Rapid upskilling

The secret sauce for success
in the project economy

Content

Introduction

Technology breakthroughs and shifts in global economic and political power are driving continuous change in sectors, organisations, and workforces of all sizes throughout the global economy. Most radical has been the scope, breadth and speed of change brought about by new digital technologies such as artificial intelligence (AI), drones, 3D printing, blockchain, to name but a few. These technologies will continue to disrupt and transform organisations in many industries, prompting them to initiate projects to enable them adapt to disruptive change and stay relevant in the marketplace of the future. This in turn will shake up the role of classic project managers and the way projects are managed, steered and prioritised, as well as the way resources are allocated.

It's therefore essential for project managers and organisations to follow the latest technical developments and respond flexibly to rapid changes in the current dynamic environment. According to the PMI Pulse of the Profession 2020 survey, the three top factors that executives see as most important to achieving success in the future are organisational agility, choosing the right technologies, and securing the relevant skills.

In this paper we'll be looking at how constant digital disruption has impacted and essentially enabled the project economy. We'll be giving insights into the 'Essential Eight': eight emerging technologies that PwC has identified that affect our ways of work: artificial intelligence, augmented reality, blockchain, drones, internet of things, robotics, virtual reality, and 3D printing. We'll be showcasing projects and organisations from different sectors (including construction, financial services, life sciences, engineering, transportation and automotive, and consumer goods) that have been impacted by the essential eight and highlighting benefits that have been reaped from using such new technology.

This new business paradigm, in which project management professionals drive change, innovation and results, is also called projectisation or the 'project economy'.

We'll also be looking forward to four highly probable future worlds of working in the project economy and the impact of digital disruption and organisational agility: The Yellow World (human first), the Red World (innovation rules), the Green World (companies care), and the Blue World (corporate is king). We'll be looking at their importance for upskilling initiatives and how the PMI's project management technology quotient (PMTQ) will help ensure the success of both project managers and their organisations in these project economy worlds.

What is the project economy?

A project can be defined as temporary and unique: a planned activity which has a beginning and end, is outside an organisation's routine operations, and is designed to achieve a certain goal. A project can thus take a variety of forms: a trip around the world, the development of a new product, the implementation of a new ERP system in a multinational company or the construction of a building.

By completing projects successfully, companies can deliver both financial and societal value to their stakeholders. This new business paradigm, in which project management professionals drive change, innovation and results, is also called projectisation or the 'project economy'. This concept – it could even be seen as a paradigm shift – results in a workforce that is continuously working in a project setting and that is led by people with varying industry backgrounds, skills, seniority and geographic reach. According to the PMI, this project economy is a world in which people have the skills and capabilities to turn ideas into reality (Figure 1).

The focus is on integrating strategy design and delivery with the aim of successfully implementing projects. To achieve this, a variety of approaches can be used to execute projects with fast, flexible, skilled and future focused teams. These can be successful in the project economy if they have an innovative mindset, collaborative leadership, sustained risk management, empathy for the customer and a governance methodology (Figure 2).

> According to the PMI, this project economy is a world in which people have the skills and capabilities to turn ideas into reality.

Figure 1: Definition of the project economy and projectisation

Projectisation	An organisation where all activities are managed through projects **PM Project Cycle**
	Organisation with project teams where all members are grouped into an almost autonomous department **PMI**
Project Economy	A world in which people have the skills and capabilities to turn ideas into reality **PMI**
	A gig economy driven by projects, as ideas without a project is just wishful thinking **Antonio Nieto-Rodriguez, former Chairman PMI**
	Moving from project to project in a new business paradigm, in the quest to become future ready **Sunil Prashara, CEO PMI**

Figure 2: The PMI's five characteristics for successful project economy teams

- Innovative mindset
- Collaborative leadership
- Methodology or framework governance
- Risk management
- Empathy for the voice of the customer

Both pervasive and relentless, current technological changes are putting pressure on organisations and industries to keep up with the future of work. To survive they will need to be able to operate successfully within the project economy. According to the PMI, three attributes are crucial to success in this economy:

- Permission to be agile
- Ability to bridge the gap between strategy design and delivery
- Commitment to professional development, both for technical skills and soft skills (e.g. innovative mindset, collaborative leadership, data-driven decisions)

We consider the first element, 'permission to be agile', to be particularly critical to success in the project economy. With technology and operating models changing fast, current practices are too slow to keep up with the disruptive impact of these changes. Organisations therefore need to explore, adapt and apply a new, agile method for their activities, which to be executed successfully have to be structured around portfolios, programmes and projects. This strategic approach enables organisations to use resources most efficiently and create a culture receptive to change. As a result, organisations become more flexible, projects and transformation fail faster (less money and time loss) and higher value is delivered to stakeholders. An agile approach produces a high-performing workforce which is risk resilient and has an open structure and mindset. As a result, new skills are developed and adopted rapidly, helping organisations to keep pace with the new way of delivering work in the modern global economy.

Businesses will need to make transformations as radical as the technologies impacting their environment and industries. Next-generation employees aspire to challenging and appealing projects which help them to familiarise themselves with disruptive technologies and gain the necessary knowledge, experience and skills to work with them.

> Current technological changes are putting pressure on organisations and industries to keep up with the future of work.

The disruptive effect of digital technologies

Artificial intelligence	Augmented reality	Blockchain
Drones	**The Essential Eight**	Internet of things
Robotics	Virtual reality	3D printing

The Essential Eight are eight technologies which we regard as highly relevant in today's economy.
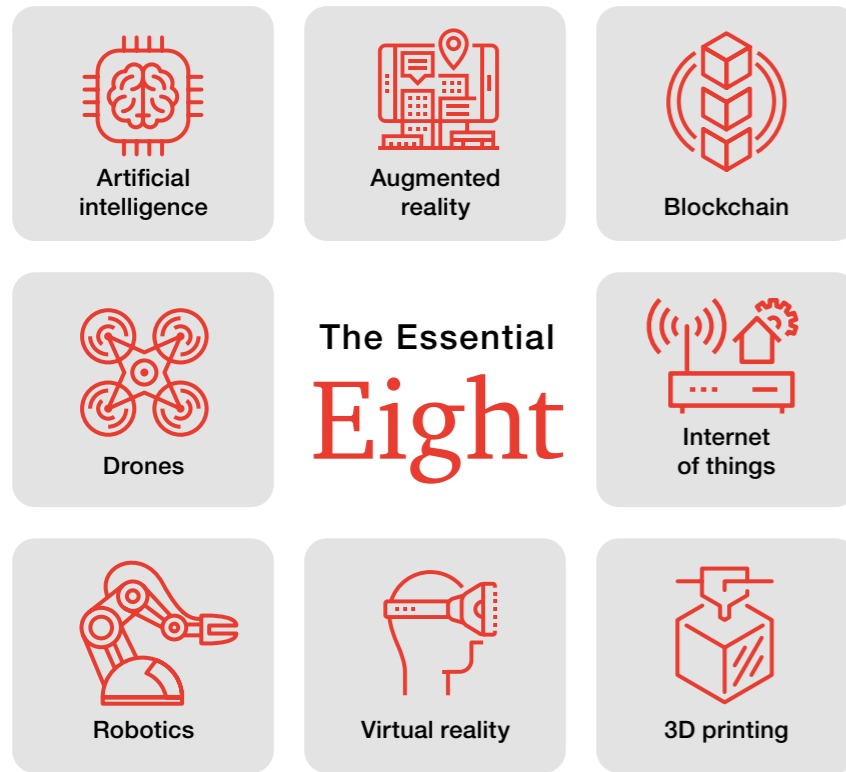
Figure 3: Definition of the project economy and projectisation

The emergence of new digital technologies has impacted many industries. Some of these technologies have great potential to change the status quo and in so doing alter social and business environments. These disruptive innovations will thus also change the project economy in all industries. The way projects are managed, steered and prioritised – and hence the role of project managers – is set to undergo great transformation in the near future.

We at PwC have identified eight emerging technologies which, in our view, are currently affecting industries most: artificial intelligence, augmented reality, blockchain, drones, internet of things, robotics, virtual reality, and 3D-printing (Figure 3). The rapid and constant change in environments driven by these eight tech-

nologies is impacting the workforce and skills required. To navigate the 'Essential Eight' and drive innovation and a smarter 'agile' organisation, it's utterly essential to have the best possible digital skills.

In reality, navigating the Essential Eight is proving to be difficult for some organisations and industries. Because they're superior in terms of both effectiveness and efficiency, these technologies threaten current processes and operations. This is clearly shown, for example, in Elon Musk's plan for Tesla. In 'Master Plan, Part Deux'[1], Musk describes four plans of how he aims to change current practices, starting with the creation of solar roofs with integrated battery storage. He also wants to expand electric vehicle product lines and further develop a self-driving

capability. Lastly, he wants your car to make money when not in use. To achieve this, multiple Essential Eight technologies are used (AI, robotics and IoT), and potential is created for disrupting (parts of) multiple sectors. Not only the car industry, but also taxis, energy companies and oil giants are being threatened by Tesla's second master plan.

The Essential Eight are eight technologies which we regard as highly relevant in today's economy. Thanks to the current rate of innovation technology is changing and evolving at such a pace that other, new technologies might become (more) relevant in the near future. Currently, however, we still consider these eight as the most important (Table 1).
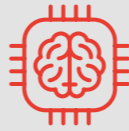
Technology	Description	
Artificial intelligence	• Performing intellectual processes characteristic of humans • Six main technologies: knowledge-based systems, machine learning, decision management, expert systems, deep learning and robotic process automation	• Cognitive skills: reasoning, learning and self-correction • Industries: healthcare, education, marketing, retail and financial services
Augmented reality	• Superimposing images on the user's view of the 'real' world • Users can process reality and digital simultaneously • New data delivery paradigm • Industries: healthcare, education, travel & tourism, military and gaming	• Closing the gap between the real three-dimensional world and the digital two-dimensional world • Impacts the structure, management and delivery of data
Blockchain	• (Public) distributed ledger technology • Information/transactions stored in a chain of blocks: transaction request, validation, approval, new block build, block added to chain • Decentralised via network of nodes: transparency and anonymity	• Security and trust in an open source environment • Industries: financial services, pharmaceuticals, voting, nutrition and supply chain management
Drones	• Unmanned aircraft (robots) remotely controlled by a pilot • Four core elements: motor, battery, sensor and microcontroller • Combine mobile hardware and internet connectedness	• Estimate of commercial application: market of USD 127 billion globally • Industries: military, agriculture, infrastructure, construction and commercial
Internet of things	• Network of devices via the internet • Proliferation of sensors and actuators in everyday (intelligent) objects • Interaction between physical and digital world: collaborative use of objects for complex tasks	• Industries: healthcare, consumer electronics, transportation, energy and manufacturing
Robotics	• Combining engineering, technology and science to design, build and use robots • Five types: pre-programmed, humanoid, autonomous, teleoperated and augmenting	• Able to take over and automate tasks originally performed by humans • Industries: automotive, healthcare, agriculture, manufacturing and military
Virtual reality	• Generates a computer three-dimensional 'near' reality environment for interaction and exploring • Next-generation communication, content creation, interaction and immersive experience	• Enables exploration of impractical/expensive/dangerous environments • Industries: automotive, healthcare, entertainment, education and tourism
3D printing	• Constructing a physical object from a digital file through additive manufacturing • Enables production of complex shapes using less material • Rapid 3D prototyping and manufacturing: lower costs, higher efficiency	• 3D printing technologies: sintering, melting and stereolithography • Industries: aerospace, automotive, medical/dental, engineering and electronics

Table 1: Description of the Essential Eight

Drone technology has already been implemented by multiple countries. Current developments, combined with other technologies like AI, might even create a completely unpiloted fighter aircraft.

Using the internet of things (IoT) for projects can significantly reduce the time it takes for execution.

Even though artificial intelligence (AI) is not an exact replica of the brain and cannot take over all human tasks, its ability to monitor patterns enables it to support project managers with repetitive administrative tasks.[2] In doing so, AI-enhanced project management tools can make sure nothing is overlooked and save employees' time by effectively managing schedules and follow-ups. In addition, AI can perform complex analytic tasks, observing project flows and using current and historic data to make predictions about the future. AI can monitor the budget and human actions to recognise activities that might conflict with the schedule. One industry that uses AI is aviation, specifically for fighter jets.[3] Pilots leverage multiple AI techniques to bring together large amounts of fast-changing data, making it comprehensible for the pilot to make split-second decisions.

The second of the Essential Eight, augmented reality (AR), can be of value to project managers in different phases of a project, especially in environments where rapid and accurate decisions are important.[4] Through AR glasses, PMs and contractors can track statuses and verify the correctness of a project quickly and accurately. This validated and synthesised information can be used to track the

With blockchain technology, everyone can be held accountable for their work, information is distributed in a timely fashion, fewer mistakes are made, and unambiguous communication and transparency are ensured.

current status, determine the next steps, and even as historical data for future projects. In the construction industry, AR is used for visualising buildings and infrastructure.[5] It gives a preview of more difficult aspects of the construction, including the complexity of the different layers of installations and materials. During a project, the path of technical installations is clearer, reducing the possibility of errors and facilitating a smooth and accurate process.

Blockchain can be used by project managers as well, especially for the automation of record keeping, reconciliations and basic coordination tasks, enabling new efficiencies and saving both time and money.[6] The

technology can, for example, be applied in real estate development projects during legally binding moments, registering transactions accurately, including an audit trail.[7] As a result, everyone can be held accountable for their work, information is distributed in a timely fashion, fewer mistakes are made, and unambiguous communication and transparency are ensured. Additionally, incentive is created for stakeholders to register transactions on the chain, which in turn strengthens trust and starts conversations about building methods and creative design options.

The fourth of the Essential Eight, drones, is another technology that can be leveraged by PMs in, for example, the military, to ensure timely product delivery within budget.[8] The unmanned vehicles can perform a variety of missions, including surveillance, intelligence, early warning, artillery, protection and threat detection. Multiple aspects of so-called modular tactical drones – for example planning, flight control, data and image transmission – can be tailored to support specific missions. The technology has already been implemented by multiple countries. Current developments, combined with other technologies like AI, might even create a completely unpiloted fighter aircraft.[9]

Using the internet of things (IoT) for projects can significantly reduce the time it takes for execution.[10] This is achieved by including devices in communication between human employees, through which a connected workplace with real-time feedback and communication is created. One industry that could make use of this technology is the automotive-industry: by letting the systems within the car monitor all parameters, the driver is notified if a certain service is needed.[11] In this case, the device uses a controlled data flow for predictive maintenance, optimising currently applied preventive maintenance methods as well as monitoring driver performance to improve safety.

Robotics, the sixth of the Essential Eight, has multiple benefits for project managers and has already been implemented by some industries.[12] Consumer goods is one sector which adopted robotics a long time ago, automating production for fast and low-cost product delivery.[13] However, this technology has much more far-reaching potential, and with consumers pushing for a higher level of control and customised products, it's crucial for retailers to take their use of robotics in projects even further. This can be done, for example, by deploying the machines to make manufacturing more flexible and expand the

range of automated tasks, reducing risks and enabling employees to focus more on value-adding tasks like customer interaction.

Virtual reality (VR) can be used in different phases of a project. Its applications include remote training where participants are in different geographical locations.[14] In such interactive collaboration and communication, project managers can visualise the outcome of the project and its product, and validation can be done at the beginning of a project. The reduced distance between humans and computers can be leveraged by, for example architecture.[15] This so called 'virtual architecture' enables the creation of a design without the use of material. This can be used to show both to colleagues, to discuss the current state and analyse possible improvements, and to potential customers, to show them the current design, including possible changes. As the content is not in material form, it is unhindered by the limitations of the physical world. As a result, VR increases productivity without any initial use of material, and thus improves efficiency and lowers the cost of the project.[16]

The last of the Essential Eight, 3D printing, has the ability to make a printing model prototype from which

experts (engineers and PMs) can analyse the miniature design and adapt it on a small scale at low cost.[17] Within projects, this speeds up delivery time significantly, with less waste and no additional dispense costs. These agile approach 3D models can be used by PMs to communicate the execution strategy, which not only improves communication, but optimises scheduling as well.[18] One clear example of PMs using the technology is the Stones project at Shell: using 3D printing for the facilitation of buoys to produce both gas and oil, even during inclement weather.[19] The entire system was prototyped in 3D, which allowed Shell to improve components on a small scale and work out the most efficient way to assemble the buoy and in what sequence. Instead of taking months to draw up the right design, they were able to produce the first working prototype in just four weeks.

Within projects, 3D printing speeds up delivery time significantly, with less waste and no additional dispense costs.

Digital technologies shape the project economy

The Essential Eight are not the end of the story. Nor are they the only thing that project managers need to know about. They're merely the latest technologies that are ripe for implementation in the project economy. The next wave of disruptive technologies might be just around the corner, and could include 5G technology, quantum computing or human augmentation. The project economy will require project workers to be permanently curious and willing to learn, adapt rapidly, work together to solve problems and shape the talent pool in a sustainable and agile way.

The economy and our working world continue to evolve. In our "PwC Workforce of the future report" launched in 2017, our experts predicted four different worlds in which project managers would take on different responsibilities (see Figure 4).

As the project economy as a whole will also shift into these different worlds, project managers will need a diverse set of skills to cover all four environments. These worlds may exist in different parts of the globe rather than in just one region – to some extent they already exist. The four worlds fall into a matrix depending on their attributes: collectivism versus individualism and integration versus fragmentation (Figure 4).

> "People don't buy what you do; they buy **why** you do it. And what you do simply proves what you believe."
>
> **Simon Sinek,** author

Fragmentation

The Yellow World Humans come first	**The Red World** Innovation rules
The Green World Companies care	**The Blue World** Corporate is king

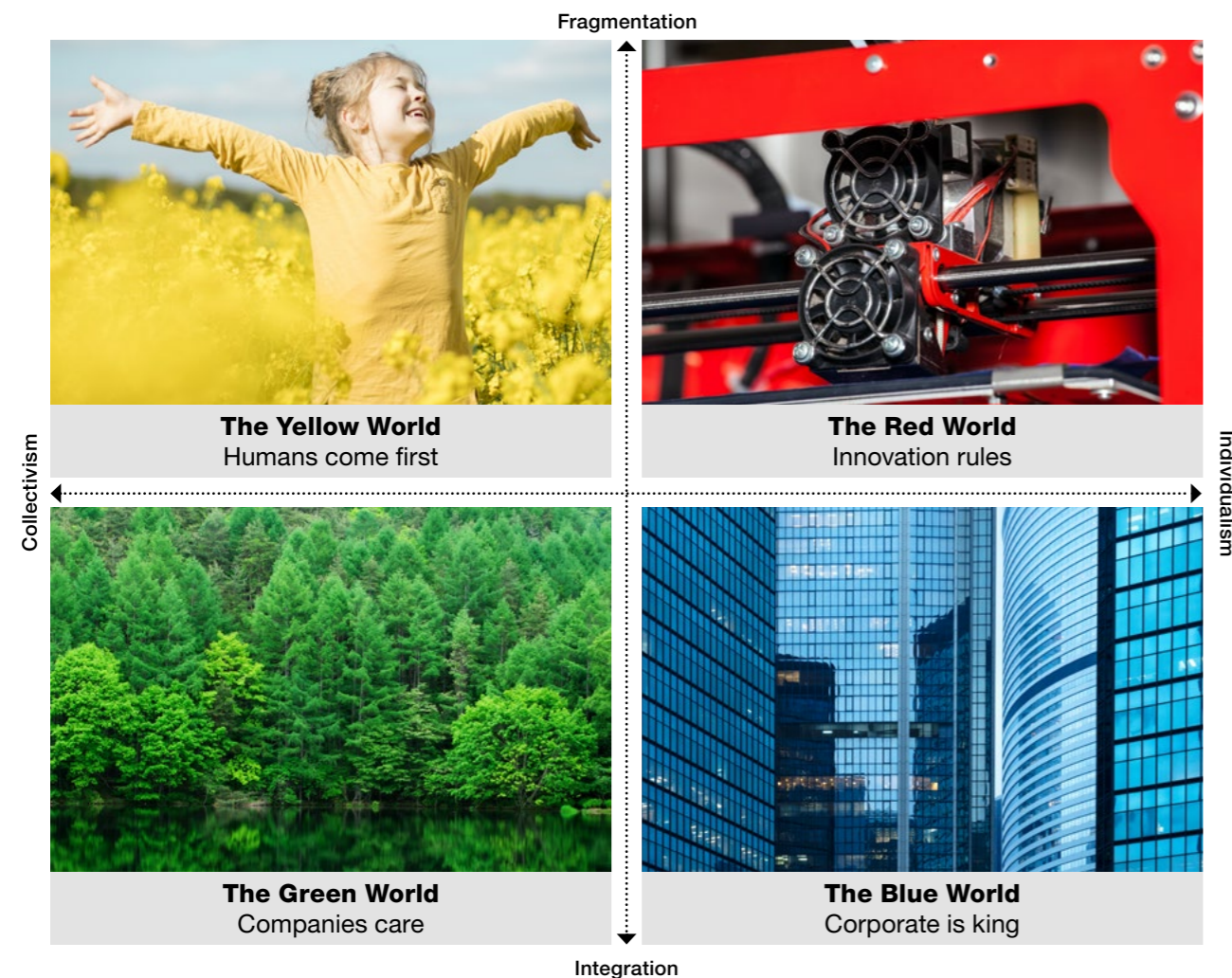Collectivism ← → Individualism

Integration

Figure 4: The four different worlds in the Project Economy

The Yellow Project World:
### where humans come first

In the Yellow World, social-first and community businesses thrive, and meaning and relevance in terms of social issues are predominant. Organisations that place value on humanness and empathise with ethics and fairness are highly esteemed. Formulating a purpose that drives every decision within the organisation and project and implementing total social impact (TSI) within the strategy are key differentiating factors. As Simon Sinek points out, "People don't buy what you do; they buy why you do it." The organisation's or project's purpose is why people buy (or contribute their best work to projects). TSI, the sum of all the ways an organisation can affect society by doing real work, incorporates both social and economic considerations into daily business decisions. Implementing TSI alongside innovation creates benefits for the core business of organisations and enables meaningful societal problems to be solved. As Michael Porter puts it, "impacting and addressing social problems is one of the biggest business opportunities".

The current disruptive technologies, the Essential Eight, have the potential to become one of the most powerful forces for organisations. With this additional power comes additional responsibility: technology should not only be used to drive transformative change, but should also have a positive social impact. An example of this could be the deployment of drones to deliver medicine and food, or use 3D printing to build affordable houses. With all these advances in technology, safety and security are still an important priority: the fitness app Strava, for example, unintentionally gave away sensitive information about staffing and locations of secret military bases. Vigilance is required.

In a fair world where a socially-minded approach dominates, projects and transformation initiatives focus on the social good. Project managers need to empathise with their fellow humans. The impact on human workers needs to seriously be carefully considered when implementing new tech. The focus on soft skills is even stronger than before. Project managers who focus on human skills such as empathy, cultural awareness, humility and authenticity combined with their digital acumen will be set for success in the Yellow project economy world.
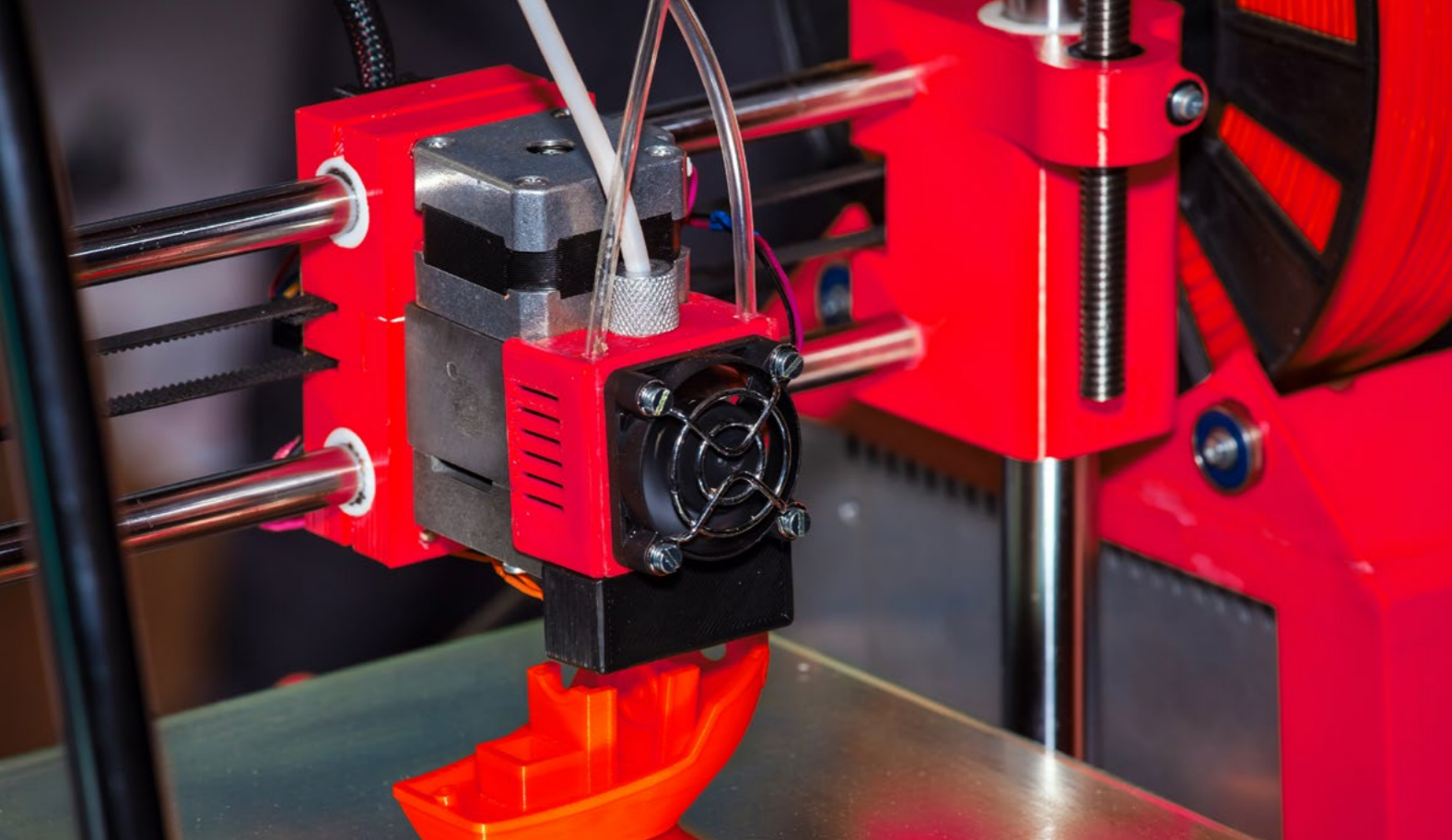
The Red Project World:
where innovation rules

In the Red World, innovation is key for business success and industry growth. Organisations and individuals race to satisfy consumer needs, and specialists and niche suppliers flourish. Even though independence is necessary for change, innovation cannot succeed in isolation if it is to impact consumers' lives. Therefore the nature of value creation and collaboration will change, and organisations will look for new ways to make decisions about partners, partner management and deals.

In this world, innovation clearly outpaces regulation. Current technical developments and new digital ecosystems give winning platforms room to thrive. Built on faster processes, partner models and data centralisation, digital ecosystems reshape traditional industries. Organisations are not limited to one industry, but rather offer value by integrating a broader range of skills and know-how.

Rapid developments in 3D printing in the medical sector are a clear example of innovation outpacing current regulation. Worldwide, regulators are struggling to keep up with advances in this technology. The main challenge is to make 3D printing available while maintaining patient safety standards. Because of this, legislation places constraints on the technology's ability to reach its full potential. Clear standards and safety regulations are needed for 3D printing developments to continue consistently and safely.

There are so many new initiatives that there aren't enough project managers to drive all the change. Start-ups and corporate innovation hubs need project management skills. Digital and

"If you want something new, you have to stop doing something old. "

Peter F. Drucker,
management thinker

tech-savvy project managers with the ability to see the strategic and bigger pictures can bring value to all kinds of organisations. Selecting the right technologies and upskilling or bringing in the relevant talent will be among the most relevant skills. As the required skills are in high demand, project managers will need to embrace a lifelong learning approach and share their knowledge and experience freely through mentoring and/or community development initiatives.

The Green Project World:
where companies care

The Green World drives social responsibility and trust in corporate agendas, and demographic changes, climate and sustainability are key drivers of business. While business played a dominant role in the environmental decline, it is the only establishment powerful enough to help society remedy the damage. Long-term sustainability can be achieved by setting up portfolios integrating the climate and sustainability. As Forbes puts it, the future of organisations which focus on healing (rather than damaging) society holds unparalleled opportunities.

One example of this is BlackRock, an US-based global investment company, which has made sustainability its new standard for investing. Its analysis has revealed that over 90% of sustainable indices are outperforming parent benchmarks. As

climate risks pose an investment risk, both physically and in terms of prices, massive reallocations of capital towards transparent and sustainable strategies are taking place. As a result, investors get better risk-adjusted returns and are kept highly informed. Another example would be the IPO of Saudi Aramco, the proceeds of which Saudi Arabia reportedly wants to use to fund a diversification strategy aimed at reducing the country's reliance on oil.[20]

Companies and project managers need to work harder at defining and conveying their purpose to employees and customers. In response to great public and societal demand, organisations will shift more strongly into social responsibility and transforming their businesses with a sense of environmental awareness and fairness. In this environment the role

of PMs is to make decisions based on their judgement. In construction, for example, they could successfully lead projects using renewable energy rather than oil or gas. In the Green World many new technologies will be implemented to automate work, and things like the sharing economy (for example car sharing) will be expanded for a lower negative environmental impact. For humans not to be left behind in the process, large sums of money will be invested in upskilling employees. Here PMs will take on the role of mentoring their staff and showing that their projects and initiatives are authentic, substantive and genuine.

The Blue Project World:

where corporate is king

In the Blue World, big company capitalism rules and large corporations are more influential and powerful than nation states. The nature of work is transformed by changing practices and an ageing workforce. As a result, only a small group of employees have permanent roles, collaborating with interim teams. Technology is used as a means of human enhancement, improving performance by going beyond human capabilities. Employees want to work flexibly, and interdisciplinary strategies are needed to facilitate efficient and successful work.

Jeff Bezos, Amazon's CEO, has implemented a strategy for his multinational technology company which perfectly fits into the Blue World. Individual small 'two pizza teams' (referring to the rule that teams should be small enough to be fed with two pizzas) focus on creating both efficiency and scalability. In this agile approach, inter-team collaboration is key to achieving larger goals, according to Benedict Evans turning the company into 'a machine that makes the machine'. New product lines can be developed without the need for internal restructuring, enabling the very rapid creation of new e-commerce companies that sell new products. Amazon calls this approach its 'Flywheel': the faster and heavier it is, the harder it is for anyone else to stop it. The company is also implementing Essential Eight technologies, starting with AI (Alexa) and aiming to experiment further with machine learning technology, opening new fields, expanding business and increasing efficiency in a manner not yet seen within the retail industry.

> "The people who are crazy enough to think they can change the world are the ones who do."

Steve Jobs
Co-founder of Apple

In the Blue World, project managers will no longer be employed on permanent contracts. Instead they will be hired for missions or projects. Project workers need to further enhance their skills and get micro-certified to remain competitive in an increasingly competitive market. Rapid change will be difficult within these large organisations, but constant change will still be necessary to fight off smaller market entrants.
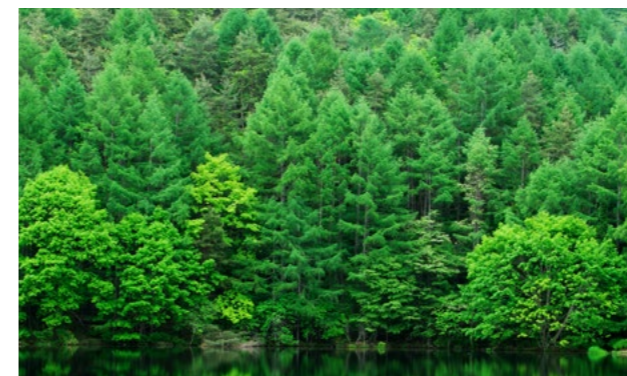

Yellow World
- Social-first and community businesses thrive
- Meaning and relevance on social issues predominant
- Humanness is valued highly
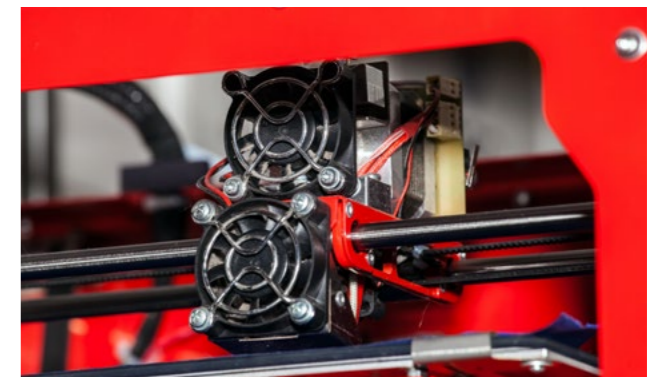
Red World
- Innovation outpaces regulation
- Organisations and individuals race to satisfy consumer needs
- Digital ecosystem give winning ideas platform to thrive
- Specialists and niche suppliers flourish

Green World
- Social responsibility and trust are driving corporate agendas
- Demographic changes, climate and sustainability are key drivers of business

Blue World
- Big company capitalism rules
- Large corporations become more influential / powerful than nation states
- Few workers enjoy permanent roles

Figure 5: Key considerations of the four worlds

Upskill yourself rapidly for the project economy

Thanks primarily to rapidly evolving technology, the world is changing more quickly and more disruptively than ever before. Currently, the Essential Eight technologies are driving this change and shaping the project economy in all sectors of the economy. This is impacting both organisations and project managers, requiring them to explore new ways of successfully operating and bringing value in the four project economy worlds. Project managers must ask themselves the most fundamental

and difficult question regarding the future of the project economy: What is the secret sauce to stay relevant in the four worlds as individual project tasks are taken over by robotics, AI and sophisticated algorithm technologies and the classic job of the project manager is constantly redefined and recategorised?

To be at their very best in these new worlds, we propose that project managers follow a simple framework: **Explore, Adapt, Apply.**

Those organisations and individuals that understand the potential futures will be the best prepared to succeed in the project economy.
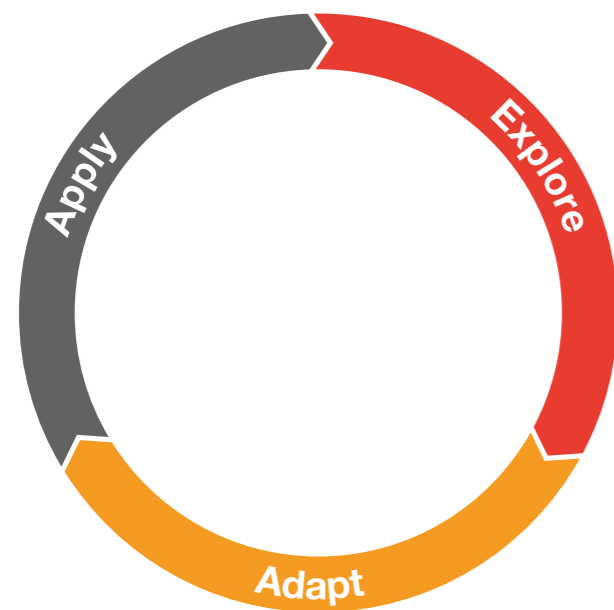

Figure 6: Secret sauce to success in the project economy

Explore

The new way of working is projectisation. Organisations are permanently in projects. This significantly changes the role of project managers, meaning they have new responsibilities as well as acquiring a diverse set of skills. One crucial component of this is for employees to acquire a tech-

nology quotient (TQ). This represents their capacity to adapt to the constant whirl of change brought on by advances in technology.[21] TQ in the project economy raises demand for so called PMTQ: project management in combination with TQ. New skills and knowledge need to be built

alongside existing ones. However, developing on the technical side by itself won't be sufficient for people to succeed. Soft skills are just as important. The disruptive changes and new working worlds created by the implementation of these technologies require project managers to empathise with their workers. Unique human skills like communication, adaptability and leadership are key to successful projects. We therefore believe that project managers will need soft skills, or so-called 'power skills', to successfully lead their employees and organisations through the four project worlds. Their workers need to adapt rapidly and be willing and curious to learn. Knowledge beyond their own industry is needed, with collaboration crucial to shape a sustainable and agile talent pool.

Adapt

One clear ingredient of the secret sauce is adaptability. This is essential for navigating the changes ahead. From where we now stand, it's impossible to predict exactly the skills that will be needed in the future. That means that project managers need to identify from the EXPLORE stage learning opportunities for themselves with regard to new business models, emerging technologies and the four project worlds that are driving change currently and in the near future. It's up to each individual to take away what's necessary for them to continue succeeding in the world they're operating in.

There are, however, upskilling initiatives that can be taken up by project managers to keep up with the pace of change. Online platforms such as Udacity, edX and coursera offer wide ranges of courses from artificial intelligence to blockchain, but also broader learning offerings such as courses in music, philosophy and history.

John Hennessy, the Chair of Alphabet and Dean at Stanford University, says: "[...] years ago, we thought of part-time education as primarily focused on getting people master's degrees. Today, it's a certificate – three courses in machine learning,

three courses in cybersecurity and blockchain – that can allow people to upskill themselves broadly across the field".

PwC has taken this statement to heart with its global upskilling programme "Your Tomorrow". Its aim is to train every employee in RPA technology and visualisation software such as PowerBI or Tableau. PwC has also introduced its Digital Fitness App, where all employees can participate in bite-sized learning activities to get a deeper understanding of new technologies and methods relevant to their work and industry.

Apply

Project managers and organisations need to make sure that the new knowledge acquired during the ADAPT phase can be applied to projects quickly. This way organisations can find their way in the four project worlds and the constant change that affects their industries.

Project managers are uniquely positioned in this new world and act as the change agents transforming organisations to fit into the project economy. Their existing skill set enables them to work in constantly changing organisations, from start-ups to incumbents, non-profit to profit. It's now up to them to invest further in their power skills, and hone their technical PMTQ.

No matter what the future holds, we believe there are some universal ingredients you need to explore, adapt and apply to make your own secret sauce:

Linear predictions don't cut it: Explore for multiple and emerging visions of the future using a scenarios approach and understand clearly how each will impact and challenge your role as a project manager.

Make decisions based on purpose and value: Build a future-looking understanding of how project managers and the Essential Eight might collaborate to deliver your corporate purpose. Furthermore, create an open and transparent narrative on how you are influencing, planning and delivering on the future of the project management work – individually and for your organisation.

Embrace technology as a force for good: Clarify how the Essential Eight can enable the redesign of your project management work, enhance productivity and customer experience, and enable a focus on more value-added tasks. Additionally, use sophisticated planning and predictive analytics tool to increase accuracy in your project plans and resource allocations in each of the four worlds you may be in.

Focus on the humans and the humane: Understand the skills you have in your project teams now (not just the roles your team members currently perform) and the gaps to the skills you will need in the future. Think beyond simplistic concepts like 'we need more soft skills in our

project'. Strengthen innovation, creativity, empathy and leadership capabilities in your project alongside critical technology skills.

None of us can know with any certainty what things will look like in the next 10, 20 or 30 years, but it's very likely that facets of the Four Worlds will feature in some way and at some time. Those organisations and individuals that understand the potential futures – and what each means for them – and plan ahead will be the best prepared to succeed in the project economy.

Are you ready to invest in your project future?

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