



# Supply chains for a digital world

A practical guide to  
achieving long and  
short-term goals

KPMG International



[kpmg.com/operations](https://kpmg.com/operations)



# Daunted by digital?



## We go behind the hype with a practical guide to designing and operating supply chains for a digital world.

Digital disruption is changing the world in which we live and work. New technologies have created new markets and new ways of working that, in turn, have given rise to new offerings and competitors. This level of competition is driving increasing customer expectations, and the pace of change is unlikely to slow any time soon.

Next-day delivery as standard, Click & Collect, personalized entertainment on demand, faster lead times, full order visibility, increased product choice – these are all things that, as consumers, we have come to expect.

Today, it doesn't matter whether you're working your way through another boxset, or a multinational corporation offering personalized products in a digital direct-to-consumer (D2C) channel, the customer-centric mindset is the same – it demands choice, flexibility, and speed.

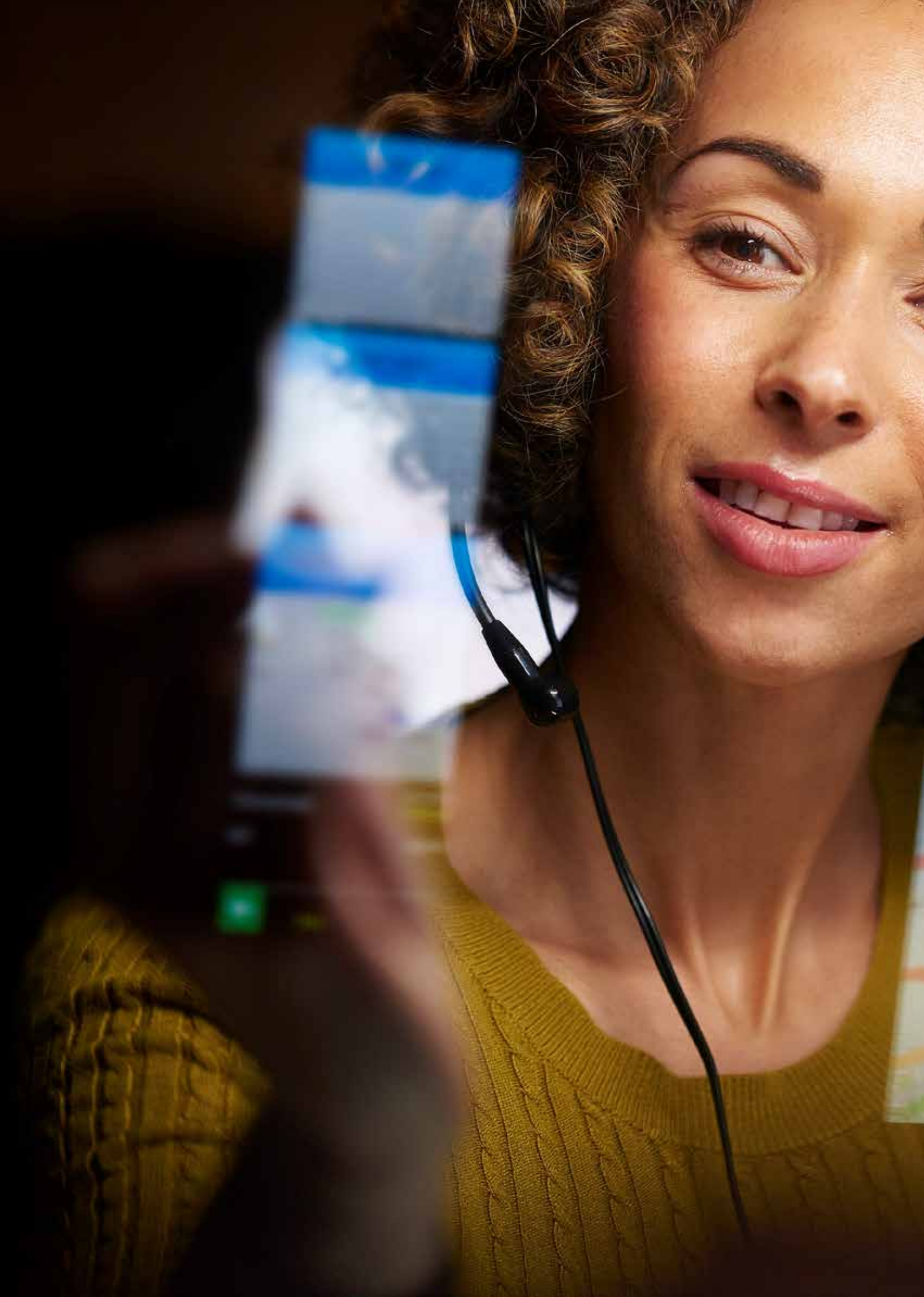
To deliver on these changing customer expectations, every business requires a digital roadmap. The challenge is knowing where to start. There's a lot of hype surrounding digital, and multiple opportunities to apply it across the value chain. Often (especially when return on investment (ROI) is unproven) the task of creating and implementing an effective digital strategy can seem daunting. One thing is certain, if businesses look to the shiniest new tech to save the day but ignore their overall performance ambition and brand promise, then their strategies are already set to fail.

We need only look to the likes of Alibaba to see how a longer-term approach can pay off. By focusing on longer-term, customer-centric, performance-led strategies, the company has made it increasingly difficult for their competitors. They are never scared to fail, and this is what makes them digital pioneers. By putting customer experience at the core of everything they do, they continue to dominate their respective industry.

Every company is at a different stage in its digital evolution, but whether businesses are venturing forth as pioneers of the digital age, or taking their lead from the existing tech-savvy giants, a steadfast focus on core capabilities is vital. Knowing exactly what you want to achieve and how to take advantage of digitalized processes, whilst supporting organizational enablement and technology innovation, will help you achieve your ambition and cash in on the related benefits.

Few companies are likely to have the required in-house digital capability from the get-go, and those looking to build an effective digital strategy will require the right support. Building deep expertise into an organization relies on the cultivation of long-term partnerships and ecosystems that can provide access to a breadth and depth of capability.

In this paper we offer some pragmatic advice on how to build a supply chain that's fit to compete. Whether you're looking to optimize existing processes or transform entire operations, the definitions and examples in this paper will help to build a clearer picture of the digital supply chain and demonstrate how digital solutions can help you on path towards superior customer experience.



# Contents

	<b>Preface – Daunted by digital?</b>	1
01	<b>Define digital</b> What exactly is a 'digital strategy'?	5
02	<b>Start with performance, not technology</b> Practical steps for building your digital road map	9
03	<b>Focus on ROI &amp; payback</b> Smart sequence your initiatives to deliver optimum benefit	13
04	<b>Develop your people</b> Nurture new skills and capabilities to stay ahead	18
05	<b>Partner for success</b> The winners will be those with the best ecosystems	22
	<b>Key takeaways</b>	25

01



Define  
digital



**Performance =**  
frictionless processes and  
effortless decision making

### What exactly is a 'digital strategy'?

It goes without saying that the priority of any COO is to improve performance within the value chain, whether that's reducing costs, improving service, lowering working capital or, more realistically, a combination of all three.

There are now a myriad of ways that digital technology can be applied across the value chain. Whether its businesses looking to automate repetitive back-office tasks with robotic process automation (RPA) software, the use of cognitive solutions to anticipate future demand, or visibility solutions being used to identify and address continuity issues, the opportunities are endless. Sometimes, however, this broad spectrum of opportunity can lead to confusion. When we talk about digital strategies, are we referring to specific software solutions? Cloud-based technologies? Robotic innovations? Are we looking to optimize existing strategies, or transform an entire business model?

It doesn't have to be complicated. When it comes to the performance of a supply chain, it's really just a function of two things; how efficient the processes are, and how effective the decision making is. No matter how well an organization streamlines its processes and optimizes its operating model, if it still makes bad decisions its performance will suffer. Conversely, if an organization is adept at decision making, but doesn't have the necessary processes to execute them, then it will perform poorly.

That's why we believe that companies need to define their performance ambition, before they look to the factors that hinder their ability to meet that ambition. Only then should digital process and technology innovation be considered as a means to address these problems. The sole focus of any digital strategy should be to improve performance.

Looked at through the lens of frictionless processes and effortless decisions, the broad list of digital technologies becomes clearer. Those aimed primarily at process improvement, such as physical robots or indeed intelligent automation, tend to be 'point solutions' and relatively straightforward to implement. Others lend themselves to improved decision making, such as data analytics, blockchain, artificial intelligence, machine learning, or

internet of things (IoT) devices. These technologies, however, tend to be components rather than complete solutions, and need to be harnessed in combination to deliver their full potential. This is where 'Decision Management' is emerging as a crucial capability.

Almost every executive has, at some point, mapped their processes and knows the value of simple tools like brown paper and post-it notes to gain a fresh

perspective on existing activities. Until now, however, very few leaders have been able to look at supply chain decision making in the same way. Without this competency, they tend to see analytics as one-off projects looking for insight in existing data pools. In doing so they miss the opportunity of exploring advanced analytical solutions and the real value that comes from predictive decision support.

**Consider these options when building a digital supply chain solution:**

	Technology	Plan	Make	Source	Deliver	Return
Enabling effortless decision making	Cyber security	✓	✓	✓	✓	✓
	Data analytics	✓	✓	✓	✓	✓
	IOT	✓	✓		✓	
	Serialization	✓	✓		✓	✓
Enabling frictionless processes	Additive manufacturing		✓			
	Blockchain		✓	✓	✓	✓
	Intelligent automation	✓	✓	✓	✓	
	Mobility	✓	✓	✓	✓	✓
	Robotics		✓		✓	

**Each of these, when deployed correctly, can streamline processes and/or improve decision making.**





---

**Process management and performance management are already well understood, but decision management is not. Yet this is where the true potential of digital technology lies.”**

**– Peter Liddell, Partner, Operations Advisory,  
KPMG Australia**

---

# 02



Start with  
performance,  
not technology

# Start with performance, not technology

It's not uncommon to see businesses getting sidetracked by the latest digital innovations. New tech might seem like the convenient answer to many operational challenges, but it can also be a distraction from the day-to-day performance of the core business. Business leaders need to forget the hype surrounding the latest trends and innovations and instead concentrate on core capabilities, market realities and the needs of the customers they serve.

This is exactly what software giant Intel has done. The organization's integrated data platform has an estimated return on investment of \$208 million US dollars (US\$), whilst

Intel IT<sup>1</sup> is transforming its supply chain into a modern "glass pipeline" that improves decision making and business agility. This is all achieved through new and innovative data analysis techniques, process optimization, and a relentless focus on building supply chain capabilities in areas that best meet the strategic objectives of the company and its customers.

Unfortunately, unlike Intel, many organizations start their digital journey by asking the wrong questions, such as 'do we need a data lake?', without considering the use cases and associated performance improvement.

Supply chains offer us plenty of opportunity to get lost in whizzy new technologies or the mass of cumbersome "big data". Yet sometimes technology and big data are actually the problem, not the solution. As many off-the-shelf digital applications or analytical tools can be slow and expensive, many projects are stuck at pilot stage because the business case for rolling out is simply not convincing.



**Gaining momentum early through great ROI, great payback, and great performance upticks as a result of deploying technology is what's going to get the interest from the exec team and the board."**

– **Dale Williams**, Partner, Head of Operations Advisory, KPMG in the UK

<sup>1</sup> Intel, *Transforming Intel's Supply Chain with Real-Time Analytics*, September 2017



## Case study

# Helping an international FMCG company take a performance-led approach to a digital strategy

The global supply chain leadership of a leading FMCG company we were working with had recognized that previous improvement initiatives (lean process redesign, KPI performance management) had plateaued. They were looking for the next way to drive a step change in operational performance to achieve their ambition of being a leader in their sector. Whilst they were interested in the opportunity from advanced analytics, they wanted help to understand what it really meant, what performance gains it could bring and where they should focus.

Rather than following a “bandwagon” approach and adopting the technology used by their peer group, KPMG in the UK helped them take a performance-led approach. This focused their investments in digital and analytics on the critical decisions within their supply chain that would deliver the greatest impact on performance. Clarity around the real business drivers gave the supply chain team the confidence to direct the technologists to targeted areas.

This type of performance-led approach starts with a clear understanding of the operational business needs and focuses the application of analytics towards the specific set of digital solutions and data required to help improve performance. In this way, any improvements made are faster, simpler and deliver a greater return on investment.



**78% of CIOs believe their digital strategy is only moderately effective, or worse.”**

Harvey Nash, KPMG CIO Survey, KPMG 2018

# Practical steps for building your digital roadmap

## Digital roadmap

Through working with leading global organizations, KPMG believe these are the practical steps that should be taken when building your digital roadmap.



Segment your customers by performance expectations. It's not just about making great products. It's about delivering a great overall experience.



Identify where you're failing to meet performance expectations in each customer segment.



Identify points of friction or poor decisions that may be impacting performance.



Look at digital processes or technology options that can improve these points (remove friction or improve decision making).



Smart sequence initiatives, otherwise the roadmap risks becoming a collation of potentially conflicting digital ideas.



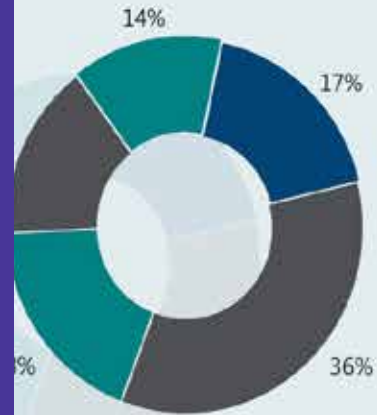
Review the current digital capability of your team.



Align all areas of your business to the digital roadmap.



# 03



Focus on ROI  
and payback

# Focus on ROI and payback

In a recent survey, 58% of all companies stated that they are rethinking their current business model<sup>1</sup> as a result of, or to take advantage of, the changing digital landscape. Furthermore, one fifth of large corporates now have a Chief Digital Officer to oversee the transformation effort and to help chart a path for the company's future. Here are some considerations when charting your digital future<sup>2</sup>:

## Rolling out the vision

Whilst most businesses know they need to address their digital strategy, many are lost when it comes to governing their digital initiatives and investment. Too often, funds will be released to invest in small-scale digital pilots before anyone has actually identified which areas of business performance they will enhance. For example, the introduction of iPads and wearable technology on many factory floors may have removed the need for paper-based records, but is there a correlating ROI?

Only 25% of supply chain practitioners state their digital projects are aligned under a single governance process<sup>3</sup>. The companies that have established governing teams to manage investments, curate lessons learned and ensure alignment are the ones that have made the most progress on their digital transformation journeys.

## Smart sequencing

Organizations are often unsure of what supply chain digital initiatives to prioritize. Without this specific focus, their roadmap risks becoming just a collation of good ideas – a bottom-up brainstorm churned into a project plan with little thought given to ROI. One organization knowingly calls these disparate ideas 'random acts of digital'. To avoid this, KPMG believes in segmenting your portfolio of digital solutions into three main categories:

- 1 Those that stabilize the core processes and decisions required by the business (such as reporting, data management, visualization and traditional analytics capabilities).
- 2 Those "off the shelf" best-of-breed digital technologies with a track record in improving the performance of key processes (such as AI driven probabilistic demand forecasting or intelligent automation).
- 3 Those truly breakthrough digital innovations, created to deliberately differentiate you from your competitors.

<sup>1</sup> 2018 Top of Mind Survey, KPMG International

<sup>2</sup> Consultancy.uk, August 2017

<sup>3</sup> Gartner, Guide to Aligning Digital Business Impacts and the Digital Supply Chain, 2018

Below is an example of a simple decision domain map to help visualize where your performance, and therefore potential digital technology, should be focused:



It's natural to want to build digital maturity in stages – to put the foundations in place, then leverage tried-and-tested commercial solutions and perhaps, once these are working, to consider more advanced solutions. There are, however, three critical problems with this thinking: you probably can't justify the investment to fix all the basics; you won't get the same competitive advantage by just buying the same commercial off-the-shelf solutions as your peers; and (most importantly) you risk being several years behind your competitors.

Instead, all three maturity categories must be started together. The time-to-value is different for each. "Stabilize" activities are the foundations that have to be built as soon as possible (the trick is to prioritize these based on performance rather than trying to do them all). "Improve" initiatives maximize the benefit from commercial off-the-shelf solutions,

but may rely on data or other infrastructure to be in place, so it is best to do as much as possible upfront. "Breakthrough" initiatives will give market advantage but could take several years until they deliver performance, so they must be started immediately.

Blending the three categories and running them in parallel typically reduces the payback time by up to 3 years, reducing time-to-benefit to under 12 months, and increasing ROI by x4.

Smart sequencing is the only way to deliver return on investment and payback. In our experience, this is the number one reason that most organizations get stuck in pilot mode. CFO's will give some budget for initial digital experimentation, but the sums needed for a full transformation require proper scrutiny and, all too often, the return just isn't there.

As an example, one FTSE 10 organization the KPMG team worked with had spent a year pulling together their digital roadmap, but

couldn't get board approval to proceed. Why? The ROI was just x1 and the payback period beyond 4 years. They had simply collated all the planned digital initiatives in the business and created a giant project plan. Return on investment was a result, not an objective. They asked for KPMG's help and, through a combination of performance-led prioritization, new ideas and smart-sequencing of the selected initiatives, the ROI improved x4 and delivered a payback of a year.

**Some additional considerations when charting your digital future**

So you've aligned as a leadership team, you've adopted a performance-led approach to the problem and you're focused on healthy returns, but have you fully considered the pace and foresight of your approach?





## Case study

### 'Pioneer at pace' or be a 'fast follower'? Define your position

Any business needs to define what their risk appetite is and what their company culture can support. Pioneers are always willing to experiment and aren't afraid to fail. They embrace process and technology innovation and are never satisfied with the status quo. Many companies, however, may not have the budget or risk appetite for this approach. Whether your company should lead the charge with an emerging technology, or wait for others to experiment and then adopt more mature solutions as they become mainstream, is certainly something that needs to be considered when developing your digital roadmap.

### Staying constantly curious

The early adopters of digital transformation understand what it means to be constantly curious. Technology will always evolve and companies will discover new ways of applying new solutions to solve old problems. Digital supply chain roadmaps will need to be flexible and evolve periodically as new capabilities become available and existing ones mature. The reality is that today's new digital accelerators will become legacy technology in only a few years' time. Companies must always keep their eye on the horizon for process and technology innovation, and be comfortable adjusting their best-laid plans midstream to take advantage of rapidly changing capabilities.

## Pioneering at pace

Mining giant Rio Tinto<sup>1</sup> recently developed the AutoHaul. A pilot run last year puts the company on track to operate the world's first fully autonomous heavy haul, long distance rail network. This will unlock significant safety benefits, and its ability to operate continuously without a shift change, has enormous productivity implications. Gains have already been realized through increased speed across the network, reduction in average cycle times, and reduced variability.

The company also has more than 80 autonomous haulage trucks in operation at its mine sites in the Pilbara, a remote region of north-western Australia. These trucks are operated by a central controller, and a supervisory team based in an Operations Center 1,300km away in Perth, rather than by an individual driver for each vehicle.

<sup>1</sup> RioTinto, Digital Transformation of Rail and Ports, March 2018



## Case study

# Robotic warehouses with 4-dimensional decision making

Ocado is using AI to revolutionize their logistics<sup>1</sup> and fulfilment operations. Two factory sites in Andover, Hampshire and Erith, London use purpose-built robots that can travel at speeds of up to 4 meters per second across a highly compact 'Hive' layout to pull together an average grocery order x20 faster than a human. AI and machine learning (ML) are being used across Ocado's platform to personalize the customer shopping experience, predict demand, detect fraud and manage the real-time control and health of the robot swarms.

The Ocado Smart Platform (OSP), of which the Hive is the key component, is currently being deployed globally (specifically the US, Canada, France, and Sweden), helping to create a collaborative ecosystem amongst the world's largest grocers and supermarkets<sup>2</sup>.

Whilst the Hive warehouse robot technology is undoubtedly eye-catching, in our view it's the underlying automated decision making that makes the real impact here.

Working together as a swarm, the robots access the required storage basket and bring it to the picking station. It's then that things get really clever and intuitive. The digital twin simulation model uses real-time sales data to predict likely demand and return the robot to a new location that's optimized to minimize the travel distance for the next pick.

Not only does the warehouse look like a chessboard, but like a grand master it's also thinking several moves ahead. This decision-making brain eliminates the concept of static stock locations entirely and creates a competitive advantage that's much harder to copy than a physical store layout.

<sup>1</sup> KPMG UK, How AI is ending the weekly shop, 2018

<sup>2</sup> HBR, Ocado is transforming online grocery shopping with AI, 2018

04

Develop your  
people



# Nurture and develop new skills and capabilities in order to stay ahead

Digital disruption impacts every corner of business, but will be especially visible with regards to the size, shape and capability of the workforce. As back-office processes become increasingly automated, we will see roles evolving, being re-defined and, yes, disappearing. Inevitably, advances in technology will mean fewer staff have the necessary skills to utilize new advances such as ML, cognitive planning, demand signals interpretation, and robotics. This presents a challenge for business leaders, who may need to invest in different skills and develop new capabilities in order to stay ahead.

Many leading organizations are establishing Digital Centers of Excellence (DCoEs) to ensure learning is developed cross-functionally and investing in learning platforms with third-party content to train their workforce. In this way, staff can be made aware of new technological capabilities, how they work and how to apply them to various business scenarios. Companies are also investing in new techniques for ideation, solution design, and implementation. These include design thinking concepts, customer journey mapping and personal development.



---

**There is a challenge around aligning culture and speeds of large companies with those of start-ups"**

**– Vinod Kumar,**  
Managing Director and  
Group CEO, Tata  
Communications

---

When setting up a DCoE within your organization, KPMG believes there are five distinct roles that need to be considered. This is an approach that we've already put in place for a leading global energy company. The roles are as follows:



**Pathfinding squad.**  
Designing and building prototypes and proofs of concept to demonstrate innovative digital solutions that drive performance.

**Ecosystem manager.**  
Establishing a digital ecosystem – market scan, prospects development, digital roadshow, partner engagement, contractual arrangements and partner onboarding.



**Change agent.**  
Driving behavioural change management to transform the ways of working and build active commitment and buy-in to the DCoE.

**Product and use case architects.**  
Working with business sponsors and product owners to challenge, redefine and prioritize use cases and progress through to delivery.



**Lead data officer.**  
Ensuring data insights are developed through the DCoE and are translated into realized value. Prioritizing data curation based on performance-led case selection.



Large organizations are more deliberately recruiting employees who have a high comfort level and curiosity for machine learning, as well as an openness to digital literacy, business intelligence, data and analytics, and business partnering.”

– **Claudia Saran**, Principal, Advisory, People and Change Leader, KPMG in the US

### Shaping the supply chain operations workforce of the future

The supply chain of the future is likely to employ a mix of workers, including core employees, 'on-demand' or contract workers sourced globally via alternative employment platforms, 'bot' workers and, increasingly, ecosystems of collaborative partners. Whilst HR departments will still need to recruit the right people, develop the right critical skills and understand exactly how the size and shape of their workforce needs to evolve, they will also need to consider how to replace the relative certainties of traditional supply-and-demand workforce forecasting with a more "agile" model. A model that can empower employees with the right skill sets, structure and culture to be successful.



**What we can see is that about a sixth of the core skills for our workforce will need to be different, in about three years, from what they are today. That's a massive volume shift<sup>1</sup>."**

**– Alexandra Badenoch, Group Executive of Transformation and People, Telstra**

**KPMG believes new roles and skills will be required to execute supply chain operations processes in the future. Some of which are included below:**

Data analyst

Scenario analyst

Robotics and autonomous engineer

Data scientist

Operations strategist

Employee experience consultants

Customer journey architect

Frictionless process champion

**These new roles will live within the operations organization and their respective capabilities will need to be more integrated, collaborative and governed to deliver improved customer experience.**

<sup>1</sup> Rise of the Humans 2 KPMG International



05



Partner for  
SUCCESS

# Partner for success

Once you've charted your path, it's time to think about the best way to execute your plan. One of the key things at this stage is to avoid the trap of thinking you can do it alone. Nobody in the digital world is completely vertically integrated; no one provider can do all of the things necessary in order to help you become a digital organization. Therefore, pulling together partnerships with tech companies, consulting businesses and academic organizations will become crucial.

## The value of ecosystems

As many digital solutions are new to the marketplace, it's often hard to find talent with the relevant experience of a new technology or the new ways of working that may be required. If the pool of expertise is small, then you'll likely have to look outside of your organization to find the help you need.

Organizations who are looking to incorporate AI into their demand planning will encounter significant challenges sourcing the kind of expertise required. Looking to recruit those with experience in demand planning is one thing, but when you also require specific knowledge of next-generation planning as well as the deployment of AI, your pool of talent grows increasingly small. What's more, there's no guarantee that this small group of specialists, once found, will want to work for your organization, or that you could offer them sufficient remuneration to do so.

The solution? Build an ecosystem and create a network of trusted partners that are an extension of your own organization and can help you to fully execute your plan. Just as any business has a trusted

network of supply partners, you will need a trusted network of knowledge partners. This might include working directly with the technology provider, or with local academia. Alternatively, it might involve working with an organization like KPMG and tapping into our multi-disciplinary capability and existing technology ecosystem.



Having an ecosystem of start-ups and industry experts has allowed us to try new ideas, experiment, and build on our reputation for innovation, with minimal constraints.

Edward Gaze,  
Senior Manager,  
Lloyd's Lab  
Innovation

## Ready for a culture shift?

Inevitably, pioneering new digital projects with new partners will require a new approach. There's little point in rolling out a new initiative if it's just going to be

constrained by old ways of thinking and working. Business must build a governance system to ensure a forward-thinking outlook, and a culture that's constantly searching for new ways of working.

For example:

- **Be ready to contract differently within the ecosystem.** Historically supplier contracting happened within strict frameworks and projects ran through long gateway processes. Leading organizations are now looking to accelerate this process, potentially share solution IP, and use customer satisfaction based royalties and profit share.
- **Work with partners differently.** Managing a technology ecosystem is a new competency. Dynamically curating the partners as a coherent portfolio (who will change as different tech emerges) and convening them in a peer-to-peer relationship (very different to a supplier-customer transaction) requires an entirely new way of working that few have yet recognized.
- **Be willing to experiment and fail.** Constant innovation and experimentation is the only way to stay ahead in a fast-moving environment. You need to look at the return and impact of all the initiatives simultaneously together and not just each one in isolation. It's okay to fail, but aim to fail fast, and always learn from the failure.





## Case study

### Procurement in a digital age

The Vodafone Procurement Company, a global leader in its field, had an exciting but uniquely challenging vision to become the world's first fully digital procurement company.

To help bring its digital dream to life, it identified an opportunity to deliver new process efficiencies. KPMG in Germany and Vodafone joined forces with Microsoft to develop a new platform called Procurement 365 Digital, the world's first fully collaborative and centralized digital procurement platform. Designed from the ground up, it automates strategic category management using advanced cognitive tools and capabilities. Procurement 365 Digital is now delivering advanced new services, significant cost savings and unprecedented efficiency for Vodafone's global ecosystem and business partners.



**All Operations and Procurement leaders need to respond to the digital agenda in a new way. They need to act as the bridge between the business and the ways in which the technology can serve those needs."**

**Dr Marcus Schüller,**  
Partner, Head of Operations  
Advisory, KPMG in Germany



**It's often complicated territory to navigate, but for those willing to build ecosystems and concentrate on long-term, customer-centric, performance-led strategies, the benefits can be far greater."**

**Rob Barrett,**  
Principal, Operations  
Advisory, KPMG in the US

# Key takeaways





## 01 Aim to make processes frictionless and decisions effortless

Achieving frictionless processes is widely understood as vital to achieving operational excellence. For maximum impact, however, any strategy targeting operational excellence must also include an ambition to make decision-making smarter, faster and easier.

## 02 Start with performance, not with data or technology

What's now possible with big data and powerful technologies is impressive. But performance should always be the starting point. Ask first: "what is the performance challenge?" and "what levers can I use to influence performance?". Data and technology will emerge as enablers for better decision making, not as solutions in themselves.

## 03 Focus on ROI and payback by smart sequencing your initiatives

Moving from cherry-picked proofs of concept to a business-wide digital transformation that delivers return on investment requires deliberate selection and timing of initiatives. Smart sequencing on a portfolio level, blending the simple foundational enablers with proven off-the-shelf solutions and selected breakthrough innovation areas, is the key to achieving acceptable returns.

## 04 Develop your people by nurturing new capabilities

The latest technology is constantly evolving and not all your workforce will have the required knowledge and skills to keep up. That's why a focus on your business culture and a workable plan to close the capability gap through up-skilling and recruitment is essential.

## 05 Partner for success and build an ecosystem

We believe the winners in the digital world will be those who can convene the best ecosystem. No single organization can do it all. This requires a new partnering culture, from contracting through to collaboration.



---

**The reality is that digital transformation isn't a simple change that can be implemented overnight and deliver results straightaway. It requires the embracing of innovative breakthrough technologies, an investment in digital skills, and retraining of the existing workforce."**

---

**Lisa Heneghan**, Partner,  
Head of Solutions and Digital  
KPMG in the UK





# Further KPMG insights

If you have found this publication useful, you may also enjoy these additional insights from KPMG. For the latest thought leadership around digital disruption, and to see how KPMG can help, visit [kpmg.com/digital](http://kpmg.com/digital)



## Digital supply chain: The hype and the risks

Manufacturing industries and service sectors alike are increasingly investing in disruptive technologies. While every business wants to harness the speed to market that these new technologies can offer, they can put themselves at risk if the right precautions are not taken. This report explores the hype surrounding some of these new technologies, but also how to mitigate some of the risks.



## Harvey Nash / KPMG CIO Survey: The Transformational CIO

In this 2018 report, we see the CIO role continue to change as organizations themselves are forced to transform. Traditional focus areas like data privacy and security are more important than ever but in order to remain competitive, IT leaders must turn the risks associated with utilizing customer data into enablers for driving new revenue growth. The report shows that those managing the balance most effectively, with the customer at the heart of their digital strategy, are significantly more profitable.



## Global Manufacturing Outlook: Transforming for a digitally connected future

UK CEOs are at the forefront of understanding what next-generation technologies can do for their business, according to our latest global survey of manufacturing CEOs. This points to an ambitious, but potentially bright, future ahead for UK manufacturing.

In this 8th edition of the Global Manufacturing Outlook report, our findings from a survey of 300 global CEOs and interviews with manufacturing industry executives and KPMG partners show manufacturers have no time to waste in building a comprehensive digital transformation strategy.



## JDA & KPMG Digital Supply Chain in Retail & Manufacturing: A state of the industry benchmark

The supply chain in retail and manufacturing survey, conducted in 2018 for JDA and KPMG by Incisiv, outlines how retailers and manufacturers are leveraging innovative technologies and strategic alliances to improve speed-to-market and deliver a superior customer experience profitably. Trying to keep up with customer expectations is driving retailer investment, while agility and innovation is driving manufacturers' investment in their supply chains.



## No normal is the new normal: Make disruption work for your business

Change is one of life's certainties, so those who look only to the past and the present are likely to be caught out by the future. This is particularly true in the consumer and retail sector, which is being transformed by three revolutions at once: geographic, demographic and technological.

This turbulence is reflected in our sixth annual Global Consumer Executive Top of Mind Survey, in which 31% of respondents say new disruptive competitors are redefining the industry. Executives also said that changing technology (25%) and competition from platform businesses (24%) are significant challenges.



## 2018 Customer Experience Excellence Analysis: Tomorrow's experience today

With the rapidly increasing pace of global change and the growing complexity of everyday life, businesses must have one foot in the present and one foot in the future to deliver competitively superior customer experiences.

Based on extensive research across 14 countries and filled with practical insights, our 2018 report is essential reading for anyone who wants to embrace the technologies of the future to deliver tomorrow's customer experience, today.

# Contacts

## Authors

### Rob Barrett

Principal, Operations Advisory,  
KPMG in the US

E: [rhbarrett@kpmg.com](mailto:rhbarrett@kpmg.com)

### Paul Crayford

Director, Operations Advisory,  
KPMG in the UK

E: [paul.crayford@kpmg.co.uk](mailto:paul.crayford@kpmg.co.uk)

### Paul Lyon

Solutions Director, Operations  
Advisory, KPMG in the UK

E: [paul.lyon@kpmg.co.uk](mailto:paul.lyon@kpmg.co.uk)

## Additional contributors

### Andrew Underwood

Partner, Operations Advisory,  
KPMG in the UK

E: [andrew.underwood@kpmg.co.uk](mailto:andrew.underwood@kpmg.co.uk)

### Ravind Mithe

Head of Operations Advisory,  
KPMG in India

E: [ravind@kpmg.com](mailto:ravind@kpmg.com)

### Marcus Schüller

Head of Operations Advisory,  
KPMG in Germany

E: [mschueller@kpmg.com](mailto:mschueller@kpmg.com)

### Peter Liddell

Partner, Operations Advisory,  
KPMG Australia

E: [p.liddell@kpmg.com.au](mailto:p.liddell@kpmg.com.au)

### Dale Williams

Head of Operations Advisory,  
KPMG in the UK

E: [dale.williams@kpmg.co.uk](mailto:dale.williams@kpmg.co.uk)

### Peter Griffiths

Sector Lead, Defence and National  
Security, KPMG Australia

E: [pwgriffiths@kpmg.com.au](mailto:pwgriffiths@kpmg.com.au)

## Global and Regional contacts

### Americas

#### Brian Higgins

Americas Head of Operations  
Advisory, KPMG in the US

E: [bhiggins@kpmg.com](mailto:bhiggins@kpmg.com)

### ASPAC

#### Chris Foster

Global Head of Operations Center of  
Excellence, KPMG International

E: [cfoster@kpmg.com.au](mailto:cfoster@kpmg.com.au)

### EMEA

#### Ricardo Tulkens

Partner, Operations Strategy,  
KPMG in the Netherlands

E: [tulkens.ricardo@kpmg.nl](mailto:tulkens.ricardo@kpmg.nl)

kpmg.com



The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

2019 KPMG International Cooperative ("KPMG International"), a Swiss entity. Member firms of the KPMG network of independent firms are affiliated with KPMG International. KPMG International provides no client services. No member firm has any authority to obligate or bind KPMG International or any other member firm third parties, nor does KPMG International have any such authority to obligate or bind any member firm.

All rights reserved.

Designed by CREATE | CRT102031