because, to be brutally honest, however you characterise leadership, I don’t think they know any more than we do. As a collective ‘hive mind’, it’s up to us to take the baby steps.”

Jo Stanford, CEO of the Healthcare Project and Change Association, agreed, arguing that “change in projects is everybody’s business”, and that not waiting to be told was “a really critical point”.

Stanford herself has shown the way. When she arrived at the NHS 10 years ago, she was frustrated with the lack of development of its project community, and could see

the potential impact this could have on the health service’s ability to sustain. Having spotted the problem, she realised she had to help drive the solution.

“I made it my mission to set up a community of practice, to get people together and build a community,” she said. “The Healthcare Project and Change Association now has around 2,300 members across 460 NHS organisations, and we’re in the process of setting up a charity to develop those skills in the rest of the healthcare workforce.”

3 Be prepared to act without all the information

While new ways of measuring a project’s social value are being developed, project professionals can’t necessarily wait for the perfect data to arrive before taking decisive action. For Jolly, the urgency and uncertainty of society’s many issues require people to be comfortable admitting they don’t know. Rather than being too worried about trying and failing, they should adopt an attitude of experimentation and learning.

“Yes, the devil is in the detail, but if we don’t start doing some good until we’ve worked all this out, I don’t think we’ll ever work it out,” she told the panel. “The model now is about connectedness, collaboration and compassion. We’ll go through the fog, in collaboration, taking care of each other. There are no perfect answers here. Nobody has these answers. We need to move forward well, together.”

4 Break through the boundaries

Projects today are operating in a complex environment, yet organisations are often set up with barriers that fail to reflect that reality, which can hamper potential solutions.

When organisations are siloed, project professionals may find themselves delivering change in the area under their watch, only to have a negative impact on the wider ecosystem. By fixing one problem, they effectively sow the seeds for issues in other areas that may be going untracked. Project professionals should work to improve communication and collaboration with operational teams, so that positive outcomes become part of a broader coherent plan. Stanford sees such organisational barriers as a critical challenge.

“Barriers are often used as a reason to not do something new,” she said. “People say ‘yes, we should do this, but we’ve only got budget for us doing our bit over here’. We need to look at system complexity and understand the interconnected nature of what we do in the changes we make.”

5 Move towards the discomfort

Most people shy away from pain. As children, we’re taught to avoid falling over or touching things that will hurt us. But, Jolly points out, change is not only uncertain, but painful. If we want our projects to offer social value, we can’t afford to turn away from what’s difficult.

“I think when people are resisting change, they’re shying away from the discomfort and pain,” she said. “And we need to change the mindset around that... Don’t run away from it, stay with it, because that’s actually what makes us change.”

“But there is huge and genuine hope, and this is my driving force – hope, genuine belief – that through project delivery, we can make the most enormous difference.”

Dr Jo Jolly was interviewed for a recent episode of APM Podcast, available at bit.ly/43SPjTK

DAVID WILLIAMS AND TAMSIN ALLI-BALOGUN INTRODUCE THE CONCEPT OF A PEER-ASSISTED PROJECT PRE-MORTEM. IT'S A DIFFERENT WAY OF LEARNING LESSONS THAT LEVERAGES THE VALUE OF OUTSIDER KNOWLEDGE AND EXPERIENCE IN THE TACIT TRANSFER OF LESSONS TO A NEW PROJECT

GETTING TO GRIPS WITH THE FOUR DIFFERENT ACTS OF A PROJECT PRE-MORTEM

Lessons learned is a familiar

process in project management in which we reflect on what went well and what did not at the end of a project to determine what could have been done to avert the problems or enhance successes. The value in lessons learned is, first, to change the way we undertake projects, and second, to share those lessons among projects that are just kicking off.

Projects that have failed are richer sources of lessons than projects that were successful. You would expect that there is a plethora of valuable lessons widely available considering fewer than 30% of all projects are considered completely successful. However, while documenting lessons at the end of a project can sometimes be cathartic, it can also be seen to rub salt into fresh wounds and can be confronting for the people involved.

Project pre-mortems

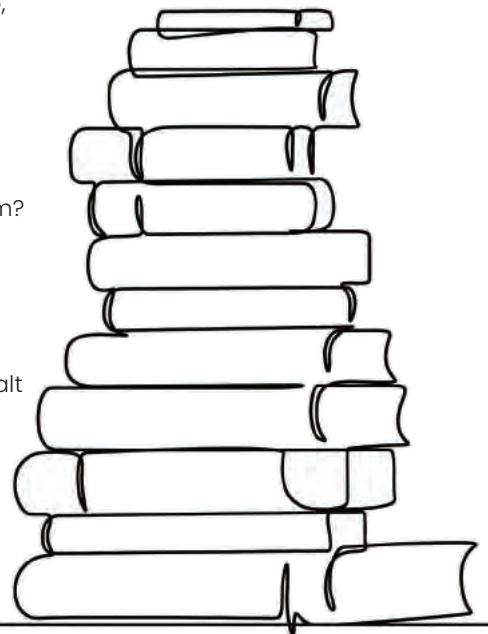
Consequently, unless a robust process for capturing and sharing lessons is reliably followed, few lessons are genuinely learned by the enterprise, and lessons

learned reports often become shelfware. Many teams initiating new projects therefore only undertake a superficial review of past project lessons and may not even have access or knowledge of their existence.

Another process for reducing risk in projects is for a newly formed team to undertake a pre-mortem. It is similar to a risk identification/analysis workshop, as the project team conduct a workshop early or mid-project to consider:

- Have we correctly identified, and do we share an understanding of, the problem?
- Will the outputs achieve the outcomes and deliver the benefits?
- What are our significant challenges and constraints?
- How have similar projects dealt with these?
- What are our strengths?
- What are we excited about?
- What does this project need that we don't have?

While these workshops are effective as a chance to reflect on experience before moving forward, they are generally introspective. They are based on the perceptions of the incumbent project team who may already be blinkered by being in the project honeymoon phase and established ways of





doing things. Without external input, these sessions draw on a relatively small and homogeneous pool of knowledge, which can limit innovation and critical thinking. Enter the concept of a peer-assisted pre-mortem. Think of it as a stage play, with a four-act process.



Act I: Preparation

Lessons learned reports have some value, but most of the lessons we learn cannot be easily written down

(sometimes referred to as tacit knowledge). Seeking the views of people coming off a challenging project, in an applied way, is an effective means of transferring that knowledge to the next project. The peer-assisted pre-mortem is where the initiating project team undertakes a pre-mortem with advice from a relevant closing project team, based on the lessons they learned from their completed project. In this, you and your team will present the objectives and challenges of your project and call on the closing

project team to advise on how they would handle the challenge based on their experience of the project they have just completed. This is best conducted at project initiation or at the early stages of project planning.

You should select and invite key personnel from a closing or recently completed project that shares similarities with the project that is about to start. Some differences are inevitable and a bit of diversity can enhance innovation, but the more different the two projects are, the less relevant the learnings may be.

As the meeting facilitator, book no more than 60–90 minutes with the two teams to

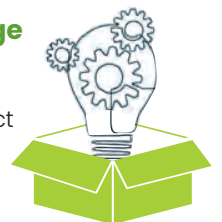
Seeking the views of people coming off a challenging project, in an applied way, is an effective means of transferring that knowledge to the next project

run this. Send your team a short description of what it will entail and take the time to review the approach on your own so that you are confident in communicating it to your team. Make sure that sufficient details of the project objectives, outcomes, deliverables, risks and benefits are shared in advance, so the team have a chance to digest the information and gather their thoughts individually. This is most effective when there are no more than 12 people involved and when the team includes a range of subject matter experts from the closing project.

Keep in mind throughout the preparation stage that the objective is to transfer lessons from the closing project to the initiating project through direct engagement between project staff.

Act II: Set the stage

Initiating and closing projects is a busy time and most project staff are focused on specific tasks. A few minutes



are required to pull people into a different headspace. Following any necessary introductions, start the session with a quick 'thinking



outside the box' icebreaker question or challenge. Ensure everyone is introduced and all are comfortable with the objective and the process.

Act III: The performance

- State the objective and the process. The most important factor to communicate and monitor throughout is that it is not about what has happened in the project that is closing. Focus on the initiating project and application of the

lessons to inform the future. The participants should be empowered to call each other out if the conversation moves away from the focus of the initiating project.

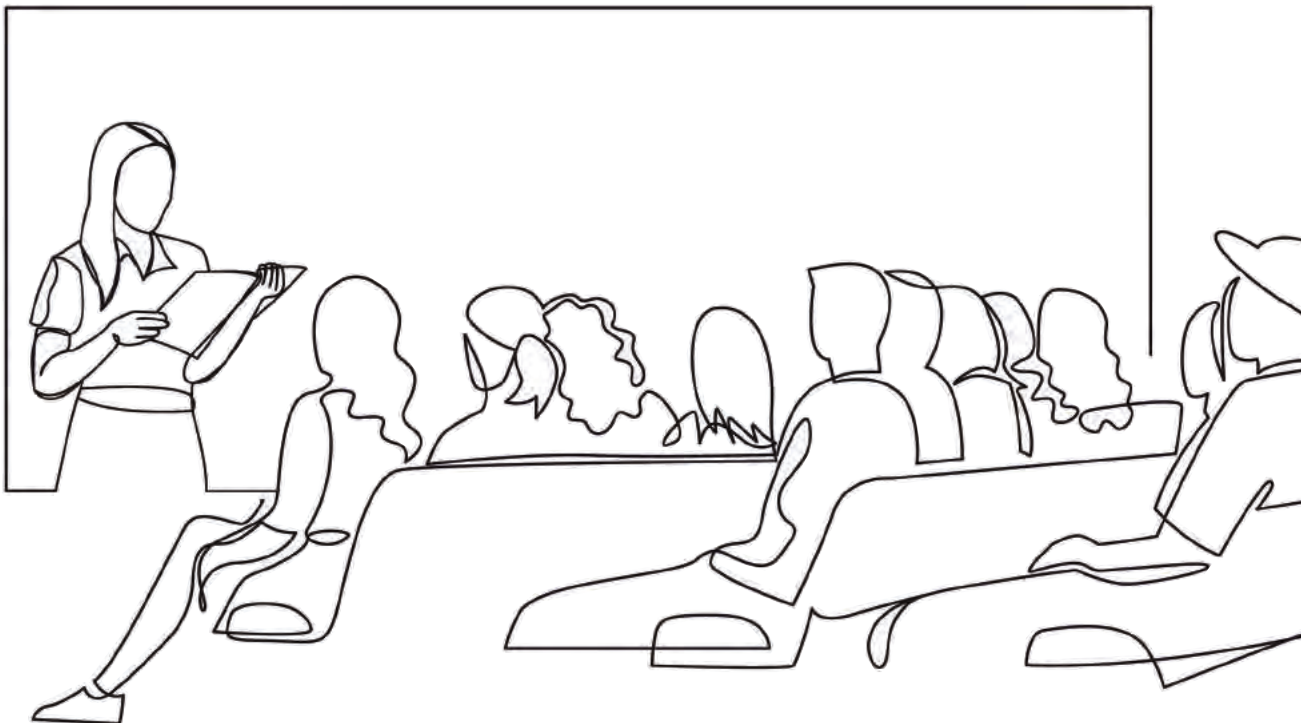
- Briefly summarise the project objective, outcomes, scope, deliverables, cost and benefits as a reminder to all participants.
- Summarise the risks identified to date and invite the outgoing project team to comment/add.
- State the concerns or issues for the project and invite the outgoing project team for their advice on how they might approach the issues based on what they have recently learned. Note: it is important not to identify/dwell on any failures of the closing project.
- Share your concerns about the project and ask: what does this project need that we don't have?

- Identify three to four key things that you might do to improve the project and how you would know if they are successful.
- Reflect on the workshop and thank the closing project team for their participation.

The follow-up (or encore)

A brief summary of an action plan leading from the workshop is valuable to the initiating project team – and the closing one. It is critical that the learning from the 'play' now be included in the scope, work breakdown, cost, risk and issues aspects of the project. Failure to embed these lessons will likely result in reliving the mistakes of the past.

It is also a good idea to pass them on to your peers, community of practice and your project or programme management office. Everyone



A brief summary of an action plan leading from the workshop is valuable to the initiating project team – and the closing one

wants to be part of a successful project. Coming off a project can be somewhat deflating and people can be concerned if their project did not quite deliver everything. Providing feedback that they have positively contributed to the exercise is a useful way of demonstrating that their effort and expertise is valued and helps build a culture of continuous improvement.

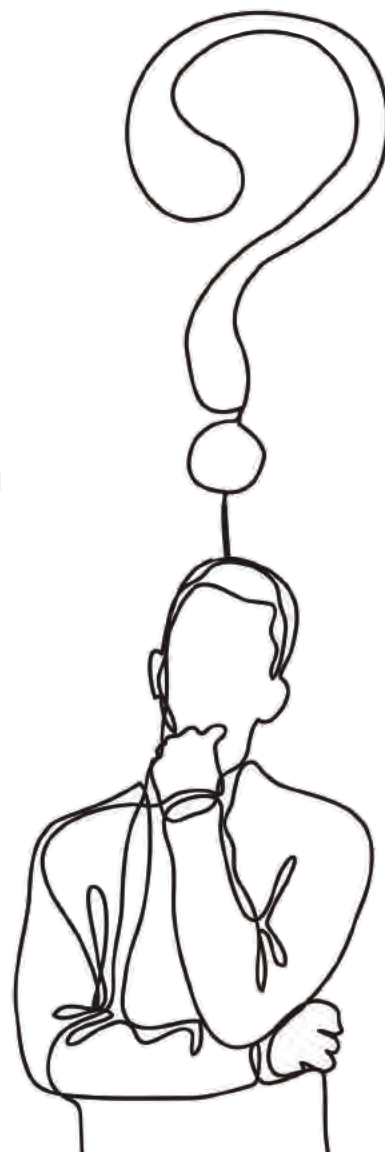
A play in practice

In June 2023, co-author David Williams was invited by an overseas government agency to provide a peer-assisted pre-mortem and exploration for setting up and implementing

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agile in its programme to digitise the business of the agency. It was about to implement an agile approach for the first time. The informal but structured discussion allowed the team to ask questions and hear what had (and hadn't) worked in a similar agency. One of the significant challenges to emerge was the need to educate project board members and sponsors on the different approach that agile has to deliverables, cost, schedule and engagement. Templates were shared and the team obtained a different perspective on how they might approach the problem.

David Williams ChPP is Principal Specialist, Intelligence and Information Systems, within an Australian government agency and is the President of the Australian Society for Knowledge Management. Tamsin Alli-Balogun FAPM is a Strategy and Change Lead at Atkins. Learn more about the APM Knowledge Specific Interest Group at apm.org.uk



FURTHER READING

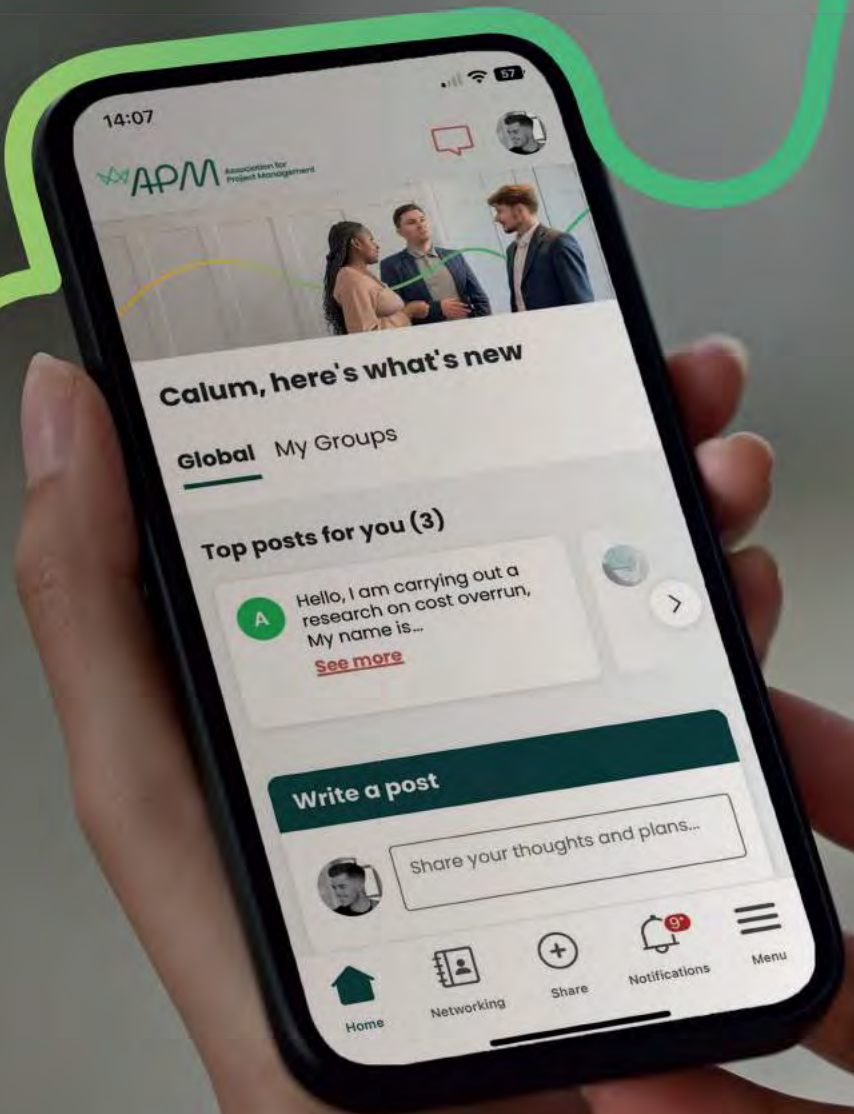
- Elisabeth Goodman, 'Lessons learned', APM blog (2012), apm.org.uk/blog/lessons-learned
- A 'peer assist' is a structured facilitated meeting or workshop where people are invited from other business units or other businesses to provide their experience, insights and knowledge to a team who have requested help. See knoco.com/peer-assist-page.htm
- The 'Catalogue of Catastrophe' and the 'Classic Mistakes' page curated by the University of British Columbia's Sauder School of Business. See callear.com/WTPF
- A range of cool icebreakers can be found at icebreakerideas.com/brain-teasers

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REFLECTIONS ON BECOMING CHARTERED

TO MARK THE FIFTH ANNIVERSARY OF THE INTRODUCTION OF APM'S CHARTERED PROJECT PROFESSIONAL STANDARD, CHARLES ORTON-JONES SPEAKS TO SOME OF ITS EARLY ADOPTERS ABOUT THE PERSONAL ADVANTAGES IT CONFERS



Peter Loosley
Programme Director,
Department for
Work and Pensions

Peter Loosley is a highly experienced project manager working at the Department for Work and Pensions. He had various roles in the design and implementation of Universal Credit and is currently leading a new national programme that will help people with health conditions get into, and stay, in work. He gained Chartered Project Professional (ChPP) status in 2019.

"I've been a long-term supporter of the professionalisation of project delivery within my department and across government," he says. "So when the opportunity came to get chartered status I was immediately keen. I also wanted to be a role model. I encourage people in my team and across the department to keep learning and strive for APM qualifications at all levels.

"Chartered status shows you have a certain level of experience and ability. It's a highly credible qualification. The other aspect for me was the way I could use it to guide my development. That's the point of qualifications – you don't just get them for the sake of it!

"It's a heavyweight application process where you have to demonstrate your experience across different programmes and roles. I realised, for example, I've not done a commercial project before, even though I've done multiple types of programmes. So to achieve chartered status I needed to get that extra bit of experience and fill that gap. I did the work, which helped get me the qualification, and I also found I really enjoy commercial projects and have done several since.

"There were other things I needed to go back and polish up on. Filling out the form made me think about my career and what

I've done. It's a reflective process. During the interview you'll be asked about examples of projects you've worked on. Again, I found that a validating experience. That's the way to see chartered status. It's a way to guide your development, to identify gaps and fill them, to make you a more rounded and capable professional.

"When I got chartered status I was working as the number two on a major programme. The qualification enhanced my CV and gave me the confidence to go for programme director roles, and now I am running my own programmes.

"The qualification enhanced my CV and gave me the confidence to go for programme director roles"

"For me, it's been well worth it. It's improved my confidence and certainly looks good on my CV. The government project delivery profession is also introducing an accreditation process, and to get the highest level you need chartered status. If you needed one, that's another reason to apply. For anyone considering chartered status, my advice is definitely to go for it."

Duncan Ross Russell Regional Director, Faithful + Gould

Duncan Ross Russell spent

16 years as an officer in the Royal Engineers before entering project management. He delivered the Northern Spire bridge in Sunderland and does work across the Tees Valley.

"I am a huge advocate of ChPP status for project professionals," he says, "and was in the third tranche to win accreditation, in 2019. I think there are two big reasons to support chartered status. The first is the recognition our profession needs. There are chartered accountants and chartered financial planners. I am a chartered engineer and always hoped project professionals would create a title of equivalent rank. Now we've got it, we need to back it.

"The second reason is to change how boards perceive project managers. There's a lack of understanding of what project managers bring, and chartered status can alter that.

"There's a professor at Oxford University, Bent Flyvbjerg, who's got a massive database of megaprojects and why they fail. He produced the statistic that only 0.5% of projects deliver the benefits they were supposed to, on time and on budget. Why is that statistic so low? One of the main reasons is a lack of direction from a competent project manager. Boards lack appreciation of the role, and this leads to projects being under-managed, with serious consequences.

"Chartered status is about communicating to boards and other managers the importance of a qualified project professional in running



projects. We want to get to the situation where those running big projects know they need to hire a Chartered Project Professional to act as sponsor. It's no good just hiring someone who happens to have the title of project manager. They could be anybody. Chartered status means you are appointing someone with the experience and knowledge to make sure the endeavour stays on course, no matter what obstacles occur.

"I had a recent conversation with an entrepreneur about his plan to build a factory. He told me he was thinking of hiring a project manager to run the construction. I told him

"You wouldn't get on board an aeroplane if the pilots weren't qualified. Why would you commission a project without engaging chartered project managers?"

fine, but make sure you only hire a Chartered Project Professional. That is the standard you need. If you find someone with a fancy project manager title, they may not understand what they are doing. There are a lot of cowboys out there.

"To me it's obvious. You wouldn't get on board an aeroplane if the pilots weren't qualified. Why would you commission a project without engaging chartered project managers?"

"My recommendation is that all project managers aspire to chartered status. One reason is to be a role model to other project managers. I chaired the Professional Project Management

Forum, a global organisation for project managers across the globe, which builds relationships. One goal of the Forum is to raise standards. Chartered status does that for the individual and for our profession more widely. It's more than just a qualification. It's a way of telling the world how important project managers are and how critical it is to appoint the best of our profession to senior roles, to ensure the best chance of success. This is why it's so important for us all to support chartered status."

Chris Mills works in the rail

sector, leading frameworks for Network Rail and Transport for Wales. He became a Chartered Project Professional (ChPP) in 2019.

"Ten years ago, clients would be specific about whom they wanted to work with in other professions," he says. "They'd say they wanted a chartered quantity surveyor and a chartered engineer. Then on the job spec it would say 'project manager, must have PRINCE2'. Now the situation has changed. People recognise project management as a stand-alone profession with its own qualifications. Clients know they can ask for, and get, an expert project manager by demanding chartered status. It's a huge step up.

"I work for an independent cost management and project management consultancy. Our group has 1,600 members in more than 50 offices worldwide. I've worked across nuclear, water, education and transportation, on projects of many different types. My focus is now in the rail sector. I work closely with Transport for Wales supporting a £500m+

portfolio of enhancement projects across Wales.

"I took the chartered qualification assessment in 2019. The reason was that my background was in quantity surveying. I changed to project management early in my career and wanted to highlight my specialism. I'd already done previous APM qualifications and gained a huge amount from those, so it made sense to look at chartered status.

"There's also the angle of attaining chartered status through APM. It's possible to study project management through other organisations, such as surveying or engineering organisations. In fact, ChandlerKBS originally began working with RICS for project management qualifications, but through my qualifications and experience with APM we felt it was more focused specifically on project management so we switched.

"The ChPP standard is not easy. What helped me is my experience. I have years of frontline roles under my belt. And I had the APM Practitioner Qualification, as it was called at the time. This gave me a really strong knowledge of the theory to back up what I'd learned on the job.

"Achieving chartered status was really positive. I was in the third tranche to get it, probably within the first 300 or 400, which was a big achievement. It was important for my organisation to have someone with chartered status. It establishes us as a company that takes project management seriously as a



Chris Mills
Partner, ChandlerKBS

core competency and has professionals trained to the highest standard. I'm proud to now have the opportunity to share my knowledge and experience to help others obtain membership and chartered status with APM.

"After attaining ChPP, I was able to put forward a proposal to improve the way we train project managers at ChandlerKBS. We are now an

APM Corporate Partner, and our development path is linked with APM qualifications and leads towards ChPP. APM qualifications are now the industry benchmark, and chartered is the rank project professionals should be working towards.

"Chartered status means we are the equal of other professions. We are now getting the recognition we deserve."

"I'm proud to now have the opportunity to share my knowledge and experience to help others obtain chartered status with APM"

EMBRACE A START-UP CULTURE IN PUBLIC-PRIVATE PARTNERSHIPS

ALUN JONES, PROGRAMME MANAGER, AND PAUL TOGNERI, LEAD BUSINESS PERFORMANCE MANAGER, AT QINETIQ'S UK INTELLIGENCE BUSINESS SHARE IDEAS ON HOW THE PRIVATE SECTOR AND GOVERNMENT BODIES CAN WORK COLLABORATIVELY TO DELIVER FAST-PACED INNOVATION TO SOLVE SOME OF SOCIETY'S MOST PRESSING CHALLENGES

The ability for the UK government to operate with the agility needed to keep pace with innovations in digitisation, big data and technology has long been recognised as a major challenge. To help address this challenge, the Accelerated Capability Environment (ACE) was conceived by the Home Office in 2017 to solve complex problems emerging from a fast-changing data and technology landscape and to do so at pace.

In establishing ACE, the Home Office acknowledged that the traditional, transactional relationship between the public sector as customer and private sector as vendor could no longer deliver the best solutions for the users. A different and disruptive approach to delivery was required to introduce fresh thinking, new suppliers, and a different culture, contracting route and delivery model.

An industry delivery partner was sought which shared the vision of what ACE wanted to be. QinetiQ created a consortium team called Vivace to meet this challenge and establish a paradigm shift in the way industry can help solve government challenges; the name was deliberately chosen to mean 'upbeat and lively' to set the tone of delivery.

In its six years since launching, the ACE concept has gone from strength to strength and is recognised across government and industry as a highly effective platform for solving some of the most complex and pressing challenges. This has included:

- A proof of concept to demonstrate the potential of artificial intelligence to support radiologists when comparing successive patient scans to identify changes since the previous scan.
- Increasing the capability of policing to rapidly analyse large volumes of seized digital media.
- Supporting the Home Office and UK law enforcement in tackling violence against women and girls.
- Supporting the UK's response to COVID-19 and future pandemic preparedness, including accelerating data-driven insights from wastewater. ACE ran several

pilot projects including end-to-end automation of wastewater sampling, low-cost viral load transportation and increasing sensor capabilities to decrease detection times of viruses.

- Combatting economic crime.

How to deliver (positive!) disruptive change

The success of ACE and the Vivace team has been built on establishing a set of core principles and a clear vision that is understood, adopted and embedded across the customer and industry team. The following core principles are the foundation of QinetiQ's Vivace model and drive us in the approach we take to delivering:

- 1 We always embrace a 'start-up culture' to promote fresh thinking and a fresh approach.
- 2 We operate in an agile way by default (and not just on software development).
- 3 We recognise that this is just as much a cultural change programme as it is a project delivery vehicle.
- 4 We recognise the need to continually develop and foster a diverse industry community to solve the problems and bring in ideas from suppliers who don't normally work direct to government.

The success of ACE and the Vivace team has been built on establishing a set of core principles and a clear vision



5 We focus on finding a route to harness the knowledge and expertise of academia.

6 We adopt lightweight processes, focusing instead on the value of the product being delivered.

ACE is a partnership that has brought together industry, academia, public sector and third-sector organisations to work together on addressing a wide range of challenges. A key part of what we set out to do in launching ACE and Vivace was to create a new and different supplier ecosystem (community) to support national security together with public safety, and over the past six years we have enjoyed considerable success towards achieving that.

Lower barrier to entry

QinetiQ now has over 300 members in its supplier community, ranging from small organisations with niche subject matter expertise through to large multinational organisations that can offer a wide range of knowledge and expertise. Crucially each organisation is treated as an equal on merit for the value it can provide in delivering a solution to the problem. This breadth of coverage of industry sectors, domain expertise and capability is a key enabler to allow ACE to address a huge range of challenges, from responding to global pandemics through to improving the policing response to drug trafficking.

One early challenge we sought to address in creating the Vivace

We actively encourage non-traditional suppliers to engage with us in order to provide diverse expertise to our customers

team was reducing the barrier to entry for suppliers to join the ecosystem (particularly small and medium-sized enterprises). This community had previously found it difficult to work on public-sector contracts and we adopted the following approach to minimise entry barriers:

- 1** Standardising the contracting terms and avoiding negotiations each time a piece of work was to be delivered.
- 2** Creating a simple web portal to cascade opportunities and for suppliers to upload proposals.
- 3** Mandating lightweight proposals to reduce the burden of producing lengthy documents, which can discourage smaller organisations that target their opportunities more.
- 4** Agreement with the customer early in the commercial process regarding intellectual property to ensure this is fairly reflected in the

Through Impact Lab we have seen a step change in the attitudes of law enforcement, who are better able to engage and contract with industry

contract and ownership vests in the right place so value can be generated from it.

5 Challenging the customer on any inappropriate security requirements; the lower the security barrier the greater the market potential.

We actively encourage non-traditional suppliers to engage with us in order to provide diverse expertise to our customers. We also encourage teaming between the community members to deliver value that is greater than the sum

KEY LESSONS LEARNED

Over the last six years we have iterated, refined and improved our approach and learned a great deal along the way. Below are some of the key learning points and critical success factors from ACE and Vivace, but that we think can apply across a broad range of fast-paced and technology-driven project portfolios:

1 Strong sponsorship is vital.
The success of any initiative such as this requires a strong sponsor who is willing to champion change and support you through the difficult periods of change. The ACE sponsor is empowered at director level in the Home Office. Having someone at that level who recognises the need and benefit to change has helped ACE and Vivace massively, particularly in the early stages when we were enacting change and introducing new ways of working across our customers.

2 Focus on the mission.
What we have found is that a successful delivery has occurred when delivery teams have spent the time and effort understanding the problem space and domain that the end user operates. This is made easier by the symbiotic partnership that an agile approach to delivery brings. Quite often, fresh outside thinking can bring a new perspective on a problem; the value of a diverse supply chain working together for the mission has been proven in ACE and is supported by an efficient triage

of its parts. One example of the success that this engagement of non-traditional suppliers can give was where we were able to work with an organisation that had image analysis expertise and had developed software that separated mouldy fruit from edible fruit. It was able to demonstrate that this expertise could be successfully applied to solve a problem related to rapidly assessing and triaging illegal imagery.

Step change

A further example of where we have sought to deliver disruptive change is through an initiative called Impact Lab. We create a trusted environment, both physical and through working practices, to bring industry and law enforcement much closer than previously to tackle challenging problems faced by investigating teams in areas such as modern

slavery; disruption to the importation and distribution of illegal drugs; and rape and serious sexual offences.

The Impact Lab approach starts with a briefing to members of the Vivace community where investigating officers lay out the issues they have faced during an investigation. This briefing is delivered at a neutral venue, but one that allows officers to speak candidly in a safe environment about their operational challenges and promotes valuable discussion with industry.

In order to make it real for industry, the customer makes historic case data available for industry to experiment with in order to develop solutions to aid future investigations. This data is shared via a secure cloud environment to appropriately protect the data and enable effective and efficient analysis and processing.

The real-world data gives industry an insight into the issues that the investigating officers have to deal with in an increasingly complex digital and data-rich environment and where these elements are often key to investigations. Through Impact Lab we have seen a step change in the attitudes of law enforcement, who are better able to engage and contract with industry, helping to generate improved products that are more user-focused.

If you would like to learn more about the work that ACE and Vivace completes, visit gov.uk/ACE or search for ACE on LinkedIn. Here you will find case studies and stories of how adopting the approach we have described above has helped us to realise a step change in government and private sector collaboration.

and assessment process to identify contributors to particular customer projects. ACE is not just a contracting framework; we support both our customers and community through delivery.

3 Make it real for the user.

Open their eyes to potential solutions and deliver early value to seek feedback. One of the founding principles of ACE is to harness the expertise of the community to make things real in order to differentiate ACE from other delivery capabilities, rather than just deliver a report or presentation.

4 The right attitude is everything.

Embracing a start-up culture and mindset encourages everyone in the organisation

We adopt a 'fail fast' methodology, allowing us to rapidly iterate towards an optimal solution, and have worked continuously to streamline our processes

to think about value for money, focus on the customer and learn through doing. The first page of our induction pack focuses on culture and values to emphasise from the outset how important these are to the organisation – not just buzzwords but the heartbeat of delivering ACE. This drives a certain approach to project delivery and we strive to be the best place to spend public funding.

5 Agility and decision-making.

Our sprint-based approach gives the opportunity to continue, pivot or pause. Even if something is paused it isn't considered a failure – the user is still likely to have found value in what has been delivered. We also adopt a 'fail fast' methodology, allowing us to rapidly iterate towards an optimal solution, and have worked continuously to streamline our processes to minimise bureaucracy. Sprint-based delivery is not just applicable to software development. The focus on iterative development of valuable products can be applied to a variety of proof-of-concept scenarios while still ensuring the product owner is in control and can prioritise features of the product.

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 India to Egypt and Mauritius! 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	Country	Name	Country	Name	Country	Name	Country
Khalid Ahmad	UK	Dan Fielden	UK	David Mason	UK	Kathryn Seymour	UK
Matthew Allpress	UK	Emma Ford	UK	Rob May	UK	Alexandra Sharpe	UK
Richard Amadi	UK	David Forsyth	UK	Matthew McCombe	UK	Sherif Shenouda	AUS
Babu Anandan	IND	Samuel Foster	UK	Michelle McDaid	UK	Luci Short	UK
Katy Angliss	UK	Kelly Frood	UK	Julie McFadyen	UK	Brij Raj Singh	IND
Catherine Appleton	UK	Kayleigh Fuller	UK	Jo McKenzie	UK	Annette Smith	UK
Kris Baldy	UK	Mark Fussey	UK	Michael McVitie	UK	Sean Snow	UK
Rosalia Barciela	UK	Thomas Kheong Guan Gan	US	Chris Midgley	UK	Joseph Somers	UK
Elisabeth Barton	UK	Darren Garwood	UK	Catherine Mills	UK	Martin Spahiev	UK
Vanessa Baxter	UK	Inderpal Gill	UK	Katie Mills	UK	Fiona Spencer	UK
Sekoura Benissad	UK	Shay Goane	UK	Martin Mookerji	UK	Adele Stach-Kevitz	UK
Nancy Bradford	UK	Lisa Goldie	UK	Nicholas Morris	UK	John Stark	UK
Kate Bradley	UK	Marc Griffin	UK	David Morrow	UK	Gareth Storey	UK
Rowena Bradley	UK	Helen Hall	UK	Simon Murphy	UK	John Szulik	UK
Jonathan Branch	UK	Russell Halton	UK	Daniel Nassbrook	UK	Rakesh Takooree	UK
Geoff Brewer	UK	Andrew Hare	UK	Marc Nevins	UK	Sam Taylor-Allkins	UK
Victoria Brown	UK	Ali Haroon	UK	Sooryaprakash Nunkoo	MAU	Derek Thomson	UK
Jonathan Bunt	UK	Kyle Henderson	UK	Natalie O'Connell	UK	Caitlin Turner	UK
Andrew Caldwell	UK	Rebecca Hill	UK	Laurie Oxford	UK	Nageswara Vallabhaneni	UK
Rhuary Campbell	UK	Alastair Hood	UK	Aimee Padden	UK	Emma Waterhouse	UK
Hope Cansdale	UK	Khurram Hussain	UK	Thomas Palmer	UK	Karen Wicks	UK
Leanne Cassella	UK	Rebecca Hutton	UK	Alexandra Parish	UK	Joscha Wiesweg	GER
Michael Clapham	UK	Stephen John Hutton	UK	Daniel Parkes	UK	Quentin Williams	UK
Beverly Cooper	UK	Syed Khurram Iqbal	NZ	Steven Prince	UK	Stewart Wilson	UK
Alex Cossey	UK	Susannah Jewell	UK	Andrew Punch	UK	Oliver Witt	UK
Richard Crane	UK	Dabinder Kandola	UK	Rawi Rabbat	EGY	James Wood	UK
Stephen Curling	UK	Bethany Keith	UK	Bhavika Ramrakhyani	UK	Gordon Woods	UK
Anthony Dannatt	UK	Daniel King	UK	Nagesh Reddy	UK	Christopher Wright	UK
Katie Davies	UK	Edward Knight	UK	Cesar Rendora	UK	Jiang Wu	UK
Michael Dowrick	UK	Tristan Le Butt	UK	Syed Rizvi	UK	Matthew Young	UK
Martin Dunn	UK	Olivia Macaulay-Lowe	UK	Jennifer Roberts	UK		
Jen Elsam	UK	Glenn Macdonald	AUS	Elsbeth Robinson	UK		
Oliver Excell	UK	Jack Machin	UK	Andrew Ross	UK		
Joe Fang	UK	Ewan Macleod	UK	Paul Ross	UK		
Lydia Fenny	UK	Stacey Marple	UK	Craig Seer	UK		

DEAR SUSANNE

I'm working on a project that I don't find inspiring. Is there a way to inject more purpose into what we're doing, or should I simply give up and find a role that I find intrinsically more motivating?



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*. For more information, visit www.susannemadsen.com

You're right to raise your lack of inspiration as a concern. Research shows that we work much more effectively and are more likely to contribute towards high performance when we feel a sense of purpose in our work.

Find your purpose

To tap into the power of purpose, we have to regularly remind ourselves and our team why we're doing what we're doing, and what benefits the project will lead to. One of the clients I coach works for a large microchip firm. His role is to oversee projects that design airbag chips for the automotive industry. "I have a reason to jump out of bed every morning," he told me. "I save lives."

Not every project is going to have such an appealing purpose, but if we look closely we will hopefully be able to find it. There's a reason why every project exists, otherwise it wouldn't have been initiated. When I worked in finance and we were in the depths of the financial crisis, it was sometimes hard to find a bigger meaning. But we often forgot that without banks there would be no loans, and businesses would find it hard to expand and employ more people. Even the most boring regulatory projects had a purpose, as many of them helped prevent the financial crisis from repeating itself.

Inviting our sponsor to give an inspiring talk at the beginning of the project was always helpful. Engaging with the end users was equally insightful. Finding purpose and inspiration in our work is often a question of perspective.

Speak to beneficiaries

Is it possible that the project you're working on does have some tangible benefits, and that there is a real person somewhere who will be positively impacted? Is it possible that you have simply lost sight of why the project exists, perhaps because you've been bogged down with defects, changes to scope, resourcing issues and demanding personalities?

If the answer is "yes", then you know what to do. Have a conversation with someone who will benefit from your project and

The impact you can have is vast, so choose wisely where you invest your time and energy

invite your team to come along. Put yourself in the shoes of the beneficiaries and imagine the difference this project will make to them. You may be surprised at the effect this simple action can have on the level of inspiration and motivation of you and your team.

Time for some soul-searching

If the answer is "no, my project doesn't have any benefits that I believe in – nor is it part of a believable vision or strategy", then you have some soul-searching to do. On the one hand, it's unrealistic to expect that every initiative you're involved with will be profoundly meaningful. On the other hand, it

will wear you down to work on a project or for an organisation that has no meaning for you, especially if it's a long-term endeavour.

If your project is short-term and you know something more inspiring is around the corner, then stay put and compensate by drawing inspiration from other areas of your life. But if you're involved in a year-long project where your values are fundamentally different to the values of your client or employer, you may be better off somewhere else entirely. The impact you can have as a project manager is vast, so choose wisely where you invest your time and energy. Whatever you choose to do, be fully present and fully engaged.

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 ME

WE ASKED PROJECT PROFESSIONALS: WHAT IS THE ONE SKILL YOU WOULD LIKE TO DEVELOP TO FUTURE-PROOF YOURSELF AND WHY? WHAT WILL YOU BE INSPIRED TO DO?



To be more culturally competent

Algy Ayson, Head of Project Delivery, Enterprise PMO, UK Parliament

Cultural competence is an important skill to future-proof myself because we live in a world that is interconnected. We work with diverse workforces, projects, markets and societies, so it is vital to have that ability to recognise the differences people have and celebrate diversity of thoughts and ideas. As a change maker and a community builder, I value this skill because it encompasses our ability to communicate, build relationships and influence people in engendering diversity, inclusion and mutual respect, which then creates positive, collaborative and meaningful conversations. If I want to adapt to ever-changing business and global environments, I need to be culturally competent with a view to developing other essential skills, including digital literacy, adaptability and innovation, and always on the lookout for what skills are in demand.

To keep up with AI

James White, Delivery Director, MI-GSO | PCUBED

AI is causing tidal waves of change across industries. I believe that keeping on top of AI's advancements in project management is an intelligent skill to develop. Our sector is inherently complicated, with multifaceted decision-making and resource planning; here, AI brings the best in any advanced technology, streamlining these facets through data-backed insights and taking tedious tasks off our plates. I ensure that I'm in the loop by reading journals, blogs and attending events that focus on AI's intersection with project management for their practical insights. For example, the CEO of Helsing gave an astounding brief on how the advancements of AI in defence are currently providing enhanced capability in real-life military applications. My continuous drive to learn more with AI tools and reflect on their real-world implications supports me in future-proofing myself.



To develop my empathy

Abigail Blumzon, Associate Project Manager, Bailey Partnership

Empathy is increasingly crucial to successful project delivery, stakeholder satisfaction and the human aspect of project management. By actively listening and understanding others' perspectives, I foster trust, effective communication and a supportive environment. Empathy equips me to adapt my approach, navigate challenges and make informed decisions based on a deeper understanding of people and situations. It enables me to align project outcomes with stakeholder interests and recognise unspoken needs. To further nurture empathy, I plan to: shadow others to observe different perspectives, focus on active listening and understanding without judgement, practise observing and interpreting non-verbal cues, and broaden my lived experience of diverse world views.



To incorporate sustainability

Helen Curel, Head of Isle of Wight Operations, Liz Earle

Projects deliver change and one of the biggest we face is the impact of climate change. That is why it is so important now for us to understand what sustainability in project delivery means. APM defines sustainability within the project profession as “an approach to business that balances the environmental, social and economic aspects of project-based working to meet the current needs of stakeholders without compromising or overburdening future generations”. This year, the skill I am looking to develop is to incorporate sustainability thinking into all aspects of the projects and programmes I am responsible

for, from governance right through to risk management and benefits delivery.



To develop my approach to agile

Vladimir Tarlev, financial sector project manager

Agile has revolutionised project delivery, extending beyond software development to regulatory initiatives and customer-centric projects. Agile methodologies empower teams, foster collaboration and enable swift responses to market shifts, regulations and customer expectations. By embracing agile, I can navigate projects with enhanced flexibility and adaptability. I will seek opportunities to implement agile principles in finance projects, leveraging its iterative approach to identify and mitigate risks while maximising value-driven delivery. On the other hand, it is important to acknowledge the potential challenges of implementing agile. For example, regulatory constraints and organisational resistance may require tailored agile approaches or hybrid methodologies. Agile's versatility and value focus make it indispensable in our dynamic industry and will help us to excel in project management.

To study data science

Will Flynn, Senior Planning Consultant, Programme Services Partners

At a time defined by rapid digital transformation, the convergence of data science and project management has become a game-changer. Recognising this, I have embarked on a data science training course to elevate my career in project controls and project management. With these skills, I aim to harness the power of data-driven decision-making to optimise project outcomes. This training will equip me with the ability to extract actionable insights from complex datasets, enhancing project planning, risk assessment and resource allocation. Moreover, it will empower me to leverage predictive analytics, machine learning and artificial intelligence techniques, enabling proactive identification of project bottlenecks and improving project performance.



To work on collaboration

Becky Emly, Principal Consultant, Mott MacDonald

Collaboration is the skill that I am most looking forward to developing. It is a capability that many recognise as being at the centre of high-performing teams, although often it is not fully embedded. Projects are being scoped to respond to some of society's biggest challenges against a backdrop of rapid change, increasing uncertainty and complexity caused by global and national shifts such as the climate emergency and cost-of-living crisis. If we are to deliver beneficial change, we need strong collaboration skills to unite integrated teams around a vision and values to unlock the ability to think holistically, make decisions for both current and future communities and, importantly, challenge one another on how to do so, as without the coming together of minds we would have no innovation. For me, collaboration is a powerful skill for keeping sight of why we are delivering our projects. It makes delivery truly exciting.



PROJECT: TO SAVE LIVES IN OPEN WATER

DEVON-BASED PETE LAWRENCE, SENIOR DEVELOPMENT MANAGER FOR THE CROWN ESTATE, VOLUNTEERS AS A LIFEGUARD, INSHORE RESCUE BOAT HELM AND CHAIR OF SURF LIFE SAVING GB



Like projects, beach users have the tendency when not observed or monitored to wander off and get into trouble

Surf Life Saving GB is a search-and-rescue charity that trains and supports volunteers to save lives and prevent drowning in open water. Through a network of affiliated club communities, volunteer life-savers deliver beach patrols and inshore rescue boat teams, assist the police with missing person searches, and form flood rescue teams.

How my skills save lives

During the week, my project management skills focus on deploying essential energy and infrastructure projects at the forefront of the transition to a net-zero future. At the weekend, I lead a charity and do a lifeguard patrol to prevent drowning. Project management skills are essential in both roles. Here are my reflections

on how my project management skills and expertise save lives.

A volunteer workforce is a professional workforce

Paid or unpaid, it's irrelevant. Standards of delivery expected of volunteers must be the same as those of a paid workforce. Some of my workforce are world-renowned experts in their field, some are European and world champions in their sport. This is a professional workforce, and I treat them with the respect they deserve.

Enabling a volunteer workforce to deliver professionally starts with the charity delivering best-in-class training and education. I ensure easy access to timely, relevant and appropriate information, support and training, and put in place a robust quality assurance process that is documented and reviewed often. I am asking volunteers to do dangerous things, to put their lives on the line to save others; this requires a very high level of duty of care.

Adopt low-ego leadership

By this I mean act with humility, whether it's leading the charity, a project or a patrol. You need to have a good level of self-awareness, be able to self-reflect and have the courage to be vulnerable, ie admit when others could do it better than you. In the sea this may just save your life. You'll also need to



understand your relationships with others with open-mindedness, show appreciation of their efforts and skills, listen, understand, be generous, share knowledge and build capability.

In the beach environment, mother nature can make the most skilled professional seem very insignificant some days, so know your limits and when to say 'no' or ask for help.

Agree your objectives

I always start with the end in mind. My beach patrols begin before operational hours with a bacon sandwich briefing at which we co-create objectives for the day. We agree what style of patrolling (eg interventionalist, high profile, visible) we want to deliver, the outcome for the day we are seeking (no lives lost, high engagement with the public, etc), and our personal goals (CPD, fun training time).

Planning and 'the Plan'

A two o'clock low tide on a hot, sunny day in August with 2ft of surf rolling in poses a greater risk of loss of life (both statistically and from experience) than a 10ft surf day in October. Why? Because there will be more people on the beach – including many without good knowledge of your beach, and who may have just eaten, with the

possibility of being intoxicated, less inhibited and taking more risks.

All this can be anticipated and planned for. Tides are known a year ahead, and weekly/daily weather forecasts guide your understanding of how your beach environment will look and operate on your patrol day. From experience, I'll know where the danger hot spots will be, eg pushing tides over sandbanks causing rip currents.

My plan looks to deploy our most capable resources to the high-risk locations at the times when we will have the greatest chance and probability of a successful outcome. In the low-tide, August day scenario, it's about placing safe bathing area flags away from danger hot spots and rostering the strongest watermen and women to the water's edge or in the water, equipped and ready to intervene at a second's notice. It's about placing my most charismatic life-saver on the beach chatting with members of public on their way to the sea, educating and informing them of the dangers before they get in. Lastly, it's about making sure your coolest head is in the control tower, overseeing, communicating with the team and able to call in support if needed.

Dynamic risk assessment

Like projects, beach users have the tendency when not observed or

monitored frequently to wander off and get into trouble. Dynamic risk assessments should continually sense-check the plan against the current conditions. A good project professional should be ready to alter the plan, communicate the changes and review the performance of the changes to make sure they have worked. If they haven't, reassess and try again. Like the ocean environment, project environments are in a continual state of change.

Celebrate success

The best patrol day is one where no one needs to be rescued. This means you have been effective, planned well and your patrol has delivered to a common set of objectives. And by deploying your resources to meet the conditions on the day, you have educated, intervened and instructed (if necessary) beach users to stay safe. The days when everything goes to plan are to be celebrated.

So what?

Whether delivering projects to time and cost or enabling volunteers to come together, the skills of a project manager are equally valuable and applicable.

While job satisfaction and knowing I'm making a difference are important, more important is knowing that the life-saving pathway Surf Life Saving GB has developed has enabled both my daughters to spend over a decade of their young lives learning and delivering these essential life-saving skills. And finally, knowing that there are three individuals who would not walk on this earth leading full and rewarding lives with their loved ones today if I, my skills and the efforts of the charity were not there in the right place, at the right time to save a life.

OFF LINE

WHERE PROJECT
MANAGEMENT MEETS
POPULAR CULTURE

ARMAGEDDON

IT TURNS OUT THAT ALL IT TAKES TO DELIVER SOCIAL MOBILITY FOR INCLUSIVE PROJECT TEAMS IS THE IMMINENT END OF ALL LIFE ON EARTH. SIMPLE! RICHARD YOUNG GETS TO TASK WITH THE END OF THE WORLD

Celebrating its 25th anniversary is 1998's biggest blockbuster, *Armageddon*, starring Bruce Willis and Ben Affleck. In this truly ridiculous film, NASA sends a crack project team to blow up a massive asteroid heading to destroy Earth. But that blunt summary hides project management decisions that offer some great lessons here in 2023. First, some context. *Armageddon* is a typical Hollywood tale of blue-collar guys showing the rich, powerful and educated where to get off. It's a film about outsiders disrupting the elite and demonstrating how diverse mindsets can deliver unique problem-solving capabilities.

Niche to their own

In *Armageddon*, it's oil-rig workers who are sent into space to destroy the asteroid by drilling 800ft into its surface and inserting the nukes. When debris from the collision that sent the Texas-sized rock on its wayward course starts landing on cities, the elitists in the government wake up and get NASA chief Dan Truman (Billy Bob Thornton) to come up with a plan – and he enlists oil-rig expert Harry Stamper (Bruce Willis).

Harry is the top man among the drillers – a good ol' boy (he also happens to have a couple of engineering patents to his name) who is as happy winding up Greenpeace activists as he is making snide remarks about 'big

government'. And he insists on bringing his whole crew along for the ride.

Now you might be thinking: if I were project leader, I would be tempted to get a few highly trained astronauts to learn to operate a drilling rig, rather than train a bunch of roughnecks for space flight. And, funnily enough, while filming, Ben Affleck asked director Michael Bay the same question. The reply? "Just shut your mouth!" (According to Affleck, his language was somewhat fruitier than that.)

That brings us to our first project management lesson: don't assume that you need the most highly trained people for the dominant domain on the project. It's hard to refute Harry's argument that having a whole team with specific domain skills makes a difference: "Drilling is an art," he says. "I'm only the best because I work with the best. You don't trust the men you're working with, you're as good as dead. Now, you wanna send these boys into space, fine. I'm sure they make good astronauts. But they don't know jack about drilling."

There is a degree of truth in this plot point. Payload specialists are often sent into orbit (albeit with more than a week-and-a-half's training), so it's not entirely fanciful. And it reminds us that project teams should value insights and capabilities from seemingly rudimentary disciplines, not get snobby about them.

Culture wars, 1998-style

Accepting the drillers onto the team is just the start. Many project managers will recognise the tensions that arise between different project constituencies. *Armageddon* sets up three different groups. First, the project sponsors – government types, characterised as detached, rules-bound (a huge no-no for your blue-collar heroes), elitist. Second, the project leadership team, typified by Billy Bob Thornton's character Dan Truman – serious, expert, organised, but blunted by their need to play the political game.

When you're hard limited, you're no longer balancing time, cost and quality – when one part of the triangle is fixed, you've got less to worry about



And third, the down-to-earth (pun intended) drillers who'll be doing the actual work on the asteroid.

Truman is a great project lead, because he knows when to cede points to keep people on side, and how to force the right level of decisiveness from the sponsors. So on the one hand, he cajoles the president into listening to the danger; and then he wins over Harry's crew, conceding to various demands. That leads us to the second lesson: create your own project culture, not one dictated by the organisation.

There's a serious point here about social inclusion, too. The roughnecks unsettle the NASA scientists and bureaucrats because they don't 'fit'. But regardless of whether you think NASA would really send up rig workers, the idea that they are there to meet the precise needs of the project is unimpeachable. All too often we can overlook actual capabilities in a project team because of (conscious or unconscious) biases about the people.

And it also reminds us that diversity is not inclusion. The *Armageddon*

crew might be a mix of PhDs and roughnecks, nerds and jocks. But to be inclusive, the different views and cultures need to be equally respected.

The joy of deadlines

The project in *Armageddon* is blessed with ultimate clarity. And for any project manager whose painfully assembled Gantt chart has been reworked over and over by stage-gate slippage and deadline-ditching, the idea of a one-shot, all-or-nothing gig might seem attractive. So let's take the SMART approach to the project's goals:

- Specific: save the Earth.
- Measurable: is the asteroid blown up?
- Achievable: well, the nerds at NASA will get you there...
- Relevant: as goals go, it's pretty significant to us all.
- Time-bound: "We have 18 days until the end of the world."

In many projects, the time bounds are artificial, often just set with reference to other parts of a project, or around external factors. When you're hard

limited, there's a kind of freedom that comes into the equation. You're no longer balancing time, cost and quality – when one part of the triangle is fixed, you've got less to worry about. That's lesson three, then: don't think of immovable criteria as a problem; they're an opportunity for clarity.

Levels of leadership

Even inclusive teams need good management to hit their deadlines, of course. There's no sense in which Willis's character, Harry, is the true project lead, despite his confidence in his own expertise. But he exhibits no shortage of leadership for his own sub-team: "The United States government just asked us to save the world. Anyone want to say no?" Stirring stuff, and a reminder that projects need a lot of leaders, and not just at the top.

Just like an army, where you need NCOs and lower-level officers who can command their troops with inspiration and clarity, projects need leaders among every specialised group to ensure things get done right, with energy and against

project goals. *Armageddon* reminds us that these mid-level leaders need skills (to maintain credibility with their people), guts (to show they're willing to do what they're asking their people to do) and commitment – as Harry says, literally on the surface of a homicidal asteroid with barely any of the project plan still intact, “I will never quit!”

This lesson, then, is about having the confidence to appoint people to the project who are natural leaders. Dan knows Harry is insubordinate and opinionated, but his value goes way beyond technical skills – he's a leader in the field and will help the project progress because of it.

Just like an army, where you need lower-level officers who can command their troops with inspiration and clarity, projects need leaders among every specialised group

ADAPT TO SURVIVE

This brings us to the final lesson: great project managers at any level know how to adapt. There's a great little piece of exposition in the movie designed to ramp up the tension and reinforce the high stakes for the project:

Harry Stamper: What's your contingency plan?

Dan Truman: Contingency plan?

Stamper: Your backup plan. You gotta have some kind of backup plan, right?

Truman: No, we don't have a backup plan, this is, uh...

Stamper: And this is the best that you—that the government could come up with? I mean, you're NASA, for crying out loud, you put a man on the moon, you're geniuses!

The point is that the contingency plan is to complete the project by any means necessary. It wouldn't be much of a disaster movie if the project had gone smoothly, and sure enough exploding space stations, crash-landings, human error and sponsor incompetence all beset the team. It's only through adaptability, ingenuity and agility that the project gets done at all. And with a heart-warming sub-plot related to Harry's daughter, who is in love with rigger AJ (Ben Affleck), naturally there has to be an emotional wrench. Spoiler alert... when the project looks in jeopardy, the pencil-necks in government decide to explode the nuke on the surface, hoping to deflect the asteroid anyway. Dan and his NASA team know this won't work, and help Harry sabotage the decision, confident in his ability to finish the drilling in time. In the end, the make-do-and-mend approach does pay off – but Harry has to stay behind to detonate the device manually.

It's the ultimate sacrifice as a project leader, but also the ultimate expression of agile decision-making. After all, humanity is at stake, and we've already seen Shanghai and Paris obliterated. The project comes first, and going against the rules to get it done is obvious, really.

It's almost enough to make a project manager jealous. The absolute nature of the project goal, the fixed deadline, the need to overcome internal politics quickly, the criticality of a genuinely inclusive project... sometimes you start out wanting to hate a movie for its preposterous premise and pitiful plot. But the project management on show might just have won us over.



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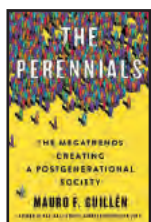
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SHOULD WE ABANDON GENERATIONAL LABELLING AND GO POST-GENERATIONAL? AND SHOULD WE AIM FOR A GENTLER APPROACH TO SOLVING HARD PROBLEMS?



The Perennials: The megatrends creating a postgenerational society

Mauro F. Guillén
(St Martin's Press)

Guillén proposes an interesting concept – that people should be characterised by the way they work, learn and interact with others, rather than the decade in which they were born. It recognises that, as life expectancy increases and societal dynamics shift, traditional generational boundaries based on birth year are becoming less meaningful in defining individuals' behaviours and attitudes. We talk readily of millennials, baby boomers, Gen Z, but there is an argument for the emergence of 'perennials' who are more easily able to adapt to change.

The author gives a history lesson in the traditional compartmentalisation of people's lives into the 'Four Stations of Life', which focus on childhood, the teenage to adult years, midlife

and post-retirement. He argues that characterising these distinct stages leads to inevitable conflict, which we can see every day – adolescents blaming the older generation for climate change, the working population resenting those who are retired 'living off our taxes', teenagers thinking they know better than their parents.

There is a huge amount of data, trends and statistics in the book that help shape the discussion on why and how these trends impact on groupings such as the 'boomerang generation', 'empty nesters', single-parent families, career-oriented women or early career professionals, among many others. Other contributing factors have led largely to the demise of the nuclear family and the re-emergence of multi-generational living arrangements, sometimes driven by financial or societal necessity.

For me, the most interesting aspect is that the author uses references to cultural touchpoints in literature, newspapers, magazines, theatre, film and social media to reinforce or exemplify the point he is making.

Ultimately, the benefits of moving to a less sequential way of thinking are so dependent on social structures, economic conditions and individual circumstances, but can be immense in addressing challenges of inclusivity and diversity, particularly when, for instance, trying to tackle ageism and stereotyping. It is so easy to make age assumptions when you're building and managing teams, and it's something that project leaders need to be alive to.

What comes across clearly is that there is both a real challenge and an opportunity for business to embrace people from different age groups and backgrounds so they can interact and work together, bringing a wide range of insights, skills and ideas to the table. This can lead to more creative problem-solving, increased productivity and the development of novel solutions. The main challenge is exactly how business can harness this, especially when looking to promote lifelong learning and career adaptability.

Overall, this is an informative and engaging book that benefits from historical lessons and case studies and is a useful guide to the driving forces behind moving to a more multi-generational, or post-generational, environment.

Review by Paul Bradley, Principal 3PM Consultant, PA Consulting



Move Fast and Fix Things: The trusted leader's guide to solving hard problems



Frances Frei & Anne Morriss
(HBR Press)

This book challenges the Silicon Valley motto "move fast and break things", which has fuelled an assumption

that a certain amount of wreckage is the price we must pay for inventing the future. They aim to show how you can lead

change with urgency and succeed without sacrificing organisational excellence and trust.

This is a playbook and is broken down into the typical working days of the week. It's a methodology, a set of instructions that follow a week, illustrating that a challenge, issue or problem can be fixed within a five-day timeframe. It does not have to be followed to the letter and the time can be expanded to adhere to the issue and the organisation.

The definitions did not really resonate with me, and I found some of the language a little confusing, although there is a useful glossary. This book is really for anyone in an organisation that wants to try a new way of solving problems and driving change forwards. It does raise some very good points about the way the organisation, cultures and people need to work together to move fast and fix things. Elements that I really liked were the agenda and materials listed for each day of the model, which are an effective quick reference of what is needed. There is a set of questions per day, which helps to frame what needs to be done.

The authors use some great examples and, when you get into the terms and language used, there are some points that really resonated with me, particularly about the alignment needed within the organisation, its people and their relationships, particularly trust, before you can fix anything.

There is an Inclusion section under Wednesday, which focuses on working together as a team, 10 underrated emotions in the workplace and 10 things that get in the way of moving fast. At the end, they use the 'take the weekend off' section as the summary. References to the authors' previous book, *The Unapologetic Leader's Guide to Empowering Everyone Around You*, throughout this one sparked an interest for me to seek this out.

Review by Donna Unitt, Head of Delivery, Rocket Consulting



My Bedside Books

Dr Jas Kalra, Arcadis Consulting & Visiting Professor, UCL & City University

The Data Imperative **Henri Schildt (OUP)**

Digital transformation is all around us, and information technology has emerged from being a supporting and enabling mechanism to the driving force for businesses. What differentiates Schildt's work is his focus on bringing strategic and management issues to the fore. He proposes a framework and advocates a shift in the management mindset to pursue 'digital omniscience' and 'digital omnipotence'.

Working

Robert A. Caro (Vintage)

This is a semi-autobiographical account by the Pulitzer Prize-winning author about how he produces his mammoth, well-researched biographies. He faced numerous challenges

while researching and writing the biographies of powerful men like Robert Moses and Lyndon B Johnson, and his courage and persistence throughout are awe-inspiring. It is an excellent book for any aspiring researcher and writer. I often find myself returning to it to remind myself of the work ethic needed to produce excellent work.

Memory, Sorrow and Thorn trilogy **Tad Williams (Orbit)**

This three-part classic epic fantasy from the 1980s is the story of an unnatural leader, an underdog, an adolescent kitchen boy who needs protection, and who, over the course of the story, grows up to become the ruler of the realm. Lots of lessons here: building a diverse team, servant leadership, the strength of weak ties and inter-organisational coordination.

We're all ears – podcasts to listen to

APM Podcast

Make time this autumn to listen to Dr Jo Jolly (Infrastructure and Projects Authority) give an insightful, inspiring interview about embedding the UN's Sustainable Development Goals into every project you work on. "We can do these things if we want to," she says. Hear her share how project delivery can be transformed for the better by embracing data and human collaboration and so improve society and all our lives.

The Infrastructure Podcast

Hosted by journalist Antony Oliver, this series of podcasts aims to introduce the people behind the

most interesting job titles and projects across infrastructure and spread best practice and learning. Recent interviewees include APM's Sue Kershaw on an integrated systems approach to transport, Sir John Armit on navigating the UK's infrastructure priorities, and Mark Thurston on managing complexity and risk.

The Green Room

A podcast from global consultancy Deloitte that explores big business questions, from climate and technology to inclusion and the future of work. Host George Parrett tackles interesting themes, including 'Does being you get easier with age?', 'What does it take to make an idea a success?', 'Can one person change a big business?' and 'Can AI help us be more human?'.

If you want to get ahead, shift your mindset!

EDDIE OBENG SUGGESTS SEVEN WAYS TO BREAK DOWN BARRIERS TO YOUR OWN AMBITION



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>

So, you want to get ahead? As it's autumn, the season of APM's Women in Project Management Conference, I'm skewing my thoughts towards women, but the advice applies to all. Thirteen years ago, I taught an all-women leadership programme designed to help participants rapidly progress up the organisation. I'm still in touch with some participants, so I know my warnings on 'how to avoid the pitfalls of popular perception' worked. But this is now. In 2023, I'll probably get cancelled for being factual but *sine timore* when it comes to your success.

Received wisdom is wrong. People often cite race as a barrier to their ambitions. But there is only one human race, so I think they mean skin hue? But not everyone gets promoted. Most people don't get promoted. Most of those not promoted share the same skin tone as those doing the promoting. The barrier might be you or, more accurately, your mindset.

Mindset shift 1: It's down to you and you alone

You must take complete responsibility for your progression. And you need a strategic framework. Remember the last time you bought something important, say a phone. A quick look to see what was on offer and you find they're all similar, six inches long, a few grams in weight, half-day battery life. Those qualifying criteria keep a phone on your list of possibles. The eight-inch phone that weighs a ton is dismissed. But how do you select the one? The winning phone has all the qualifiers, none of the negatives, plus something you value that differs from all the others.

Now imagine you are the person determining your progression. What's on their losing criteria list? A trail of failed or painful projects. What's on their qualifiers list? A track record of project success or ChPP qualification? Now you're on list of possibilities alongside every other candidate. What differentiated value are they looking for that will make you win?

Mindset shift 2: All of us are the same, but some are more the same than others

In our one human race, men and women are more alike than they are different. So although it's popular to pitch men against women, reality doesn't care. For millions of years, men and women worked together in a team to fend off dangers to their slow-maturing children. Teams work when there is a common goal, individual contribution and interdependence. The popular five-factor model shows that the biggest personality differences between men and women are in the level of agreeableness and neuroticism, while conscientiousness, openness and extraversion are much of a muchness. So team power comes from differentiated roles rather than different personality contributions. In terms of inherent motivation, men tend to be more interested in things and women in people.

Mindset shift 3: Don't become a carbon copy

If women simply think, act and behave the same as men, then what's the point? They lose their competitive advantage.

Mindset shift 4: Relish the thought of being the minority

My widowed mother was a groundbreaking scientist entirely in a man's world. All of her detractors, those prejudiced and jealous of her being more brilliant than them, were men. All her supporters and advocates were also men! Her career flourished because it was so much easier to create her own differentiated brand untainted by association.

Mindset shift 5: Use your inbuilt differences; work on projects where you naturally excel

How is agreeableness useful in projects? Perhaps for building strong stakeholder relationships that projects need?

Neuroticism is a superpower where a project has high risk factors. You will keep your stakeholders happy and calm. Are you motivated by the people or the content? Choose to lead projects that use your preference.

Mindset shift 6: Keep learning just-in-time

The first phone just had to work. The next had to work with clear sound. The third to work with clear sound and a cool handset. Yesterday's order winner is today's qualifier. The qualifying criteria will keep growing and so must you too by learning.

Mindset shift 7: You are unique

To get ahead you will offer different value from other candidates. As you become excellent you become unique. If you don't relish being a minority, your mindset will drag you back to the safety and comfort of the herd. Leadership is always lonely, but you will always have yourself for company.

USEFUL TOOLS

Project types <https://QUBE.cc/PETs/ChangeTypes>
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