

# The Top 5 Tech Trends to Deliver Business Outcomes: Understanding the Power of the Platform



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Authors:  
Danielle Hernandez  
Philip Carter

IDC #EUR145995120

## PREFACE

Please note that this White Paper was published before these challenging times became a reality across the global economy. However, the research, insights, and recommendations provided are all very much still valid. The imminent economic downturn globally will actually compel organizations to continue to invest in their digital initiatives — but the pressure on financial outcomes will increase. As part of this, IDC believes that technology will play a critical role in the recovery of the economy, as the pandemic has highlighted the potential of digital to multiply our value through intelligence, data, and a shift to platform-based business models.

As an IT executive, your sphere of influence will potentially grow in 2020 and beyond, but the new normal requires a new mindset. In case you are still wondering which areas of your business are ideal for adoption of disruptive technologies, we invite you to start asking different questions to uncover the potential value that digital initiatives can deliver. This will require an unwavering focus on the following:

- Establishing a future-proof technology architecture that underpins a business model that adapts and responds to uncertain external market pressures
- Creating a data strategy based on data pipelines feeding into and out of that integrated technology architecture
- Delivering digital innovation at scale so that new capabilities can be delivered in an unpredictable environment
- Modernizing core IT environments to establish the backbone for agile business models
- Developing a use-case journey that aligns the C-Suite to deliver on the ROI promise and deliver financial outcomes from digital

As these challenging times fundamentally shake up how we live, learn, socialize, and work, governments are taking drastic measures to keep citizens safe and healthy. IDC believes that the response of organizations in these uncertain times will shape the market perception of their brand in the next 10 years — technology leaders have a unique opportunity to define the future of business and society in a fundamentally positive fashion.

# The Top 5 Tech Trends to Deliver Business Outcomes: Understanding the Power of the Platform

## AT A GLANCE



- The role of technology in transforming business models will continue to accelerate exponentially.
- The sphere of influence of forward-looking technology leaders has the potential to expand in parallel if they focus on delivering business outcomes.
- IDC has identified five key trends that we believe technology leaders should focus on to make or save money.
- There is a close link between use cases that are business oriented and those that are enabled by technology.
- IDC believes the technology architectures of the future will be platform oriented to enable a seamless flow of data internally and externally to the ecosystem.

## Introduction

As we move into the next decade, the role of technology to transform businesses will continue to expand exponentially. Technology leadership roles will need to be redefined and new roles will be created. Whether you are a CIO, a CTO, a chief data officer, or any other technology leader, your sphere of influence will potentially grow in 2020 and beyond. Being aware of, and acting on, these game-changing trends with a laser focus on either making or saving money by delivering concrete business outcomes will be the difference between success and failure.

IDC's research shows that only 19% of organizations are generating net new revenue streams from digital investments, despite spending \$1.2 trillion on digital transformation (DX) initiatives in 2019. In parallel, only 25% of organizations are delivering bottom-line growth from their technology investments. IDC refers to these organizations as the "digital moneymakers."

IDC believes the anchor point to deliver business value from technology investments will shift from applications (which encouraged data fragmentation) to platforms (which will enable a more seamless flow of data across internal and external environments).



Below is a summary of the five key trends that you, as a technology leader, should be focusing on to help deliver these business outcomes:

**#1: Integrated technology architectures:** By 2025, 82% of revenue derived from digital business models will be platform enabled — leveraging the multiplier effect that platforms have on business value, as they enable the flow of data across the value chains of the future.

**#2: The power of data = intelligence:** By 2020, 80% of enterprises will create data management and monetization capabilities, enhancing enterprise functions, strengthening competitiveness, and creating new sources of revenue.

**#3: The future of digital innovation:** From 2018 to 2023, 500 million new apps will be created — equal to the number built over the past 40 years.

**#4: Platforms to modernize the core:** 65% of organizations will aggressively modernize legacy systems with extensive new technology platform investments through 2023.

**#5: A new technology leadership:** By 2023, 30% of organizations will define a new technology leadership role combining CIO, CTO, chief digital officer, chief data officer, and chief innovation officer functions that will orchestrate the digital road map based on a “use case journey” for their respective organizations.

## Why do These Trends Matter to Technology Leaders?

As part of this, IDC believes a new technology architecture will be critical for organizations aiming to deliver business outcomes from their digital investments. The key to delivering business value will shift from applications (which encouraged data fragmentation) to platforms (which will enable a more seamless flow of data across internal and external environments).

The CIOs, CTOs, and chief data officers of the future will need to understand the potential of this approach to chart the next phase of their personal careers and take technology leadership to the board across all industries.

This paper showcases these five key trends and looks at the role this new platform architecture will play.

IDC research shows that only 19% of organizations are delivering net new revenue streams from digital investments and only 25% are reducing costs. These organizations are the moneymakers and money savers.



# #1



## Integrated Technology Architectures

There is often a major overestimation of the maturity of organizations in terms of how modern and flexible their technology architectures actually are. Although there is plenty of discussion about leveraging emerging, innovative technologies to deliver new revenue streams, the reality is that most companies are still battling with complex (and costly) legacy systems. Organizations are often constrained by having to untangle this legacy, and new technology initiatives become what IDC calls islands of innovation — entirely disconnected from core IT and often stuck in proof-of-concept jail. This is a short cut to a dead-end, as there is no way of getting to scale. To get out of this “PoC jail,” a next-generation technology architecture will be required — one that is platform oriented. The trick to monetizing digital at scale is to integrate several technology environments (regardless the deployment model) into a hybrid platform that brings the back office closer to the front office. Thereby, leveraging the multiplier effect that platforms have on business value, as they enable the flow of data across the value chains of the future.

**IDC predicts that by 2025, 82% of the revenues derived from digital business models will be platform enabled. To make this a reality, organizations need to understand the following key best practices in terms of their technology architecture strategy:**

- Integrate aggressive core modernization to drive business agility in the back office
- Embed intelligence into core business processes
- Use integration as a key enabler to deliver business value
- Extensively use cloud analytics to deliver visibility, insights, and predictive capabilities
- Create innovative use cases that are designed to scale

### The Power of the Platform

The integration capabilities of the platform can be used to fast-track integration across all the business applications, systems, and apps distributed across on-premises, hosted, or public cloud. This will enable the creation of new workflows leveraging information across legacy and SaaS applications to build custom use cases on top of core functionalities.

## #2



### The Power of Data = Intelligence

By 2020, 80% of enterprises will create data management and monetization capabilities, enhancing enterprise functions, strengthening competitiveness, and creating new sources of revenue.

Much has been said about data being the new oil that will fuel businesses in the future. But the reality is that it's not about the amount of data that organizations have access to, but how effective their decisions are based on that data. Data alone will not be the new oil — intelligence will fuel the future enterprise. Organizations that can create intelligent business processes to deliver contextualized and consent-based experiences will be the winners in this new data-driven world.

#### **IDC believes that the digital moneymakers are developing the following key best practices in terms of their data strategy:**

- Building a unified data management architecture that delivers real-time business outcomes
- Shifting data-intensive workloads off premises as part of a cloud-first approach to deliver business agility
- Delivering an enterprise data strategy that dynamically links feedback from the external ecosystem to internal processes (and vice versa)

#### **The Power of the Platform**

The data management capabilities of the platform enable a deep understanding of all data, including its definition, meaning, provenance, lineage, and relationships. The data pipelines of the future will come from both internal and operational data sources, but also from the external world (in short, experience data from the ecosystem). To have such awareness of the data, technical metadata needs to be augmented with business context to identify the most valuable and most sensitive information for businesses by integrating data from many sources. This unified data management architecture (including the master data definitions) needs to provide the basis for intelligent technologies to be embedded within core applications to support the creation of more agile business processes.

# #3



## The Future of Digital Innovation

From 2018 to 2023, 500 million new apps will be created — equal to the number built over the past 40 years. This app explosion will require the agile development of innovation capabilities. This includes the developer and user experience services that will rapidly enable the creation of net new applications.

To balance the need for speed with the need for control, organizations will have to put in place a standard framework across all technology capabilities, regardless of the deployment model. This framework should leverage a governance-as-code approach to generate dashboards and automatic alerts to provide visibility and auditability for the key stakeholders in IT and the business.

### The Power of the Platform

IDC believes that staying relevant in this environment requires a cloud-based application development and deployment environment that accelerates the delivery of new digital products, services, and experiences linked to those increasingly intelligent business processes. As we move to a technology era increasingly dominated by hyperscaler cloud platforms, there is a requirement to be open to these platforms to deliver specific business use cases that are critical to the business. Therefore the business innovation capabilities of the platform (in a multicloud world) will be critical to deliver net new applications to the market.

# #4



## Platforms to Modernize the Core

Sixty-five percent of organizations will aggressively modernize legacy systems with extensive new technology platform investments through 2023.

During the era of experimentation for digital transformation, standalone projects based on emerging technologies were frequently driven by different business departments (LOBs) and were created in silos. Security was an afterthought for these initiatives, and so they exposed many vulnerabilities to the organization. In addition, scarce innovation resources were spread across multiple pilots and many digital efforts were failing before they even got to production.

To bridge the scale gap, organizations set up a new digital structure to focus on the new while ringfencing the old enterprise IT environment (seen as an operational bottleneck) to deliver some level of agility.

It became clear that not only do these systems, processes, and people need to be integrated as part of an enterprisewide platform, but also that the core needed to be modernized to provide the necessary agile backbone, infused with intelligence, to help redefine and create new business processes in a more dynamic fashion.

### The Power of the Platform

IDC predicts that by 2025, at least 90% of new enterprise application releases will include embedded AI functionality. Additionally, the development of use cases for technology leadership needs to be supported by the platform, as it enables the extension of existing applications and development of net new capabilities.

# #5



## A New Technology Leadership — Delivering the Use Case Journey

By 2023, 30% of organizations will have defined a new technology leadership role combining CIO, CTO, CDO, and innovation functions to orchestrate the digital strategy in their organizations.

IDC believes the “use case” is the anchor that will enable technologies and business outcomes to drive technology leadership capabilities to the next level. Note that a use case is a business initiative, enabled by technology, with measurable outcomes.

#### An example of what a use case is:

- 24 x 7 customer support enabled by conversational AI platforms that deliver better NPS

#### What a use case is not:

- A discrete technology offering, such as a chatbot
- A discrete technology project, such as an ERP implementation

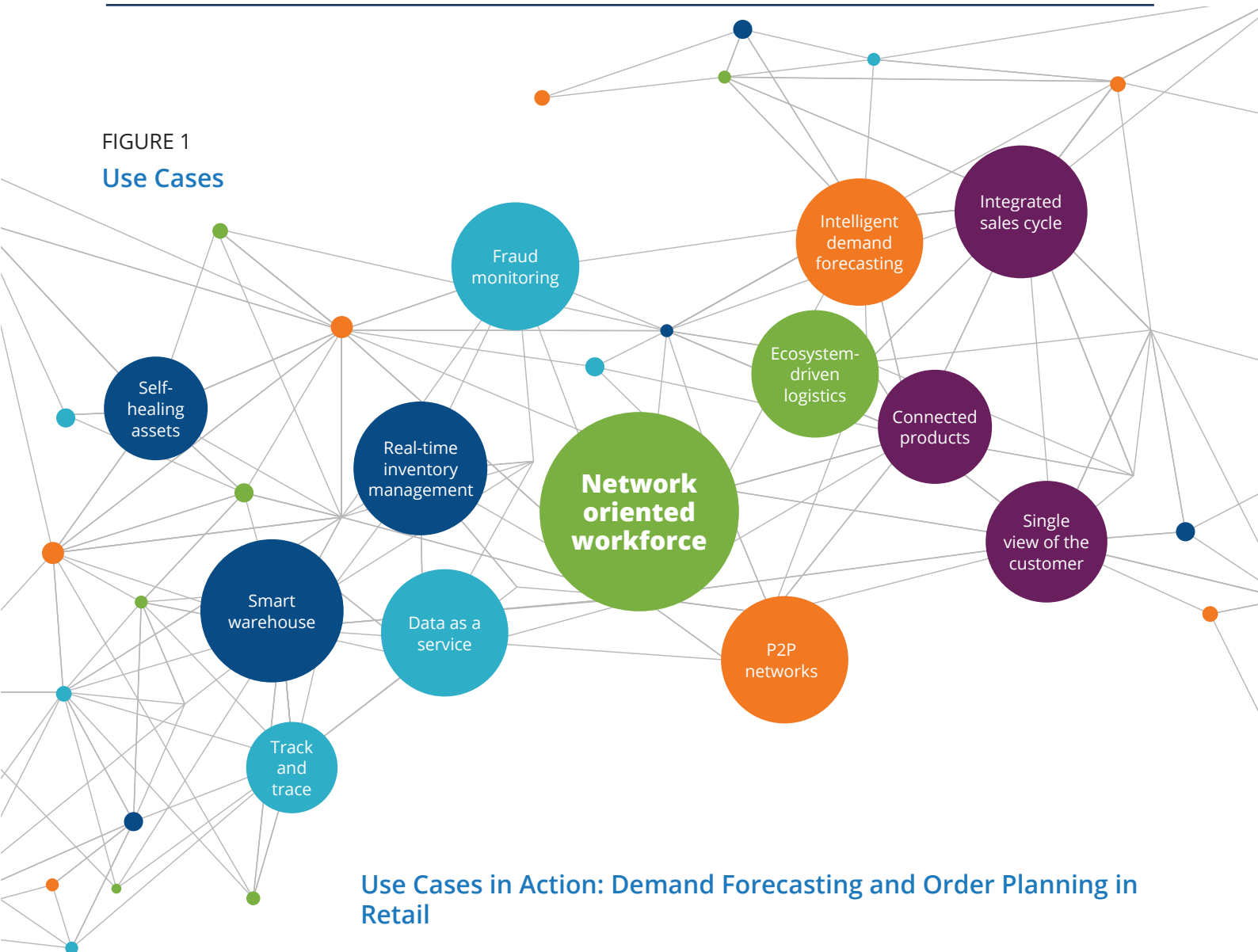
These use cases need to populate the digital road map highlighted previously as part of a use case journey that is unique to a company, but needs to be orchestrated by the future technology leaders.

A use case is a business initiative, enabled by technology, with measurable outcomes.





FIGURE 1  
Use Cases



Source: IDC, 2020

### Use Cases in Action: Demand Forecasting and Order Planning in Retail

Let’s take intelligent demand forecasting and order planning in the retail and consumer goods industry. Being able to optimize inventory based on customers’ personalized preferences has a major impact on profitability (and customer experience). In retail today, however, you generally have separate and sequential systems and workflows for store-bound and direct-to-consumer orders (for the capture, manage, and fulfill process).

A leading U.S. retailer’s bakery section produces bread, confectionary, and pastries for all of its stores. Production planning, however, was manual and based on latent inventory and shipment status data. This was exacerbated by the fact that inventory status and condition data was held in separate logistics, procurement, and merchandising systems with limited ability to commit inventory quickly in view of revenue potential and opportunity costs to meet store and direct-to-customer orders.

However, by creating a set of “digital innovation” platform services layers tightly integrated with ERP, inventory, supply chain, and procurement systems, it was able to turn this around to create intelligent demand forecasts based on real-

time visibility of logical (e.g., safety stock), location, and physical status against orders and forecasts, visible to all ordering, supplying, and viewing channels, devices, and roles to support optimal order fulfillment.

This real-time visibility into product inventory in physical and virtual stores/facilities, enabled by a combination of IoT, AI, inventory management apps, and cloud technologies, improves omni-channel order orchestration and fulfillment service levels, which in turn drives return on inventory investment.

### Use Cases in Action: Early Warning Systems in Smart Cities

Cities, towns, communities, and regions are responding to a growing number of natural and human-made disasters (floods, fires, tsunamis, oil spills, terror attacks, etc.) with little preparation, mitigation, and advance notice. This leads to far greater instances of human loss and injury and to damage to infrastructure, property, and the environment.

A good example of a “fragile” city in this context is a capital city in Latin America. In 2013, relentless rain flash-flooded parts of the capital. This led to chaos for the 13 million inhabitants of the city, with nearly 100 people in the region losing their lives.

To prevent this from happening again, the city administration started to put sensors on drainage systems and gather early warning data on approaching weather. The sensors collect data on the level, speed, and direction of water flow in sewage drains. They automatically set off an alarm if the water levels start to rise too quickly, giving city administrators real-time data visibility which is critical in the event of urban emergencies. Even a delay of minutes could have catastrophic consequences.

Technologies such as IoT sensors, Big Data analytics solutions, mobile-enabled apps, and cloud are the basis for these early warning systems. They enable city administrators and emergency management personnel to quickly detect and respond to natural or man-made disasters, and to alert residents, halt critical infrastructure to minimize impact, reroute traffic, and deploy resources as quickly as possible.

### Use Cases in Action: Asset Optimization in Oil and Gas

In the oil and gas industry, assets tend to be monitored and inspected on a set schedule based on limited performance information compared to historical data. This puts operations at risk from unintended events and poor historical data. As part of this, some automated notifications of potential issues or performance data are provided, but these are very rudimentary.

A petroleum and natural gas exploration company was struggling to improve asset tracking and quickly identify emerging production issues. It created a

central operational cockpit integrating data from more than 15 systems and developed a mobile app for task and asset management. It now has real-time asset tracking and provides visibility on tasks, which helps to prevent production problems. The app was rolled out in less than 10 weeks. The overall system delivered a return on investment (ROI) within one year and delivered 15% productivity increases.

For this type of asset optimization use case, organizations are also looking to incorporate not only asset data but also external data, such as weather, OEM data, and benchmarking performance data, as an analytical foundation to predict asset life and maintenance needs. The objective is to reduce outages and improve asset performance, thereby minimizing inspections, which has a direct impact on the bottom line.

### Use Cases in Action: Improve Product Quality in Manufacturing

In 2009, a multinational automotive manufacturer indicated that it would have to recall 4 million vehicles due to faulty gas pedals. After a series of missteps, it was fined over \$1 billion by the US Justice Department.

This example highlights why product quality is such an issue for the manufacturing sector. Not only does it create significant extra work on the product design side, but it also negatively impacts customer satisfaction, causes reputational damage, and, most critically, has potentially significant financial implications.

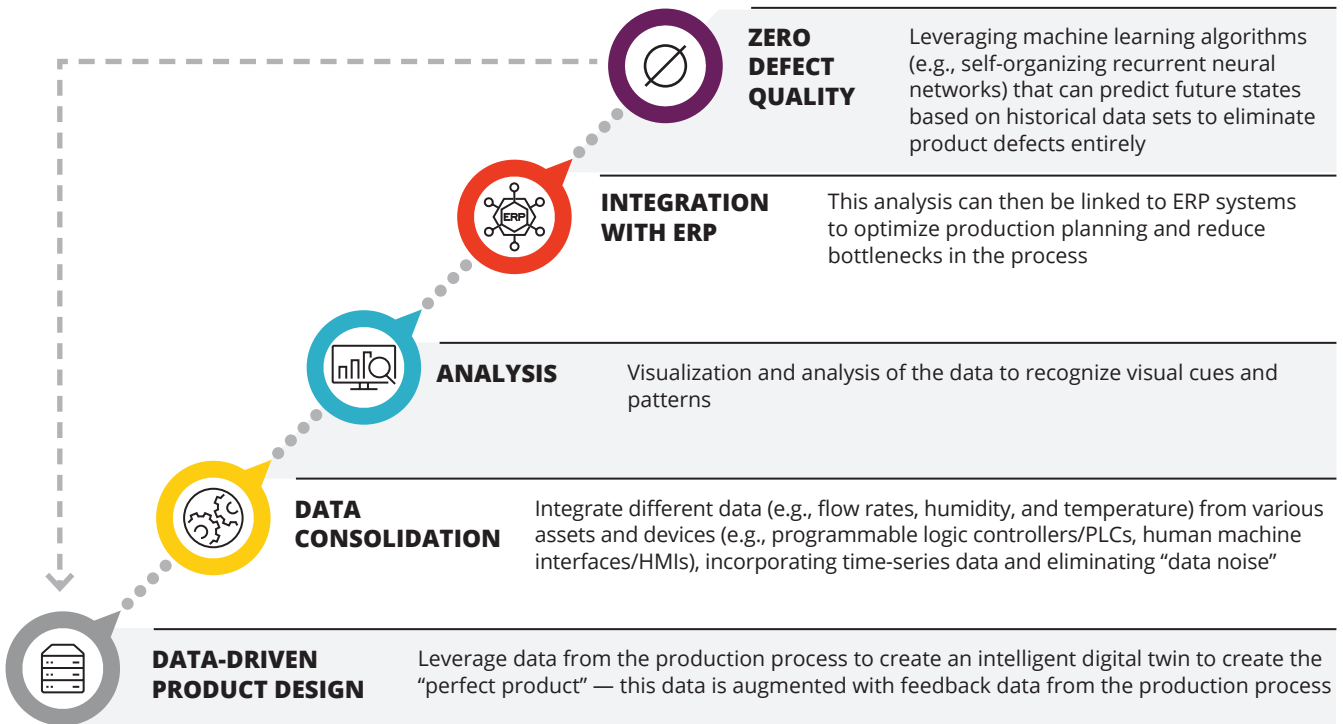
Historically, when there were product defects in the discrete manufacturing process, organizations would have brought in a subject matter expert (SME) with a problem statement to try and understand the origin of the defects. This would be time-consuming and would have required the collection of data from various stations on the shop floor. This was often exacerbated by organizations dealing with multiple assembly lines with disparate systems and devices running on different communication protocols. In addition, the data types and platforms were quite diverse and mired with scalability challenges. However, root cause analysis is critical to preventing further product issues and reducing the chance of costly recalls.

The good news is that connecting products, assets, and processes gives manufacturing organizations the opportunity to entirely rethink product quality. IDC believes that finding a path to zero defect quality will be critical to the future of digital manufacturing and to sustaining competitive advantage in the digital economy.

Following is an overview of how organizations can start to work toward zero defect quality manufacturing by embedding and extending core applications and AI, and augmenting them with data from IoT, integration capabilities, and data platforms.

FIGURE 2

The Path to Zero Defect Quality



Source: IDC, 2020

Use Cases in Action: Sentiment Analysis in Banking

In the banking industry, financial institutions often use disparate processes to track client satisfaction and improve client retention. However, new data sources and new ways of analyzing them open up the opportunity to understand consumer preferences, experiences, and expectations in near real time. Sentiment analytics of voice, email, and social and SMS data help to identify dissatisfied investment clients and improve client retention rates.

For example, a Central European bank has developed an AI algorithm to understand customer sentiment from social media feeds to help assess customers' views on various banks in Europe (both positive and negative). These reactions were then used to predict customer preferences and financial variables for those banks. However, sentiment analysis is not just limited to understanding customer preferences — it can also be used to monitor credit markets, equity investing, and compliance monitoring leveraging real-time data and analytics with AI technologies and natural language processing-sourced data.

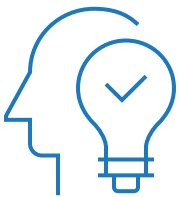
IDC believes sentiment analysis will be a critical way of combining external and internal data to not only understand customer preferences in real time, but also to drive new ways of doing business in the banking sector.

**IDC has highlighted five use cases that show how platform technologies can actively deliver key business outcomes:**

- Intelligent demand forecasting and order planning in retail to optimize inventory and improve customer experience
- Early warning systems in smart cities to prevent flooding and save lives
- Asset optimization in oil and gas to reduce outages and improve asset health
- Improved product quality in manufacturing to reduce costly product recalls and drive innovative new product development
- Understanding customer preferences by combining external and internal data to drive new ways of doing business in banking

These are only some of the potential use cases that need to be mapped, prioritized, and executed on as part of any digital road map.

IDC believes that the CIO and the broader IT organization should orchestrate the budgets, stakeholders, and technology outcomes to enable this type of business initiative. This highlights the importance of business outcomes and impact — and will be a critical enabler for the success of the digital moneymakers in 2020 and beyond.



**Conclusion:**  
**How the Digital Moneymakers Actually Deliver**

IDC predicts that 75% of organizations will be digitally transformed over the next decade — and that the rest will fall out of business. The difference between the winners and losers will be an organization’s ability to build out a data-driven, platform-enabled, and ecosystem-centric business model. To win this 10-year race to become a digital business, organizations need a new way of thinking, acting, measuring, and reporting success. The outcome will be a shift from traditional linear value chains to a model where all ecosystem interactions are part of a continuous feedback loop underpinned by a platform that enables the seamless flow of data across every single person and organization in the value chain.

This platform is a flexible application infrastructure architecture that enables the orchestration and automation of end-to-end business processes and the creation of a launchpad for business innovation capabilities.

**This is done by leveraging the following key capabilities:**

- Cross-silo analytics
- Intelligent technologies (such as AI, IoT, and intelligent RPA)
- Application development, integration, and extension
- Database and data management

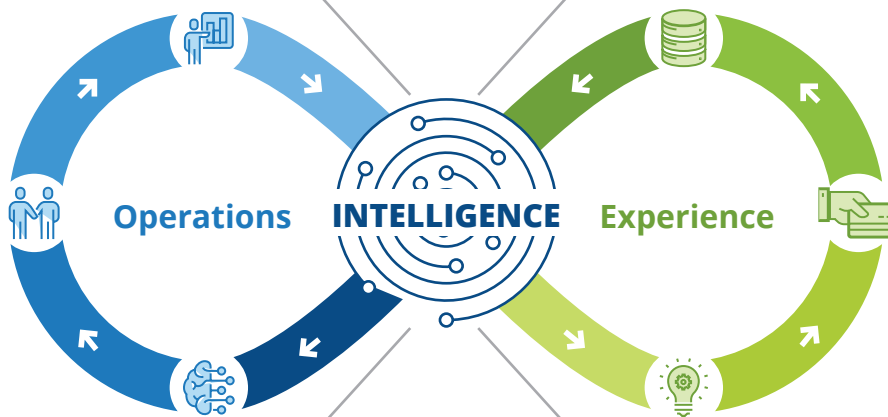
FIGURE 3

**Analytics**

- Collaborative planning
- Predictive analytics
- Reporting

**Data**

- Database
- Centralized data management



**Intelligent technologies**

- IoT
- AI
- Intelligent RPA

**Business innovation**

- Application development, integration, and extension

Source: IDC, 2020

**How can you make this happen? Technology leaders should:**

1. Focus on the use case, not the technology
2. Measure business outcomes obsessively
3. Build a digital dream team with technology leads as the orchestrator of budgets, technology architectures, and key business stakeholders
4. Think platform architecture to deliver business value, not application functionality
5. Create their own digital road map to align people, prioritize use cases, and execute at scale

The CIOs, CTOs, and chief data officers of the future will need to understand the potential of this approach to chart out the next phase of their personal careers and to take technology leadership to the board across all industries.

## About the Analysts

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### **Danielle Hernandez, Research Analyst**

Danielle Hernandez is research analyst for IDC's European Digital Transformation (DX) Practice. She covers a wide range of DX-related topics, focusing on assessing the digital impact of emerging technologies such as AI/cognitive and blockchain. She also supports IDC's regional and global consulting projects for key clients in the DX space.



### **Philip Carter, Chief Analyst, Europe**

Philip Carter is chief analyst for the European region, driving innovation in new research topics and deliverables, and promoting collaboration and knowledge sharing to increase customer satisfaction.

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### **IDC UK**

5th Floor, Ealing Cross,  
85 Uxbridge Road  
London  
W5 5TH, United Kingdom  
44.208.987.7100  
Twitter: @IDC  
idc-community.com  
www.idc.com

### **Global Headquarters:**

5 Speen Street Framingham,  
MA 01701 USA  
P.508.872.8200  
F.508.935.4015  
www.idc.com

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