PROJECT

ISSUE 303
SUMMER 2020
£13.75

THE VOICE OF THE PROJECT MANAGEMENT COMMUNITY

apm THE CHARTERED BODY FOR THE PROJECT PROFESSION

Inside the race for a vaccine

ADAPT AND PIVOT
SHARING YOUR STORIES OF THE COVID-19 CRISIS

THE BIG INTERVIEW
SIR JOHN ARMITT ON THE FUTURE OF PROJECTS

PLUS **HOW TO BE MORE RESILIENT**

EXCLUSIVE!
LEGO'S INSPIRING APPROACH TO ITS FLAGSHIP PROJECT

Mi-GSO | PCUBED

COVID-19

United in Delivery

Need help getting your business back on track?

As lockdown restrictions loosen and we go into the next phase of the global response, organisations will be eager to restart and rebuild. We will need to develop adaptive roadmaps, allowing for adjustments and changes as new information emerges.

It is in all of our interests to get the nation, and our projects and programmes, back on track. If your organisation is a corporate member of the APM, we can offer **our peer expertise** to **remotely deliver complimentary workshops** to help you on your journey.

Get in touch:
Email us at: **info@migso-pcubed.com**
Call us on: **+44 (0)207462 0100**

Mi-GSO | PCUBED
more on www.migso-pcubed.com
APM Project Management Consultancy of the year 2017 & 2018

scan to open our website

CELEBRATING 25 YEARS IN THE UK
1995 - 2020
Mi-GSO | PCUBED

FROM THE EDITOR

Some breathing space

Months into this pandemic, we are moving towards a steadier state. Can we allow the dust to settle and take some time out to reflect on what we have lived through so far this year? The adrenalin-fuelled first few weeks of lockdown showed us that we humans are hardwired to adapt under pressure. Please take some time to congratulate yourselves for what you have achieved. The strain everyone is under is immense.

If there was any situation that proves what power projects can have, it is this pandemic. I don't just mean the life-saving project of finding a COVID-19 vaccine, our cover story this issue. I also mean the way project managers are trying to keep businesses and organisations running as society and the global economy is paused. Most importantly, organisations like the NHS that are dealing with the terrible human effects of coronavirus. At a humbler level, it's the importance of helping the people who surround you (physically or virtually) to keep going, whether that's your project team or the people you share your home with. And let's not forget keeping yourself afloat though the financial uncertainty that lies in the wake of this.

The COVID-19 cataclysm caught us unprepared but has accelerated a transformation that many project managers have been advocating. It's just that it happened in weeks, not months or years. It might be stronger collaboration, remote working, more streamlined processes or better communication. Essentially, more agility, greater adaptability and a determination to get the job done with the right outcomes, rather than caring about how many hours you sit at your desk in the office (what office?).

But surely what trumps everything else is the appreciation of our own humanity. From glimpsing a team member's toddler on a Zoom call to consoling those who have lost someone to COVID-19 or are recovering from it themselves. Values are being reassessed as we witness great kindness, compassion and a tentative hope that we have a chance in this pause to build a more positive future.

Now is the time to go over what has happened, keep the best and ditch the mistakes made in haste so that we can prepare for a new and better normal. I hope this issue will give you a sense of pride in the community in which you play a part, and the inspiration and fortitude to carry on doing the best that you can.

We go inside the race for a COVID-19 vaccine, Sir John Armitt helps discern what the future might hold for projects, and I investigated LEGO's inspiring approach to the project management of its new Danish campus. It's a company that celebrates play, collaboration and creativity. Now, doesn't that sound like something worth fighting for? P

● **EMMA DE VITA** IS EDITOR OF *PROJECT*

Values are being reassessed as we witness great kindness, compassion and a tentative hope that we have a chance in this pause to build a more positive future

BEN WRIGHT

PROJECT

Editor
Emma De Vita
emma.devita
@thinkpublishing.co.uk
Managing editor
Mike Hine
Group art director
Jes Stanfield
Sales director
Michael Coulsey
020 3771 7232
michael.coulsey@
thinkpublishing.co.uk
Account director
Kieran Paul

THINK

APM, Ibis House, Regent Park, Summerleys Road, Princes Risborough, Buckinghamshire HP27 9LE, United Kingdom
apm.org.uk Tel (UK): 0845 458 1944
Tel (Int): +44 1844 271 640

Cover price: £13.75
Annual subscription fee: £56.50 (UK); £66.50 (Europe); £77 (international)

PROJECT (ISSN 0957-7033) is published by the Association for Project Management in association with Think Publishing, Capital House, 25 Chapel Street, London NW1 5DH
Tel: 020 3771 7200
thinkpublishing.co.uk

apm
THE CHARTERED BODY FOR THE PROJECT PROFESSION

CONTENTS

FROM COVID-19 TO LEGO – **THIS ISSUE OF PROJECT AT A GLANCE**

NEWS ANALYSIS

PERSPECTIVES

"Before this, you just took it for granted that you could produce a product and your factory wouldn't shut down"

FEATURES

PA IMAGES; MICHA THEINER; C.F. MØLLER ARCHITECTS

32

"It's hard to imagine how any government is going to avoid putting up taxes. What impact does that have in terms of the availability of money?"

PEER TO PEER

OFFLINE

END GAME

NEWS ANALYSIS

IN THIS SECTION:

IMAGES

On your bike

London and other major world cities have created pop-up cycleways

London, Paris, Milan, New York and other usually gridlocked cities are giving cyclists new emergency cycleways as lockdown restrictions continue, and the hope is that the trend will carry on once the COVID-19 crisis is over. In May, London mayor Sadiq Khan and Transport for London (TfL) published their *Streetspace for London* programme that will rapidly repurpose the capital's streets to transform them to accommodate more walkers and cyclists while social distancing. TfL says that some of the changes, including new temporary cycle lanes, wider pavements and traffic reduction measures on residential streets, could become permanent.

In May, transport secretary Grant Shapps also announced a £250m emergency travel fund to create pop-up bike lanes, safer junctions and bus-only corridors across England.


74
BUS DRIVER VACANCIES
0800 38 99 7 99
www.go-ahead-london.com
West 4 Joinery
BV66

Grabbing the opportunity for a greener future

Accelerating sustainability within projects has been a growing priority in recent years, and a post-pandemic world may provide the perfect chance to take action

As we come to discern what the 'new normal' might look like, there is a feeling that government and business should capitalise on this enforced pause to move towards greater sustainability.

"After the 2008 financial crash, governments spent too much money on 'shovel-ready' infrastructure projects. As a result just $1 out of every $6 was spent on sustainable infrastructure [globally]," wrote the *Financial Times* in its editorial of 15 May. "The opportunity today is greater. The cost of renewable energy has fallen significantly. The sector today provides many jobs, employing 11m people worldwide in 2018."

Yet 'greening' a project is much more difficult than 'greening' a business, because projects typically involve multiple supply chains and temporary organisational structures. In a statement earlier this year, APM said that it agrees there is an urgent need for coordinated action by project professionals across all sectors to address and minimise the impacts of both the climate-change and biodiversity emergencies. Amid rising public concern, the UK government has set in law a target to achieve net-zero greenhouse gas emissions by 2050 (or sooner, as in Scotland). APM itself has made a commitment to be a carbon-neutral organisation consistent with the UK government's own target date, if not sooner.

CONFRONTING CLIMATE CHANGE

APM calls for projects of every size and purpose to minimise their environmental impact and adapt to the future climate. It is developing an action plan based on five objectives (see box, page 10) and is working on plans to reflect its statement on climate change, both to reduce its own carbon emissions and to provide thought leadership and resources for the profession.

Its *Projecting the Future: Climate change, clean growth and sustainability* challenge paper, published in September 2019, asks project professionals to "confront the implications of our projects for the climate. We have to consider the responsibility of the profession – and the individual professional – to drive change within individual projects and organisations". Project managers now need to develop new competencies to deliver projects informed by knowledge of sustainability issues and the UN's 17 Sustainable Development Goals (SDGs, see page 48).

LETTING GO OF THE OLD WAYS

Gwyn Jones, director of the Association of Sustainability Practitioners, told *Project* that now could be "a great opportunity" to let go of behaviours such as the use of coal, regional flights, car ownership and fast-fashion that have been directly and indirectly responsible for industrial-scale environmental, social and personal harm. "This isn't a blame game: it means let's invest in those ideas and industries that will contribute to that sustainable goal. Across the EU in particular, and here in the UK, business leaders and politicians are lobbying governments to do just that. If we go back to the old ways and travel the same path that got us here, we will end up back here."

"Be aware that we are facing complex global problems that need new thinking: replace 'ego-centric' thinking with 'eco-centric' thinking"

Jones points out that in cities around the world roads are being converted to multi-modal corridors with cycle lanes, broader footpaths and more bus lanes, to cope with social-distancing measures due to the COVID-19 pandemic.

"But look at how they are doing it. Not elaborate (re)construction projects, but with bollards, tape and paint. They are experimenting and rapidly prototyping – seeing what works, adapting or abandoning those that fail and eventually setting in concrete those that work.

"Letting bikes, pedestrians, buses, trams and trains in solves congestion and stimulates more footfall in town centres and thus economic growth – and improves air quality. These plans, ideas and visions have been around for decades, but the inertia of 'that's how it's always been' stifled them. This shows how creative, imaginative and inventive our project managers can be when given the freedom to be so – and the freedom to fail."

Jones says that, to commit to a more sustainable future, project managers should think differently. "Be aware that we are facing complex global problems that need new thinking: replace 'ego-centric' thinking with 'eco-centric' thinking. In other words, be really conscious of the interconnectedness and interdependence of the systems in which your project lives." He advises project managers to consider both the positive and negative impacts of their project on all their stakeholders, from the local community and investors to the team, clients, sub-contractors and the planet.

RESPONSIBLE PM

The campaign for Responsible Project Management (RPM) was launched in 2018, and is a call to action that aims to change the narrative of project management by focusing on the competencies and knowledge that project professionals will need to develop to act responsibly. The UN's SDGs integrate social and environmental concerns and were chosen as a framework to underpin RPM.

The RPM manifesto, launched in 2019, and to which APM was an early signatory, calls for "project professionals to expand their roles by advocating for beneficial change". It aims to facilitate conversations that value conscious awareness over ignorance of project impacts; regenerative and circular approaches over consumption, ▶▶

Extinction Rebellion's 'No Going Back' campaign aims to turn the COVID-19 crisis into an opportunity for permanent change towards a more sustainable future

Amid rising public concern, the UK government has set in law a target to achieve net-zero greenhouse gas emissions by 2050

GETTY

“Lockdown has provided plenty of opportunity for new thinking... many projects have been delivered in seemingly impossible time frames”

damage and waste; and collaboration and engagement over competition and control. Signatories are developing and applying ways of managing projects that deliver social, environmental and economic value.

Dr Karen Thompson, a lead campaigner for RPM, and senior academic in the people and organisations department at Bournemouth University, tells *Project* that: “The period of lockdown has provided plenty of opportunity for new thinking and behaviour. Many projects have been delivered in seemingly impossible time frames, from the mobile apps to monitor the virus to transport infrastructure projects taking advantage of the quiet time and digital transformations that have changed organisational behaviour. Post-pandemic it seems likely that the expectations for project delivery will be high, and my hope is that sustainability will be high on the agenda.”

Dr Thompson argues that, before the pandemic, climate change was highlighting the dependencies between economics, society and the natural world and making project delivery increasingly challenging, but that the COVID-19 crisis has further emphasised these dependencies. “Post-pandemic, in a rush to rebuild the economy, tensions between people, planet and profit are likely to play out in projects,” she says. “This will be an opportunity to create a better future, but it will not be easy.”

STRONG FOUNDATIONS

She says that project managers already possess many of the skills needed to balance the needs of different stakeholders and to negotiate for beneficial change, although many will need to develop new competencies if they are to successfully deliver projects in the changed landscape. With her colleague Dr Nigel Williams, Dr Thompson recently gave an APM webinar on RPM, during which a poll on the extent of reporting of environmental and social project impacts was run, with 52 per cent of respondents indicating they are already regularly reporting on both. This gives an indication of some good foundations for future sustainability, Dr Thompson says.

CLIMATE CHANGE: WORSE THAN A PANDEMIC

“Climate change will cause more death, hardship and disruption than any pandemic,” Tom Taylor, past chairman and president of APM, principal of consultancy Dashdot and sustainability advocate, tells *Project*. “Pandemics do come to an end. Climate change will just continue to worsen and accelerate. Similar to pandemics, the effects of climate change cannot be eliminated or totally avoided – but as we have seen with COVID-19, they can be addressed and tackled.

“Perhaps now, working together, people and governments will be able to address ever-advancing climate change with the same focus as a pressing pandemic.”

To further the cause of sustainability right now, Taylor advises project managers and teams to undertake risk assessments and management for climate change within their business continuity and disaster recovery plans and provisions, as well as for fire, flooding, terrorism, asteroid collisions – and pandemics. Ⓟ

APM’s Action Plan on Climate Change

1 **Raise awareness and encourage debate about the consequences of climate change and how individuals and organisations can make a difference now and in the future.**

2 **Guide, advocate and promote the need for investment in climate change adaptation, mitigation and sustainable development. We will do this by working in collaboration with public bodies, professional bodies and other stakeholders, as well as our corporate partners and individual members.**

3 **Encourage, identify and celebrate good practice within the project profession that responds to the climate change challenge.**

4 **Share and disseminate knowledge and research to encourage the take-up of project innovations that are responsive to both climate change and sustainability challenges.**

5 **Promote education, training and professional development opportunities to help members gain the knowledge and skills to respond effectively to climate change.**

For Earth Day, communities in China painted cloth bags and offered them to those in need, promoting sustainability and community-focused activities

IMAGES

In France, a Christian Dior perfume factory converted to the production of hand sanitiser thanks to 50 volunteer employees

GETTY

Unprecedented projects for unprecedented times

Successful projects dealing with COVID-19 from around the world are testament to the 'urgent need' and value of project management skills

Who would have thought at the start of 2020 that Christian Dior would be pumping out hand sanitiser and Chanel medical masks and gowns? That the Royal Mint would be making medical visors or that car manufacturers would be making ventilators? The skill and speed with which organisations and their project managers have adapted and pivoted under extreme pressure has been impressive, from government departments like HMRC and NHSX, with its work on a contact tracing app, to online retailers such as Ocado.

Nothing has been more physically symbolic of the coronavirus crisis than the temporary hospitals that were built within weeks across the UK to help the NHS cope with COVID-19 cases – and that have thankfully been underused. NHS Louisa Jordan opened in April in Scotland's largest exhibition centre, Glasgow's SEC, at a cost of £43m. Graeme Watson, infrastructure firm AECOM's director on the project, tells *Project* it was "the hardest three weeks of my life". And this is coming from a former British Army platoon commander.

"This stretched me in many different ways, including implementing an extreme level of prioritisation to set up processes which were streamlined and fit for purpose, and maximised compliance and patient safety, and building relationships and trust very quickly with new team members and companies.

"The most impressive element of the project was the way everyone collaborated to such a degree. Yes, of course there were tensions and we had to hold people to account, but the can-do attitude that everyone brought was amazing. We had to create the conditions where any member of the team could feel confident proposing ideas."

THE UNSUNG HEROES OF THE PROJECT PROFESSION

"Perhaps when this whole dreadful pandemic is concluded, one of the key chapters of the story will be on the often unsung contribution of project professionals, using adaptive and change management skills to ▸▸

deliver a bewildering array of logistical and adaptive emergency projects and activities," wrote Sue Kershaw, president of APM and managing director of transportation at Costain, in a blog for APM's website. "The successes and failures will show a clear route map back to those organisations that were well organised and had the vision, skills and capacity to adapt at speed against immense pressure and deadlines to deliver. That is to say great project management was at the heart of this success."

And yet the UK will need a similarly imaginative collective effort to rebuild its economy and social and mental fabric, Kershaw argued: "Project management must be at the heart of this effort."

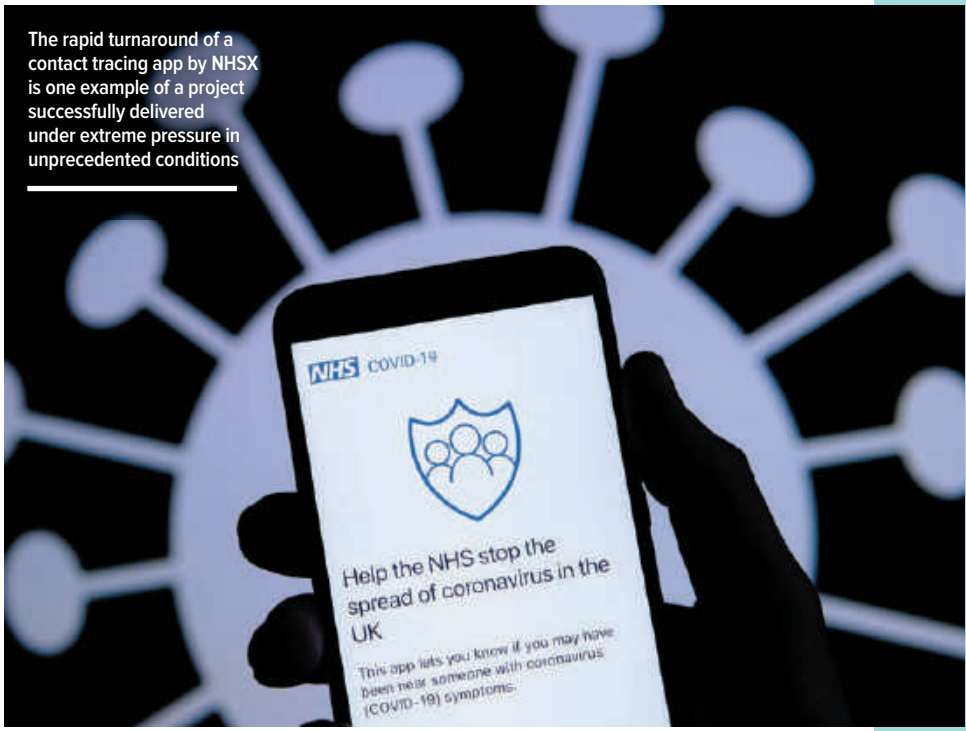
IMPLICATIONS FOR THE FUTURE OF PROJECT MANAGEMENT

"It was interesting to see the findings of a recent survey by APM reveal that, even after the introduction of the lockdown in March, there were more project professionals who reported projects being brought forward than cancelled as a direct result of coronavirus," wrote Debbie Dore, chief executive of APM, in a blog. "While this didn't overshadow the high percentage that are experiencing budget cuts or changes to scope and timelines, it did highlight the fact that – first and foremost – our profession has the flexibility and resilience to handle change and can rise to the challenge."

Meanwhile, Tim Banfield, chair of APM's Projecting the Future Group and director at the Nicholls Group, tells *Project*: "COVID-19 has drawn into sharp focus the importance of the project profession in dealing with dynamic change. It has given us the chance to demonstrate to the world that we are more than technical experts and that we provide expertise and leadership at times of momentous change.

"As project professionals, COVID-19 is providing a real-world test bed to showcase the way we routinely use emergent and novel practices in our work and adapt and learn as we go. What I'm seeing is that our confidence and ambition in delivering the diverse change required swiftly and effectively in the face of massive uncertainty are rising. That is about more than applying traditional agile practices. What it shows is that adaptability – in techniques, attitudes and behaviours – is king. It is now an essential part of the project practitioner's strategic toolkit.

"The things my fellow project professionals are achieving while often working in incredibly difficult conditions are absolutely inspirational. They are real concrete examples that everything we do changes the world a little bit for the better."



The rapid turnaround of a contact tracing app by NHSX is one example of a project successfully delivered under extreme pressure in unprecedented conditions

"The most impressive element of the project was the way everyone collaborated to such a degree. Yes, of course there were tensions and we had to hold people to account, but the can-do attitude that everyone brought was amazing"

Banfield believes that the conversation APM and its members have been having around Projecting the Future over the past year will give the profession a head-start to build on the momentum the crisis is generating.

"When we look back, my aspiration is that the COVID-19 crisis will be seen as the moment when the project profession really came of age and our value was truly recognised. But more than that, it will be when we positioned ourselves in the minds of senior business and public-sector leaders as being at the heart of future change.

"What strikes me is that having a common goal, breaking down silos, relaxing the shackles of bureaucracy and being forced to work differently are giving us years of learning in months – it is an evolutionary leap for us as individuals and for the project profession."

BRILLIANCE AT A COST

But it isn't easy, Banfield admits. Not just in his own work environment, but in lots of conversations with colleagues, it is clear that different working patterns, tensions and pressures combined with understandable fears about the virus and the future are stressing individuals and teams in multiple ways – and the challenges are changing the longer the crisis runs. "We are achieving brilliant things, but at what cost? What worries me are the implications on the mental and physical wellbeing of colleagues and my teams – not to mention my family and friends."

● **Check out episode two of *The APM Podcast* (apmpodcast.podbean.com), in which Sue Kershaw and Debbie Dore discuss the project profession's future opportunities in light of change brought about by the COVID-19 crisis**

Project growth sectors to watch

The Golden Thread *research continues with deep dives into the healthcare and pharmaceuticals/life sciences, charity and SME sectors*

APM and PwC's study of the contribution of project management to the UK's economy was published last year in *The Golden Thread*. New research, to be published in early July, takes a deep dive into three growth sectors for project management – healthcare and pharmaceuticals/life sciences, charities, and small- and medium-sized enterprises (SMEs).

It's important to note that the research was undertaken before the COVID-19 pandemic took hold, so while this research sets out the current position of project management, it will be some time before the long-term effects of the COVID-19 pandemic and resulting economic slowdown are visible. It is without doubt, however, that the response to COVID-19 will require both an increased focus on the importance of health, but also a major rethink of how countries, both individually and globally, prepare for the future and possible further outbreaks.

The research found that the three sectors are fertile ground for project management not only because of their increasing uptake of project management methodologies, but also because of the ways in which project professionals within them are adapting approaches and processes to fit sector needs.

For charities and life-science organisations, project management facilitates funding and grant applications to evidence that the organisation has a structured approach underlying its work and planning. Project professionals in charities are also using techniques like impact assessments to help them precisely measure the impact their work is having. SME project professionals stated that processes like risk management can be easily incorporated into their business as usual and offer great benefits to their ways of working.

HEALTHCARE AND PHARMACEUTICALS/LIFE SCIENCES

Within healthcare, analysis from Health Education England has highlighted that recruitment within project delivery for the NHS as a whole has nearly doubled over the last six years, from 2,500 to 4,500 annual recruits. There are 7,500 project professionals working within the NHS. There is also anecdotal evidence that the healthcare sector is taking a more structured and focused approach to project management.

In the pharmaceutical sector, strong project management is recognised as a valuable asset in the process of developing new pharmaceuticals, testing them and bringing them to market efficiently and effectively. Project management is also well established in private-sector life-science projects, and there is evidence that it is moving into the research sector as project managers are increasingly specified and sought after by funders, especially on larger projects.

Sector snapshots

HEALTHCARE AND PHARMACEUTICALS/LIFE SCIENCES

£17.5bn
annual contribution to the UK economy from the project profession

223,800
full-time equivalent project workers

CHARITIES

£6.61bn
annual contribution to the UK economy from the project profession

117,900
full-time equivalent project workers

SMEs

£79–94bn
annual contribution to the UK economy from the project profession

1–1.3m
full-time equivalent project workers

● For more on the *Golden Thread* series, visit apm.org.uk/goldenthread

CHARITIES

A major portion of charities' work is project-based, and the adoption of project management approaches is relatively recent, but on the increase. Charity-sector experts interviewed for the research stated that the use of project management is increasingly established throughout the UK's large charities, with some now employing dedicated project professionals. Smaller charities are following suit, training staff on project management approaches and introducing documentation and theories of change to underpin their work.

Project management approaches are relatively new in the charity sector but are being adapted and embedded. This trend is driven by a 'filtration effect' from local authorities as project management benefits become more widely known, wider recognition of project management in the charity sector, and grant decision-makers increasingly requesting evidence of project management approaches in bids.

SMEs

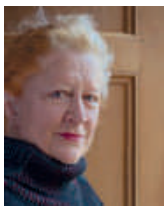
The types of project that SMEs run include IT/digital transformation, new product development, organisational transformation, fixed capital projects, events-based projects, creative media projects and mergers and acquisitions. On average, an SME undertakes 16 projects a year, with a median project budget of £30,000.

The research found that SME projects are often run by managers with limited formal training in project management techniques. With finite resources to hire dedicated project managers, a need was highlighted for further training and guidance for these professionals, particularly in key processes including risk management, change management and time management.

Several key SME sub-sectors were identified where project management can potentially provide a significant contribution to upscaling productivity, including the creative and media industry. The job functions and objectives of creative production managers, for example, are well placed to benefit from project management tools and methodologies. Ⓟ

MARGARET HEFFERNAN

Why maximum efficiency doesn't always pay



The belief that efficiency makes everything better is a dangerous myth that ignores the fundamental differences between what's complicated and what's complex, writes ***Margaret Heffernan***

We've all done it: sat in planning meetings and shaved off costs here while tightening schedules there. We think we're keeping everything efficient and under control. Since the Industrial Revolution, the prevailing ethos of business has focused on efficiency. Bigger, faster, cheaper. Modern technology accelerated and amplified the theme and made globalisation possible. Just-in-time manufacturing now means that, while Apple's iPhone is "designed in California", making it depends on raw materials and suppliers from Ireland, the Philippines, China, Taiwan, Japan, Austria, Korea, Singapore, Thailand, Germany, the UK, the Netherlands, Indonesia, Puerto Rico, Brazil, Malaysia, Israel, the Czech Republic, Mexico, Vietnam, Morocco, Malta, Belgium and many of the United States.

This complex, tightly managed supply chain is designed for maximum efficiency: reducing costs and taking advantage of labour specialisms, employment conditions, currency fluctuations and tax breaks. It is pretty miraculous and has led most organisations to optimise efficiency everywhere they can.

But that's because we ignore the drawbacks. Such complexity also exposes Apple (and similar manufacturers) to natural disasters (like disease), labour disputes, economic volatility, social turmoil, religious strife, trade wars and political discontent: all unpredictable factors over which the company has no control, little influence and poor foresight. These systems are so dazzling that it's easy to forget that they multiply contingencies and amplify risk. The belief that efficiency makes everything better is a dangerous myth that ignores the fundamental differences between what's complicated and what's complex.

Confusing the complicated and the complex is dangerous. If you think everything is complex, projects become bloated and overly cautious

A useful analogy here is air travel. Much in flying is merely complicated. You know passengers will check in, their bags will be loaded onto planes and they will want to eat and drink. Those aspects of flying are managed with a beady eye on efficiency and they work well. But once the plane is in the air, you cannot guarantee with absolute certainty exactly what will happen: whether geese will hit an engine or a part will fail. Too many factors are at work and beyond control to know for sure what will happen. So, aircraft have been designed with more engines and operating systems than they usually need – just in case one fails. Robustness, not efficiency, is their protection against the unpredictable. Just in case.

Confusing the complicated and the complex is dangerous. If you think everything is complex, projects become bloated and overly cautious. If you think everything is merely complicated, you eliminate all margins for the unexpected. The overuse of efficiency in the NHS, for example, left it radically unprepared for an epidemic. Using 100 per cent of the capacity in intensive care or running down stockpiles looks efficient when in reality it's dangerous.

Often, both the complicated and the complex exist within a single system. That was true of the Dutch homecare nursing system, which was designed to maximise efficiency. This made it a cumbersome bureaucracy where every patient had a standardised contract specifying precisely how nurses should spend their days and minutes with patients. The desire for efficiency meant that patients were being treated "like apples on a farm: just picked and packed off". Just-in-time management made the work uniform, expensive and largely meaningless.

One of the nurses, Jos de Blok, had a great insight. He saw that, in fact, there were two aspects to this system. One was just complicated – like issuing the contract that assigned a nurse to a patient. It was predictable and repetitive, so technology could make the process more efficient. But the other part of the work, helping the patient recover, was inherently complex, because no two patients are identical and the work cannot be predicted. That part,

Toyota's just-in-time manufacturing is so efficient that components have to fit perfectly first time because no alternatives are available

GETTY

de Blok thought, should be left to human judgement, because it needs to be more adaptive and responsive. So he proposed an experiment: automate much of the paperwork – but give nurses the freedom to do whatever they believed was best for the patient.

When the accounting firm EY audited de Blok's experiment, it found that patients got better in half the time, because nurses were free to use their judgement on the spot. And when the experiment was expanded, costs were shown to be 30 per cent lower. The success should spill over into the rest of the health system, too: emergency admissions down by a third and generally shorter. EY estimated that €2bn would be saved if the whole of the Netherlands adopted the system.

Efficiency is powerful with any work that can be standardised, measured and predicted. But not everything can be, and it's important to know the difference. Trying to standardise and measure all work may instil the illusion of control, but it too often deskills and demotivates the human skill sets that the unpredictable demands. It also robs people of their capacity to adapt and respond with creativity and commitment. Acknowledging the uncertainty inherent to life isn't a weakness to be conquered; it challenges our humility and our creativity to address the unexpected. Ⓟ

● **Margaret Heffernan is the author of *Unchartered: How to Map the Future Together* (Simon & Schuster, £20)**

ANDREW LIKIERMAN

Learning to exercise good judgement

*London Business School professor **Sir Andrew Likierman** explains why leading during turbulent times means making the right judgement calls on the run. Here's how...*

'Unknown unknowns' are familiar territory for project management, and good judgement is a key quality for any leader looking to navigate financial and logistical nightmares. Judgement – the ability to combine personal qualities with relevant knowledge and experience to take decisions and form opinions – has six elements. Let's take each one in turn:

1 WHAT YOU TAKE IN. The danger is not picking up on the key messages in unfamiliar circumstances. Good judgement means making sure you understand what makes this crisis different.

2 WHOM AND WHAT YOU TRUST. Expertise on coronavirus, particularly on timescales and implications, is lacking, so it's difficult to know who to trust. Question any claims about aspects that are unfamiliar, and put a premium on those who are honest about what they don't know.

3 WHAT YOU KNOW ABOUT THIS. What we know for certain is that this is not like any crisis we've had before, so beware false analogies. Good judgement means being clear about what is known and what isn't. Find out what you can about how others – not necessarily in your own industry – are handling challenges, whether bottlenecks, shortages or financing problems.

4 WHAT YOU FEEL AND BELIEVE. Good judgement means bringing your feelings and biases, including optimism and pessimism, into the open and making sure your risk analysis reflects the current circumstances. Two pitfalls are likely to be confirmation bias (when we find evidence to support our point of view) or availability bias (when the latest piece of evidence is given undue weight). Good judgement means understanding risk appetite or tolerance and matching it to the knowledge available at the time. This includes putting on the table all the key trade-offs, such as in conserving cash while managing relationships with suppliers.

5 YOUR CHOICES. Identify the key trigger points for decisions. Cash will be the prime consideration for suppliers, contractors and customers. But this is a crisis with a difference, with government support at an unprecedented level, banks under pressure to be flexible and everyone in the same boat. Your choices need to reflect these special factors. Your 2020 budget should almost certainly have been replaced with shorter planning horizons, featuring ranges instead of mid-points for the medium term. Detailed scenario plans should be avoided until assumptions are solid enough to be worthwhile. As in any crisis, take the opportunity to rethink 'the way we do things around here'.

6 DELIVERY. There are special aspects to this crisis when assessing the impact on delivery. These include: everyone is affected; strong secondary effects (such as supply-chain disruption); unexpected tertiary ones (such as the effects of restrictions on movement); and uncertainty about the shape of the economic recovery. Good judgement means being even more rigorous when checking the credibility of claims regarding delivery. Ⓟ

● **Sir Andrew Likierman has been interested in major projects since serving on a 1975 government inquiry into cost increases in developing North Sea oil. For more information on measuring judgement, see his article 'The elements of good judgement' in the January/February 2020 edition of the *Harvard Business Review*.**

Mi-GSO | PCUBED

Celebrating success in the UK for 25 years

MI-GSO | PCUBED is the world's leading consultancy dedicated to **project, programme, portfolio and change management.**

This year we celebrate our 25th anniversary in the UK.
We would like to thank all of our employees, clients and business partners.
Here's to another 25 years!

APM Project Management Consultancy of the year 2017 & 2018

To find out more, visit us at:
www.migso-pcubed.com

Email us at: **info@migso-pcubed.com**
Call us on: **+44 (0)207462 0100**

scan to open our website

CELEBRATING 25 YEARS IN THE UK
1995 - 2020
Mi-GSO | PCUBED

Mi-GSO | PCUBED

BENT FLYVBJERG AND ALEXANDER BUDZIER

Will the Tokyo Olympics be a winner?

Bent Flyvbjerg and Alexander Budzier examine the postponement of the Games by a year and wonder if support is waning

Few other megaprojects draw as much public attention as hosting the Olympic Games. In 2013, when Tokyo won the bid for the 2020 Olympics, the world was a different place. Japan hoped that the Olympics could help stimulate growth in its lacklustre economy, which was still impacted by the fallout of the 2011 Fukushima disaster. The idea of hosting the Olympic Games was also popular with the public. According to polls, eight out of 10 Tokyoites supported the bid. The Olympic Games, proponents argue, showcase a country to the world. It is a two-week event to celebrate sports, national culture and heritage.

In March 2020, COVID-19 forced the postponement of the Games by one year. Questions remain as to whether 2021 is a certainty. The Olympics last experienced a crisis when World War II forced London 1944 to become London 1948. The postponement presents a massive logistical and financial challenge to the organisers.

We have long been critical of the Olympic Games. Bids for hosting the Games consistently and severely underestimate the outlays of the event. Our research shows that not a single Olympics that has reliable data has delivered the competition within the budget set out in the bid. Cost excesses are in the billions. Tokyo's official budget stands at 1.35 trillion yen (£10bn). The Japanese state auditor found government projects worth 1.06 trillion yen (£8bn) whose scope is directly relevant to the Games. Yet, the Tokyo Organising Committee does not account for the government spend in its budget. On top of that, the city of Tokyo is spending 810 billion yen (£6bn) on Olympic-related projects.

ADAPT TO THRIVE

Despite the outlay, the anticipated economic boost has not materialised. Japan's GDP growth since winning the bid has stayed below the 2013 increase of two per cent, according to World Bank figures. Since Tokyo won the bid, public support globally for hosting the Olympics has waned. The International Olympic Committee (IOC) selected five cities to enter the final stage of the bidding process for the 2024 Games. In 2015, Hamburg's citizens voted against proceeding with the bid. One year later, Rome dropped out after electing a mayor who ran on a platform against hosting the Games. Finally, in 2017, just before the final bid competition, Budapest also suspended its bid. The dropouts left only Paris and Los Angeles in the running. Instead of forcing the two cities to compete, the IOC awarded 2024 to Paris and 2028 to Los Angeles.

This setback came despite the IOC's attempt to change. In 2014, the IOC adopted its 'Agenda 2020', which set out '20+20 recommendations' to improve the sustainability of hosting the Games. Critics of the Games, like us, have argued that these changes are not fundamental enough, but at least they show an appreciation of the need to adapt the Games. Thomas Bach, the IOC chairman, explained the need for change when the IOC launched Agenda 2020 in December 2014. He argued that the Olympics need to become more sustainable, transparent and ethical in a fragile world with more political, financial and health crises.

The failure to award the Games through a competitive bidding process was already a predicament for the Olympic Movement when COVID-19 hit. Whether crises have an internal trigger, like the Olympics sustainability crisis, or an external trigger, like COVID-19, a set of critical factors determine whether organisations survive or fail. Three failure factors are common in organisations that collapse because of crises. Organisations tend to either ▶▶

◂◂ miss the crisis, misunderstand the crisis in a way that leads to ineffective responses, or fail to learn from the crisis.

In the current situation, most organisations and projects have grasped what COVID-19 means. Trial-and-error learning dominates when organisations learn to respond to crises. Most organisations have implemented first responses and continue to find new ones. These responses will, hopefully, ensure survival through this crisis, which is why now is the time to start thinking hard about what can be learned from this.

Our research has shown that dismissing a crisis as being a unique event kills organisations in the long term. Therefore, learning from and through crises is essential. Research has found that learning focuses on four questions: first, how did we respond to the crisis? Second, how did the crisis change the relationship between our organisation and its members? Third, what are the structures, routines and processes that we need to (re)build, improve or let go? Fourth, how did the crisis change our organisation's identity and values?

LESSONS TO BE LEARNED

This summer, we are having more and more of these conversations in our homes and at work, and these will continue long after we emerge from the COVID-19 crisis. As leaders in projects, we need to drive these conversations, and that starts with reflecting on our leadership. How did you respond to the crisis? What worked and what did not work? How did the crisis change your relationship with team members? What practices do you want to start, stop or continue? How did the crisis change and challenge your values and identity as a project leader?

The Learning Legacy has been part of the Olympic Movement since Sydney 2000. The IOC and the leaders of the Tokyo Organising Committee will try to learn from the recent events and their response. So should we all. Ⓟ

● **Bent Flyvbjerg is BT professor and chair of major programme management at Saïd Business School, the University of Oxford, where Alexander Budzier is also a fellow in management practice**

DEBBIE DORE

At the heart of matters

Debbie Dore, APM's chief executive, talks inspiration, achievements and dedication

It is an understatement to say that the past few months have been testing for the profession and for APM, as they have for all of you, but it has also been an inspiring time when we have seen people come together and deliver some outstanding achievements. Like many of you, APM has had to adapt to operating remotely and implementing new ways of working – and thanks to the dedication of our staff and the collaboration of our members and volunteers, this has been achieved extremely smoothly. As our chair, John McGlynn, said in a message at the beginning of the coronavirus crisis, "the change for us all has been significant – both personally and professionally – and we are all trying to adapt".

It is clear that across many sectors the profession has stepped up and played a vital part in supporting the significant changes that had to be put in place at pace to ensure that as a country we could tackle the immediate health challenge of the pandemic. Latterly this has focused on the early steps leading to economic recovery. We have tried to capture these stories in both our online and print content to showcase those doing great work, but also for others to learn from their experience.

The scale of the impact was dramatic. Our survey of members in the early stages of lockdown showed that 77 per cent of respondents anticipated further disruption to projects they are working on as a result of the coronavirus outbreak. This survey made clear there was a strong belief that there would be a long tail of disruption to projects in the future, and we are now starting to see that. Without doubt there will be benefits too as people challenge the norms that existed and introduce new ways of working that have often been talked about but not fully adopted.

Of one thing I am certain. Project professionals will be at the heart of planning and delivering successful change in a post-lockdown world

APM IS HERE TO SUPPORT YOU

At APM we have done all we can to adapt our offering to support our stakeholders. We have launched a new community platform for our members – the APM Hub – where people can keep in touch and share experiences. We successfully brought forward the launch of our online qualification platform, and it is heartening to see so many training providers and organisations using this. Together with this, our volunteers have greatly increased our webinar programme on topics of real interest at this time. We have moved our Power of Projects conference programme to deliver in a new online environment and

GETTY

look forward to hosting our first virtual conference with almost 2,000 participants. We will keep looking for new ways to support you as we adapt even further as time goes on and the shape of a new future becomes clearer.

CHALLENGING TIMES AHEAD

Of one thing I am certain: project professionals will be at the heart of planning and delivering successful change in a post-lockdown world. Project professionals working in all types of organisations will need to adopt new ways of working to successfully deliver and manage projects amid the seismic disruption caused by coronavirus. Small steps towards recovery are under way, but it is clear this will be uneven across sectors and types of projects. Many challenges will have to be met and overcome, such as social distancing, adjusted budgets, compressed timelines and a reassessment of the benefits the project is delivering in this new normal. APM looks forward to supporting the profession as it continues to adapt and show its value, and we wish you well in meeting these challenges.

APM trustee elections go digital

As a membership body, Full and Fellow Members of APM have the right to enter the annual ballot to become trustees for their association. Importantly, they also get to vote for their preferred candidates and decide who they wish to see on the APM Board. It's important that truly high-calibre people put themselves forward. APM chair John McGlynn confirmed: "It's incredibly rewarding to be an APM trustee and to play a leading role in driving APM and the profession forward. I strongly encourage members to consider the opportunity carefully. Look out for the announcement and briefing pack from APM this July. And whatever you do, please make sure you vote in the ballot. This year the elections are being held in online form only and this is all part of APM's commitment to reducing our carbon footprint."

APM is developing action plans to reflect its statement on climate change, both to reduce our own carbon emissions and also to provide thought leadership and resources for the profession. The Board therefore decided to stop sending hard-copy ballot papers and election statements by post. This will yield a small cash saving but, more importantly, will see a reduction in paper and the carbon emissions associated with their production, printing and distribution. Members are encouraged to make sure email addresses are correct in their MyAPM account to ensure they receive this year's ballot pack.

Russ Archibald

We are sorry to learn about the death of one of our early pioneers in APM – Russ Archibald, aged 93, in Mexico where he lived. Among his many accomplishments over the years, he was a founding member of APM. He was a PMI Fellow, Honorary Fellow of APM and ISIPM (Italy), and an honorary member of many other organisations. He has had three careers: first in military and aerospace, then as a corporate engineer, and finally as a consultant for more than 30 years. A highly regarded author, he had a bachelor's and master's degree in mechanical engineering. He was also awarded an honorary PhD in strategy, programme and project management from Ecole Supérieure de Commerce de Lille. Honorary Fellow David Pells said: "He was a true expert, and a kind, generous and gracious human being. Russ was an inspiration! He will be missed."

INSIDE THE RACE FOR A VACCINE

The urgency to find a coronavirus vaccine is compressing years of research into weeks for these life-saving projects. ***Rachael Pells*** *goes behind the scenes to understand the superhuman effort and international collaboration to find humanity's golden ticket out of the pandemic*

SCIENCE PHOTO LIBRARY

As millions prepared to celebrate the dawn of a new decade on 31 December last year, world health authorities in China received reports of a worrying new illness spreading across Wuhan city. Over the coming days and weeks, this novel coronavirus – which causes the disease now known as COVID-19 – would dominate news stories across the globe.

The coronavirus pandemic has killed over 317,000 people at the time of writing; it respects no authority or border and has upturned every aspect of society in its contagion. Now, the planet's sharpest minds are racing to find a vaccine, which experts agree is the only exit strategy from the current state of social and economic limbo.

But a clear road to a successful vaccine and treatment is not guaranteed. Scientists face huge time-scale pressures, and navigation is especially complicated when traditional planning strategies no longer apply. In April, it was revealed that Remdesivir, a highly anticipated drug developed by researchers in China in the hope of treating coronavirus patients, had failed its first round of trials – a major blow.

While terms like 'unprecedented' and 'global crisis' have become clichéd through overuse, it is clear that the unpredictable nature of this disease means project managers are unable to plan to the same measures they once might have. It begs the question: how do we go about achieving such a complex and high-stakes mission when the only deadline leaders have is 'now'?

VACCINE PROJECTS AT THE CUTTING EDGE

During previous epidemics, vaccines would take years to develop, but COVID-19 has come at an auspicious moment: cutting-edge genetic sequencing technologies make it possible to crack a virus's genetic code in no time at all, and scientists are no longer required to put themselves at risk by handling dangerous, live molecules of a disease in order to develop a vaccine response. Instead, they are able to design artificial copies of the offending virus's DNA or RNA.

Tarja Huuskonen, CEO, Action for Results

Thanks in part to Chinese researchers who were quick to crack the virus's code and share its unique genetic sequence, testing of potential vaccine candidates is well underway. Research by Imperial College London into an RNA vaccine – which works by training the body to build up a defence mechanism of antibodies against specific, harmful cells – is due to be ready for human trials in June.

Another project, underway at Oxford University's Jenner Institute, takes a different approach: immunologists are creating what is known as a recombinant vector vaccine, designed to work by embedding a string of genetic coding from the coronavirus into an existing chimpanzee virus that is harmless to humans. The theory goes that, when the doctored chimpanzee virus is introduced to the human body, it hijacks cells to generate molecules that match the same shape as the coronavirus. Once the body has these uniquely shaped cells in its recognition, it will be ready to attack the real thing later on.

The potential benefits of this relatively new type of vaccine development is that it uses an existing structure, and is believed by some experts to be safer – getting researchers to the point of human trials much faster. The first volunteers were given trial injections at the end of April, with tests on rhesus macaque monkeys in May showing good results, and a further 10,000 volunteers to be recruited. According to Jenner Institute senior immunologist Professor Katie Ewer, creating a vaccine this fast has never been done before – nor has a clinical trial been designed so quickly during an outbreak.

Around 80 further academic laboratories and private institutions are also hard at work on the task at hand, not including dozens of grassroots and under-the-radar initiatives taking place among so-called 'DIY' or 'citizen' scientists via online forums and hacker-spaces. And while criticisms grow over political leaders' responses to the pandemic, even the world's largest pharmaceutical companies are teaming up with would-be competitors: in April, GlaxoSmithKline and Sanofi announced a joint-initiative clinical vaccine trial later this year with the hope of having a product ready by the second half of 2021.

PROJECT LEADERS NEED STRONG ALLIES

"A public health crisis – especially one on global scale – is not 'business as usual'," says Tarja Huuskonen, CEO at life sciences project management consultancy Action for Results. Leadership, resilience and a "focused pursuit of the end goal" are crucial, but perhaps more so than ever, team leaders will need to build a strong network of partnerships and alliances – often with competitor groups and across boundaries, she advises. This means "deploying agile methods and 'fail-fast' principles", with a primary focus on getting to the point of scientific and clinical proof-of-concept "as quickly as possible – with clear go/no-go criteria and understanding of risk".

"The great news is that novel technologies are being pursued with considerable potential to accelerate clinical development," says Huuskonen. "However, the novelty of DNA/RNA based approaches also carries an increased technical risk associated with development."

The clinical 'proof' for a vaccine is generated through Phase 2 trials, which still have a high failure rate – only around 33 per cent make it through to the approval stages, Huuskonen notes.

"From a global perspective, having a prioritised pipeline of vaccine candidates is important," she adds. "While several global collaborations are in place, questions about prioritisation and ability to refocus resources and funding quickly appear." To this end, communication is key: "Daily huddles with teams to stay connected will be critical." Given that social distancing measures are forcing office teams – not just those used to collaborating internationally – to fully coordinate work online, often for the first time, "another challenge is to quickly learn virtual facilitation of work – truly working virtually, and not just meeting virtually," she explains.

'PLAYING ROULETTE'

Even with the best of intentions, there can be no doubt that these teams, alongside their ruling governments and policymakers, will succeed better with help from coordinating bodies. "While it is good to have multiple efforts under way, given high failure rates, if these efforts are driven independently, the overall probability of success – defined by having a safe and effective vaccine out in record time, in the right quantity to address global needs – decreases," Huuskonen explains. With this in mind, "the end goal" should be "to have a platform for ongoing preparedness in the long term".

The Coalition for Epidemic Preparedness Innovations (CEPI) was set up to respond to exactly this eventuality. Launched at Davos in 2017 as a joint initiative by the Norwegian and Indian governments, the Bill and Melinda Gates Foundation, Wellcome Trust and the World Economic Forum, CEPI was born out of a consensus that a coordinated international and intergovernmental plan was needed to develop and deploy new vaccines to prevent future epidemic crises.

Researchers at Oxford's Jenner Institute are working with unprecedented speed on a breakthrough vaccine

The timing of epidemics is unpredictable, but that's not to say that some degree of forward planning is impossible. Within the first six months of operation, CEPI had negotiated partnerships with vaccine developers to offer financial and advisory support for work on nine vaccines, which may or may not be needed. CEPI may not be able to develop vaccines for every known virus, but it can make educated predictions as to which diseases are likely to cause problems in the near future.

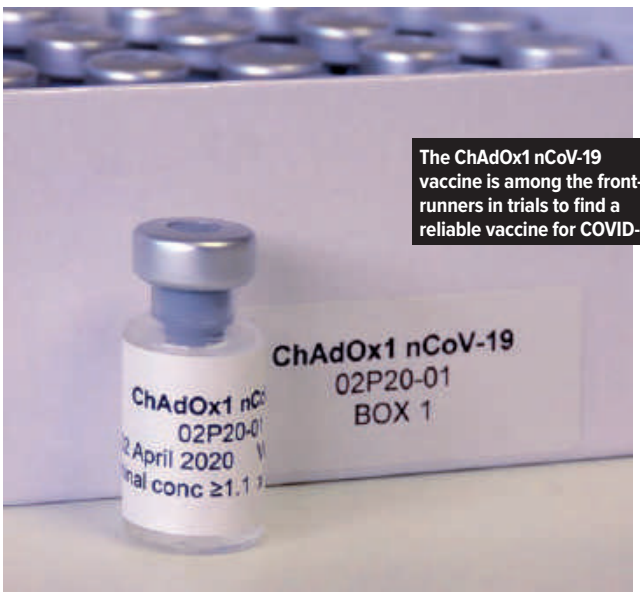
"We are playing roulette," Richard Hatchett, CEPI's CEO, told Margaret Heffernan, author of *Unchartered*, in late 2017, adding with acute foresight: "We have to deal with beta coronaviruses, like MERS and SARS, because they have pandemic potential."

A RACE AGAINST THE VIRUS

Today the organisation has an 80-strong staff body working on the international COVID-19 response, including researchers from a variety of backgrounds in industry and academia, as well as project managers, contract managers, lawyers, and communications, financial and administrative staff. When the World Health Organisation declared COVID-19 an international public emergency in January 2020, CEPI moved to set up eight new partnerships with promising vaccine programmes around the world, backed by $23.7m in funding. "This virus can only be beaten with international cooperation, and we are seeing unprecedented levels of global scientific collaboration," says Mike Whelan, project leader for CEPI. "There is certainly a race to find the vaccine right now, but it's a race against the virus and not against each other."

As with any project of this scale, a timeline was set: in this case, 16 weeks, something leaders acknowledge is "extremely ambitious and unprecedented". Agreed vaccine projects are broken down into defined work packages, "each with ▶▶

"This virus can only be beaten with international cooperation, and we are seeing unprecedented levels of global scientific collaboration"



The ChAdOx1 nCoV-19 vaccine is among the front-runners in trials to find a reliable vaccine for COVID-19

pre-agreed milestones, and transfer between work packages is controlled by a pre-defined review procedure", Whelan explains. Partners are allocated a dedicated CEPI project lead, each with extensive experience in vaccine development to provide real-time support and guidance.

OXFORD'S JENNER INSTITUTE: A PIONEER

The Oxford vaccine trials are also partially funded under CEPI. Sarah Gilbert, the recombinant vector vaccine programme's leader, first came across the new virus in early January – weeks before UK ministers met to declare the contagion of COVID-19 a threat to national health. While many took time off to celebrate seasonal holidays, Gilbert and fellow scientists remained clued up on the crisis taking place on the other side of the world through group email conversations within the medical community. It was not long before she began to consider the potential impact of this new disease: "It looked like it might be something interesting, but we didn't know if it had spread very far," Gilbert recalls.

Gilbert's research group were already busy working on vaccines for diseases including Lassa fever, MERS and 'disease X', the name given to the unknown threat "that we knew was going to come and cause a pandemic at some time in the future". Given their available resources, she and colleagues decided to get started on a vaccine, just in case.

The Jenner Institute is unique in that it has its own manufacturing facility for Phase 1 and 2 clinical trials, and has previously conducted 12 clinical trials against similar diseases, giving Gilbert's team a head-start. Now, more than ever, organisation is key: the vaccine centre currently has around 200 people on rotas to manage the set-up of human trials, screening volunteers ready to take part as soon as vaccines are available.

Lessons learned from Ebola

The global need for an organisation like the Coalition for Epidemic Preparedness Innovations (CEPI) was recognised after the devastating Ebola epidemic hit West Africa in 2014. "The world's response to this crisis fell tragically short," CEPI's Mike Whelan reflects. "A vaccine that had been under development for more than a decade was not deployed until over a year into the epidemic. That vaccine was shown to be 100 per cent effective, suggesting that much of the epidemic could have been prevented. It was evident we needed a better system to speed development."

One positive lesson learned from the epidemic is that delegation and outsourcing of project management in large-scale vaccine trials is proven to have a significant impact on the speed with which immunisation – from laboratory testing all the way through to distribution of the drug – can be implemented in a community in times of crisis.

With the Ebola outbreak already underway, action was required to push vaccine trials through at a faster rate than laboratories were previously found capable of. To this end, help was sought from big pharmaceutical companies such as GlaxoSmithKline in the development, testing and licensing of a vaccine, and the task of project managing such a feat was awarded to Quintiles (now rebranded as Iqvia), a US multinational company responsible for outsourcing services for pharmaceuticals. Quintiles oversaw the recruitment of 3,000 adults and 600 children required for Phase 2 trials of the most promising vaccine, and managed the task three weeks ahead of schedule.

"One of the challenging things about COVID-19 is that the objective is clear but how to get there is murkier than ever"

"In the context of social distancing this is a huge logistical challenge," notes Andrew Pollard, chief investigator on the study. To speed the process up, the team must effectively build the train while on the track: researchers would ordinarily wait more than a year after the first phase of trials has finished before moving on, "but here in a pandemic we have to manage things differently," he explains. "Trials are organised to run in quick succession, so there's no change overall in procedures, just the urgency to try and move rapidly through the testing."

Manufacturing the vaccine, adds institute director Adrian Hill, is "one of the biggest challenges faced. It's no good telling you the vaccine works but we don't have any ready," he says. As such, "risk manufacturing" of the most promising vaccine candidate has already begun in that partnerships are being set up with a network of seven manufacturing companies around the world. "We're now moving to the point where, instead of doing maybe three-litre manufacturing runs, we're up to 50 litres. We'll go to 200, maybe even 2,000 litres. The aim is to have at least a million doses by around September once we've got the vaccine efficacy result, and then move even faster from there – it's pretty clear the world is going to need hundreds of millions of doses by the end of this year."

In fact, Cambridge-based pharmaceutical giant AstraZeneca signed a deal at the end of April with the Jenner Institute to team up to manufacture and distribute the prospective vaccine, with the capacity to supply up to 100 million doses by the end of the year, and then expand from there. Gilbert has given the project an 80 per cent chance of success, possibly as early as September.

THE FINANCIAL COST OF A GLOBAL VACCINE

Biomedical testing is a costly business – CEPI estimates the cost of developing a single epidemic infectious disease vaccine at between $31–68m, assuming no risk of product failure, during ordinary times. Since the COVID–19 outbreak, the foundation has received over $765m from the UN, Canadian and European governments, and some private-sector donations, but much more will be needed to ensure fair distribution of the products across continents.

The ideal situation, according to Whelan, will be to have multiple licensed vaccines ready for distribution, not just one "winning" formula. But project managers' work will continue far beyond that initial eureka moment. "Ultimately, when a vaccine becomes available there will be global demand, so it is vital that a system is in place to ensure that those who most need it get priority access."

Jenny Ottenhoff is a project leader for health and education programmes at the ONE campaign. A major part of her role is to drive routine and targeted fundraising on a global scale to support charity and research bodies, including CEPI. "Whenever we are working on projects that are as key as this one, they're always mission-driven and we need an objective," she says. "One of the challenging things about COVID-19 is that the objective is clear but how to get there is murkier than ever.

"Making decisions when you aren't positive that you have the right information is challenging in itself. So keeping a resilient attitude and making it clear to partners that you might be taking

Sarah Gilbert, professor of vaccinology at the Jenner Institute, University of Oxford

JOHN LAWRENCE

some risks is really key in this time of uncertainty," she says, adding that a "big tent attitude" is required. "We're drawing on expertise and resources, talking to every partner we can to share ideas, lock intel and try to connect dots. Right now, I think the biggest lesson from this outbreak is that we're all in this together and the solidarity message is really key. It absolutely cannot be done in a silo."

This global connectedness is an ambition shared by researchers in Gilbert's lab, too. "We would be really keen to work with other vaccine developers, either sending them samples from our clinical trials or receiving samples from theirs so we can start to compare the immune responses," she says. "With the 2014 Ebola outbreak, this didn't happen. Different groups were using different ways of measuring the immune responses so it wasn't possible to compare like with like until after one of the vaccines had been through an efficacy study – when it should really be the other way round."

Jenny Ottenhoff, project leader, the ONE campaign

This would not only help experts to prioritise the vaccines that work, but would give researchers a greater understanding of RNA and DNA vaccines in general, she explains. "We don't think ours is the only vaccine that's going to work, but we don't think all of those out there are going to be useful."

Gilbert's team was awarded a further £2.2m by UK public funding bodies in March, and she is confident a vaccine will be ready for manufacturing by autumn 2020. If so, they will have achieved an extraordinary feat in a marginal time frame thanks to their ability to prepare for virus response ahead of time. Once this crisis is over, there will nonetheless be lessons to learn for next time around.

"From a programme management perspective there isn't a clear global or national plan, nor a clear definition of roles and responsibilities"

"We are seeing significant positive movement: public-private partnerships, sharing of information across traditional boundaries, funding from government and philanthropic sources, vocal demand for vaccines," Huuskonen reflects, "[and yet] from a programme management perspective there isn't a clear global or national plan, nor a clear definition of roles and responsibilities. Still a siloed approach rules more than not – and, unfortunately, political and personal agendas get in the way."

'WE'RE ALL AT RISK'

"I am very optimistic that we will learn from this and continue to improve the global response to these types of things. We already have," Ottenhoff adds. "But it's imperative that preparedness stays at the forefront of policymakers' minds once this is over." Ultimately, project leaders need to be willing to make risk management a regular feature in their month-to-month planning, not just after a crisis has hit. "But I would say it really happens at a government level," Ottenhoff concludes, "every country on earth needs to be prepared for an epidemic, and until all of us are prepared and our systems are functioning well, we're all at risk."

ADAPT AND PIVOT!

How are project managers reacting to the coronavirus crisis? Dave Waller speaks to those who are learning to live with the new normal and pulling off the extraordinary feat of keeping projects going as everything is turned upside down around them

IN PAGES

Lisa Pattenden has been spending a lot of time indoors lately when we speak in April. She's slowly mastering the art of working from home – set up by the window in her living room, with an open door letting in air from a Juliet balcony. On calls she's quick to apologise for the rumble of Chinook helicopters arriving at the NHS Nightingale hospital built at London's ExCel convention centre, opposite to her flat.

Pattenden wears several hats. As well as having volunteered to deliver hot meals to NHS Nightingale staff, she's on contract through Atkins as a programme manager for quality and transportation strategy at HS2, in charge of the logistics of the traffic involved in the rail construction. She's also, like many project managers during the COVID-19 pandemic, being tasked to deliver complex projects smoothly in a world flipped upside down.

In mid-April the government gave HS2 the nod to proceed, despite the country being deep into lockdown. "That meant a whole other level of construction for us," she says. "So there's the dynamic of managing that from home. I was like: 'Right, how are we doing this?'" That's a question that will surely resonate among readers right now. Around the world, project managers are implementing new systems and working patterns for projects that are pivoting and shifting more wildly than ever – and it's all being carried out from improvised offices in spare rooms.

A PLACE TO HIDE

Pattenden's work hinges on ensuring hundreds of critical tasks are being handled to plan. Her biggest challenge has been to ensure the same level of accountability she could expect in the good old days of working face-to-face. "It was really great when we were in the office because I could track people down and they couldn't hide from me," she says. "Now they can." This transition to ▶▶

Engineers at Royal Mint pivoted to produce a successful face-visor prototype within 48 hours. As a fast-moving manufacturer, Royal Mint could take advantage of techniques that could easily be transferred from coin-making

"I didn't know people's home lives when we worked in the office. Now I can understand the challenge of the marriage, the kids, the barking dog"

Lisa Pattenden, programme manager for quality and transportation strategy, HS2

remote project management may feel very familiar. Productivity trackers used to be a handy tool; now they're an absolute staple for the team, generating regular status reports and graphs that show deliverables at a glance. Collaborative spreadsheets are now a must. And the only sight of her colleagues comes through a window on Microsoft Teams.

FLUID SITUATION

Some organisations were already well equipped to make this kind of switch. At the NHS's Health Education England, for example, corporate portfolio manager Jo Stanford relates how valuable it was to have virtual 3D workspaces in place before the virus took hold. "It's a bit like the advice you get on a plane to put your own mask on before helping with someone else's," she says. "We could provide support to the key programmes that were being affected, and do coaching and workshopping for others."

Yet many companies are so used to working face-to-face that they have had to scramble to get live collaboration tools up and running. Prior to the pandemic, Hannah Gledhill, project management office lead at chocolate maker Hotel Chocolat, couldn't have imagined developing new products without gathering round a table to taste chocolate samples and handle prototypes for packaging. She concedes that moving her team over to sharing live documents online has been a challenge. But she's also found herself struggling with something bigger.

"As a project manager, I inherently like to be able to control things," she says, on the phone from her makeshift upstairs office. "This situation is so fluid; it's almost a full-time project management job trying to keep the line-up of different projects accurate across the business. The suppliers for a product are open one day, the next day closed, then they're open again. Before this, you just took it for granted that you could produce a product and your factory wouldn't shut down."

As Gledhill suggests, the unique impact of the pandemic has left project managers facing new, unfamiliar hurdles. But some are suddenly working on completely unfamiliar projects too. And even when these pivots are critical for the public health effort, they can easily create extra stresses of their own.

"This situation is so fluid; it's almost a full-time project management job trying to keep the line-up of different projects accurate across the business"

Hannah Gledhill, project management office lead, Hotel Chocolat

Surface Technology International (STI) is one of many companies around the UK that has pivoted its production to support the NHS – in this case, handling the production and testing of ventilators for Ventilator Challenge, the high-profile consortium of manufacturers that includes McLaren and Rolls-Royce.

RADICAL PIVOT

STI is aiming to produce 15,000 ventilators in five weeks. Each ventilator has around 600 components. So that's close to nine million parts in total, for a product it had never made before. The team has had to dismantle and relocate its facilities to cope with the new production flow, and its supply chain has buckled under the demands of the radical pivot.

"A number of new suppliers have been brought on board," says Jon Ashford, project engineering manager at STI. ▶▶

Tips for project managing in a crisis

● Know your systems
Even if you didn't have remote collaboration software in place before this crisis, you'll need it for the next one. Set up a consistent suite of tools for everyone to use, and make sure shared documents are accurate and accessible to everyone, wherever they are.

● Be open with suppliers and customers
A crisis will play havoc with your regular supply chain and distribution, none of which will be within your control. But you can dictate how you communicate the situation to stakeholders.

● Start looking forward
We don't know what the future of work will look like, but things won't be the same after this. So carve out space to pause and reflect on lessons already learned and how this can serve you in what comes next.

● Bring people with you
The more complex the organisational change, the more that human element comes to the fore. Be open, honest and visible.

● Remember to cut your team some slack
When asking your team to go above and beyond their usual role, understand that they may have to put other things ahead of the job. And remember to schedule catch-ups that aren't about work, but just sharing a moment – as people.

Apply today for the
2020 IET Young Woman Engineer of the Year Awards

theiet.org/ywe

With thanks to our Co-Headline Sponsors

BAE SYSTEMS · BOEING · Collins Aerospace · FRAZER-NASH CONSULTANCY · GCHQ · LEONARDO · MBDA · Ofcom making communications work for everyone · ROYAL AIR FORCE · Royal Mail · TELEDYNE e2v · WILEY

"It's about trying to find the right ways to discuss it with the production team, so they don't automatically take a hit and think: 'Oh, we're just starting and stopping again'"

Jon Ashford, project engineering manager, Surface Technology International

The team at Surface Technology International have pivoted from their previous role as providers of electronics solutions to handling the production and testing of ventilators

"With that comes requirements for quality assurance and material dependability. It's taken a couple of weeks for materials to start to flow into STI, and there are a number of small issues cropping up that are causing production to stop and material to be put into quarantine."

The team is, of course, well aware of the value and importance of its task. One colleague has even spent several weeks in hospital with the virus on a ventilator. The subsequent sense of purpose can serve to amplify frustrations when the wheels fall off the process. "It's about trying to find the right ways to discuss it with the production team," says Ashford, "so they don't automatically take a hit and think: 'Oh, we're just starting and stopping again.'"

Gledhill and Ashford have both taken a similar approach in keeping morale up. Communication is regular, open and honest. Progress is clearly documented, with very obvious targets set, met and celebrated. Catch-ups are shorter but more frequent. And live documents are kept accurate and accessible to everyone – to help people who are working odd hours around childcare commitments.

CUTTING PEOPLE SOME SLACK

Carol McGovern is project manager at medical software company Clevermed. Prior to COVID-19, Clevermed was busy scaling up its BadgerNet maternity platform. But as the pandemic spread, its customers – pregnant women – were suddenly some of the most at risk. Thanks to the efforts of the company's software engineers, it was able to quickly roll out nationwide upgrades to the platform to build in coronavirus-specific triage questions, as well as push notifications containing the latest guidance for pregnant women.

Yet some of those engineers have struggled with the structure and rigour of working from the kitchen, day after day. McGovern's own work experience has helped her be more empathetic towards her team's changing needs. "We need to cut people a lot of slack," says McGovern. "We all want to see projects go live, obviously, but unless the deadline is life or death, it's best not to harass people. Six weeks ago I'd have said: 'Where are we at with that?' or 'That's failed. OK, how do we fix it?' Now it's more a case of: 'What can I do to help?'"

That's a question that's going to resonate for some time yet. As well as the considerable immediate project management challenge of moving to remote working, and keeping projects on track as the pandemic plays out, there are other issues for project managers to juggle. Like what happens next. The working world is moving as one into a massive unknown. And this throws a huge question mark over project managers' ability to see where their organisations and the wider working world are going. Let alone how best to navigate there.

At Health Education England, Stanford's primary role is to head up the corporate portfolio office, which recruits and manages the workforce supply coming into the NHS. She explains how, beyond the immediate emergency response, the organisation is starting to

"NHS Digital's virtual GP consultation programme was averaging around 300 virtual sessions a month. But in March there were something like 600,000"

Jo Stanford, corporate portfolio manager, Health Education England

plan for the post-coronavirus future. This includes harnessing positives that have emerged in the crisis.

"They say necessity is the mother of invention, and COVID-19 has pushed some real innovation and change to the fore," she says. "NHS Digital's virtual GP consultation programme was averaging around 300 virtual sessions a month prior to this year. But in March alone there were something like 600,000. Circumstances have advanced that agenda – and it won't go back to how it was before. Some of our work will be around looking at those opportunities."

As for how she'll approach that work, Stanford credits the research of Stephen Carver, Cranfield University's change and crisis management expert, who argues that the more complex the organisational change, the less success hinges on processes and structures.

"How we're reacting and responding to each other as humans is an incredibly important part of our planning," says Stanford. "A lot of people are frightened by the virus. Others will be in denial. So it's about how we take them out of anxiety and over to acceptance. It's about providing assurance that, although there are some bad things going on, some of the things we need in order to have a productive and effective future aren't scary in themselves. They're just things we need to learn how to do differently."

CAMARADERIE AND EMPATHY

Back at her flat opposite the ExCel, Pattenden is reflective. For her, the pandemic hasn't merely transformed her experience of work, it has also transmitted a healthy personal reminder that project managers are people with lives outside of work. "I didn't know people's home lives when we worked in the office," says Pattenden. "Now I can understand the challenge of the marriage, the kids, the barking dog. And that has built camaraderie and empathy. Now we know what's going on with each other, I won't be so firm with that person. We can help each other out."

the big interview

SIR JOHN ARMITT

The shape of the world post-pandemic is currently front of mind for the chair of the National Infrastructure Commission. He talks to Andrew Saunders about big government, climate change and taking a more holistic view of infrastructure projects

Has making the right infrastructure choices ever been more challenging? Even before COVID-19 swept the best-laid plans aside, the pace of change and unpredictability of both politics and public opinion already seemed at odds with the stable, long-term mindset required when deciding on huge investments in new roads, railway lines, airports and power grids.

Now we are in the midst of a global pandemic, things are even less clear. When the crisis ends, as it must, the ways in which we live and work, and the kind of world we will need to shape, will have changed too. Long-held assumptions about how much and how far we will move around in the future, how much can be done digitally, and the balance between the social, economic and climate impacts of major infrastructure projects look set to be upended.

In the eye of this perfect storm sits Sir John Armitt, the veteran civil engineer behind major projects including Sizewell B nuclear power station, the second Severn crossing and the 2012 London Olympics, and now chairman of the National Infrastructure Commission (NIC).

"It's an incredibly difficult debate," he says of the potential effects the novel coronavirus and the mass economic shutdown that it has brought. "It will be very interesting to see what happens. The longer it goes on, the bigger the potential consequences. What will the impact be in terms of the attitudes of companies and employees to flexible working, for example? Will there be a reduction in the demand for commuting travel – instead of a five-day-a-week peak, will there be a three-day-a-week peak instead? You can certainly see that possibility."

That could lead to other associated changes. Will the balance between car use and public transport, which in our cities has been shifting in favour of public transport for years, shift back again if people remain unwilling to pack into busy trains and buses? What would that mean for flagship projects like HS2, Crossrail 2 and the proposal to improve east-west rail links between Liverpool, Manchester, Leeds and Hull?

These are the kinds of question that infrastructure planners are well equipped to answer – at least under normal circumstances, when population-level changes in the behaviour of millions take years to come about. But sudden and unpredictable shifts in demand, such as those the present crisis may provoke, are hard to cope with, Armitt says. In the short term, operators' revenues are being hit, while in the longer term, important decisions about capital spending will be put in jeopardy.

"The other question, of course, is: what is this going to cost? It's hard to imagine how any government is going to avoid putting up taxes. What impact does that have in terms of the availability of money to do whatever is necessary?"

And given the billions that have already been promised to support salaries and business lending, he adds, "it's hard to imagine that we won't finish up with a slightly bigger government".

Even big governments need independent advice, however, and that, says Armitt, is at the heart of the NIC's role. "We're reasonably well established now, and 95 per cent of the recommendations we have made so far have been accepted in principle. We're essentially seen as independent – although we are an agency of government at the moment, there has been a lot of talk about turning us into a full statutory body."

Set up in 2015 by then chancellor George Osborne, the NIC was conceived to help develop a strategic plan for infrastructure that is sufficiently well-founded to survive the vacillations in government policy that have dogged many attempts to upgrade the UK's critical infrastructure. Too often, plans that were supported by one administration or minister have been sidelined by the next, with the result that vital projects end up seriously delayed, over budget or cancelled – the classic example being the tussle over whether to build a third runway at Heathrow.

In 2018, the NIC duly published the UK's first ever National Infrastructure Assessment, a comprehensive set of recommendations on everything from road and rail planning ▸▸

THE INSTITUTION OF CIVIL ENGINEERS

to low-carbon power, digital infrastructure, managing urban growth, tackling floods and reducing waste energy and materials. The assessment took an integrated and holistic view of the wider infrastructure landscape – an effort to wean politicians off their penchant for what Armitt has described as "big shiny projects" and to give greater consideration to maintenance and improvement of existing assets.

So far so good, but the expected government response to the NIC's recommendations, in the form of the much-anticipated National Infrastructure Strategy (NIS) itself, is taking a while to emerge. The document, which will set out for the first time a 30-year plan for UK infrastructure, was due to be published alongside the autumn spending review last year, but the Tory leadership election got in the way. It was then rescheduled to coincide with the budget in March, but put off again.

Now coronavirus is upon us, will the NIS be held up for a third time? "In the current circumstances, I wouldn't be surprised if there were a further delay," says a diplomatic Armitt, who won't be drawn on what exactly he expects will be in it, or when it might eventually appear. But his implication is that, with the Comprehensive Spending Review (originally due in July, but now delayed) and the next budget around the corner, plus the 'double whammy' of COVID-19 and Brexit occupying Whitehall, we could be in for quite a long wait yet.

But in the meantime there is still plenty of work to do, Armitt points out. Climate change underpinned much of the thinking in the National Infrastructure Assessment, he says, and that issue has become much more urgent since the government announced its aim to achieve net zero by 2050.

"The biggest challenge at the moment is energy policy. That's a tricky one because, in a way, the government has made it more difficult for itself by deciding to go down the zero-carbon route. Everything you do in terms of energy and electricity becomes even more challenging," Armitt says.

In light of the recent Court of Appeal decision on Heathrow expansion, climate change considerations are likely to become an integral part of all infrastructure decisions in future, he adds. The saga took its latest twist in February when the airport's third runway plans were deemed illegal, essentially because the government failed to follow its own carbon emissions impact rules properly.

"Heathrow has been knocked off by the challenge in the courts over whether they had considered the impact of zero carbon. Clearly that's now going to be an issue for anyone developing any of these projects," Armitt says.

The rising importance of digital infrastructure also needs to be recognised by an industry that is more often associated with putting large amounts of concrete and steel into the ground, rather than fibre-optic cables. It's no surprise, then, that the NIC's new chief executive, James Heath, was previously director of digital infrastructure at the Department for Digital, Culture, Media & Sport.

The still relatively new Conservative government has big plans for infrastructure as a tool for social engineering too – the so called 'levelling up' that has been promised to former 'red wall' voters in the post-industrial north in return for having lent their votes to Boris Johnson in December. Such plans might include improving the parlous state of the rail links on the axis between Liverpool and Hull, particularly the Transpennine section, in an effort to make the much-talked-about Northern Powerhouse a reality.

Armitt has said that there can be "no levelling up without digging up", so does he really think that infrastructure can raise living standards and boost social mobility? "By itself, no. It's one of several factors. If you want to level up, first and foremost you have to provide people with opportunity. So, skills are going to be high on the list, but so are connectivity and the means of distribution. That's why we had railways in the first place. How do you create connectivity and improve capacity between places as effectively as you can?"

"If you want to level up, first and foremost you have to provide people with opportunity. So, skills are going to be high on the list, but so are connectivity and the means of distribution. That's why we had railways in the first place"

GETTY

Sir John Armitt believes the infrastructure sector still has a lot to learn about stakeholder engagement

While successful legal challenges on the scale of Heathrow are still pretty unusual, the age-old issue of budget overruns is still very much with us. HS2 is barely under way and the estimated cost has already risen from £34bn to somewhere in the region of £100bn, depending on which report you read.

Armitt, who was involved in building HS1, says that such increases should be laid at the door of the client, rather than contractors. "We did some interesting work with PwC comparing the costs of high-speed rail in Europe and the UK. It's about 50 per cent more in the UK, and a lot of that comes down to political decisions. I think we do tend to gild the lily a bit in the UK. For example, do you run your new high-speed rail link right into the city, or build a parkway station on the outskirts? Because the costs go up astronomically if you do go into the centre."

While you might expect an engineer to say that, Armitt's opinion carries the weight of experience – there are few more seasoned hands than his when it comes to major projects. After 23 years with John Laing, he moved on to developing the plans

Sir John Armitt

1946 Born, London
1966 Graduates from Portsmouth College of Technology; joins John Laing as a graduate trainee
1993 CEO, Union Rail; development work on the Channel Tunnel Rail Link venture
2001 CEO, Railtrack, which became Network Rail
2007 Chairman, Olympic Delivery Authority
2012 Chairman, the Armitt Review
2015 Deputy chairman, National Infrastructure Commission
2017 Chairman, National Infrastructure Commission
2018 Publication of first National Infrastructure Assessment

MICHA THEINER

for the Channel Tunnel rail link in the 1990s. Then, as CEO of Costain, he rescued the struggling construction group and turned it back into a profitable concern with a growing order book. He was CEO of Network Rail at one of its lowest points and successfully steered the organisation through the aftermath of the 2007 Grayrigg accident in which one person died due to faulty points.

Armitt's father was in retail, so what drew him to civil engineering in the first place? "I was influenced by a leaflet from the Institution of Civil Engineers that described civil engineering as 'harnessing the resources of nature for the benefit of mankind' and talked about travel and working out of doors. I thought that sounded pretty interesting," he says.

He moved into management in his mid-20s in a holiday relief role and never looked back. "I recognised I was never going to be a leading civil engineering genius and that my abilities were more likely to lie on the organisational side, working with people," he explains.

Perhaps the high point of Armitt's career – as well as the ultimate organisational and people challenge – was his stint as chairman of the Olympic Delivery Authority for the 2012 London Games, where he learned that unmissable deadlines don't have to be the kiss of death. "When it comes to project management, if you have a fixed end date and you say, 'Look guys there's no choice', then people are encouraged to innovate and achieve a new standard," he says.

"When it comes to project management, if you have a fixed end date and you say, 'Look guys there's no choice', then people are encouraged to innovate and achieve a new standard"

He also learned the value of communication and the power of public opinion, lessons which, he says, the infrastructure sector has yet to take on board fully: "We've got to get better at engaging with all the various stakeholders, including the public, about the pros and cons, the costs and the implications of doing nothing – what are you not going to have?"

To that end, the NIC has been undertaking some exercises in what he calls 'deliberative democracy', involving presenting various infrastructure challenges to groups of 30 or 40 members of the public at a time. "We've done it in Bristol, Nottingham and Liverpool, talking about reducing congestion. 'As a city mayor, what are my choices?' Interestingly, the number-one preference is for better use of space – people accept less space for cars and would like to see more space freed up for public transport and cycling. Health and wellbeing was the second highest priority."

Keeping a finger on the pulse of public opinion is a skill that is likely to be even more useful in a post-coronavirus world, when making assumptions about what people want will be even more fraught with the potential for error.

But Armitt also believes that there are some long-term trends that will remain a high priority, despite the confusion caused by the pandemic. "I'd be surprised if it takes the pressure off the climate change and zero-carbon agenda. The open question remains – 25 or 30 years out, to what extent will we be seeing different behaviours and living in a different society because of this? Because, as a sector, we have to remember that we aren't doing this just for our own job satisfaction, we're doing it for the consumer and for the public."

TIME TO PLAY AT LEGO

Its new campus headquarters in Denmark is capitalising on LEGO's culture of collaboration, innovation and play both in its design and how the project is run. It should be an inspiration for all project managers, writes Emma De Vita, who was given exclusive access to the project team, finding everything to be awesome

LEGO was born in 1932 in Billund, a small windswept town in Jutland, Denmark, where its head office remains, and where around 2,000 employees from around the world get to live their dream of playing with small, brightly coloured plastic bricks. It's an exciting time for the family-owned Danish icon as work on its ambitious new campus continues safely while the COVID-19 pandemic endures. After four years of planning and construction, Phase 1 was completed in October 2019 and saw two interconnected buildings open and 500 people move in.

The entire project is on course to complete in October 2021 and is an ambitious symbol of the LEGO Group's values of creativity, fun and play – the LEGO name derives from the Danish *leg godt*: 'play well'.

"There's one aspect that is completely special to us: being playful. This is what defines a LEGO workplace," LEGO's workspace experience global design lead Sudhir Saseedharan told *Wallpaper* magazine. At the Billund Phase 1 opening party, Niels Christiansen, CEO of the LEGO Group, reiterated that: "It's important we provide our talented colleagues with an environment that is playful and inspires creativity and innovative thinking."

ANOTHER BRICK IN THE WALL

These values are made real through LEGO's culture of openness, collaboration and connectivity between colleagues, including the way it is managing the Billund project. LEGO's approach is the envy of many project managers who aspire to a better way of working, and is inspirational for those outside the business who are brought in as partners to work on its projects. ▶▶

“Curiosity and play is how we develop things and it creates joy. When we collaborate, we each prosper, and that is our company identity”

Morten Pedersen

The buildings feature a flexible layout, with breakout areas and lounges

Inspiration for the Billund campus design came from the office of Kjeld Kirk Kristiansen, grandson of LEGO founder Ole Kirk Christiansen and chairman of Kirkbi, LEGO's parent company. In this office hangs a picture of a boy holding up his LEGO creation. The buildings incorporate LEGO-shaped bricks in the exterior walls, and two gigantic yellow LEGO bricks sit atop the roof. Inside, the layout is flexible. The two buildings that are open include all the usual office, team and breakout areas any cool company needs, including play areas, lounges and outdoor parks open to the public. When complete, the campus will include a 'People House', with a large auditorium, fitness centre, games areas, café and staff accommodation, and will span 54,000m², with office space covering 25,000m². The current Phase 2 involves the interior fit-out, including a permanent dining area and shop, while Phase 3 will focus on the People House.

Anneke Beerkens, senior workplace anthropologist at the LEGO Group, worked with employees to design their ultimate workplace: "In the same way you build with LEGO bricks, we took elements our people love and brought them all together to create something unique. For example, employees told us that they wanted the freedom to choose an environment that suited them best for whatever they were working on, but they also like to stay close to teammates. So we built team 'neighbourhoods', which are a mix of individual and collaborative workspaces."

"When you have trust, people don't hide problems and we solve them together. Instead of people protecting themselves they are being open and honest. It helps people work very efficiently and gives you agility"

A TRUE PARTNERSHIP

The Billund campus project is a partnership between Kirkbi, CF Møller Architects, engineer Niras and contractor CM Hansen. Morten Pedersen, Kirkbi's project director, created the original brief in 2015 and set the tone for a collaborative, open and trusting approach to the project. Pedersen says Kirkbi wanted to promote an equal partnership between the engineer and architect, so unusually the client had split contracts – one with each. "Partnership is a key value at LEGO," he says.

"It's very important to talk the walk – to talk about what kind of walk you want the project team to do," he explains. "From day one, the project has been developed in close dialogue and collaboration with them. The fact that we wanted them all on board in the early stages to get their recommendations on the brief is very unusual [for non-LEGO projects]."

All were involved in twice-weekly meetings where Pedersen demanded an open dialogue. A dedicated project management office was created in CF Møller's office, comprising a team of around 60 staff drawn from the architect's practice, the engineering firm, and Pedersen's and LEGO's office, who worked together side-by-side. To have everyone around the same table in a dedicated project space helped to foster close, effective collaboration and creativity, explains Pedersen. It also sped up decision-making.

Face-to-face discussion is Pedersen's preferred way of getting a project done. "It's then more a decision process than a design process. You have the ideas, you decide which ideas to go for, and you get a faster design," he says. "It was all about building a successful project together. You get ownership of the project and you get the engineers and architects understanding each other. Knowledge sharing is so fast."

Pedersen himself benefited from a high level of trust from LEGO's owners, the Kristiansen family, who, once they had signed off the initial design, gave him the freedom to run the project as he saw fit. "I had a full mandate from the family. I told them about the concept and they said: 'You just go on with it.'" It has meant the design process could press ahead with zero challenges. "Being a family-run business affords Kirkbi the freedom to put culture first," admits Pedersen. "It's a definite advantage."

WHEN WE COLLABORATE, WE PROSPER

Pedersen made clear to his partners that he needed to have people with the right attitude on the project team – those whose professionalism would allow them to speak openly and fairly so that trust would be created and nothing would need to be "covered up". What mattered would be their dedication to the project, and getting the best work done. When there is a culture of trust, "people get

LEGO Serious Play

LEGO Serious Play (LSP) is a type of training that provokes managers into alternative ways of solving a problem and involves trained coaches giving participants LEGO bricks to build models. Micael Buckle, chief executive of Danish consultancy Inthrface, who has led hundreds of LSP sessions, including those for project teams, explains that the method helps people look at a situation or a problem in a different way. By using your imagination and physical blocks, you are able to tap into a different thinking mode. "LSP has always got a purpose," he says.

Iconic LEGO-shaped bricks appear as part of the design in the exterior walls

Klaus Toustrup

so motivated and say what they feel", he says. "The most important thing is to have trust from everyone on the team and expect the best from them. Everyone wants to be pushed to be the best."

Trust also means that project team members won't start arguments, because open dialogue means expectations can be aligned, and project team members have the confidence to be bolder with their ideas. "We focus on delivery, but also on how to get the best product created by the most motivated people. You give people a clear direction with a clear framework, and you show you believe in them," Pedersen explains.

Placing such an emphasis on the culture of a project team might perhaps seem alien to many project managers, but it is what distinguishes the LEGO approach.

"People focus too much on the deliverables and timelines rather than the social part," says Pedersen. Although he realises that, with a brand as appealing as LEGO's, it makes it easier for people to get excited about working on a project. "We take advantage of that," he says.

LEGO's philosophy, he explains, is "to never forget the child – and that means humour. Humour is a great part of LEGO. I've been here 10 years, with four years in Kirkbi working with the family, and Kjeld [Kristiansen] is so open to saying that play is really the key thing in human life. Curiosity and play is how we develop things and it creates joy. When we collaborate, we each prosper, and that is our company identity." Yet the most important success criterion of a project for him is also its biggest challenge. "It's a hard nut to crack," he admits.

Recent work has included sessions with the team of a large offshore wind turbine project, and a four-hour workshop for a pharmaceutical company's 60-strong project team on process mapping and optimisation, where LSP was used to create a physical overview of the project.

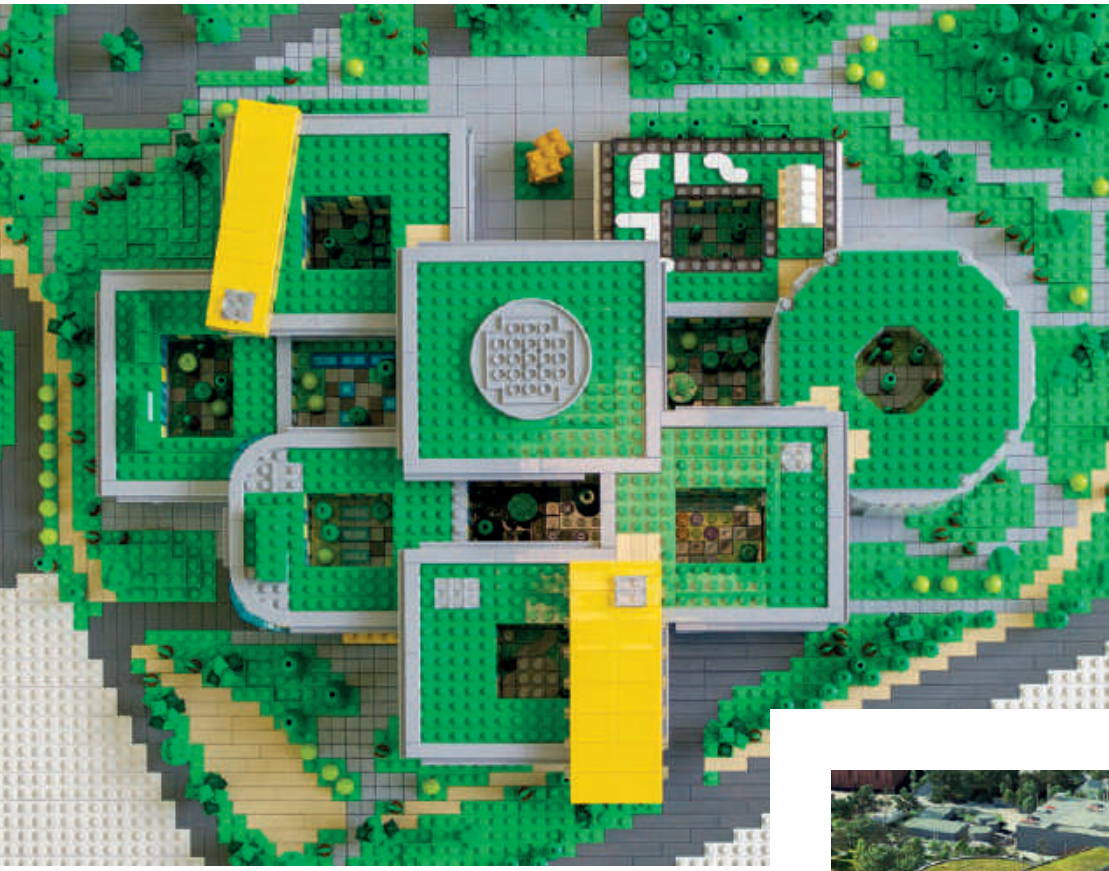
Seen from the outside, the models may seem overwhelming and even disorganised, but to the participants who will be working on the projects afterwards, they were able to see which parts of the project were connected, where bottlenecks may occur and how to prioritise to avoid a lack of resources.

Another project management workshop involved individual team members building LEGO models explaining who they are, what their competencies are, what they can contribute and what they would like to become better at.

"This is a great way for a new team to get to know each other better, for any team to create security within the team and to see patterns in how the team is connected, or maybe should be connected to excel at what they do," Buckle explains.

TRUST MEANS PROJECT EFFICIENCY

Klaus Toustrup is a partner and project lead at CF Møller Architects, whose submission won the campus design competition in 2015. He says that LEGO was looking for a highly flexible building that could keep pace with a dynamic organisation that is continually changing and innovating. Initially, Kirkbi didn't want a showy LEGO icon, more a design that could incorporate some of the LEGO values and reflect that the company's purpose for being is children and play. In the design process, the LEGO owner showed a painting of a proud boy and his LEGO creation; ▶▶



"We focus on delivery, but also on how to get the best product created by the most motivated people. You give people a clear direction with a clear framework, and you show you believe in them"

LEGO's Billund campus embodies the company's desire to see its values reflected in every piece of work it creates

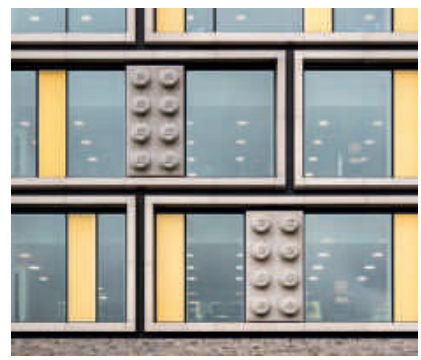
this became a benchmark and inspiration for all parties to the project. As a reminder, Toustrup made a copy of the child's painting and pinned it up in the project area, together with the LEGO brand values.

Unsurprisingly, LEGO bricks served as an inspiration for the design, from interior details such as helping with wayfaring, to the conceptual view of seeing the LEGO office as a little city of elements put together. Yet Toustrup found it was LEGO's strong values that were inspiring.

"LEGO thinks with its values, and as architects it's quite nice to have this as a framework. For me, it was very inspiring to see the LEGO culture not just in the design, but in the way we collaborate. In many ways this was about the sense of trust and developing the project as an open process, with a shared office with the engineers and LEGO."

THE BUILDING BLOCKS OF TRUST

Another unusual approach was to bring the contractor KG Hansen in from the start as part of the design discussions. "It worked very well," says Toustrup. "Often with these processes there can be a lot of struggle, and none of that has happened because of the way the project has been set up." It's something he is now trying to replicate on other projects.



"The challenge is that you need this trust element. When you have trust, people don't hide problems and we solve them together. Kirkbi has a great role in creating the right atmosphere. Instead of people protecting themselves they are being open and honest. It helps people work very efficiently and gives you agility," says Toustrup.

It also stops conversations becoming destructive and enables team members to flag up worries that can then be solved collectively. "There are none of the usual boundaries between the architects, the contractor and the engineers," he notes.

One of the biggest design challenges was working out how LEGO's requirement for the buildings to be flooded with daylight could meet with high standards of sustainability. Big windows potentially create a lot of heat, and the buildings need to be cooled down, which consumes a lot of energy. The balance between allowing daylight in and a sustainable building design led to the creation of a self-shading cooling system through the base design of the office façade – curtain walls with aluminium frames that change in depth depending on the direction of the sun on the building. It was a successful solution born from pragmatic collaboration between architect, engineer and contractor.

A SHARED 3D MODEL

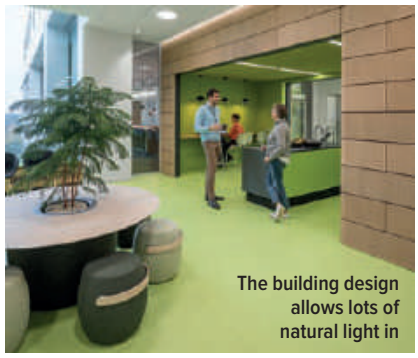
The project team used an Autodesk Revit 3D model that they shared and updated live, where contractor, engineer, architect, client and subcontractors could see what was going on at any time. "Sitting in the same room and co-creating it was a great way to avoid mistakes," says Toustrup.

Nikolaj Holst-Hvitved, project director at engineer Niras, explains that being able to work on the 3D model together and in real time was a first. Usually on projects like these, the engineers and architects would work on their respective models and exchange them once a week, by which time the model is a week old.

Sitting alongside the contractor in the project office afforded some advantages to Holst-Hvitved's engineering design team, because all the solutions could be discussed with them and their suggestions built into the design. "It meant we can agree solutions to the project along the way and everyone is happy and ready to start construction," he says. "It's better that we can solve things without arguments. On other projects, the atmosphere isn't always that nice."

When he speaks to *Project* at the tail-end of April from the construction site, Holst-Hvitved says most of the buildings are finished, with work continuing undisturbed on-site despite the social distancing measures the Danish government has enforced because of COVID-19. "A lot of our collaboration is happening online anyway," he explains. "It has not been such a big issue because all the people on the project have known each other for the past three or four years." The project office at CF Møller was used for two years. "During construction the project team is much smaller and we do not have the same need for a project office." The project team continue to meet regularly and have follow-up meetings weekly (online for now).

Nikolaj Holst-Hvitved



The building design allows lots of natural light in

HIGH AMBITIONS

The main bulk of the remaining work is on the interior. The original time frame for the project has been adjusted because of organisational changes at LEGO that brought a delay as more office rooms were needed, but the autumn 2021 completion date is set in stone.

"The client has had a lot confidence in us and is open-minded," says Holst-Hvitved. He has been impressed that the focus has been on creating a good project rather than becoming fixated at all costs on the deliverables agreed in the original scope of work, which might not be best for the project as it unfolds. "It would be nice if we had more clients with that mindset," he notes. "It produces better work, for sure." Holst-Hvitved admits he had been hoping to work with LEGO for some time. "They are a client that has high ambitions and who want to do something extra."

Its approach is something all project managers can learn from and aspire to.

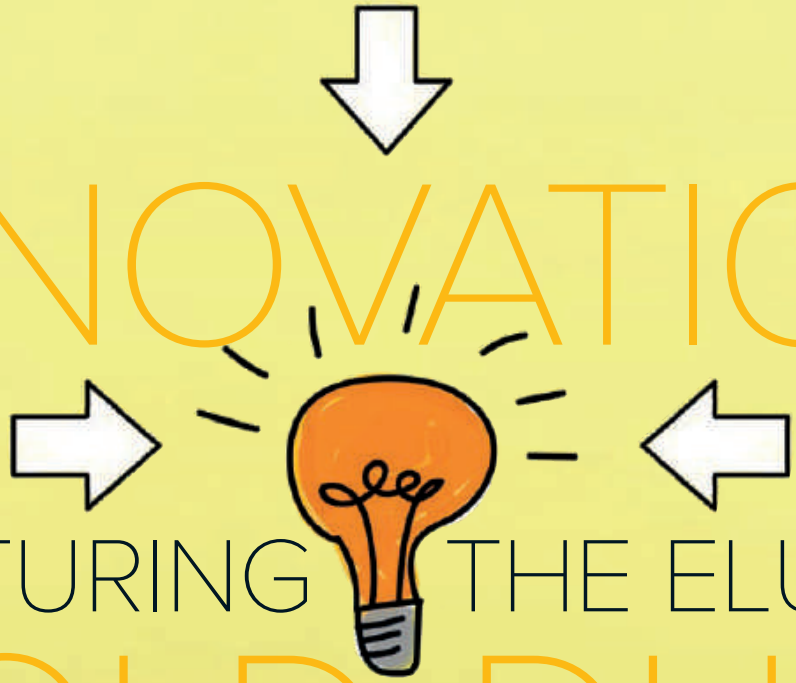
Using LEGO to teach project management

Ian Stewart, senior lecturer at the University of Manchester, designs learning activities using LEGO to create model experiences while building actual model objects.

"To learn project management, a person has to actually manage a project. At the 'front' end when designing a LEGO-based learning experience, I have to know the intended learning outcome. The problem driving the learning has to be real and the scenario created must have sufficient realism for learners to see a connection between what they are doing and actual project work."

Like building with LEGO, project management is about putting something new into the world, solving problems and battling constraints. "At the 'back' end when it is finished, with careful debriefing, I must ensure that they make sense of that experience and its relation to the reality of project work. In between the front and back end, 'realities' is the 'intermediate impossible'. Here is where the LEGO comes in. Following the rules of the activity leads to the creation of objects that might be impossible in the real world, but via completion of the objects comes completion of the learning."

For example, the learning activity intended to teach scheduling creates a multi-storey office building with a rooftop garden, but no stairs, staffed entirely by pirates. "The work with LEGO is an intermediate stage between the motivating problem and the satisfaction of the learning outcomes. The LEGO model is a representation of their learning experience, without which the learning would be more difficult. There is also the element of fun. Even though the LEGO is for a serious purpose, it takes me back to the time when learning and playing were the same thing."



INNOVATION CAPTURING THE ELUSIVE GOLD-DUST

How can you sprinkle dynamism and excitement through your projects? That's the million-dollar question...

WORDS / ALEXANDER GARRETT

In a certain sense, innovation is at the heart of every project. As one project management consultant points out: "Every project undertaken is undertaken for the first time. A project team may not be the first to build an aircraft carrier, but they are the first to build that aircraft carrier, which must be built using this team, in that location, with those suppliers, this design and those constraints."

Innovation in project management most obviously takes the form of inventing a new practical and theoretical model, with each furnishing a methodology and a set of tools designed to provide guidance and structure to the project manager. Process management innovation, on the other hand, can be either more iterative, focusing on just one aspect of the process, or more specific, addressing the needs of an individual organisation or project.

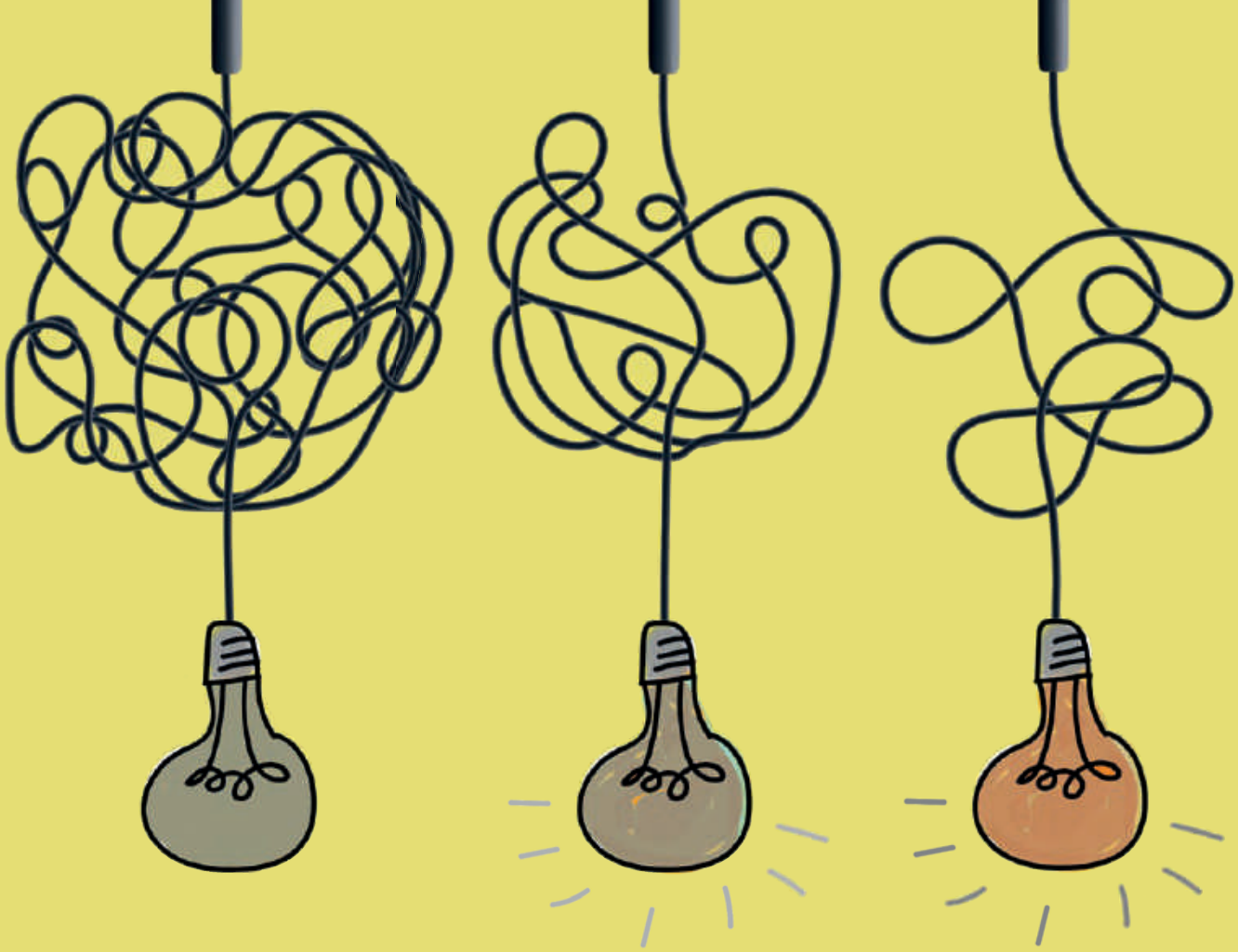
WHERE DOES INNOVATION COME FROM?

In 2019, APM introduced a new Innovation in Projects Award, designed to recognise "the team whose project or programme has delivered successful outcomes by using new, diverse and innovative approaches to project delivery". The winning entries showed the range of new ideas and just how powerful the results can be when executed well.

But where does that innovation come from in the first place? Not all companies are equal when it comes to delivering innovation, and there have been many attempts to find out why. Global design company IDEO, for example, helps organisations understand their strengths and weaknesses in this area with the help of Creative Difference, its digital tool to assess, guide and track the development of creative and innovative teams.

David Aycan, managing director of IDEO Products in San Francisco, has come up with some of the best ways to get innovation flourishing in your organisation. Perhaps create a shared vision of what you're working towards, for example, or provide a working environment that encourages collaboration and experimentation. Prototyping with high-performing teams and then codifying and sharing what you learned are also key elements.

The first winner of the APM Innovation in Projects Award was Proteus, a specialist provider in the project management space with a focus on change management, which won for its digital and data offering. This pioneering self-help hub enables project professionals as well as non-professionals to evaluate the progress of any programme, transform their own expertise and deliver results. ▸▸



For John Roberts, co-founder of Proteus, developing the hub started with a strategic assumption: "That organisations will do more and more change in order to survive and excel, and that for that to happen, change as a competency needs to be owned by everybody – not just the project manager."

He elaborates: "Organisations can't continue to rely on expensive consultants to fix their change challenge. So that means they increasingly need to develop change, project and programme management as core competencies of the whole organisation."

"Organisations will do more and more change in order to survive and excel, and for that to happen, change as a competency needs to be owned by everybody – not just the project manager"

DEMYSTIFYING THE DARK ART OF PROJECT MANAGEMENT

Starting a decade ago, Proteus responded to this by codifying its experience, drawn from £14bn of projects and encapsulated in 250,000 data points, in a suite of digital tools encompassing project assessment, benchmarking, gap analysis, diagnostics, capability modules and much more.

A key feature is enabling professionals and non-professionals to share a plain-English Common Language of Change that demystifies the dark art of project management without being couched in specialist jargon. The platform also makes heavy use of digital data and visualisation, relying on the adage that a picture paints a thousand words. "Together, these allow people from different levels of your organisation, right up to the C-suite, to have a really powerful conversation about the project in question," Roberts explains.

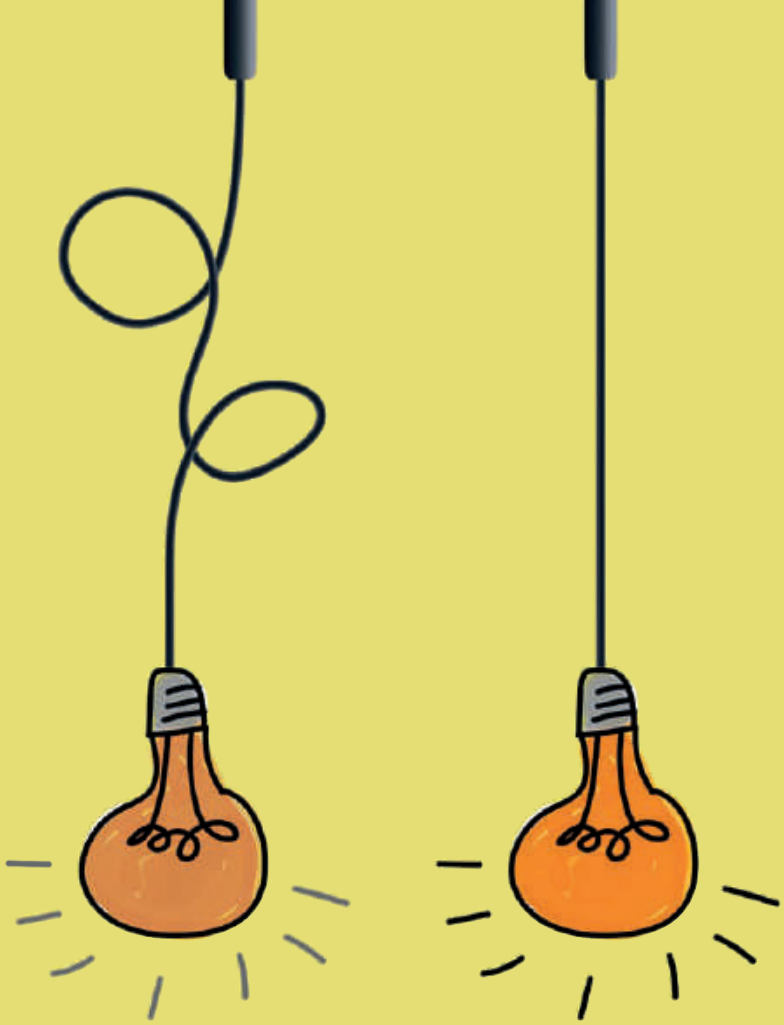
In the case study submitted to APM, a financial services company used the Proteus Learning Hub to achieve a range of objectives across its change management projects: implementing new ways of working, redefining the role of the project sponsor, building team capabilities, using diagnostic tools to improve project assurance and establishing a change community of practice. But unlike conventional consultancy engagements, it required only one Proteus consultant on the ground to support the programme.

One example of what can be achieved was a £50m efficiency gain in how change is done, a reduction from 40 hours to one hour to undertake an assurance review and a 60 per cent reduction in elapsed time to shape projects – and that's without counting the value of better teamwork, increased confidence and more effective decision-making.

As more clients use the Learning Hub, more data is fed back into the system to provide benchmarking and improve the model itself. "Our focus is changing people's understanding of what change could be," says Roberts. "We want to help them be self-sufficient and more agile in their cultural mindset, as well as delivering efficiency and effectiveness gains in the ways they are working. Ultimately, we hope to improve the predictability of project performance."

LETTING INNOVATION FLY

Innovation can be more prosaic, too. Among the runners-up for APM's Innovation in Projects Award was one nominee offering a simple and utilitarian innovation: a new method of finance. The RSPB wanted to install solar panels



at a number of its nature reserves around the UK, as well as installing a biomass boiler and energy-efficient LED lighting. For the first time, it planned to do so using debt finance rather than charitable donations from supporters and the public.

"Moving away from donative funding has always been an idea for us, but historically there had been some nervousness around it," explains senior project manager Nikki Marks. "One reason we wanted to do it was that some of our donative income is restricted. For example, some of the legacies we receive might be dedicated to particular expenditures, whereas debt finance could be allocated wherever we chose. That means the donative income can then be dedicated to conservation impact."

The main obstacle was that the RSPB didn't have in-house expertise in debt finance, and persuading its trustees that it was a good idea proved a challenge. To address this, the charity used external consultants Environmental Finance, as well as consulting with another charity in the sector who had tried a similar approach. A number of banks were approached, and a proposal from Triodos Bank was given the green light.

"It required approval from our trustees, so we had to anticipate the questions that they would ask," says Marks. "We had to keep our internal stakeholders on side when they couldn't see much happening."

The project secured £710,000, resulting in the installation of more than 700 solar panels at seven nature reserves. The debt is being successfully serviced through cost savings to the RSPB, as well as government subsidies and energy that is generated and sold back to the grid.

Beyond the clear environmental benefit, Marks says that the project has provided a model and the in-house capabilities to raise debt finance for other initiatives. A £4m project to develop the RSPB's catering assets is now under way.

MEASURING INNOVATION

As well as projects with tangible outcomes like these, there are also those projects that focus specifically on delivering innovations such as new products or processes. But how can the success of the innovation be measured?

A research team at Brno University of Technology in the Czech Republic has been working for a number of years on just this issue. Its Innovation Scorecard is a way of continually measuring how successful any innovation has been in order to decide whether to retain the new approach, modify and retest it, or discard

"Organisations can't continue to rely on expensive consultants to fix their change challenge"

Top tips for project innovation

1 Create an innovation lab
This is a dedicated space to focus on understanding what your customers want and to generate worthwhile ideas.

2 Be inclusive
Use language that the greatest number of people can understand.

3 Measure success
Establish a set of metrics (not just financial) that reflects what your innovation really sets out to achieve.

4 Be flexible
Allow for the fact that where innovation is involved, not everything will go to plan. You may have to adjust the timing or resources you've allocated.

5 Codify and share what you've learned
According to IDEO, teams that have access to information about prior initiatives are 51 per cent more likely to create successful solutions.

it as being unsuitable for the intended purpose. Ondrej Zizlavsky, associate professor at the university, says: "It's not rocket science. We just picked some good ideas from the measurement concept known as the 'Balanced Scorecard' and from project and process management, put these bits together and developed our Innovation Scorecard."

The starting point, he says, was in 2013–15, when the university wanted to find out how companies in the Czech Republic measured their innovation, "if they did at all". Many simply didn't bother to try and evaluate what they were doing, which meant they effectively lost control. "At some point, things would go wrong, but they didn't know why or where," Zizlavsky says.

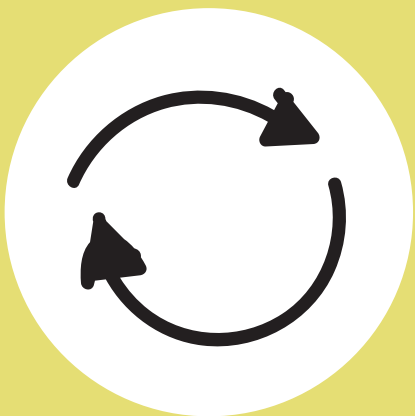
SCORES ON THE DOORS

The Innovation Scorecard has been thoroughly implemented in two projects at IT and software development company Red Hat (see below) and has shown significant benefits in terms of the level of innovation taking place there. Eddie Fisher, professor of project management at Brno University of Technology and an external project management consultant for the Innovation Scorecard team, says that one significant benefit, for example, has been in terms of empowerment.

"People before didn't have the authority or autonomy to make decisions. They were waiting for others to tell them what to do. Now they are able to use their ideas without having to go through a long chain of command. Customer projects and services have been delivered much faster and to higher levels of quality."

Using the Innovation Scorecard also enables organisations to measure the amount of innovation taking place, says Fisher. "Innovation is by definition doing things in a different way – creatively – so you can look, for example, at how many ideas are being considered within each stage of your projects, compared to how many ideas were created before within the same teams," he explains.

For project managers, innovation can mean different things in different contexts, but it is always going to be central to the goal of achieving business objectives with available resources within a fixed period of time.



Experiment

Catalyse innovation

Immerse your team

Case study: Red Hat

To verify that it could deliver on its promise of managing and controlling a newly designed 'Innovation Scorecard' approach to measure how successful an innovation has been, a team from Brno University of Technology in the Czech Republic, undertook a pilot implementation within the Czech operation of open-source software company Red Hat.

The three-year-long project, known as 'Innovation Scorecard: Management Control Framework of Innovation Projects within the IT Industry', began in 2019 and was backed by the Technology Agency of the Czech Republic.

The Czech company, a research and development subsidiary of Red Hat in Raleigh, North Carolina, was considered an ideal candidate for the project because of its strong commitment to innovation.

The aim was to ensure that Red Hat achieved maximum return on its Innovation Scorecard investment. And as a high-performing, innovative company, it was hoped that Red Hat would enable the Brno team to apply all the usual project management skills: to plan, organise, monitor and control the full cycle of the Innovation Scorecard process within an agile project management environment.

To kick off the initiative, two sub-projects were developed (a third one is set to follow this year): Atomic Host (completed in 2019) and Continuous Integration (due for completion in 2020). Red Hat could ultimately extend the approach to other, non-IT areas.

Atomic Host focused on building software and looked at changing the structure of what team members do, to see if the process could be improved.

"A bot system that automated tasks was implemented, freeing up team members' time to focus their attention on more creative activities," explains associate professor Ondrej Zizlavsky.

apm

THE CHARTERED BODY FOR THE PROJECT PROFESSION

STAND OUT FROM THE CROWD with APM Qualifications

APM Qualifications are 100% online, this allows everyone to have the opportunity to sit an online training course and gain their qualification without leaving their home.

Start your journey towards becoming a Chartered Project Professional (ChPP).

Learn more at:
apm.org.uk/starttoday

The UN's infrastructure projects in Nepal and Haiti link with all 17 of the UN's Sustainable Development Goals, presenting an opportunity to leave a lasting positive impact

FOR THE GOOD OF ALL MANKIND

***Steve Crosskey**, head of the United Nations Office for Project Services, describes the importance of the UN's Sustainable Development Goals to project management. He explains how these global objectives can inform the thinking around every project*

The world faces unprecedented challenges – climate change, rapid urbanisation and, most recently, the COVID-19 pandemic – that will have long-lasting socioeconomic ramifications on society. In response, we must redouble our efforts to meet growing development needs, as outlined in international commitments like the 2030 Agenda, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement. This will not only require trillions of dollars in investment, but also a renewed dedication to sustainability across all practices.

It is imperative to ensure a proactive approach to tackling these challenges as we strive to realise these global agendas. As many of these will be achieved through the delivery of projects, it is crucial to take a hard look at how we plan and deliver projects and manage their outputs in the long term. The local impact of a project can ultimately expand to have a national influence. The way in which we manage a project will determine whether this influence is positive or negative – and to what degree.

Shifting our understanding of project outcomes is key to maximising their positive impact and guiding progress towards the achievement of national development goals and international commitments. Yet the success of a project is not only indicated by outputs delivered on time and within budget and scope. The UN's Sustainable Development Goals (SDGs) give us an opportunity to look at projects through a different lens, moving away from the traditional constraints of the iron triangle of time, cost and scope to consider a wider set of benefits.

SDGs AND THE GLOBAL AGENDA

The SDGs were adopted by UN member states in 2015. There are 17 goals, with a total of 169 targets, and their purpose is to guide global development until 2030. A global indicator framework for the SDGs has 231 indicators at regional and national levels by which to measure progress – although a challenge project managers face when trying to support countries in achieving the SDGs is that this framework is not designed to measure project impact.

The SDGs are part of a global agenda that requires all of us to support UN member states in achieving the targets outlined by commitments like the Paris Agreement and the 2030 Agenda. The United Nations Office for Project Services (UNOPS) aims to help people build better lives ▶▶

JOHN RAE. RODSON PIERRE SAINT. CLAUDE ANDRE NADON/UNOPS

The success of a project is not only indicated by outputs delivered on time and within budget and scope. The UN's Sustainable Development Goals give us an opportunity to look at projects through a different lens, moving away from the traditional constraints of the iron triangle of time, cost and scope to consider a wider set of benefits

and countries achieve sustainable development by providing peace and security, and humanitarian and development solutions through five core service lines: infrastructure, procurement, project management, financial management and human resources. Based on this mandate and on our understanding of infrastructure's influence on the SDGs, I will use infrastructure projects as the lens through which to discuss project management.

INFRASTRUCTURE AS A KEY EXAMPLE

There is a strong link between infrastructure and the SDGs, as infrastructure sectors influence all 17 goals and 92 per cent of their targets, according to our own research. Project outputs can also influence multiple SDGs. This establishes a significant connection between infrastructure project outputs and progress towards achieving the SDG targets. Based on decisions made during the project life cycle, the output will contribute to long-term sustainable development either positively or negatively.

In this way, the SDGs can indicate project success beyond economic aspects or even the triple bottom line, as they allow those involved in project management to target impacts in key development areas (eg poverty elimination, gender equality and the empowerment of women, environmental protection), providing a clearer idea of how projects can contribute to wider sustainability efforts.

To contribute to these global efforts, UNOPS created the SustainABLE tool (sustainable.unops.org) to support infrastructure project developers in identifying activities to undertake during the project to positively influence the achievement of the SDG targets. By using the SDGs as a lens to consider the potential impact of a project, managers and project developers can therefore create more holistic and integrated approaches to support countries and their beneficiaries to achieve these global agendas.

THE IMPORTANCE OF AN INTEGRATED APPROACH

UNOPS works in challenging environments to implement projects; each year, more than 50 per cent of countries in which the organisation works are classified as fragile and conflict-affected states. Most UNOPS projects have two essential characteristics in common. First, they have potential high risks due to the uncertainty of context, depending on the country profile and specific project context. And second, they hold high-potential opportunities to help people build better lives while contributing to a country's development.

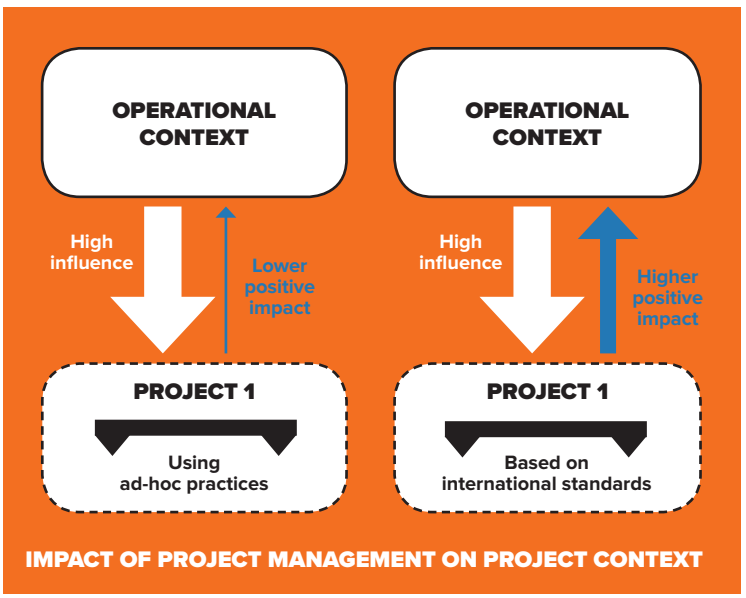
BEYOND THE LIFE CYCLE

An integrated approach considers all management perspectives simultaneously and interdependently from the outset and continues to gradually and iteratively embed each perspective during the project lifespan. This can ensure fewer difficulties during implementation, produce project outputs that are fit for purpose and, most importantly, achieve a higher contribution to positive outcomes and impacts at all levels.

This approach is crucial because no project exists in isolation; rather, it is part of a very specific operational context. This includes political, environmental, social, economic and security factors, which together influence the project and the degree of its impact. A project that adopts an integrated approach based on international standards mitigates risks and has higher probabilities of success and a positive impact on global commitments like the SDGs.

This is particularly important to infrastructure projects as, beyond the project life cycle, the possible service life of a building designed by UNOPS is between 30 and 40 years, or more, locking certain sustainability practices into place for decades. Measuring project success through the SDGs can expand short-term project lifetime thinking to cover the whole life of the output, which can ensure more sustainable practices and benefits in the long term.

Project management practitioners have an important role in ensuring aspects of sustainability are present throughout their project life cycles, as sustainability should be at the heart of everything we do



IMPACT OF PROJECT MANAGEMENT ON PROJECT CONTEXT

Environmental and social protection safeguards, and gender and inclusivity, are two themes encapsulated in the Sustainable Development Goals framework

JOHN RAE, ATSUSHI SHIBUYA/UNOPS

HOW TO INTEGRATE SDG THINKING INTO PROJECTS

An integrated approach to project management takes several perspectives into account from the start of the project. Perspectives are interdependent thematic areas that cover different aspects of project management activities, and those applied by UNOPS projects are:

- **Management control**
- **Sustainable results management**
- **Finance management**
- **Stakeholder management**
- **Risk management**
- **Governance**
- **Resource management**
- **Quality management**
- **Technical management**

Actions taken during project planning and delivery can also encourage progress towards the SDGs. The project development stage provides a chance to engage in advocacy with clients (eg governments and partners) and to embed standards into proposals. Another key action is early definition of operating/maintenance requirements and clear benefits realisation linked to development themes encapsulated in the SDGs. Activities undertaken during implementation may include aiming to gain a thorough understanding of the project context, increasing professional collaboration and stakeholder engagement, familiarising oneself with the supply chain, prioritising the use of appropriate materials and technology, ensuring environmental and social protection safeguards are in place, and thinking about considerations of gender and inclusivity.

By undertaking these activities, indicators of success can be expanded to consider aspects such as carbon neutrality, fair wage and labour practices, women's empowerment and workplace flexibility. Together, these perspectives, actions and targets can contribute greatly to supporting countries in achieving the SDG targets.

FINAL THOUGHTS

Project management practitioners have an important role in ensuring aspects of sustainability are present throughout their project life cycles, as sustainability should be at the heart of everything we do. The SDGs provide a framework for project teams to take an integrated approach to project planning and delivery in a holistic way, helping them think differently and understand how their actions can have wider consequences.

At UNOPS, sustainability is at the core of our projects, and we work to support our partners across the world in developing good practice, including in project management. With this sentiment, we welcome our collaboration with APM to highlight the importance of integrating sustainable development considerations in project management in our mutual endeavours to tackle impending global challenges. P

- **Further reading: Professor Peter Morris, *Climate Change and what the project profession should be doing about it: a UK perspective* (apm.org.uk/blog/climate-change-and-project-management-re-thinking-the-relationship/)**

- **Steve Crosskey writes about real-life infrastructure projects where the UN's SDGs have been put into practice for APM at apm.org.uk**

PEER TO PEER

GETTY

HOW TO BUILD YOUR RESILIENCE

It's a quality that we all need more of during stressful times. The good news is that resilience is a skill that can be worked on. ***Clara Cheung*** *tells you how* ▸▸

When life is challenging, resilience becomes even more important to our wellbeing as it can help us stay safe, productive and effective. Psychologists define resilience as the process of adapting well in the face of adversity or significant sources of stress, such as relationship problems, serious health problems or workplace stressors. In a nutshell, resilience helps us to bounce back from these difficult experiences and can also empower us to grow – and even improve – our lives along the way.

Because of its profound effect on our lives, people have created many myths about resilience. For example, that resilient people don't experience emotional pain and stress; that resilient people are tough and don't need help from others; and that you are either born resilient or you are not. In fact, being resilient doesn't mean you won't experience difficulty or distress, but

Don't be afraid to ask for help when you need it – and offer a helping hand when you see others struggling

resilient people choose to respond to challenges positively, and to find meaning and purpose in their lives. They are also resourceful – family and friends are their most critical resources. More importantly, based on the past 40 years of scientific research, resilience is not a trait but a skill that can be learned and developed over time.

Yet like building a muscle, increasing your resilience takes time and intentionality. Focusing on three core components – building mental toughness, building on your strengths and building strong relationships – as proposed by Martin Seligman, Zellerbach family professor of psychology and director at the Positive Psychology Center (and known as the father of positive psychology), can empower you to withstand and learn from traumatic experiences.

Indeed, these three components have demonstrated effectiveness in enhancing people's resilience levels, as borne out in more than 25 years of research, development and large-scale implementation in various organisational settings. To take each of these three critical components in turn:

1 BUILDING MENTAL TOUGHNESS

At its core, mental toughness is the ability to stick to something even when the going gets tough. People with high levels of mental toughness can push beyond obstacles and forge a path towards success, while those with lower levels of mental toughness may abandon their dreams. To enhance your mental toughness, you need to develop a positive mindset, connect with your purpose and minimise catastrophic thinking.

Develop a positive mindset:

When you have a positive mindset, you are more able to generate different pathways to achieve the goal during setbacks. It starts with understanding Albert Ellis's ABCD model: C (emotional consequences) does not directly lead on from A (adversity), but from B (one's beliefs about adversity). You work through a series of As (for example, falling behind the project schedule) and learn to separate Bs – heat-of-the-moment thoughts about the situation ('I'm a loser') – from Cs, the emotions generated by these thoughts (such as feeling upset for the rest of the day and failing to concentrate at your work). Then you learn D – how to effectively dispel unrealistic beliefs about adversity. For example, developing a habit of interpreting setbacks as temporary, local and changeable ('It will be over soon; it's just this one situation, and I can do something to work around it').

Connect with your purpose:

One of the most important factors to build mental toughness and keep a focused mind is having a strong 'why' for things you are working on. Think about the last time you were working on a goal and things weren't going as well as expected. Maybe you immediately wanted to give it up. Perhaps you thought you didn't have enough willpower or discipline to achieve it. The truth is, you just didn't have a strong enough 'why'. Management guru Simon Sinek (who gave a famous TED Talk called 'How Great Leaders Inspire Action') has been spreading his message 'Start with Why' around the globe. In short, he says that: "Your 'why' is the purpose, cause or belief that inspires you." More importantly, without connecting to your 'why', you can't intrinsically motivate yourself to achieve your most challenging goals.

Minimise catastrophic thinking:

To strengthen mental toughness, we need to learn how to minimise catastrophic

Resilience is not a trait but a skill that can be learned and developed over time

thinking. One of the ways to do this is by considering 'worst case', 'best case' and 'most likely' outcomes. For instance, a project manager receives a negative performance evaluation from their client. They immediately come up with a catastrophic thought: 'I won't be recommended for promotion, and I don't have the capability to stay in the project profession.' Indeed that could be the worst case. Now let's think about the best case: 'The negative report was a mistake.' And what's the most likely case? 'I'm frustrated and my line manager will be disappointed. Yet I'll work out a performance improvement plan and follow it to improve the situation.'

By thinking about and working through different cases, you are more able to evaluate the situation accurately and take necessary actions to turn it around without getting into the hopeless condition set by catastrophic thinking.

2 BUILDING ON YOUR STRENGTHS

Your unique strengths are your special tools that allow you to build a happy and fulfilling life. Understanding what tools you possess can give you the confidence to face any challenge that comes your way. Although we can't predict the future, we can have confidence in our ability to deal with whatever happens. Seligman and Christopher Peterson's 'Values in Action Character Strengths Survey' (a free online survey that produces a ranked list of your top 24 character strengths, www.viacharacter.org) is a good starting point to understand yourself. Everyone possesses all 24 character strengths that make up what's best about our personality in differing degrees. Therefore each person has a truly unique character profile. Research shows that people who use their strengths a lot are 18 times more likely to be flourishing and less likely to get depression during difficult times than those who do not use their strengths.

3 BUILDING STRONG RELATIONSHIPS

A strong network of supportive friends, family and colleagues that you can talk to and confide in can help you through any tough times. Don't be afraid to ask for help when you need it – and offer a helping hand when you see others

GETTY

struggling. In particular, focusing on positive communication is essential to building strong relationships. Shelly Gable, a psychology professor at the University of California, Santa Barbara, has shown that when an individual responds actively and constructively (as opposed to passively and destructively) to someone who is sharing a positive experience, love and friendship improves. (See her 'Four Ways to Respond' at www.mindtools.com/pages/article/gables-responses-to-good-news.htm)

As positive interactions accumulate, they can have effects that go far beyond the initial conversation because feeling positive can boost happiness and confidence and reduce stress. Another tip for having positive communication is to give effective praise. The Stanford psychology professor Carol Dweck found that when people mention specifics and efforts (as opposed to saying something general like 'Good job!'), it promotes a growth mindset – a belief that most abilities can be developed through hard work – to their counterparts. This belief creates a love of learning and improves one's resilience level.

It takes time and energy to build resilience but it is a worthwhile investment to improve the quality of your life. Focus on building the above three core components and try not to be disheartened. If you still struggle to cope in certain situations: perseverance is key!

DR CLARA MAN CHEUNG
has nearly 20 years of work experience in project management. She is a lecturer in project management at the University of Manchester and a project management professional. In 2019, her APM funded research paper *The wellbeing of project professionals* was published, which benchmarked the wellbeing levels of project professionals and developed corresponding interventions to enhance wellbeing (apm.org.uk/about-us/research/research-fund/2019-research-fund-studies-wellbeing)

LEADERSHIP AT A DISTANCE

Many project managers have been forced to physically step back from their teams, but how do you remain a leader when you're not at the front line? Project management consultant ***Vip Vyas*** *shares his advice*

So there you are sitting at the dining-room table preparing for an important project review meeting. As you fire up the laptop, both your young kids coming running up and say, "We're bored. Will you play with us?" Despite being tired, irritated and frustrated, you manage to break a smile.

You wonder how the rest of your team are feeling. Are they also struggling to be productive? The $600m utility project is already behind schedule. Over the past few weeks, you have been worrying about the state of your team and the project: recovery of the schedule seems almost impossible.

The world we are living in is very different to the one a year ago. In the world of projects, the pandemic has been a real jolt to the conventional delivery system. Very few could have imagined or anticipated the scale of global uncertainty, social impact and economic disruption we would witness over the first half of 2020.

By contrast, many people entered the new decade with an air of excitement and optimism. Physical distancing and social isolation weren't part of the game plan. Instead, unprecedented plunges in global stock markets, shattered supply chains, overloaded healthcare systems, and anxious and frightened families provide the backdrop against which key strategic projects must now be delivered.

THE CHALLENGES OF LEADING PROJECTS AT A DISTANCE

Many project leaders must now contend with and battle regulator inaccessibility, logistic backlogs, falling production rates, site stoppages, anxious workers, remote working and other government restrictions. Meanwhile work must be conducted through a virtual medium that strips away our ability to read context and detect essential 'mood cues', and makes collective decision-making more difficult.

From a supply-chain perspective, consultants, contractors and sub-contractors must factor in shrinking work volumes and (in some cases) delayed payments by clients. All of this impacts ▶▶

Internal VUCA: The subjective side of performance

PERFORMANCE FACTOR	RATIONALE
Project imperative	● Create and sustain a strong project purpose. ● Maintain an intentional focus on the end goals despite the ups and downs. ● Seek ways to uplift project productivity in the new environment. ● Keep acknowledging positive movements in performance despite the challenges.
Adaptive thinking	● Complex and tumultuous environments create curve-ball challenges. Being able to keep issues in perspective and notice/rein in one's own personal reaction patterns creates an environment conducive for performance. ● Facilitate information gathering from the front line to maximise line of sight to project actions, issues and performance.
Digital presence	● Leadership signalling: the leader cannot go silent. The absence of an authority figure can easily cause people to revert to inaction and wait for orders. ● Being able to demonstrate warmth, humour, presence and performance in a virtual environment promotes collaborative leadership. ● Communicate authentically, frequently and intentionally.
Vibrant virtual community	● Overcome physical distancing by designing strategies and tactics that promote cohesion, connectivity and belonging. ● Close information gaps by arranging frequent 'town hall' meetings to have everyone on the same page. ● Deliver clear, robust and comprehensive messaging. ● Promote the creation of virtual buddies for managing well-being and having an internal thought partner.
Problem resilience	● Prepare the collective mind for potential obstacles, impediments, frustrations, disappointments and other issues that could impact the project's critical path. ● Contextualise these issues as part of the territory that comes with dispersed working. ● Promote the importance of identifying virtual red flags and early warnings.
Output focus	● Working remotely has both advantages and disadvantages: freedom on one hand, but also the potential for distractions and procrastination. ● Develop an intervention escalation approach appropriate to the context and values of your business and deliverable expectations.

the commercial viability of projects, and in some cases, parent organisations. The rapid winding down of the global economy is also causing many enterprises to review their planned portfolio of projects as investment yields collapse and financing costs surge. The result will likely be the suspended animation of some projects, and the total shelving of others. The world is witnessing a negative economic multiplier effect of gigantic proportions.

Without a clear end in sight to the uncertainty facing us, how can project management best adapt, navigate and operate?

DISTRACTED, DISENGAGED, BORED

Interventions are only meaningful and useful if they squarely address the problem, issues, challenges and impediments that projects are experiencing. Here are some representative comments from project executives that I have heard:

"It's basically hard work to get anything moving. People are unresponsive. They seem to be distracted and disengaged. Some are even bored," said one project manager.

A head of procurement said: "When we review our contracts, a lot of what we considered force majeure is now the new normal. Email response times can be days."

"I save a lot of time on daily travel but the day-to-day personal connection has disappeared. It feels like I am alone," revealed a building information modelling

The world we are living in is very different to the one a year ago. In the world of projects, the pandemic has been a real jolt to the conventional delivery system. Very few could have imagined or anticipated the scale of global uncertainty, social impact and economic disruption we would witness over the first half of 2020

"The meetings are close to useless. We are supposed to go around the virtual table, but, in practice, people talk over each other. It's very frustrating and dissatisfying"

manager, while one project director shared that: "The meetings are close to useless. We are supposed to go around the virtual table, but, in practice, people talk over each other. It's very frustrating and dissatisfying."

THINK ABOUT ADDRESSING TWO VUCAs: INTERNAL AND EXTERNAL

The term VUCA originated in the US military in 1987. The idea evolved as the military had to adapt to guerrilla warfare and external conditions that were becoming increasingly volatile, uncertain, complex and ambiguous (VUCA). For projects, the challenges that delivery teams currently face are internal, as well as external. Managing the people side of projects – the mindsets and psychology of consultants, contractors and vendors, ie those who are central to the success of the project – becomes increasingly paramount.

From a performance standpoint, project leadership at a distance involves focusing your attention on and responding to an array of subjective and objective variables as they evolve over the project's journey. The table on page 58 outlines the key subjective variables that act as powerful enablers of superior performance.

These aspects of project leadership are covered in only a cursory manner in traditional project management training. My experience has shown that these competencies are both ripe and critical for development as projects get larger, more complex and geographically distributed. On the objective side of VUCA, it is a case of seeing where the opportunities are in the crisis – those aspects of the project that can be affected by redesigning workflows and/or the use of emerging technology. These are summarised in the table on this page.

The combination of COVID-19's natural course and the effectiveness of the global battle to constrain it will play out over time and eventually end. Already, many academics and executives view the pandemic as the largest global mass challenge (and experiment) we have witnessed in our lifetime. It is becoming increasingly likely that the world, and work, won't simply snap back to pre-virus times. Organisations will want to harness learnings from this difficult period in the most valuable way.

Effective leadership of projects at a distance involves the convergence of three forces: social, technical and workflow design – all in a fluid environment. The imperative that projects currently face is building leaders who are both 'social psychologists' and industry experts – those who can lead and generate confidence in uncharted waters. Ⓟ

External VUCA: The objective side of performance

PERFORMANCE FACTOR	RATIONALE
Reimagine home workspaces	• Invest in provision of reliable high-speed technology and ergonomic furniture. • Recommendations for setting up distraction-free dedicated workspaces for remote work.
Structure work patterns	• Establish natural work rhythm that maps office working, e.g. morning touchpoints, launch sessions, kick-offs, on-boarding sessions, trouble-shooting meetings, milestone reviews and performance governance.
Remote task design	• Purpose, intention and output clarity. • Definition of work boundaries and control limits. • Task interconnections and associated daily verbal commitments that force the pace of work of the various packages. • Establish output measures.
Seek digital transformation opportunities (Business case design, front-end engineering procurement and project governance)	• Office-oriented project tasks provide opportunities for potential efficiency gains, productivity enhancements and cost savings. • Removal of wasteful low-value-add activities via the appropriate use of digital technology.
Site production and safety	• Increased use of modularisation and off-site production. • Build redundancy in supply chains. • Incorporation of government restrictions into daily work patterns.

Many project leaders must now contend with and battle regulator inaccessibility, logistic backlogs, falling production rates, site stoppages, anxious workers, remote working and other government restrictions

VIP VYAS is a regular contributor to INSEAD's Knowledge hub, and a keynote speaker on major and mega-projects. He advises and consults project boards and their projects in uplifting performance. His firm, Distinctive Performance, focuses on the human side of project performance in complex and challenging environments.

DECLASSIFIED

HOW GCHQ TRANSFORMED ITSELF

The head of the intelligence agency's corporate portfolio directorate shares how its programme management office became APM's PMO of the Year, having achieved cost savings of up to 20 per cent, embraced agile ways of working and established an outcome-focused, digitally enabled service

Our programme management office's (PMO's) transformation journey has not been a smooth one. Is any significant transformation smooth, for that matter, especially when it's as much about people and culture as it is about systems and technology? As such, we wanted to share with you the highlights of our transformation, which led to us winning PMO of the Year at the 2019 APM Awards.

For many years, we had a PMO that operated in a very traditional way – and that worked for us. It met our business needs and the team fulfilled its role, but it was starting to feel out of kilter with new ways of working. In 2017, under pressure to increase efficiency amid changes to our portfolio, the PMO was given a mandate to do things differently – and it needed to. To put it into context, our corporate portfolio is complex, covering everything from the delivery of cutting-edge technology through to facilities and estates.

PMO+ IS BORN

Two years ago, more than 50 per cent of our portfolio had already moved to using more agile delivery approaches, across a community of around 400 people (project managers and project control officers). New skills and ways of working were emerging, we were seeing an increase in collaboration with our partners across the UK and we had a mission to deliver at an ever-increasing pace. We also had to transform the PMO at the same time as continuing to operate it.

The design of the new PMO was shared with the business early on, and business engagement was a key part of the process. It was important to manage expectations, to get buy-in and for our communities and customers to start thinking of this as something new. Coupled with a 24-month Transformation Roadmap, a kind of 'People's Charter' to establish values and behaviours, the service was given a new name. PMO+ was born.

That new identity heralded new purpose and a new beginning. The key strategic benefits of the transformation were to achieve savings and increase value; provide more effective PMO services; maintain operational grip, consistency and reputation; increase delivery management productivity; and innovate and influence.

However, rebranding is all well and good, but you have to back up your claims with action. One of the first key changes to the PMO was becoming an 'outcome-based service' with a clear service menu. This meant creating clear parameters

GCHQ's iconic 'Doughnut' headquarters building is situated in Cheltenham and houses 5,500 employees

ALAMY

within which the PMO+ would operate, ensuring that low-value administrative tasks, such as arranging catering, booking meeting rooms and organising visitor passes, were no longer performed by the project control officers (PCOs). That enabled them to focus instead on supporting areas such as finance, delivery reporting and risk management.

PAINFUL PERSEVERANCE

Implementing this so-called 'Stop List' caused a lot of pain, but we persevered. It was amazing to see how much time was saved with this approach. Under our old way of working, a PCO would be allocated to a project manager to support them in the delivery of their project(s). Under the new PMO+, we organise ourselves differently. Six teams were created, each supporting a collection of themes within the portfolio. This was the start of a more efficient approach, moving away from single points of failure to creating variety through the work, with a broader set of deliveries to work across. This in turn meant we were able to create more fulfilling roles for our PCOs. We mapped their skills, created development plans and, in consultation with our wider P3M team, created joined-up career pathways into project management.

Rebranding is all well and good, but you have to back up your claims with action

Maintaining operational grip, consistency and reputation hasn't been without its challenges. As an organisation, we tend to beat ourselves up about this type of activity, but actually we do a pretty good job. We have found that using more agile ways of working has meant that we don't have as much delivery reporting data as we may have had in the past. This is something that we are tackling head-on, bringing together the PMO, the corporate portfolio and the senior project management community to define the standards needed to meet the business requirements. This takes time, and it has been a big cultural challenge to find the right balance, but we are getting there. Supporting finance reporting takes up more time than we would like, so again, we have worked with stakeholders in finance to agree a Responsible, Accountable, Consulted and Informed (RACI) method for how we manage this. ▶▶

IT'S ALL ABOUT DELIVERY

Finding ways in which the PMO could be niche and add value was part of the 'Approaches to Delivery' aspect of the roadmap, enabling an increase of delivery management productivity. As an organisation, we had already developed modelling around the most appropriate delivery approach to take, depending on a set of key factors. This aspect was about enabling the PMO to facilitate these sessions, as well as developing a body of knowledge that everyone across the organisation could tap into and establishing a number of delivery approach coaches, who are deployed to delivery areas across the business to support them in embracing new ways of working. This complements the organisation's agile coaching network and other related communities that have grown in recent years.

Innovation has been at the heart of the transformation of our PMO. We have developed a knowledge-sharing portal for PMO+, as well as for the business as a whole. This holds all the information about the PMO that a user or customer could wish to know. We have also developed other tools to support day-to-day processes, including managing finance, making it all a lot easier and more consistent for the PCOs. We have not only been innovative in our design of the overall service and some of our tools – we have also ensured that we have adapted along the way.

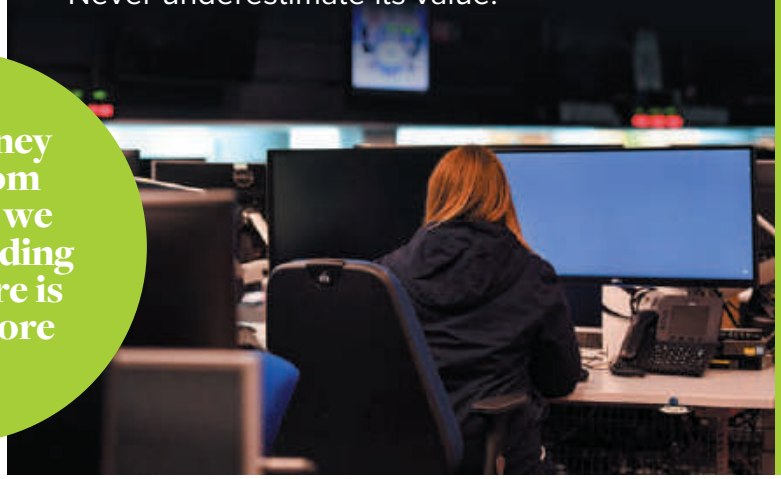
A steering group and an oversight board were established early on to assure the overall delivery and ensure strategic alignment of the new PMO+, but the day-to-day delivery was managed through six-weekly planning increments with fortnightly sprints. At every planning increment, we shared our progress, learned lessons, assessed risk, prioritised resources and coupled that with our knowledge. We then planned the next six weeks, agreeing goals for each transformation outcome. It worked brilliantly – both for the team on the ground and the strategic groups overseeing the change – as we were able to pivot and change direction as needed.

The journey is far from over and we aren't standing still – there is plenty more to do!

Top tips for PMO transformation

From our experience, if you're thinking about embracing a new approach for your PMO, you might want to consider these points first:

1. Having the right sponsorship for your change is key; it made all the difference for us. We were supported, valued and championed.
2. Your PMO community needs to understand why you are changing – as do their customers. It still won't be easy for them, but it will help.
3. Expectations need to be managed at every stage. As with any change project, we were too ambitious, but that ambition drove us and, without it, we wouldn't have achieved what we have today. Be bold and be brave.
4. Invest appropriately in business change. Never underestimate its value.



PA IMAGES

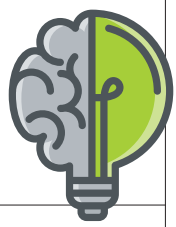
STILL TRANSFORMING

You will hopefully have got a sense from this that it hasn't all been plain sailing. As I noted at the beginning, change that impacts both culture and people never is. If we asked ourselves "How successful has it been?", the answer would probably be "reasonably". Some of it has proved hard – really hard. Working through some of the tool implementation came with huge stakeholder engagement challenges. For example, we had hoped to make more progress with our digital transformation in the reporting space, but it struggled to mobilise in the way we had envisaged. This is where we had to pivot and rethink our approach, asking ourselves whether we had been a little too ambitious at the outset. So, no, not all of the benefits were realised as planned, but some additional benefits have been gained along the way.

Our journey didn't stop at the end of the roadmap. We have continued to evolve and change, and we've recognised that we can't do the next stage in isolation. We are partnering with the rest of the P3M community more than ever, because we need each other to move forward with our respective transformations (which actually goes right across the corporate portfolio). The journey is far from over and we aren't standing still – there is plenty more to do! And, ironically, the coronavirus pandemic and all the disruption it has caused might just help us along with some of this.

PROJECT ME

We've all had to find a way of getting on with work during the coronavirus crisis. We asked project managers to give us their tips on turning things to their advantage



IT'S MAKING PROJECTS BETTER

Leon Hughes, project manager, Taylor Wimpey

Juggling family and work is a challenge at the best of times, but COVID-19 has forced us to come together and focus on how we can all support each other. I have found that my role has actually become a little easier. I am now chairing project meetings via video call, and team members who often couldn't make it into head office are now able to attend. As a result, our projects and actions are benefiting greatly. Going forward, rather than schedule meetings in an office, we will continue to use our current format, which cuts down on travel and pollution, creates more flexibility and has shown those who had 'old school' beliefs that we need to embrace the technology available to us and use it to our advantage.

Remember that work is not everything

Mark Reeson, project management consultant

Ensure you set your office hours so that you can remain productive, but also ensure you step away from your work to take breaks. Learn to manage your personal tasks around your work and communicate your working schedule to your friends and family. Remember, work is not everything, and maintaining a healthy lifestyle is also key, so look after yourself during these troubled times. Try not to over-do the work, be aware of the hazards of multi-tasking and focus on being productive around what really matters. Remember, this will all be over before we know it and then it will be a great time for a celebration.

Embrace the digital – and have fun!

Gennadii Miroshnikov, technology manager, London Business School

The main focus for me was how to help our project teams and the whole organisation become pandemic-resilient. Embracing digital technology and enabling its wider adoption was key. A starting point was to check what systems, apps and tools were already being used by teams and how they felt about them. The resulting list included not only the names of the systems recommended by other teams, but also their lessons learned, tips and best practices for roll-out. The next step was to form a team of digital champions, early adopters and enthusiasts who volunteered to share their knowledge. Every day we held short sessions as a 'lunch and learn', as well as more detailed sessions by request. Recording short webinars for those who could not attend online sessions also turned out to be useful. Focusing on already utilised systems allowed us to speed up the process of mass adoption significantly, as the systems were already familiar to some teams, and some volunteers were ready to share their experience. Another small tip was not to forget about fun and to find time for informal communication with your colleagues. Friday's evening quiz in WhatsApp, Jackbox over Zoom or a lunchtime 15-minute workout over Skype, Slack or MS Teams with your colleagues are great ways to keep your team engaged and in good spirits.

HOW TO DEAL WITH VIDEO-BOMBERS

Claire Dellar, founder, Transformists

Whether it's the dog barking at the postman, the cat sat on your keyboard or the kids who have to tell you right now, interruptions are coronavirus facts of life. As a leader, your reaction can improve the stress levels of the whole team. My tips for handling video-bombers are, first, suspend the discussion, say hello to the child, and introduce yourself to them. Second, ask them about their day and what they have been up to. Third, once they feel included they'll probably quickly settle down or leave. The important thing is to signal to the parent that they should not be embarrassed or stressed.

It's easy to fall into working longer hours and not taking regular breaks, getting absorbed into what I'm doing with fewer 'interruptions', but scheduling in breaks keeps me fresh and prevents burn-out

Create positive habits

Kevin Morgan, senior projects planner, Collins Project Delivery

Instead of getting up early to commute, I'm getting up early to use my commuting time to expand my knowledge and develop myself. Not only does this help improve my career, but it also keeps me in a regular routine and keeps me focused for my daily tasks. Trying to maintain a routine allows positive habits in what is an unusual time. It's easy to fall into working longer hours and not taking regular breaks, getting absorbed into what I'm doing with fewer 'interruptions', but scheduling in breaks keeps me fresh and prevents burn-out. I have also found it useful to touch base with colleagues at least once a day. This allows the human connection while also keeping us up-to-date with developments, but again, scheduling this in is important to prevent interruption.

CARE FOR YOUR TEAM

Alex Phillips, HR director, CPMS

With anxieties running high, it has never been more important to provide strong leadership and direction for employees. We have found ourselves taking an unscheduled crash course in remote leadership, ensuring that employees are engaged, supported, and motivated. This kind of disruption affects people in different ways, whether that is operationally, mentally or emotionally, and so we have implemented initiatives to care for our team and ensure our family culture is maintained. These include a weekly company-wide conference call with our managing director, in which he provides company updates and positivity; a weekly newsletter celebrating employee birthdays and promoting positive wellbeing solutions and the in-house virtual peer training to support personal development and welcome new starters; and virtual quiz nights.

Try to keep work and home separate

Chelsea Evans, associate project manager – apprentice, HS2

Motivation, IT and Skype meetings are the main challenges I have faced while working from home. While not having to commute every morning has meant an extra hour in bed, I learnt that travelling to and working in the office kept me motivated. At home I have a designated workspace set up to minimise strain and ensure that I am not distracted. I started taking regular breaks from my screen to help stay productive. Shutting down my laptop and clearing my 'desk' at the end of the day helped keep work and home separate. Despite the unprecedented circumstances, we have not experienced a reduction in productivity; there seem to be more meetings put in the diary now. My calendar has an hour blocked out each day for me to take a walk or make lunch, and meetings are scheduled with enough time to make a cup of tea beforehand.

MANAGING STAKEHOLDERS IS A PRIORITY

Emile Fakhoury, principal project manager, Exterran

Managing stakeholders has become my major challenge in this remote-working environment, as it increases the complexity of the project and removes physical interactions and the ability to manage emotions and behavioural aspects. Adding to this challenge, if you have kids at home, home-schooling will add more to the load. I always modularise discussions with stakeholders. Increasing the frequency of calls to twice per week, or daily, after agreeing to a regular rhythm is essential to controlling the project's progress and managing your stakeholders. Appreciate everyone's time zone and location, be mindful always of cultural barriers and remember to provide an opportunity for each stakeholder to participate and get involved on each call.

ONE-TO-ONES ARE ESSENTIAL

Jerome Trefalt, project manager, Tetronics

Time management is critical, as most of us are working from home while trying to deliver home learning to children. It becomes normal to see kids appearing in a virtual meeting. Some team members would prefer to start their working day earlier so they can achieve quality working time. Trying to schedule meetings when team members have misaligned working hours is nearly impossible. Instead of team meetings, I prioritise one-to-ones, which sometimes include the department lead. I had a one-to-one meeting with the entire project team on Monday to review and close last week's work and plan for the week ahead. I also have short one-to-ones throughout the week to ensure the flow of information and communication goes smoothly within the team, and I encourage the team to have their own such meetings.

GET IN TOUCH

Stumbled across a great productivity hack or tip? Get in touch with *Project* to share it in the next issue

A new normal is a result of routine

Ednah Nzombe, project manager, Mott MacDonald

Working from home is not a new phenomenon for me. A few years ago, I was self-employed, and my home was my office. If you want to keep going and keep sane, have a routine with quick satisfying wins. Simply start by making your bed as soon as you wake up. This is a task achieved, and you will thank yourself for having a neat bedroom later. Brush your teeth, comb your hair, take a shower – you will feel rejuvenated. Take a few breaks to get some fresh air, even by the front door. Have the wind in your face and let the sun embrace your skin. This will take some tension away. Why not add in a few squats or jumping jacks to get that healthy, fast-beating heart rate? If you practise these simple tasks, they become part of you and no longer a routine. This is how I have created a new normal to keep going and keep sane.

Say thank you every day

Greg Philp, projects and programme manager, Leidos

Face-time is invaluable. Instead of sending an email, I've been video calling. You cover more material, secure buy-in and build stronger relationships. Only four per cent of our communication is the words we use. Tonality and inflection you can pick up from an audio call, but the depth of understanding and personal connection that you get from video calling is vital in creating 'togetherness' in geographically disparate teams. You can quickly see who is engaged or otherwise, and you can immediately see the relief on peoples' faces when they get a bit of respite and personal engagement! I've been trying every day to say thank you; a specific message to sincerely thank someone for their input, explaining its importance and what it means to me. The science is marvellous – you receive thanks/recognition, and endorphins are released in your brain. People want to replicate that feeling and so they are motivated to perform well – it's cyclical.

A volunteer works at a food distribution hub for vulnerable groups in Alexandra Palace, London

IMAGES

COLLABORATION IN A CRISIS

Project management in this pandemic will rely on our natural instinct to cooperate, think on our feet and make the most of the resources to hand, finds the Open University's ***Matthew Moran*** *as he examines valuable lessons from previous 'disaster communities'*

Survivors of 9/11 tell us there was little panic in the World Trade Centre buildings as thousands fled for their lives. Rather, we hear reports of many acts of kindness and camaraderie – and singing. Fast-forward to 2020 and another disaster. This time we see viral videos of Italians singing from their balconies as the COVID-19 pandemic ravaged the country.

Panic is rare, even in the most desperate situations. Courage, solidarity, generosity and altruism are far more common responses. On 22 March 2020, the day before the UK government placed the country into lockdown, 1,000 volunteer groups had been set up, with tens of thousands of people coming forward to assist those in self-isolation.

The author and journalist Amanda Ripley interviewed many survivors and witnesses of disasters for her remarkable book *The Unthinkable: Who Survives When the Disaster Strikes – and Why*. Ripley finds that people rarely panic in disasters. The reason, she suggests, is that it is not a useful survival tactic. "We probably could not have evolved to this point by doing it very often," she writes.

Rather than panic, we seem to be wired to respond by cooperating and organising in rapidly improvised groups and networks, or what Rebecca Solnit calls 'disaster communities' in another remarkable and topical book, *A Paradise Built in Hell: The Extraordinary Communities that Arise in Disaster*. We do this, it seems, to safeguard ourselves and others close to us, and to share what resources and knowledge we have, so that our group can adapt to the new reality. ▶▶

The COVID-19 crisis shows how these informal groups and networks outperform formal organisations and hierarchies for speed and quality of response. Take notes on how these groups work – they will be useful after the storm.

Right now in the UK, volunteer groups are delivering food to remote rural communities, and to refugees and asylum seekers who have no family or other connections to call on. At the time of writing, in April, the Meals for the NHS group has raised £1.2 million and delivered 43,000 meals to front-line staff in 52 UK hospitals. Compare this with the dismal performance of most Western governments in organising COVID-19 testing for their citizens.

The pandemic presents us with an opportunity to observe and learn in real time how to respond, organise, make decisions and adapt in chaotic and unstable environments. And it offers us valuable insights into how, as project professionals, we can train ourselves, our organisations and our clients to survive the COVID-19 crisis and come out of it stronger.

Panic is rare, even in the most desperate situations. Courage, solidarity, generosity and altruism are far more common responses

WHAT WE CAN LEARN FROM DISASTER COMMUNITIES

Let's start by looking at some of the characteristics of disaster communities. First, they are spontaneous – they form and become active extremely quickly. And they are localised, not centralised. They form around local needs, such as those of remote rural communities or urban refugees. They don't require (and they don't wait for) permission or approval from government or any other authority. Initially they are autonomous, non-hierarchical and self-organising, but soon they may form into networks with other groups for mutual support to achieve common goals.

Improvisation is a characteristic behaviour of disaster communities. In a crisis, there is no playbook, no best practice, no air-dropped survival kits. We must improvise with existing knowledge and resources, and quickly find ways of using and combining what we have in order to satisfy emerging local needs. In a disaster, communities cannot afford to cling to preferred pre-crisis processes or mental models, and there is no time to wait for more or better resources to arrive, even assuming we can access or afford them.

Improvisation involves using the means we have available, no matter that they were not designed or intended to be used to meet the needs we now face. We must experiment, tinker and repurpose our resources, our practices and our tools to meet the emerging needs of our community.

IMPROVISING WITH WHAT IS TO HAND

The anthropologist Claude Lévi-Strauss called this *bricolage* and contrasted it with engineering. While the engineer plans ahead and prepares all the necessary resources before starting a project, the *bricoleur* improvises with what is available in the moment. So far, so logical, but other characteristic behaviours of disaster communities seem less rational.

We rightly regard volunteers, medical staff, delivery drivers and others as heroes for putting their own lives at risk to serve others, but just as we are wired to support our communities in a crisis, it seems that we have a strong motivation to expose ourselves to the danger. Almost every terrorist atrocity of recent times has produced its heroes. Rick Rescorla was the head of security for Morgan Stanley in the south tower of the World Trade Centre on 9/11, and is credited with saving more than 2,600 lives. He was last seen near the 10th floor on his way up to help evacuate the last of his colleagues from the building.

There may be more going on here than altruism. At least some of us are drawn to danger. And it may be that this, too, is an adaptive behaviour that in the past gave us some evolutionary advantage. Recent discoveries reveal that groups of Neanderthals walked across the surface of an active volcano in central Italy around 345,000 years ago, leaving footprints in the cooling lava flows just hours or days after the eruption. Our ancestors may have gained useful knowledge, skills and resources (such as volcanic rocks to make new kinds of tools) by approaching these hazards. By exposing ourselves to risk, we are able to access new resources and knowledge that could transform our practices and create advantages for us that would not be available when 'playing it safe'.

Collaboration and innovation have been on show in Glasgow (main image) and London (inset) as volunteers assist with the manufacture of personal protective equipment for the NHS. Right: survivors of 9/11 vacate the scene of the disaster

GETTY; SOPS/SHUTTERSTOCK

PROJECT MANAGEMENT REQUIRES MORE EXPERIMENTATION

As a profession, what are we: *bricoleurs* or engineers? And how far are we prepared to roam, and at what risk, to expand our repertoire of skills, tools and techniques, and to enable our organisations and clients to adapt and prosper? These are not idle questions. COVID-19 forces us to answer them, and to give different responses to those we would have given just a few months ago.

As we look out into the pandemic-stricken world, and the economic depression ahead, we need to be more *bricoleur*. For the last decade or more since the global financial crisis, we have heard a lot about 'doing more with less'. Now, businesses need people who can do something with nothing, *bricoleurs* able to work with existing resources and capabilities, repurposing and combining them to serve new needs and create new forms of value.

Project management and strategy execution look quite different in this new world. Carefully tracking the performance of resources allocated to us will seem like a bygone luxury. Instead, business and society need us to be able to interpret emerging and unarticulated needs, and rapidly experiment with available (and perhaps long-forgotten) skills and assets. Pressure to perform will be great, so we should start training ourselves now.

In this challenging business environment, there will be little room for our profession's sometimes obsessive preoccupation with methodology. In a matter of weeks, many millions of organisations of all sizes have rapidly implemented changes that, in normal times, would have taken months if not years to plan and execute – and they did it not through devotion to linear or iterative life cycles, but by decentralising decision-making, trusting and empowering staff, sensing and responding through short feedback loops, and getting the apparatus of control out of people's way.

APM made a bold step forward in recognising hybrid life cycles (a form of *bricolage*) in the *APM Body of Knowledge 7th edition* (2019), placing practicality above purism. This step looks prescient now. But I believe we need to go further. Next year will be 20 years since the Agile Manifesto was created. The debate is over. It's time to move on. The pandemic and the resulting economic and social crisis call for new thinking. Now is the time for us to start reimaging project management for a post-pandemic world by drawing on applied complexity and systems theory; disaster and emergency response and recovery; global development; community preparedness and resilience; and history, archaeology and anthropology, subjects too long neglected by this profession.

There are challenges here for us as a profession. To meet them, we must be prepared to let go of some of the beliefs and logic we held dear before the crisis. But there's no need to panic. Rather, let's prepare to play our part in rebuilding our businesses and communities so that they are not only ready for the next shock when it comes, but also able to take advantage of it. Let's start today.

How far are we prepared to roam, and at what risk, to expand our repertoire of skills, tools and techniques, and to enable our organisations and clients to adapt and prosper? These are not idle questions

DR MATTHEW MORAN is head of transformation at the Open University and occasional lecturer at the Open University Business School

RISING STAR

HOW TO BE A TURNAROUND CHAMPION

(AND GET EVERYONE HIGH-FIVING)

*Meet **Emily Outten**, a project manager at DHL Supply Chain, whose spectacular efforts to bring a drinks distribution centre into the new decade is cause for celebration*

No one likes being told how to do their job. So, when Emily Outten was asked to walk into DHL's main distribution hub in Surrey to tell more than 200 workers that they needed to change, well, pretty much everything, she might have felt a touch nervous.

"I shook my head and thought, 'What on earth have I got myself into here?'" recalls Outten. The plant was in Salfords, Surrey. It supplies the pubs of London and Kent with kegs of beer, wine and spirits for clients such as Carlsberg, Greene King and Molson Coors. Frankly, without Salfords, the bars would run dry. It is as vital as broadband to the capital.

But Salfords needed to improve. "The issue is that the way we drink has changed," explains Outten. "These days, pubs stock dozens of types of gin, vodka and craft ales. The old method of sending a few kegs of beer is over. There are lots of individual bottles for the stock-pickers to find and pack. It means far more work for the production line. Salfords needed to adapt and change to this new world."

Fortunately, Outten was born for a mission like this. "I absolutely love change management," she says. "It's my favourite part of being a project manager." Spoiler: she transformed the plant and got the entire workforce behind the new regime. She was also shortlisted for the APM Young Project Professional of the Year Award for her work. So, how did she do it?

TALK TO THE PEOPLE, STUPID

"The first thing we did was talk to the people who work there," she says. "We held a town hall meeting and asked, 'Where are things going wrong?' and 'How can we improve things?' We got an incredible list of ideas, from changing the sequence of aisles people walk down to complaints about the toilets."

She went deeper. "We did focus groups. We asked them their opinion on the site, and what it's like to work at Salfords. We engaged them for hours and listened to everything they said." Then she went deeper still: "If you really want to know what people think, you can't just ask them in a formal setting. You need to go onto the shop floor and hear what people say around the coffee machine. Go into the canteen and just listen." Outten introduced a visible metric to measure the emotional state of the workers. "We put a board out front with happy, medium and sad faces. People could tick one as they went by. It's a very simple but powerful way to track how people feel during a change management project."

"You need to go onto the shop floor and hear what people say around the coffee machine. Go into the canteen and just listen"

ROLL UP YOUR SLEEVES

Next, she rolled up her sleeves and volunteered to work at the plant. "The only way to really understand a business is to work in it," she says. "Every warehouse has its quirks. You gain respect from the guys and learn the nuances. There's no other way."

By the end of this process, Outten and her team of 10 experts had a list of 228 improvements. "Some were small, like sorting out overflowing bins by ordering more frequent collections. Others were major, like creating a handover sequence for when the shifts change. Previously, the new shift manager came in and just had to guess where the last one ended. It was a mess. Horrible!"

The site was remodelled, with the yard streamlined so vehicles took a more efficient circular route. But as the changes kicked in, the staff felt the ▸▸

"The only way to really understand a business is to work in it. You gain respect from the guys and learn the nuances. There's no other way"

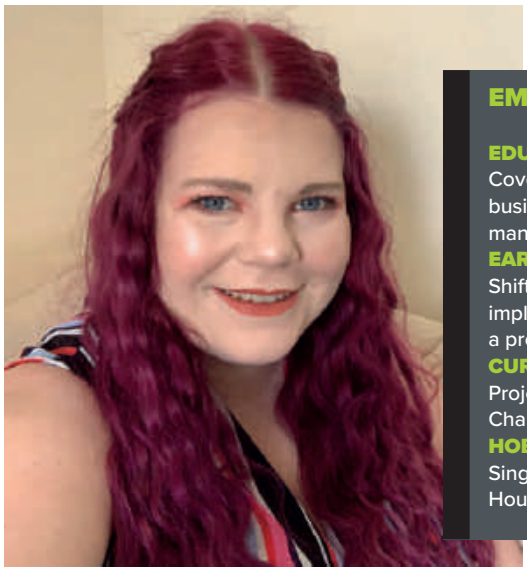
pressure of constant change. "Our happy, medium and sad faces went from medium at first, as people didn't know what was happening, to quite a few red unhappy faces, as people questioned the plan. But by the end nearly everyone was on a green happy face!"

RAMP UP COMMUNICATION

The secret? "Communication. Always communicate. At a time like this, rumours can spread like crazy. People thought maybe we were there to shut them down. We went from weekly briefings to daily ones. And you can't tell people something sensitive in an email. It may be misconstrued or leave questions hanging. I made sure that when I needed to explain something I did it face to face. They can see the whites of my eyes. It's the only way to build trust."

At the end of the project, victory was declared. "Of the 228 items on my list, all but 15 were completed. And they were minor things we can revisit in the future. Before, we were struggling to meet our KPIs. After, we hit them all."

"When we went live there were people high-fiving. That's when you know you've succeeded"



EMILY OUTTEN

EDUCATION:
Coventry University, BA Hons business administration and management, first class

EARLY WORK:
Shift manager, DHL; implementation manager for a project at Gatwick Airport

CURRENT ROLE:
Project manager, DHL Supply Chain UK

HOBBIES:
Singing with the Royal Opera House's Community Choir

For Outten, this sort of challenge is why she loves project management. She fell into the profession after graduating with a first-class degree in business from Coventry University. "When I first joined the DHL graduate scheme, I wanted to do operations," she recalls. "I thought project management was boring! I quickly found out I was wrong. Operations is repetitive, but project management takes you everywhere. I got the bug."

The Salfords job is her highlight so far. "I remember we had to ask people to work later shifts. Not easy. But we talked to everyone, heard their views, explained the logic and got them on board. When we went live there were people high-fiving. That's when you know you've succeeded."

Emily Outten was speaking to **CHARLES ORTON-JONES**

Emily's top five tips for ambitious project managers

1 Communicate directly
The number-one thing in change management isn't deciding whether change will happen. It's helping people realise it's inevitable and then getting them through it. Communication is king. You need a clear and consistent message – you can't have two managers saying different things. We held daily briefings in person, and this stopped any news feeling like a big shock. You'll know if you aren't getting it right, as the rumour mill will go into action. Then you've got a problem.

2 Pay attention to morale
It's important to understand how people are feeling and how your plans will affect them. I am a fan of the happy, medium and sad face method of gauging moods, as it's quick, cheap and easy for everyone to understand. It can be used to track morale throughout a change project. For deeper understanding, the only way to know is to take time to ask people how they are feeling. Get to the root causes. Ask them in person on the shop floor or in the canteen. You won't get that information by just listening to managers in meetings.

3 Keep learning
Ongoing education is vital. I benefit from having a wonderful mentor called Jane Cosgrove. She's a great sounding board and someone I can go to whenever I have a problem. I also challenge myself to learn from other project managers. I'll go and speak to them and often ask if I can sit in on their meetings. This approach means you are always learning from a wide variety of people. And I'm taking my APM Project Management Qualification. Formal education matters too!

4 Work on the shop floor
Whatever industry you're in, the best way to get an understanding of day-to-day operations is to volunteer for a shift or two. I started my career as a shift manager, so I already had some understanding of how DHL's operations work. But every facility is different. On each new assignment, it's vital that you show willingness and do at least a day on the shop floor. You'll earn respect by doing that.

5 Wind down!
A key aspect to being a great project manager, and something that is often overlooked by young project managers as we push ourselves, is that we need down time. Otherwise, you'll overload on stress. I read and go on walks. I'm a classically trained opera singer and a member of the Royal Opera House's Community Choir. We meet on Mondays in Thurrock, Essex, for rehearsals.

Dear Susanne HOW CAN I WIN OVER MY STAKEHOLDERS FROM THE GET-GO?

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

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

Q&A

My relationship with stakeholders, internal and external, is often troublesome. What can I do to minimise the risk of stakeholders blowing up?

You are right that poor relationships with stakeholders – and with the project sponsor in particular – are a serious risk that can contribute to project failure if not addressed and mitigated. Research confirms that having an actively engaged sponsor is one of the top drivers for project success. Unfortunately, research also shows that fewer than two in three projects have sponsors who are actively engaged. APM's *Conditions For Project Success* research from 2015 highlights the importance of clear and regular communication between all parties (apm.org.uk/resources/find-a-resource/conditions-for-project-success).

The good news is that, as a project leader, you have the power to influence how the stakeholders and sponsor show up. Most sponsors haven't been trained in how to steer a project, so you need to help them and have an open conversation about what their role is, what you need from them and what they need from you.

ESTABLISH THE GROUND RULES

The mistake that many of us make is that we spend too much time talking about what needs to get delivered and by when. While these are important conversations, we forget to discuss how we will be working together and what we expect from each other. In other words, you need to explicitly agree what behaviours and ground rules you will be working to.

Some of the most important questions you can ask are: 'How would you like me to communicate with you?' and 'How would you like me to keep you updated?' Some people prefer regular written status reports, others would like you to call

The mistake that many of us make is that we spend too much time talking about what needs to get delivered and by when

them, and others prefer an informal chat by their desk. There is no need to guess. You can simply ask: 'How would you like me to escalate urgent issues to you?' Every stakeholder has a different tolerance level for how much they would like to be involved and what kind of decisions they would like to take part in.

IDENTIFY THE RISKIEST ONES

A thorough stakeholder analysis tool can help you understand who all of your stakeholders are. It will also help focus your efforts on those stakeholders who pose the biggest risk to the project. Instead of using the traditional two-dimensional power and interest matrix, use a three-dimensional cube with the following dimensions:

Power – is your stakeholder strong or weak? If they are strong they may have enough power (either formally or informally) to stop the project and determine its direction.

Interest – is your stakeholder active or passive? If they are active they are more likely to engage and be actively involved in the project.

Attitude – is your stakeholder hostile or helpful? If they are hostile they will have concerns about the project and could pose a threat.

The riskiest stakeholders are those with strong power, high interest and a negative attitude. Your primary task is to lower the likelihood of these high-risk relationships blowing up by changing their attitude. As you look to make these high-risk stakeholders more supportive, use your emotional intelligence and draw on your knowledge about each stakeholder's universe. Meet them on their terms and ask them lots of questions about their thoughts, ideas, worries and hopes for the project. The better you understand the context in which they operate the easier it will be for you to build strong relationships and address the reason for their opposition.

DON'T STICK YOUR HEAD IN THE SAND

Many project managers avoid having these crucial conversations with sceptical stakeholders with high power. But avoidance is not the answer. You need to actively engage with, listen to and address their concerns. In that way you will gradually gain their support and put in place one of the most important prerequisites for successful project execution. With a group of powerful, interested and helpful stakeholders you will be off to a flying start.

BEYOND THE JOB

SETTING UP A MENTAL HEALTH CHARITY

BLACKDOG OUTDOORS

*In this series, project managers tell us how they're using their skills for a personal project. Here, **Andrew Higson**, a project manager at Balvac (part of Balfour Beatty) and a keen mountaineer, tells us how he established Blackdog Outdoors, a voluntary charity set up to promote the benefits of outdoor recreation for improved mental health*

The Blackdog Outdoors project was devised as all good things often are... in the pub! Outside of work I'm an avid mountaineer, having qualified as a summer mountain leader and navigation tutor, and have spent time in the Alps and further afield on high-altitude mountains. In July 2018, I climbed Mount Elbrus (Russia, 5,642m) two months after completing a Mental Health First Aid (MHFA) qualification with work. Conversation in mountain huts is initially scatological, but after we stopped talking about bodily functions, we got onto the subject of why we were all there.

The majority of the team recognised mountaineering, and generally being outdoors, as our personal therapy. The challenge, isolation and escape from a fast-paced life were felt to be good for our individual mental health. So, how could I use my skills as a project manager and my passion for mountaineering and the outdoors to help other people realise these benefits?

I considered this on my flight home and discovered that there are many academic papers on the subject. The research shows that the benefits of outdoor activities include improved mood and self-esteem, and reduced stress. I researched mental health websites for inspiration and observed that there are many organisations promoting mental health support, and many promoting the outdoors, but few promoting the link between both. How could I highlight that link with a format that is readily accessible?

KICKING OFF WITH THE BASICS

Simple. I would create a website with the objective of promoting the mental and physical benefits of outdoor recreation. As a starting point I reverted to my APM training, in particular the 'five Ws' and the 'two Hs':

- **How will I make it happen?** I'd need to bring together a team of friends who, like me, are passionate about outdoor recreation and improved mental health. I assigned each of the team a role and, following a workshop, we developed a plan of what content the website should contain.
- **What do I want the website to contain?** The website would be informative, act as a central hub of information (on safety, insurance, tips on clothing, etc) and signpost people to mental health support groups should the need arise.
- **Why will people benefit from this information and what are the expected outcomes?** The website will give people the information to access the outdoors confidently and to seek opportunities to improve their skills and competence.
- **Whom do I want to promote the website to?** It should be accessible for all who are interested in heading outdoors, from novices to the more experienced.
- **Where will I find those people?** We would promote the website via social media linked to a communications plan and strategy, with regular press releases.
- **When do I want the website to go live?** I set an ambitious target of having a live website by the end of 2018 – only four months from conception to implementation.
- **How much will it cost?** The website work was gifted to us as a donation

Andrew Higson combined his passion with his project management skills to deliver benefits that many projects could only dream of

ADAM VAUGHAN PHOTOGRAPHY

by Berri (www.berri.co.uk), which mitigated set-up costs. The team agreed to manage the site content and social media on a voluntary basis.

In November 2018, after only three months of work, we launched www.blackdogoutdoors.co.uk with all the information that people could need to head outdoors, or so we thought. My experience as a project manager has taught me that a plan, once implemented, should be monitored to ensure that it works. I sought initial feedback from some of the website users, which was generally positive and confirmed that the website and our social media releases sent a powerful message. However, as with anything in life, there are always lessons to be learned.

HELP, I'M LOST! AND WHERE'S THE LOO?

Our first real lesson was that we hadn't fully considered the barriers that may exist with our target audience. As the website became more popular, we started to receive feedback that, although the information was useful, anxiety (among other conditions) made it difficult for some people to use it themselves. There were concerns that ranged from a fear of getting lost to how to go to the toilet in the great outdoors.

This presented us with a new challenge, so I revisited the original outline (business case) for the project and convened a team meeting. That meeting, again using the five Ws and two Hs as an outline framework, resulted in a fantastic plan.

The majority of the team recognised mountaineering, and generally being outdoors, as our personal therapy

We would facilitate an annual walking event for those whose mental health acted as a barrier to them getting outside and, best of all, it would be free to attend.

I started planning in January 2019 with the aim of holding an event for 30 people in the Peak District that April. We enlisted the voluntary support of local qualified mountain leaders and mental health first-aiders. We also reached out to the British Mountaineering Council and received an amazing level of support, which included insurance for the event.

We now needed to consider safeguarding and how to make the event appeal to our target audience, which included producing a flyer and setting up social media event pages to confirm that the event would be managed by qualified outdoor professionals and supported by MHFA-qualified people. We also asked interested attendees to complete a booking form listing pertinent medical issues to help us support them on the day, and issued specific instructions on where and when to meet, how the day would unfold, and what clothing, equipment and food to bring. ▶▶

Attendees at Blackdog Outdoors' walk in Malham, North Yorkshire, held in March in support of *Trail* magazine's 'Mountains for the Mind' campaign

All our attendees had to do was get themselves to the starting point, and they did just that, much to our relief. This inaugural event was attended in full, and the immediate feedback was encouraging. So encouraging, in fact, that we started to talk about more events, which presented a further challenge. How would a small core of volunteers, with work and family commitments, be able to facilitate free events on a more frequent basis? I needed another plan, so it was back to the pub!

I drafted a governing document that was signed by the six Blackdog Outdoors members (at the time) as trustees in the summer of 2019. I drew up a plan and a revised organisational structure that over the remainder of the year resulted in the team recruiting voluntary staff to fill some of the new roles. We also developed a training matrix for the team, raised funds through crowd-funding to cover overheads and training requirements, created a network of qualified volunteers to support events, and established a stakeholder management plan, which has led to strong, mutually supportive relationships with the British Mountaineering Council, Mountaineering Scotland, Mountain Training, the Mountain Training Association and *Trail* magazine's 'Mountains for the Mind' team.

There were concerns that ranged from a fear of getting lost to how to go to the toilet in the great outdoors

We also established and implemented a GDPR policy, emergency procedures and risk assessments for events, strengthened our credibility as an organisation by signing up to MIND's Mental Health Charter, and held a further eight events (all free to attend) throughout 2019.

REALISING THE BENEFITS

With all this in place, what did I expect success to look like, and how would I know that the expected benefits were being realised? My core aim has always been to promote the benefits of outdoor activity on mental health. However, the impact on attendees will vary depending on many factors, such as personality and existing conditions. The success criteria would need to be a demonstrable improvement of mental health/wellbeing based on the individual.

To this end, I developed an anonymous feedback survey with questions linked to existing academic research. These questions provide us with a baseline of the attendee's general mood before and after an event – for example, were they happier, more confident and less stressed after the event than before it? The survey responses (to date) give us demonstrable evidence that our work has a positive impact. Our statistics show that 71 per cent of attendees find our events to be a release from everyday worries; 85 per cent say that the events allow them to connect better with others; and 57 per cent left the event with a feeling of accomplishment.

Where are we now? In early 2020 I applied to the Charity Commission for full charitable status. This was granted, meaning we are now a registered charity. We're all excited about that and hopefully it will open some more doors for us.

In addition, to support further expansion, we have taken on additional voluntary staff to provide monthly walking events across the whole of the UK to support 'Mountains for the Mind'; paddle-sport events with support from British Canoeing-affiliated clubs; outdoor climbing events in collaboration with 'Climb Alongside Mental Health'; and navigation and hill skills courses with support from Mountain Training.

WHERE ARE WE GOING?

At the time of writing, we have held four walking events and one paddle-sport event so far in 2020. However, our remaining events are currently on hold due to the ongoing coronavirus pandemic. We are using this time to look ahead to 2021, which includes tentative plans to introduce cycling and horse-riding events. This will require another organisational restructure, another plan and, following lockdown, another trip to the pub! P

● **Visit www.blackdogoutdoors.co.uk for more information**

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 France and the Netherlands to those in Australia and Nigeria! Full details of the criteria for achieving chartered status and the routes to get there can be found on the APM website at apm.org.uk/chartered-standard, where you can also view the full Register of Chartered Project Professionals.

First Name	Surname	Country
Robert	Avery	UK
Mark	Ayto	UK
Rachel	Baldwin	UK
Katie	Banks	UK
Mark	Beaver	UK
Phillip	Bryden	UK
Steven	Carroll	UK
Eric	Chang	US
Jean-Christophe	Chavrier	FRA
Gary	Clarke	UK
Kirsten	Disney	UK
Charlotte	Eimer	UK
Shaun	England	UK
Karl	Fearnley	UK
Michael	Giddings	UK
Alistair	Goodbrand	UK
Yvonne	Holland	UK
Jonathan	Humphries	UK
Sunchana	Johnston	UK
Joe	Kennedy	UK
Vincent	Lalaurette	UK
Richard	Lambert	UK
Robert	Loader	AUS
Adam	Lowmass	NED
Andy	MacIntosh	UK
Karl	Mason	UK
Abbas	Mavani	UK
Colin	McMillan	UK
Alan	Moser	UK
Claire	Mueller	UK
Huw	Parker	UK
Mark	Plowman	UK
Yu	Qian	UK
Kevin	Quinn	UK
Gary	Robson	UAE
David	Ruston	UK
Sumeet	Shah	UK
Christopher	Shields	UK
Rebecca	Showler	UK
Alasdair	Stirling	UK
Paul	Togneri	UK
Innocent	Ukejianya	NIG
Kamaldeep	Vaseer	UK
Penny	Ward	UK
Arran	Wharton	UK
Neil	Whittaker	UK
Bill	Wilson	UK
Peter	Wright	UK
Marta	Zaremba-Marsden	UK

apm association for project management

THE CHARTERED BODY FOR THE PROJECT PROFESSION

STAND OUT AND BECOME CHARTERED

Join the community of **proud project professionals** making a difference to society by becoming a **Chartered Project Professional (ChPP)** with APM.

"Chartership represents a badge of honour and an independent recognition, something that I am 100% certain will really help with anyone's progression in their career."

Simon Maxwell ChPP MAPM
Programme Lead, Dyson

Start your journey today at apm.org.uk/chpp

OFFLINE

Where project management meets popular culture

THE GREAT ESCAPE

Programmes, projects and plans abound in one of the all-time war classics. It reminds us that even the most secretive project needs great communication, writes ***Richard Young***

Many people, from the Queen and the prime minister on down, invoked the Blitz spirit during the COVID-19 lockdown, so which better film classic to revisit than the 1963 star-laden war movie *The Great Escape*? It's a film with great moments of a soaring spirit against adversity and healthy doses of humour, but one that doesn't shy away from tragedy. And most importantly, it's a film that is oozing with project management lessons. ▶▶

ALAMY

THE VALUE OF A PROJECT MANAGEMENT OFFICE

The elite prisoners of war (PoWs) have a clear corporate objective: escape from the camp and sow chaos in the enemy hinterland. Their project management office is headed by 'Big X' (Dickie Attenborough) and comprises discrete (and discreet) teams with their own sub-projects on infrastructure, supply chain, waste management, security and sustainability (the escapees will need identities and disguises for the outside).

One of the big early lessons is how to manage project teams when it's hard to meet up. Big X gathers his expert escapees at night after they sneak out of their huts. He has to use this scarce face-time with the group effectively – and the scene is a masterclass in strategic comms.

First, he explains the mission: not piecemeal escapes ('blitzes') but a huge breakout of 250 men. He scopes the main infrastructure projects that the team will be delivering – three tunnels: Tom, Dick and Harry. And after confidently reassuring the incredulous top team of his intent to fulfil this bold programme, he quickly assigns them key duties – digging, security, escape equipment, logistics and so on.

But the key line? "I'll meet with you all individually in the exercise yard to thrash through the details." Big X knows his men are experts. He trusts them. By setting out the parameters of his programme, and their sub-projects, then following up later, he gives them the chance to work through solutions in their own time and address problems outside the main forum.

This might not work for all projects – sometimes a group discussion can yield interesting cross-pollination of ideas between disciplines. But when time and resources are tight and morale is critical, using the group meetings to set clear, positive objectives is outstanding project leadership.

Clear mission, detailed specs, empowered to use his initiative. Perfect agile

AGILE: THE VALUE OF 'BEING THERE'

Not that Big X is inflexible. He has set the teams almost impossible goals – and every project manager has to deliver to strict stage gates. They can't dig a tunnel without the ventilation system or a means of getting rid of the dirt; the PoWs can't escape without disguises and papers, but when confronted with challenges, Big X knows to shift tack.

The best example is his initial decision to save time and materials by not shoring up the tunnels with wood. While inspecting Tom, he witnesses a partial collapse – and the near death of one of his team. He sees that his original decision was flawed and switches in an instant: wood must be found to make the tunnels viable.

Agile project management isn't just about snap decisions, of course, or even being opportunistic, but it does rely on detailed and clear project parameters and objectives. Get those right, and the team can improvise and adapt much more easily.

A great example is Robert 'The Scrounger' Hendley (James Garner). Teams will rely on his resourcing and supply-chain expertise (theft and blackmail, mainly – essential skills for any project manager) to get their own work done. He's given a shopping list: a pick, examples of identity papers, a camera – crucially, he's told specifically what film, lens and shutter.

But Big X leaves the detail on delivery to him. It allows him to assemble impromptu teams to complete any given sub-task the moment an opportunity arises – whether it's stealing steel from a truck or the commandant's butter supply for a bribe. Clear mission, detailed specs, empowered to use his initiative. Perfect agile.

DISCIPLINE AND REDUNDANCY

One big lesson for many organisations coming through the pandemic has been the hidden risks of ultra-efficiency.

Those with a lean operating model, reliant on just-in-time logistics, holding limited cash reserves or working close to capacity have found that when the assumptions in their industry break down, they have little opportunity to flex.

Big X takes no such risks, even when the resourcing requirements of redundancy put an incredible stretch on project teams. When tunnel Tom is discovered by the 'Goons' (during a Fourth of July party – this project doesn't neglect team morale), the project management office

POST-PROJECT PRISONERS

The lessons from *The Great Escape* are numerous but it's worth analysing how things work after the project is concluded. Once into the woods, the PoWs have to work with the resources and training that were created as critical deliverables.

Do their papers stand up to scrutiny? Are the train timetables accurate? Will hand-made civilian clothes fool the authorities? How about their language skills? Will the processes laid down to help the PoWs evade capture operate as designed?

Every project manager designing a process for business as usual or a user journey knows the worry: will it stand up to everyday use? Are users going to get confused? Will they find their own workarounds?

ALAMY

switches focus immediately to redundant tunnel Harry.

This also highlights the need to make sacrifices to deliver the core project. Wood for the new tunnel is a critical resource – but the sleeping arrangements for the PoWs are not. Handley scrounges slats from bunk beds, even if that means some of them collapse.

PROPER PLANNING AND PREP

We learn a lot about the value of the project management discipline right at the start of the film. Several PoWs attempt blitzes out of the camp. For example, Danny 'Tunnel King' Velinski (Charles Bronson) and Louis 'The Manufacturer' Sedgwick (James Coburn) attempt to mingle with Russian PoWs sent out to cut trees – armed with just one Russian phrase, *ya lyublyu tebya* ('I love you'). All these unplanned, under-resourced attempts fail.

A big part of project management, even agile methodologies, is planning. And there's plenty of that in *The Great Escape*. But how does your project management training hold up when the planning lets you down?

One of the big early lessons is how to manage project teams when it's hard to meet up (sound familiar?). Big X gathers his expert escapees at night after they sneak out of their huts

Although the landscape is thoroughly surveyed, for example, tunnel Harry comes up 20ft short of the woods.

It's a great project management moment: when they realise they've messed up, second-in-command Mac asks, "How could that happen?" Big X knows not to waste time: "What the hell difference does it make? It's happened!" He wants to think about solutions – the analysis can wait for a lessons learned review.

They quickly agree a process to ensure the project can continue – a contact line from the woods telling PoWs the sentry has passed. It's one of the few moments Virgil 'The Cooler King' Hilts (Steve McQueen) makes a contribution to the project. His other is scoping out escape routes – and his sacrifice in being recaptured to pass on this intelligence is a reminder that projects may need to go backwards to make progress...

But tragedy strikes when one of the project team disregards (or perhaps isn't told about) that new process and leaves the tunnel at the wrong moment. The guards are alerted and only a third of the PoWs get out. It's a reminder of just how important communication is to any project. Whether it's aligning team members around project goals or stage gates, or ensuring that process and procedures are adhered to, how you get your message out can be a matter of life and death.

One of the film's most dramatic moments involves exactly this deviation from a carefully designed process. Second-in-command Mac (Gordon Jackson) drills into escapees the importance of not being caught out by speaking English in occupied territory. Yet when he's wished "good luck" in English by a German officer, he replies, "thanks", blowing his cover.

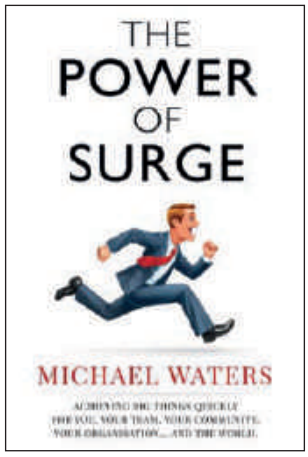
Other PoWs fare better, sticking to the processes. Only three make it to neutral countries, however, and failure for 50 others results in their murder by the Gestapo and SS.

It's worth bearing in mind that the film starts as another project ends: the construction of an 'escape-proof' PoW camp for the Luftwaffe. The project outline was simple: build a facility to secure hundreds of the best escapees in the world. It was well resourced. The processes – such as the fence 'wire of death' and hut searches – were designed competently. Yet once it entered business as usual, the mission failed.

One reason, arguably, is that the German forces are too rigid in their processes. They enforce predictable patrols and searchlight patterns, they're too mechanical in hut searches. Tunnel Tom is only discovered thanks to a spilled pot of coffee. The project as delivered works in a perfect state – but cannot adapt to the unexpected. The lesson? You can't expect users to iterate or improvise once you hand over the project. Training them to be more creative perhaps ought to be part of the original project plan.

New books to help you deal with 'surge events' and lead large projects successfully, and why every leader should be empowering their team

What you know about small projects won't apply to large projects, and why adopting a 'surge' mindset could be a valuable new addition to the project management vocabulary



THE POWER OF SURGE
Michael Waters (Olympia Publishers)

In 2016, when a 100ft-wide hole appeared in a five-lane motorway in the Japanese city of Fukuoka, it was resolved through a rapid, concerted effort and the road reopened within a week. *The Power of Surge* focuses on such high-energy, time-limited events and projects that are also sudden, urgent, short-lived, extraordinary and impactful.

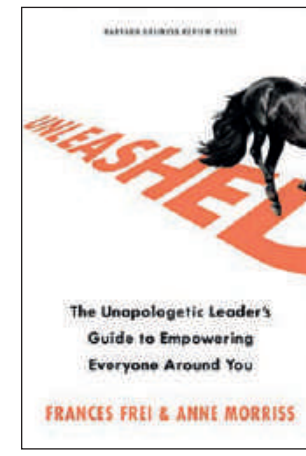
We typically advocate starting projects the right way so that they stand a better chance of succeeding. Such thinking assumes that we have time to consider, plan, reflect and prepare, but on some occasions we do not have that luxury. Surge events occur when we need to accomplish big things rapidly and robustly without the benefit of preplanning. Early examples on offer include tackling a killer virus, accommodating spikes in demand at supermarkets and addressing a surge of critically ill people at a hospital – challenges that suddenly seem more pertinent.

A lot can be learned from the emergency services and aid organisations, but Michael Waters' thinking goes beyond rescue and relief operations to encourage a surge mindset. Indeed, if surge offers a turbocharged way of doing things, why does it not normally feature as an alternative project approach? According to Waters, we don't surge more often because we simply don't think about it. The aim of the book is to encourage surge-infused approaches and to offer thinking architecture and tools for applying it.

The book is timely, offering new ways of thinking. The excellent introductory chapter challenges us to embrace surge and become more ambitious in employing it. Subsequent chapters build on the thinking but are often too dreary, featuring lists and inventories. The final chapter addresses mega-surges, such as collapsing ecosystems and pandemics, requiring robust responses on a massive scale. Adding surge thinking to our project vocabulary is useful and apt, but a more succinct journey through the concepts might also help in selling the idea.

★ ★ ★

Review by Darren Dalcher, professor in strategic project management at Lancaster University Management School, and director of the National Centre for Project Management



UNLEASHED
Frances Frei and Anne Morriss (Harvard Business Review Press)

Unleashed is an easy read, filled with lots of good ideas. They are, however, not as innovative as the authors seem to imply. From a Harvard Business School professor, I'd hoped for new and thought-provoking insights. Instead, what we have is a good book, but not a very good one. It's a fast-paced

Where we can have an impact is over the cultures of the projects we lead

guide for new and rising leaders but there is little to expand the perspectives of a seasoned project leader.

The core theme is empowerment. Frei and Morriss see the role of the leader as one of getting the best from their team, and weave a framework of five levels in which to do this. The first two, Trust and Love, will be familiar to those with a knowledge of servant leadership. As a big advocate for this (see my column in *Project*, spring 2019) I wanted to love these chapters, but with no new insights, they were disappointing.

Ironically, it was the later chapters I enjoyed more, especially those on Belonging – their third level. This not only advocates for a more diverse team, but offers lots of practical advice. However, it will only be of use to project managers who have a direct influence on recruitment.

The last two levels are where the authors argue that the leader has the greatest impact through their absence by the creation of a guiding Strategy and building an empowering Culture. Few of us have an impact on our organisation's strategy, but I enjoyed the case studies. Where we can have an impact is over the cultures of the projects we lead. What a shame then, that this section is the thinnest. I so wanted to like this book, but with so many far better books appearing every day, it's one I can only recommend to a few readers.

★ ★ ★

Review by Mike Clayton, project management speaker and trainer, author of several project management books and founder of OnlinePMCourses

MY BEDSIDE BOOKS

James Lea, *consulting project and programme manager, and Fellow of APM*

SKIN IN THE GAME
Nassim Nicholas Taleb
Risk is central to the lives of project managers. No one commands this subject better than Taleb. His earlier books, *Fooled by Randomness*, *The Black Swan* and *Antifragile*, lay the foundations for this one, which explores the 'hidden asymmetries in daily life'. What can be one person's gain is often a result of another's loss: risk transfer. Reading it has helped me understand just how widespread this phenomenon is. The realm a project manager directly controls is small; we must pay attention to a range of external risks and behaviours across many interrelated parties. This book will change your thinking and help you recognise and manage the world better.

EFFECTIVE PROJECT MANAGEMENT
Robert K Wysocki
The agile v waterfall v hybrid debate rolls on. This book helps put it to bed. Wysocki sets out a project landscape model that describes how to select the best approach at the project design stage, taking clarity of goal and solution into account. I find this a powerful approach, as it describes what to do when neither goal nor solution is clear. It also identifies another case where the solution is clear, but the goal is not. By understanding the taxonomy of projects, they make more sense, and we can draw on our experience more effectively. The rest of the text looks at specific techniques and treads more common ground.

FREEDOM FROM COMMAND & CONTROL
John Seddon
I love this title! The subtitle, 'a better way to make the work work', makes clear Seddon's emphasis. He shows how we can apply ideas from Demming, the Toyota Production System and lean to improve service organisations. He excoriates target-setting and has lots to say about effective measures and use of data. He notes that "the Japanese miracle had at its heart the training of the workforce to work on the work, not just do the work". These lessons are applicable to all projects and project organisations. We must design work so that it flows seamlessly to customers – without whom we would not have our projects.

BIG TEAMS
Tony Llewellyn (Practical Inspiration Publishing)

Tony Llewellyn has substantial experience of working on major projects, and this is an accessible book, around 200 pages long, with case studies to bring the theory to life. It is targeted at those aiming to take on a leadership role on a major project, but is also useful for seasoned professionals as a reminder of why certain approaches work well.

Big Teams helps those familiar with smaller projects to understand that their experience does not upscale to major ones. The inevitable uncertainty, complexity and ambiguity that define major projects are well set out. This is something that those new to the arena can often find themselves wrong-footed by. Llewellyn helps us understand and embrace the environment and continue to be successful.

I particularly enjoyed the discussion around management thinker Frederic Laloux's stages of organisational development, taking us from the red command-and-control through to the pluralist green stage. Llewellyn provides a succinct consideration of the range of approaches and how they have evolved. His list of what teams do not need speaks volumes.

In the major project environment, collaboration can be an overused phrase that sometimes exists on paper only, with a commensurate lack of trust between collaborators. The author discusses how challenging it is to create an environment of trust and provides a checklist on how to remove possible obstacles.

Perhaps the most significant chapter is on resilience. The case study 'Preparing for the Storm' provides an accessible story to learn from, set in a highly unpredictable environment. While aspects of major projects, such as set-up, are relatively obvious, resilience, reflection and transition can be missed and are key to success, and the author's points are well made.

Big Teams includes valuable references for future reading and refers to the author's website for tools and techniques. It is peppered with nuggets of wisdom and much of the material will be beneficial to anyone involved in a project environment.

★ ★ ★ ★

Review by Julie Wood, director and leader, major complex projects, Arup

THE 5 STAGES OF A PANDEMIC REACTION

Never waste a good crisis, says Eddie Obeng, as he spells out how to move to a new and better world

Over the past six months we've lived a lifetime of change. But what did it all mean? And what comes next?

My personal digital transformation began at 30 with three major epiphanies.

First, I learnt from management thinker Eli Goldratt about how to understand complex systems simply.

Second, one rainy evening in Nottingham, I experienced my first virtual-reality console. I was in shock for days. How could I have been so immersed in the computer world that I forgot it wasn't the real one?

Third, I found out why projects were in transition from closed to uncertain. Ways of working in place for 100 years that fit a world of incremental change worked only if we could remain in control and stay ahead by learning.

You want permanent change, but your experience so far has been pretty dehumanising, and the idea of spending the rest of your working life in the understairs cupboard fills you with dread

But the pace of change had risen and all our assumptions were obsolete – and so was everything I was teaching.

So, I quit to seek this new world. I had a virtual-reality teaching facility built. I dispersed my business team, forcing me to learn virtual leadership and remote working. Around me everyone kept behaving rationally in response to an old world they understood and recognised, but which no longer existed. Sound familiar?

The best pandemic joke is: 'Who is in charge of your digital transformation? (a) CEO; (b) CIO; or (c) COVID-19?' Suddenly, no one can deny the presence of our new world. As a bystander, this is what I have witnessed:

STAGE 1 FIRE! FIRE! OFFICE CLOSED

Systems you've relied on for getting your work done are suddenly inaccessible. Continuity must be assured immediately. Secretly you're amazed how fast your normally sleepy organisation, suppliers and customers have moved. They finally began to use the digital infrastructure they have paid for, and have paid lip service to, for years. Overnight they discovered that work that can go down a phone line should, and work that can't is called 'key'.

STAGE 2 FINDING YOUR FEET

Talk about continuity, disruption and remote work is all well and good, but working from home isn't. Home is shared with family and pets. How do you negotiate a place, time and way to work that is fair to all? Your family quickly goes through the stages of team development: forming, storming (really noisy rows), norming, performing. You realise your choice of devices to keep you mobile – laptop and phone – are awkward to use all day, with tiny screens that make your eyes hurt.

STAGE 3 THE FALSE DAWN

Today you spent seven hours on webcam staring at each other's foreheads. Old world: meet to discuss then do the work offline. You play pass-the-parcel with a spreadsheet and pretend you are collaborating. These tools and methods were built to serve the old world. It's not ideal but you're getting used to what people are calling the 'new normal'. This is your false dawn. You have just digitised your old actions. New world: meet to do the work, and collaboration means thinking together.

PROFESSOR EDDIE OBENG is an educator, TED speaker and the author of *Perfect Projects* and *All Change! The Project Leader's Secret Handbook*. Read his white paper at eddieobeng.com/howdigitalwillsave theworld. Tweet him @EddieObeng or read his blog at imagineafish.com

STAGE 4 A SENSE OF LOSS

The rumble starts as the gate-keepers realise that in our new, high-speed, innovative free-for-all, they are irrelevant. They start to plan how to return to 'normal', ie work before COVID-19. You want permanent change, but your experience so far has been pretty dehumanising, and the idea of spending the rest of your working life in the understairs cupboard fills you with dread.

STAGE 5 NEVER WASTE A CRISIS

The pandemic has driven change at an amazing rate. Perhaps 10 years' worth in 10 days. People now recognise how ridiculous the previous normal was and that it is obsolete. But gluing wings onto a caterpillar does not make it a butterfly. So now you need to imagine the possibilities and learn a different way – fast.

I'll give you a couple of shortcuts to getting there. First, your thinking and habits will mislead you. For every activity or problem, make two lists. On one put your measure of success and how you would have tackled it in the old world. On the other, do the same for our post-COVID-19 world. Few items should be on both sides.

Second, with respect to remote working, imagine a three-legged stool. The first leg is 'group culture'. How will people be together? How will people learn new behaviours? How will we include everyone?

The second leg is 'aligned collaboration'. What processes and tools will we use? How will we collaborate and think together? How will we make decisions?

The third leg is the facility we will need. Previously we used the office, meetings and flew executives around the world. How will we do it now? I use a virtual-reality facility, QUBE, which I built to support executive education and run Pentacle. There are many other choices, like LearnBrite and ProtoSphere. It is important that, whichever facility you choose, it allows you to be agile and flexible, and will bend to suit your needs as you learn and change. Welcome to the new world. Ⓟ

apm

THE CHARTERED BODY FOR THE PROJECT PROFESSION

Join the conversation on your member exclusive online community platform, APM Hub

This secure space connects like-minded members faster and easier than ever before to nurture and facilitate discussion, debate and development across all levels of the profession and the sectors they operate in.

On the APM Hub you can:

- Connect with like-minded project professionals across the globe
- Collaborate with fellow members
- Expand your professional network

Learn more at: hub.apm.org.uk

YOUR TEAM, ANYWHERE.

ppmanywhere.com/request-a-demo/

We create beautifully uncomplicated software to manage process, people and financials.

Polarisoft
Business technology partners