Realising Digital's Full Potential in the Value Chain

When the COVID-19 pandemic struck, manufacturers, retailers and service providers revamped delivery and operations models virtually overnight to ensure their consumers had access to familiar goods and services. Many companies found they had to upgrade the infrastructure supporting the new "path to consumption" value chain, and turned to digital to accomplish this. As we spoke with executives across Europe who lead such digitising efforts, they described a diverse range of deployments, but digital can — and must — deliver far more. In this ebook, we explore how businesses can realise digital's full potential across their value chain.

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Introduction

Digital has become an important tool in the "path to consumption" value chain — and yet still has more to offer. Manufacturers, service providers and retailers have doubled down on their digital initiatives.

That became apparent in our conversations late in 2020 with more than 40 senior executives who told us about the recent top digital initiatives in their companies. The executives represented companies in a variety of consumer-facing goods and services industries across Europe. All had embarked on ambitious projects, some of which spanned multiple operating areas. Most of these projects had been launched before the COVID-19 pandemic struck, then continued, with project teams collaborating from remote locations via tools like Microsoft Teams. Some projects took on new urgency in the pandemic, such as retailers solving the logistics of last-mile delivery from their retail stores instead of warehouses. At least one robotics process automation (RPA) project launched because of COVID-19, when a company simply didn't have the human power to tackle paperwork associated with a divestiture.

Executives shared these details, explaining why these projects took priority; where they ran into implementation obstacles; and lessons learned and success measures. These common themes emerged from our conversations:

▋ **Digital is everywhere in the value chain but only rarely supports an end-to-end digital strategy.** Organisations have matured beyond using digital for simple point solutions but could still expand their vision for how to use digital to retool value chains.

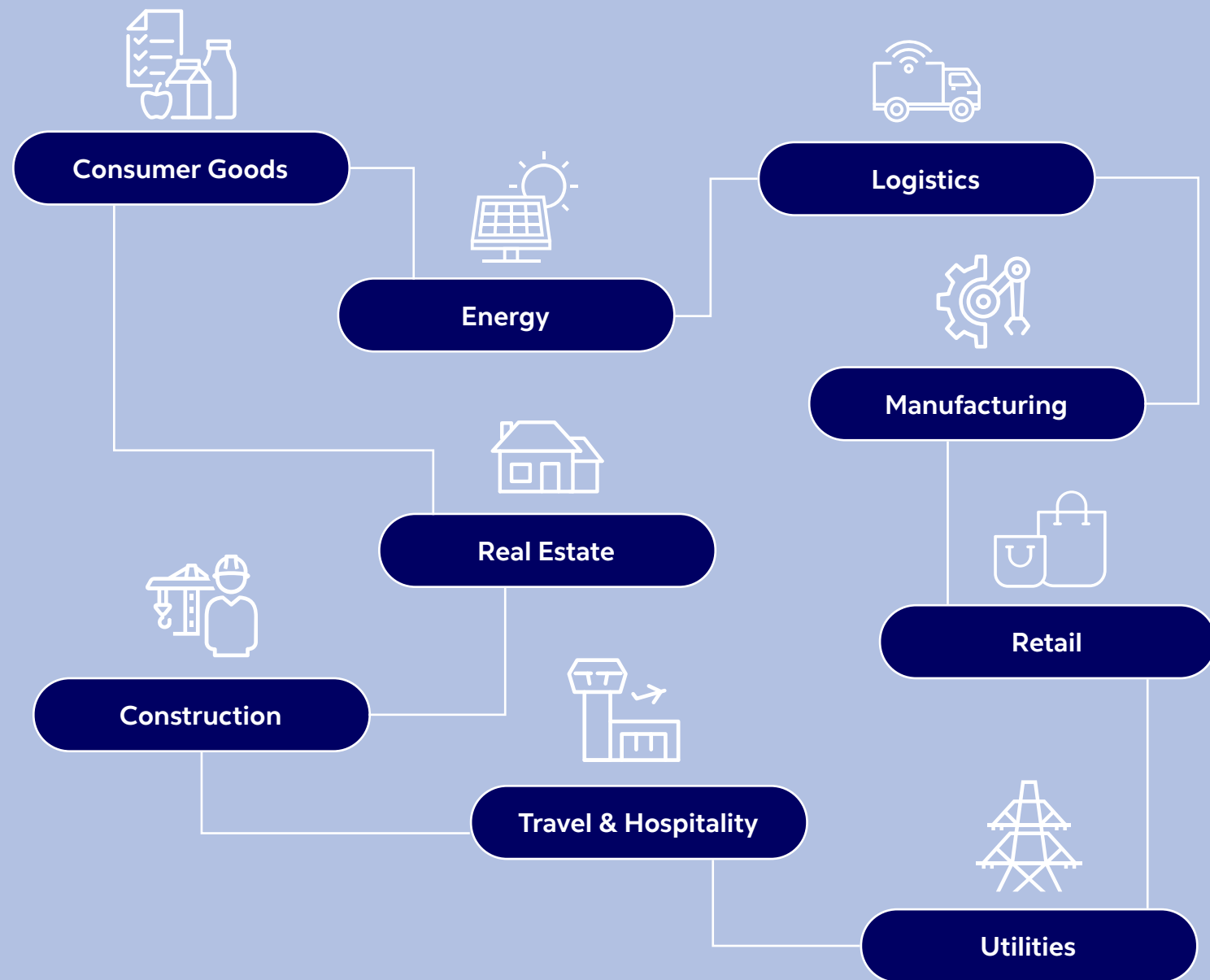▋ **Experience is ultimately the end game for most digital initiatives.** Experience is broadly defined, from closing contracts in the field to tracking machine parts throughout their lifecycle. Creating a common vision of the customer experience across the organisation can drive more cohesion among digital efforts.

▋ **Creating intelligence by unlocking data silos is an imperative.** Organisations only rarely mentioned AI and machine learning applications, tools that could help them supercharge returns from work they are doing to consolidate data stores to tap them for historical analysis, forecasting and customer insights.

▋ **Legacy system inertia slows and complicates digital initiatives.** Modernisation is overdue. Heritage systems and processes they support often have a larger-than-expected impact on modern technology.

❙ Project and change management remain challenges as the stakes for their success grow larger. Organisations must adopt experience-oriented approaches to ensure stakeholder adoption and full return on digital investments.

❙ Sustainability and the circular economy are emerging. Companies need a strong digital foundation on which to build sustainable, environmentally sensitive practices to satisfy growing consumer demand for products and services from green businesses.

We explore these themes throughout this ebook. We examine how to engineer a modern business through a holistic digital strategy centered on delivering a well-defined customer experience. We discuss building this experience with insights based on deep, rich data stores, tapped with intelligent decisioning tools. We also look at how to overcome common barriers to digital success and lessons shared. Executing these steps will help position companies to realise maximum return from their digital investments in the future of experience, technology and work.

Consumer Goods

Energy

Logistics

Manufacturing

Real Estate

Retail

Construction

Travel & Hospitality

Utilities

Think bigger about digital

Respondent Voices

"Essentially we had to create a new organisation with a functional ERP, industrial IT and modernised processes."

Operations director, manufacturing

"Being more predictive about plant maintenance would help us manage those costs."

Head of IT & digital, energy producer

"Our goal was a stable infrastructure with best of breed online and backend technologies."

IT director, retail conglomerate

"The key to transformation was to improve the experience for customers and employees, and define the way we operate the digital company."

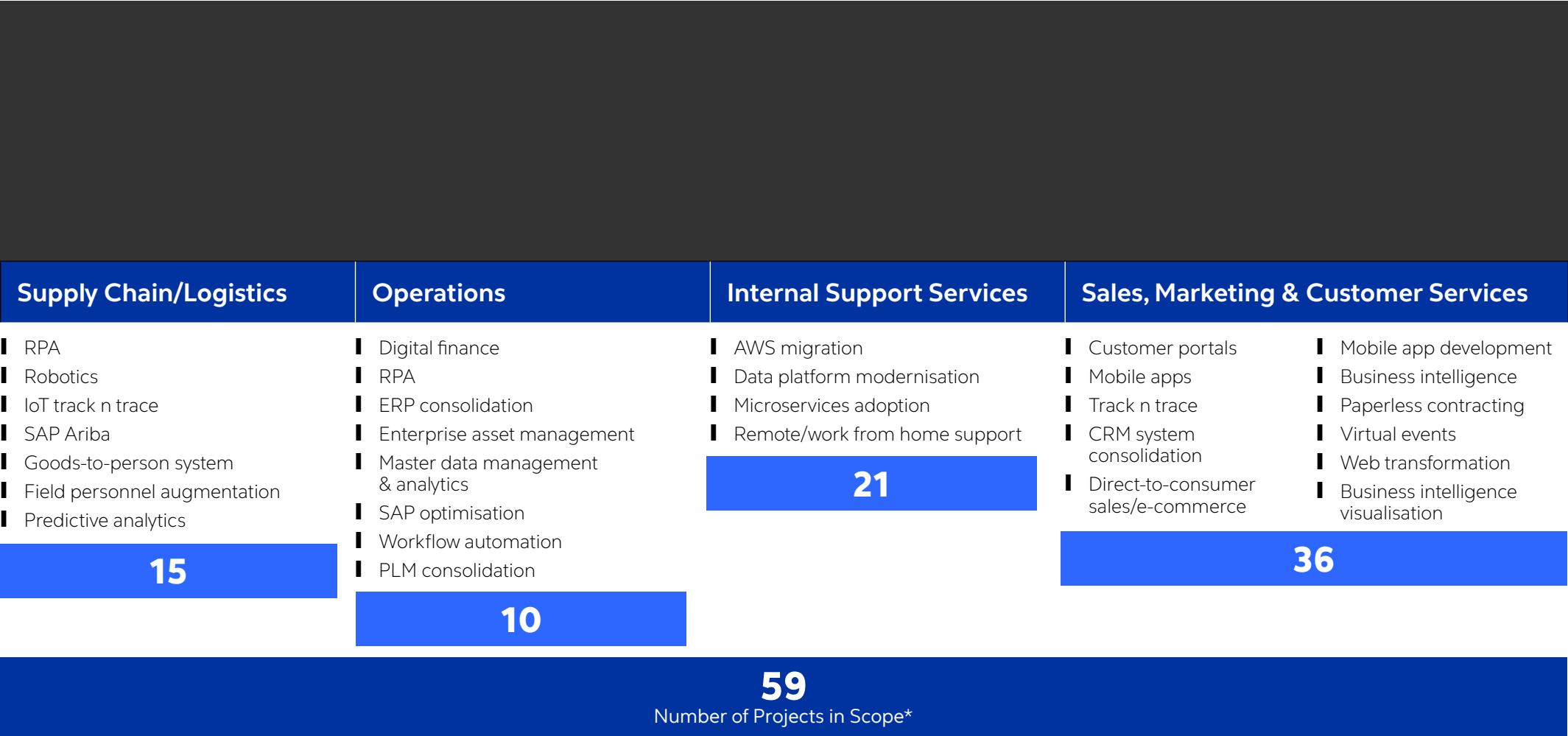**CTO, energy services and solutions company**

"Our people must close contracts while they're in the field to capture business away from our competitors."

Digital transformation lead, agricultural supply company

"A master data pool would supply intelligence to all our operational and supply chain needs."

Director, global shared services, energy producer

Digital projects from the respondents' organisations

Supply Chain/Logistics	Operations	Internal Support Services	Sales, Marketing & Customer Services	
RPA	Digital finance	AWS migration	Customer portals	Mobile app development
Robotics	RPA	Data platform modernisation	Mobile apps	Business intelligence
IoT track n trace	ERP consolidation	Microservices adoption	Track n trace	Paperless contracting
SAP Ariba	Enterprise asset management	Remote/work from home support	CRM system consolidation	Virtual events
Goods-to-person system	Master data management & analytics		Direct-to-consumer sales/e-commerce	Web transformation
Field personnel augmentation	SAP optimisation			Business intelligence visualisation
Predictive analytics	Workflow automation			
	PLM consolidation			

Supply Chain/Logistics	Operations	Internal Support Services	Sales, Marketing & Customer Services
15	**10**	**21**	**36**

59
Number of Projects in Scope*

*Some projects encompassed more than one category.
Response base: 40 European executives
Figure 1

We asked each executive about the three top digital projects under way in their company. Many projects were ambitious and required some integration with systems in other segments of the value chain. Clearly, digital is no longer synonymous with "point solution." Yet organisations could drive still more value out of these ambitious digital projects. Here's how:

▮ **Articulate a vision and business case for the comprehensive digitisation of the value chain.** Many projects concentrated on one value chain segment, with links to other segments being incidental vs. being deliberately targeted and strengthened. Projects focused on supply chain logistics did not necessarily incorporate a finance or customer-facing component. Customer-facing initiatives did not always have obvious operations and logistics integration. Chief digital officers, chief information officers and chief operating officers may all be leading different digital initiatives with their own distinct perspectives. This reality makes it extremely difficult to develop a coherent strategy. Large islands of tactical digital may arise that don't map to the organisation's business strategy.
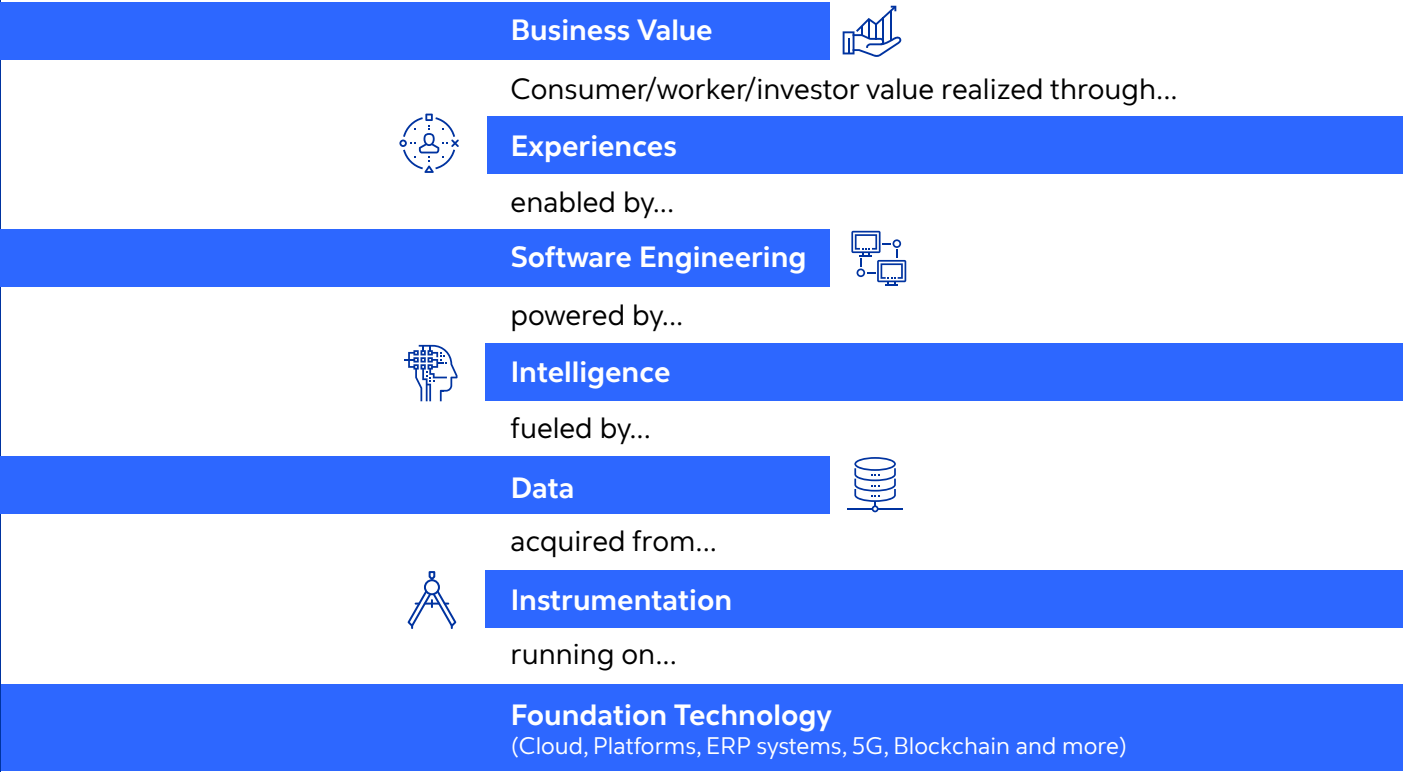
▮ **Create digital capabilities in the service of an overarching guiding vision.** Digital is delivered via a new technology stack that gives companies the power to reimagine how they can be better at delivering the product or service that has made them great. A few executives did describe visions for using digital to drive new experiences and intelligence throughout their value chain, even if their efforts are nascent. These visions can be bolder and should help guide the choices made and capabilities created in each segment of the value chain.

Projects focused on supply chain logistics did not necessarily incorporate a finance or customer-facing component. Customer-facing initiatives did not always have obvious operations and logistics integration.

❙ Aim to iterate vs. overthink. An organisation that takes two years to develop an overarching vision will find technology advances have likely outpaced its thinking. Yet reckless development is wasteful and unsatisfactory. Focusing on delivering an optimal customer experience (also likely a moving target) should provide direction about what processes to reimagine and capabilities to build. Companies can then move forward via rapid prototyping, feedback and iterations of minimum viable products.

On a new architecture for work

Every organisation must master this stack at scale to drive business in the Fourth Industrial Revolution. Applying this — process by process, experience by experience — across every value chain is how we build the modern enterprise.

Business Value

Consumer/worker/investor value realized through...

Experiences

enabled by...

Software Engineering

powered by...

Intelligence

fueled by...

Data

acquired from...

Instrumentation

running on...

Foundation Technology
(Cloud, Platforms, ERP systems, 5G, Blockchain and more)

A foundation of tech fit-for-purpose for the modern enterprise.

Figure 2

Put experience at the center of digital initiatives

Respondent Voices

"We had to match digital competition and build deeper partnerships with customers vs. transaction-based relationships — without hiring more field personnel"
Digital transformation lead, agricultural conglomerate

"Our customers have high expectations for fast resolution of issues with their components, so we needed full traceability throughout the product lifecycle."
Global SCM digitisation lead, manufacturing

"The goal is to make our customer-facing systems more responsive, with more efficient integration with data and backend supply chain systems."
Director of technology for retail & digital, retailer

"We were seeing a 30% drop rate during the customer journey and had to optimise that experience."
CTO, travel & hospitality group

"We wanted to understand individual customers so we could personalise our interactions with them."
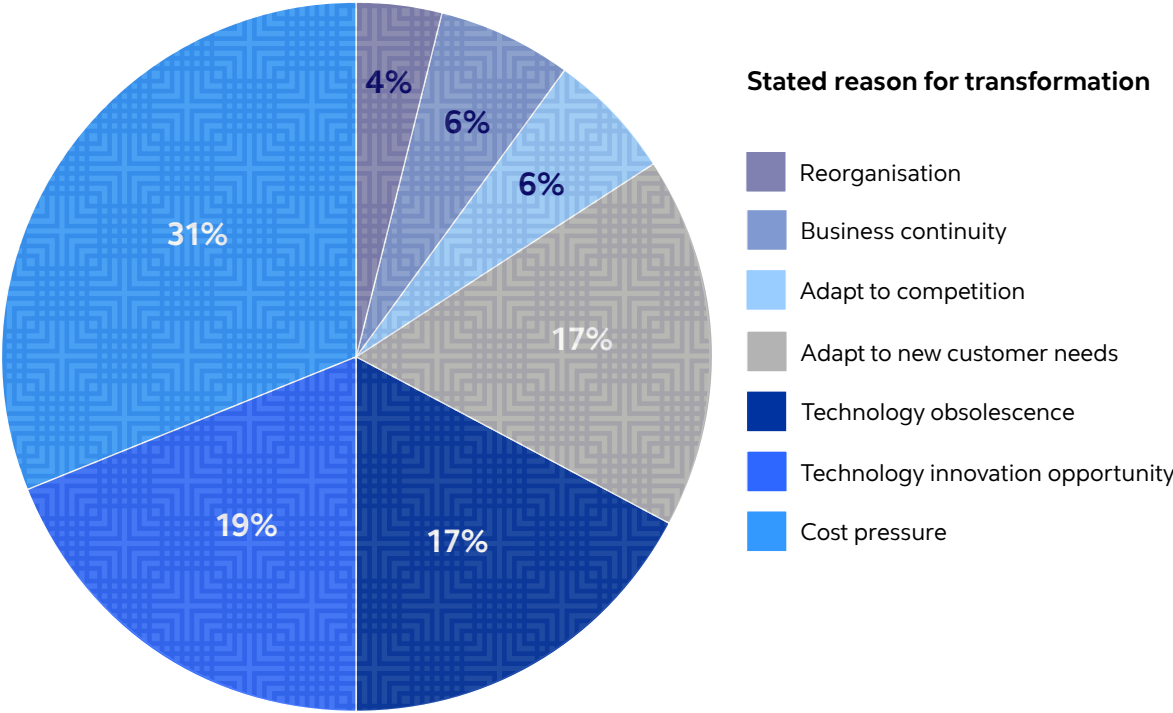**Deputy CIO, retailer**

Many decision-makers explicitly named improved customer experience as a key objective of a digital initiative. The pandemic has sharpened this focus because the "Amazon experience" has become the benchmark for any digital experience. This is true for experiences across both the business-to-business and business-to-consumer links in the path-to-consumption value chain.

Organisations targeted a variety of stakeholders to please: customers, internal business users, field personnel and suppliers. Yet very often, we heard companies assume experience would improve as a byproduct of digital delivery. It was not surprising to us that several executives said they "missed" their improved experience targets. Here's how to help ensure ancillary goals, such as reduced costs and new technology features, deliver expected returns:

❚ **All digital initiatives must center on the organisation's customer experience vision.** Insights into the customer journey will determine what the experience should be and all the touchpoints at which the experience must be delivered. With that clear picture, companies may then define the capabilities required to support that experience. These capabilities are interrelated, so companies must take a holistic approach to each initiative, considering how a change in one capability may require changes elsewhere.

Multiple drivers of digital business change

Stated reason for transformation

- Reorganisation
- Business continuity
- Adapt to competition
- Adapt to new customer needs
- Technology obsolescence
- Technology innovation opportunity
- Cost pressure

Response base: 40 European executives
Figure 3

▮ **The cost of not thinking holistically about digital is high.** Without the digital ecosystem in mind, it's all too easy to create a process or function that contradicts the goals for the customer experience. A supply chain initiative may be designed to minimise delivery costs paid by the customer by shifting to a different last-mile carrier. Yet sales intelligence shows customers are willing to pay a premium for greater visibility and fast delivery — qualities the new process does not deliver. The customer experience is undermined because the supply chain initiative was not aligned with the sales insight.

▮ **The effort to coordinate digital across value chain segments is higher — but so is the payback.** Take the objective of delivering a seamless, continuous experience no matter which facility, store or branch a customer visits across Europe. An IT team might propose a new master data management or CRM system. Yet such systems alone could not deliver a harmonised experience at every touchpoint unless they incorporated human-centered experience design. That design also will help identify all the customer data required to provide the intelligence needed to refine products and services and retool fulfillment processes, such as consolidating or adding distribution centers. These refinements then are executed with customer experience in mind, forming a virtuous, value-creating loop.

▮ **Prepare to know your customer forever.** Some companies already have invested in understanding customer journeys. Customers are continuously generating data and new tools, which are still rapidly advancing, enable new insights. As one retailer explained, the company had never before been able to know its customers as unique individuals. Also, data gathered during the COVID-19 pandemic will be extremely valuable to understand which customer behaviour shifts will be lasting and how new expectations and habits should shape a company's next generation of products and services.

The experience-driven digital ecosystem

Digital initiatives across the value chain should align with a common, company-wide vision of the desired customer experience.
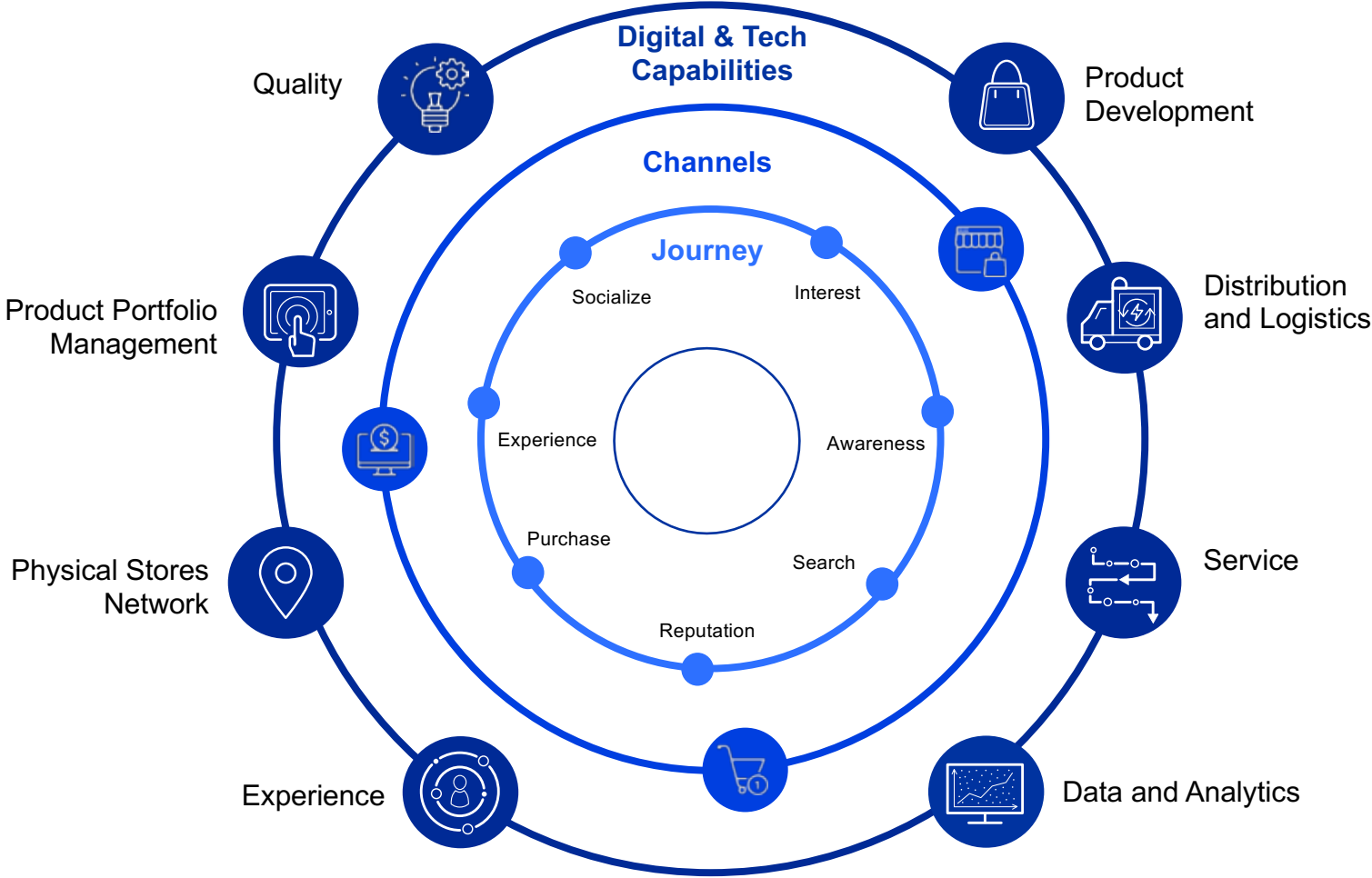

Digital & Tech Capabilities

Quality
Product Development
Product Portfolio Management
Distribution and Logistics
Physical Stores Network
Service
Experience
Data and Analytics

Channels

Journey

Socialize
Interest
Experience
Awareness
Purchase
Search
Reputation

Figure 4

Supercharge decision-making with AI

Respondent Voices

"Our teams required a transparent, common way of looking at a single source of truth so they had deeper insights and could make better decisions."

Senior manager, digital transformation, automaker

"We were able to say 'no' with confidence to initiatives based on data we collected and insights data provided us. "

CTO, energy services and solutions company

"The goal was to increase plant production through analysis of historical data that could show how to overcome a recurring bottleneck."

Head of IT & digital, energy producer

Manufacturers have meticulously tracked material and finished product movements for years. Utilities, logistics service providers, and major retail and hospitality players have increasingly moved much of their customer engagement online. All these efforts have created a treasure trove of data from across the value chain.

Organisations are using digital to unlock these vast data stores and are applying tools to understand processes and customers with more granularity to generate insights and intelligence they can act on. One energy producer created a big data platform and used it to analyse historic data about oil flow during the extraction process. Processing the data with AI indicated how it could increase the flow without additional equipment, improving potential revenue from the production facility. Despite such potential, only a handful of companies mentioned using AI tools to drive more value from their data. Here's how to address that gap:

▌ **Put data in the cloud.** Modern cloud-based platforms make more data accessible throughout an organisation, streamlining data extraction from key systems, including legacy applications. Cloud offers flexible data structures and architectures that enable organisations to quickly tap into and monetise data resources.

▌ **Invest in improving data quality.** Machine learning tools and algorithms must learn from clean and structured data sources. Tools exist to make it easier for organisations to clean older pools of data. Going forward, companies need data quality management teams to evangelise data quality and provide governance for long-term data integrity. Team members work with product owners and users to help them understand why data quality is essential and how it will enable more accurate predictions and analysis. Data quality must be a company-wide initiative, not the responsibility of a single department.

▌ **Focus on use cases when building insights from disparate data sources.** Focusing on a pain point and identifying the data needed to solve it is an effective way to avoid "boiling the data ocean" and to see faster returns from AI tools. This is especially true when one data source turns out to support several use cases. Too often, data engineering teams load data that is not relevant to the problem at hand.

▌ **Make data beautiful for business users.** Providing intuitive, attractive tools will help convert stakeholders used to making decisions based on instinct or anecdotes to using business intelligence and analytics. Several executives explained business users did not always automatically comprehend how analytics tools could derive insights from data.

Overcoming barriers to optimising digital returns

Respondent Voices

Transformation management/planning

"We tried too many transformations at the same time."

Innovation director, sports equipment maker

Legacy technology

"Our pace of change was constrained because of our complex old internal IT estate."

Head of IS delivery, utility company

Change management

"It was very difficult for our engineers to let go of their experience and trust the data."

Head of IT & digital, energy producer

"We saw quite a lot of resistance to change, both in adopting the technology and in accepting the new processes."

Change transformation program director, real estate & hospitality

Bring realistic resources to transformation

Many executives told us project scoping, requirement gathering and stakeholder expectations management were challenging and sometimes led to delays in project implementation. One company's global enterprise resource planning (ERP) rollout was delayed because it launched too many concurrent transformations, all of which required the same resources. For others, rolling out a new digitised process across regions often went slowly, if it occurred at all, because processes had not been harmonised before or during the project's development. This meant some projects fell short of expected productivity gains.

Our recommendations:

▮ **Resource management is key.** Our conversations reinforced our observation that key decision-makers often are involved in too many projects. That generally results in projects not receiving sufficient attention or bottlenecks occurring as decisions and direction lag. Creating an enterprise project management office (PMO) is still the clear way to prevent this. A PMO looks at the resources each project requires in terms of tools and finances as well as attention from executive management. It's easy to develop a business case for a PMO when an organisation thinks about the value at risk. A PMO does require everyone to be transparent about their available resources and how they are being allocated.

Uncork legacy bottlenecks

Many of our conversations revealed that projects bogged down where digital initiatives had to share data with legacy systems. Here's how to deal with heritage hurdles:

- **Modernise applications to speed digital deployment.** This makes vital data in legacy systems more readily consumable by modern applications. While we don't advocate reviewing the IT landscape from alpha to omega before every project, it is important to understand what data will come from or be supplied to a legacy system to drive the desired customer experience. This knowledge will help prioritise which applications to address first, often by modernising and migrating them to cloud environments.

- **Take a phased approach that delivers quick, visible wins.** Have a vision for what the fully modernised process or system will accomplish, then deconstruct that into smaller, manageable projects. That could be as simple as training a software bot to complete a rote data entry task

that creates cost savings and returns time to stakeholders. These successes demonstrate how digital can improve work experiences and start building acceptance and even demand for change.

- **Use containers, microservices and the cloud to accelerate modernisation efforts.** These tools make it easier to reuse existing knowledge artifacts in legacy systems without affecting the responsiveness of modern systems. It also enables other digital investments like AI, RPA, IoT, etc. to interact in the ecosystem without standardising all the underlying platforms. Our experience has shown that application modernisation leads to 30% efficiency gains in the IT landscape, resulting in up to a 25% increase in revenue generation from the affected applications.

Change management

Every executive we interviewed cited significant change management challenges as the main reason why intended users, either internal or external, did not adopt a digital tool as expected. Digital offerings did not necessarily sell themselves. Some professionals did not trust new data-driven processes vs. their own body of knowledge and experience. Others did not take time to learn the capabilities of new tools, while others expected far more than the tools and processes delivered. Limited adoption typically meant slower ROI.

While digital creates new change challenges — such as the managers at one company that had to learn how to supervise industrial robots — it also creates ways to overcome the age-old conundrum of how to manage change successfully. Here's how to accelerate true acceptance of digital change:

▮ **Change management today must be delivered as an experience vs. a process.** Today, stakeholders must be engaged as cocreators of new tools and processes. Gathering information for an impact assessment and other traditional exercises should not be the work of a small, centralised team. Instead, during workshops, affected stakeholders should collaborate with each other, drawing on their expertise to solve the challenge and/or take advantage of an opportunity. Stakeholders learn more about how their work affects the customer experience and value chain when engaging with each other. Through cocreated solutions, they'll also have more ownership in the new process, service or product, i.e., a vested interest in its success.

▮ **Demonstrate the power of digital tools.** Whenever appropriate, change management communication and engagement mechanisms should be delivered on digital platforms and devices. Use high quality videos and podcasts and online training tools. Gamify training to stimulate engagement. Build and empower online change communities to create grassroots support; monitor the sentiment of the community to identify and address concerns and issues before they become entrenched obstacles.

Successes and lessons shared

Respondent Voices

"The time it took to find the right data went from days to seconds."
Global SCM digitisation lead, energy company

"We can now spin up environments in 30 minutes compared to two to four weeks before."
CIO, retailer

"More data for inventory management was an unexpected benefit from our robotic deployment."
CIO, robotics, manufacturer

"RPA gave us a quick implementation and faster ROI, which gave relief to users vs. waiting for a long-term solution."
Senior manager, digital transformation, automaker

"The conversion, stability and scalability of the platform was massively improved. We can experiment with more frequent releases and get quick feedback. Online customer volume and revenues have grown."
IT director, delivery & operations, ecommerce

"We have broken down the silos between IT and the business."
Customer service manager, utility company

Most decision-makers we spoke with reported at least some measure of success with their digital initiatives. Many of these metrics struck us as being department-centric vs. organization-wide. The pandemic and rapid pivot-to-digital across the path to consumption value chain requires benefits to quickly percolate across the enterprise.
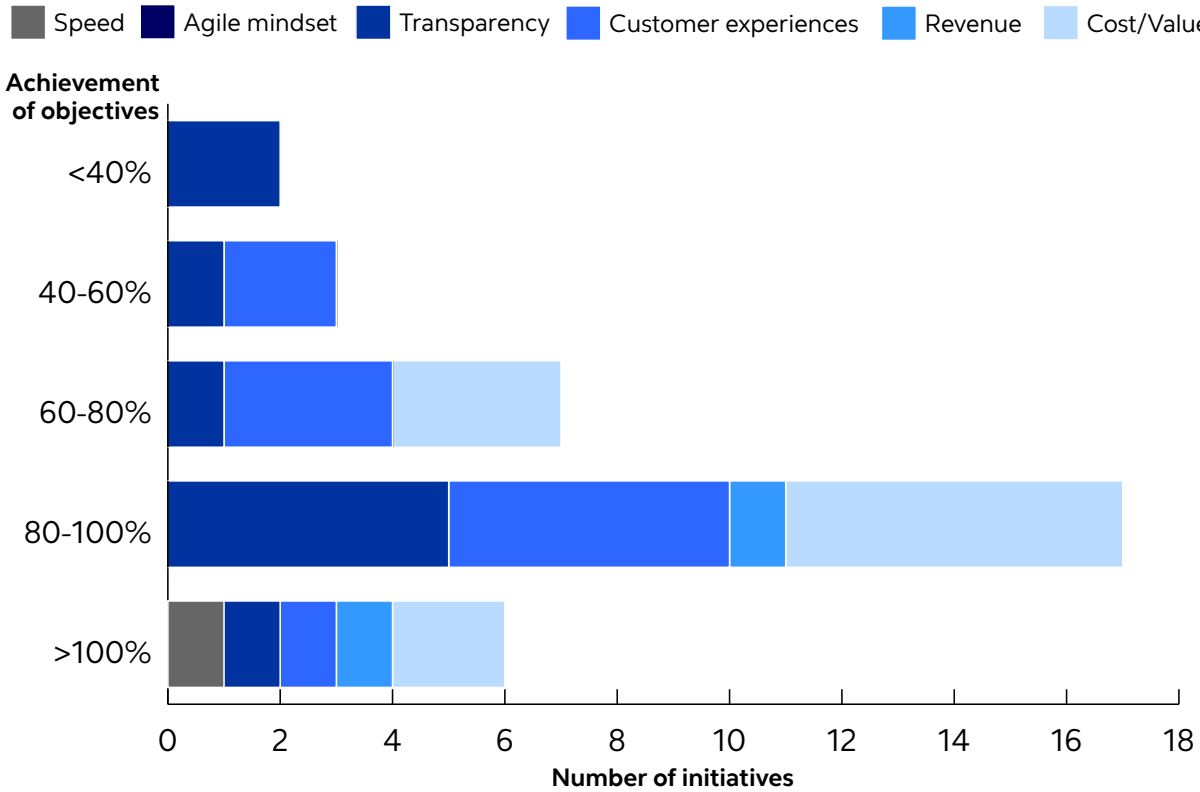
It's likely different business functions will have unique metrics, such as the speed of delivering a key report or real-time monitoring of machinery health. It can be easy to achieve some of these and yet be disappointed in the overall digital effort. Focusing on goals for tactical areas — even as broad as supply chain management and logistics — could create islands of digital that don't necessarily improve the customer experience. Ask these two questions to help guard against that occurring:

▮ **Does the digital initiative help the company deliver the next generation of the products or services at which it excels?** The digital technology stack of intelligent decisioning built on data stores on top of a cloud infrastructure makes it possible for companies to reimagine and create new experiences around the products or services for which they are known. Projects and their success metrics must be evaluated in the context of the company's overarching business strategy and digital vision.

▮ **Does everyone share the vision?** An effective way to get everyone on the same page is to fully define the customer experience to be delivered. Then everyone must understand this vision. Ask four or five leaders in key areas to explain the vision. If each has a different answer or perspective, efforts likely will be out of alignment. That conceivably can lead to one area thinking it has met the objective while another complains the new tool or process does not deliver their required capabilities.

Succeeding with digital initiatives

Many of the executives reported digital projects were successful, particularly in cost reduction. Companies can derive even greater benefits by also focusing on customer experience in their digital initiatives.

Legend: ■ Speed ■ Agile mindset ■ Transparency ■ Customer experiences ■ Revenue ■ Cost/Value

Achievement of objectives

Response base: 40 European executives
Figure 5

Shared learnings

▮ **Get the right input early.** This is essential to avoid wasted time and effort. One executive said a team spent a great deal of time perfecting data warehouse requirements before considering the use cases, so the features they delivered turned out to have limited value. At another company, a team developing a customer portal had plenty of input from internal stakeholders but limited contact with the customers. The first iterations of the tool did not meet the customers' needs and slowed adoption.

▮ **Balance planning with agility.** Given that traditional project management, waterfall development and change management tend to require comprehensive initial planning, it is challenging for companies to adopt faster, more iterative approaches to digital initiatives. Technology is changing too quickly to attempt to build and follow a long-term implementation plan. Keep the customer experience in view and determine what systems, capabilities and data are necessary to deliver it. Use that insight to guide planning — such as examining data structures of just the affected applications or determining processes that must be reimagined before automation gets under way.

- **Have a plan for MVPs and pilots.** A German manufacturer told us that having clear criteria for when to move from experiments and minimum viable products (MVPs) to a pilot and when to scale pilots was an essential learning. Initially the company did not have a clear framework for managing innovation, nor was there a common definition of success among all project stakeholders. Without this framework, many MVPs remained at the initial stage and pilots were not scaled. After addressing these issues, the manufacturer scaled more pilots into production. A UK retailer noted that training and coaching senior business executives on Agile practices and decision-making increased its success rate on pilots.

- **Identify champions and create incentives.** Several executives noted strong leadership support made it easier to hurdle change management obstacles. Lacking that, stakeholders often "went back to their own ways" of doing things, as one director put it. Another effective strategy was to make regional or country leaders responsible for adoption success and link it to their performance reviews.

- **Accelerate deployment with diversely skilled development pods.** Having people who fully understand the business as well as full-stack developers in a pod makes the Agile methodology even more effective. To successfully divest a line of business, one company had to review and sort thousands of contracts — a process fraught with warranty and financial risk that could take potentially years to complete. By bringing together a team with AI and RPA experts alongside power business users and using Agile methods, the company had a prototype automation developed in a week — and the contracts sorted within a month.

What's next

Respondent Voices

"Sustainability is the key driver in all our transformation projects, regardless of technology."
Senior manager, digital transformation, carmaker

"[Environmental & Social Responsibility] is part of contracting with suppliers and selecting packaging materials."
Vice president, ecommerce, consumer goods company

"The entire five-year plan and projects for our industry revolves around environment and sustainability."
Customer service manager, utility

"Everything we do is linked to ESR in some way in terms of cost of delivery, waste, environmental impact and fuel consumed."
IT director, retail conglomerate

"Carbon emission now must be included in every business case."
Head of IT & digital, energy producer

"ESR is central to our product and service differentiation. We have even calculated our footprint reduction from number of servers avoided through this program."
CTO, real estate and hospitality group

Several companies told us that environmental concerns and sustainability goals are becoming indirect or direct drivers of their digital initiatives. Customers increasingly will demand sustainably sourced and developed goods. Organisations with digitised value chains will have the flexibility required to meet these new challenges. Here is where to prepare:

▐ **Real-time data flows will be critical to thriving in the circular economy.** Sustainable solutions and products will be driven by insights about using energy and other resources more efficiently, designing components for reuse and repurposing waste. Environmental sensors and IoT, smart grids and AI all are poised to take important roles in organisations' sustainability efforts.

▐ **Customer sentiment insights will be more important than ever.** Responsible sourcing and environmental protections will increase the cost of goods and services. Some customers undoubtedly are willing to pay premiums for sustainable offerings. Others may resist. As green competitors emerge, organisations will need to understand their customers' specific journeys and what costs their markets will bear. In our recent sustainability research, a majority of respondents told us they expect their sustainability investments will increase sales and improve brand reputation.

▐ **Digital must go deeper and more broadly into the value chain for companies to deliver sustainability-driven innovation.** Constraints created by climate change and consumer pressure to reduce waste and use sustainable materials and processes will demand businesses find new and creative ways to use their resources. Data, AI and analytics, along with Agile methods and human-centered design, will need to be present throughout the value chain, informing all processes.

Realising digital's full potential will deliver lasting value

The challenges of making digital work to its full potential across the value chain are considerable. Yet this work can reshape not just a company's bottom line but also the impact it makes on the environment and natural resources. Businesses that expand their digital visions to reimagine how they deliver experiences, products and services will see greater immediate returns on digital as well as have a powerful, yet flexible foundation for meeting emerging challenges and opportunities.

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Acknowledgements

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