DIGITAL PLATFORMS

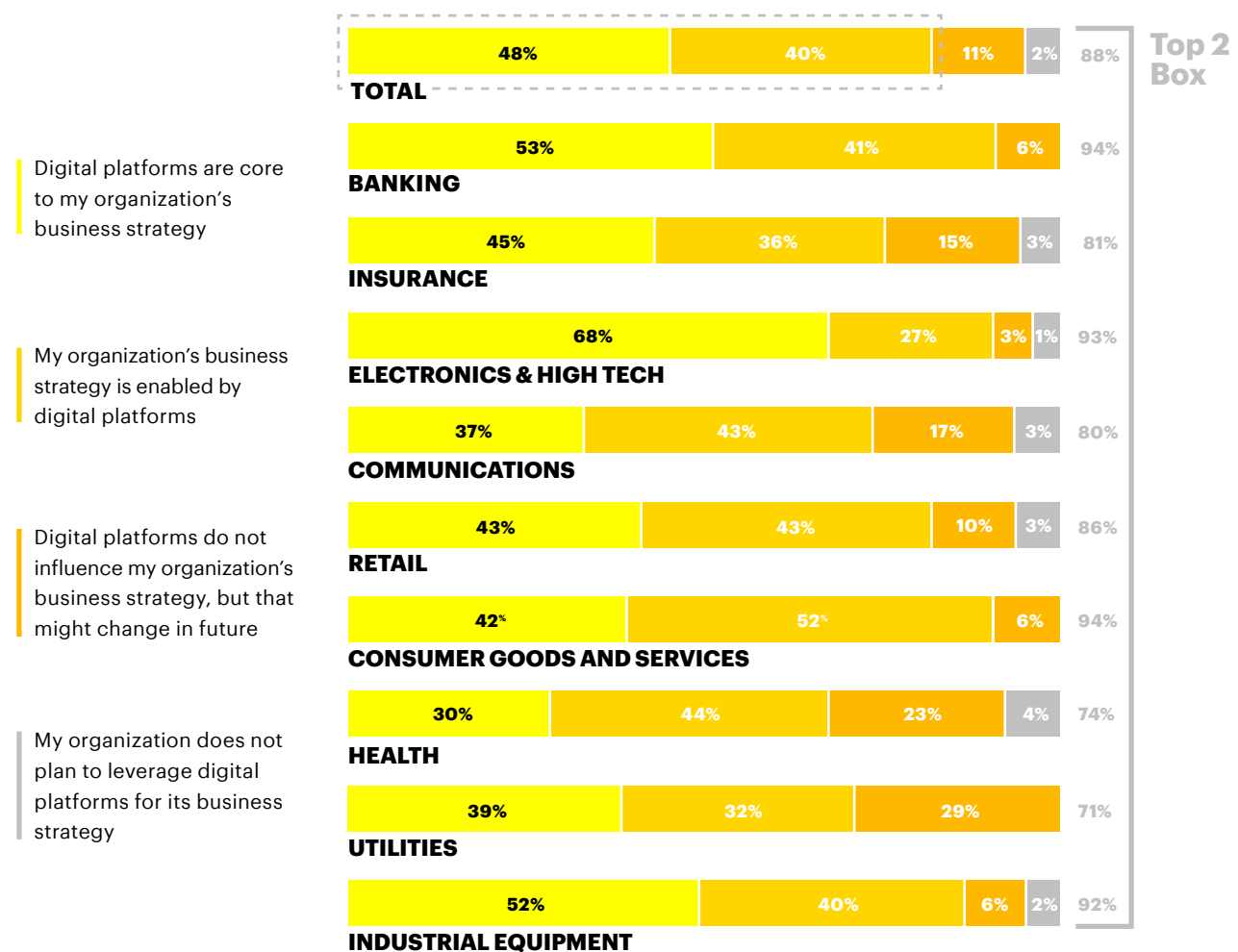**will define the winners and losers in the new economy**

New business models and strategies, made possible by increasingly powerful and pervasive digital platforms, are driving the most profound global macroeconomic change since the industrial revolution. In fact, platforms are fast becoming a competitive necessity and the foundation for new value creation—and companies that fail to embrace them could find themselves on the outside looking in. New Accenture research takes a closer look at how companies are approaching platforms, the progress they've made in using them to fuel their business strategies, and what they should do to build on their momentum.

The concept of a "digital platform"[1] is a major hot-button issue for companies today, and for good reason: They've become a driving economic force across virtually all industries.

In fact, platform business models represent a fast-increasing proportion of the growth of the digital economy, with the top 15 public platform companies already representing $2.6 trillion in market capitalization.[2] Indeed, networked markets underpinned by digital platforms are changing the way we live, work and play. As a result, virtually every industry has been, or will be, affected by platform economics.

Given this, it's no surprise companies are embracing digital platforms as a key part of their business strategy. According to Accenture research (see 'About the Research'), half of the companies we surveyed indicated platforms are core to their strategy and 40 percent said platforms enable it (Figure 1).

Figure 1: How central digital platforms are to companies' business strategy
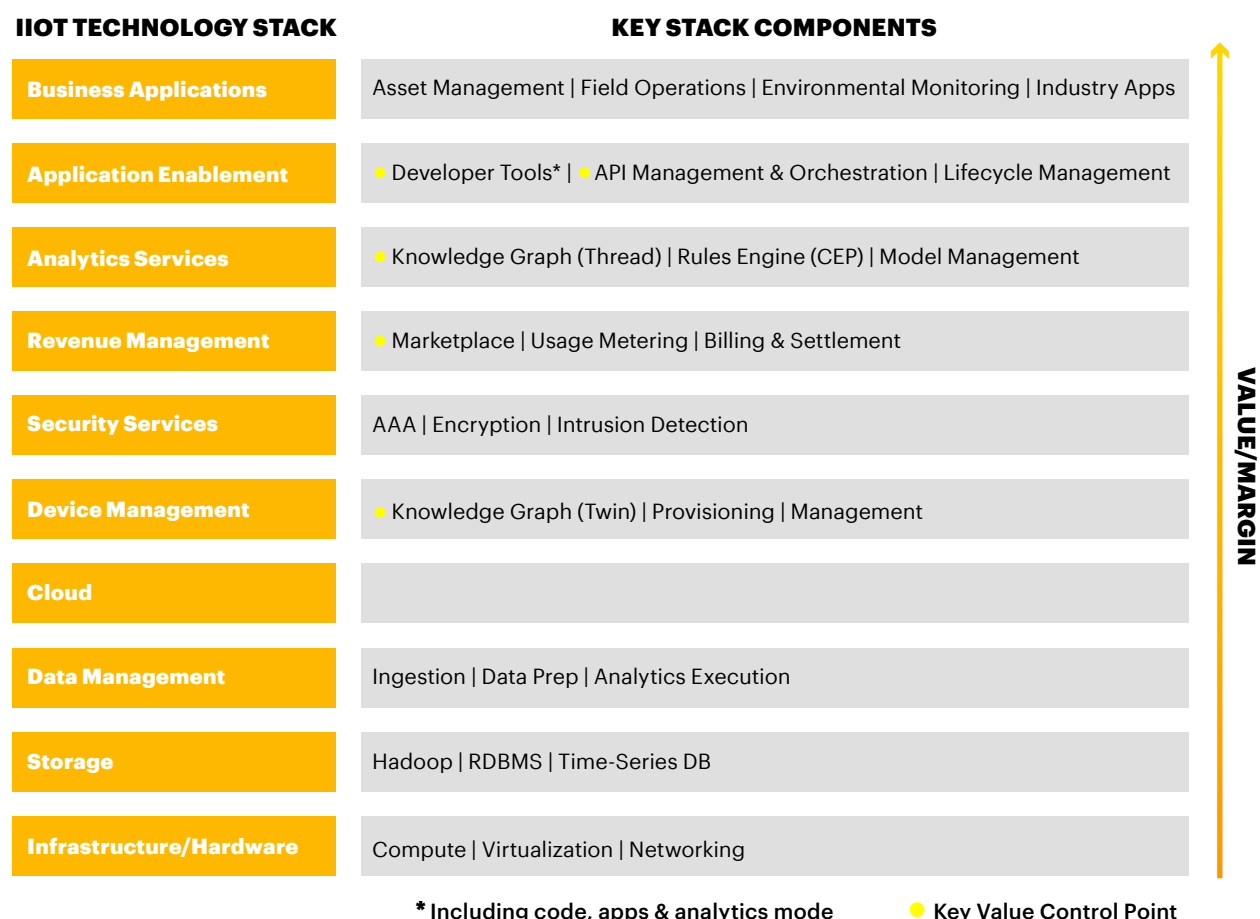
Legend:
- Digital platforms are core to my organization's business strategy
- My organization's business strategy is enabled by digital platforms
- Digital platforms do not influence my organization's business strategy, but that might change in future
- My organization does not plan to leverage digital platforms for its business strategy

Category	Core	Enabled	Might change	Not plan	Top 2 Box
TOTAL	48%	40%	11%	2%	88%
BANKING	53%	41%	6%		94%
INSURANCE	45%	36%	15%	3%	81%
ELECTRONICS & HIGH TECH	68%	27%	3%	1%	93%
COMMUNICATIONS	37%	43%	17%	3%	80%
RETAIL	43%	43%	10%	3%	86%
CONSUMER GOODS AND SERVICES	42%	52%	6%		94%
HEALTH	30%	44%	23%	4%	74%
UTILITIES	39%	32%	29%		71%
INDUSTRIAL EQUIPMENT	52%	40%	6%	2%	92%

What drives platforms' power? In general, a platform creates value in three key ways. It:

01 Provides a common set of functions that accelerate application development, so solutions can be deployed to the business more quickly

02 Connects an ecosystem of previously disparate devices, software, and service providers to drive more relevant and compelling customer outcomes

03 Fosters greater innovation among ecosystem participants

This value increases over time as more data, devices, business applications, and users are added, resulting in a virtuous cycle of value creation.

Companies that get the most value from platforms invest in higher levels of the platform stack—including business applications such as asset management and field operations, applications enablement, and analytics services—and make sure they own key control points across the platform (Figure 2). Doing so also enables companies to more flexibly deploy solutions and avoid being "locked in" by vendors.

Figure 2: Where companies should invest to get the greatest value from a platform

IIOT TECHNOLOGY STACK	KEY STACK COMPONENTS
Business Applications	Asset Management | Field Operations | Environmental Monitoring | Industry Apps
Application Enablement	● Developer Tools* | ● API Management & Orchestration | Lifecycle Management
Analytics Services	● Knowledge Graph (Thread) | Rules Engine (CEP) | Model Management
Revenue Management	● Marketplace | Usage Metering | Billing & Settlement
Security Services	AAA | Encryption | Intrusion Detection
Device Management	● Knowledge Graph (Twin) | Provisioning | Management
Cloud	
Data Management	Ingestion | Data Prep | Analytics Execution
Storage	Hadoop | RDBMS | Time-Series DB
Infrastructure/Hardware	Compute | Virtualization | Networking

VALUE/MARGIN

* Including code, apps & analytics mode   ● Key Value Control Point

But generating significant value requires more than simply "jumping in." Companies need to carefully define their platform strategy—i.e., pick where and how they play—to determine how platforms best fit their business. The two primary choices are either participating in orchestrating the value exchanges in a market connected via a digital platform.

A participating company joins the platform economy by providing products, services, information, or capacity that leverage assets in new markets. For example, a bank could participate in a financial services platform in several ways, such as owning the relationship with customers and leveraging partners to provide solutions; providing traditional core financial services; or contributing a secure system that gives consumers access to digital commerce.

An orchestrating company leverages various assets to create the platform infrastructure for an efficient two-sided or multi-sided marketplace connecting buyers and sellers. In other words, it

owns the platform on which other parties operate. Well-known examples of platform orchestrators include Alibaba, Airbnb, and TripAdvisor.

The fact is, the rapid expansion of platforms across industries represents a tremendous opportunity for companies to grow. But it also can seriously threaten a company's business—and in some cases, its very existence—if a company fails to effectively define its platform strategy. Whether a company "owns" a platform ecosystem or plugs into another's, what matters is having a platform strategy and the business know-how to exploit it.

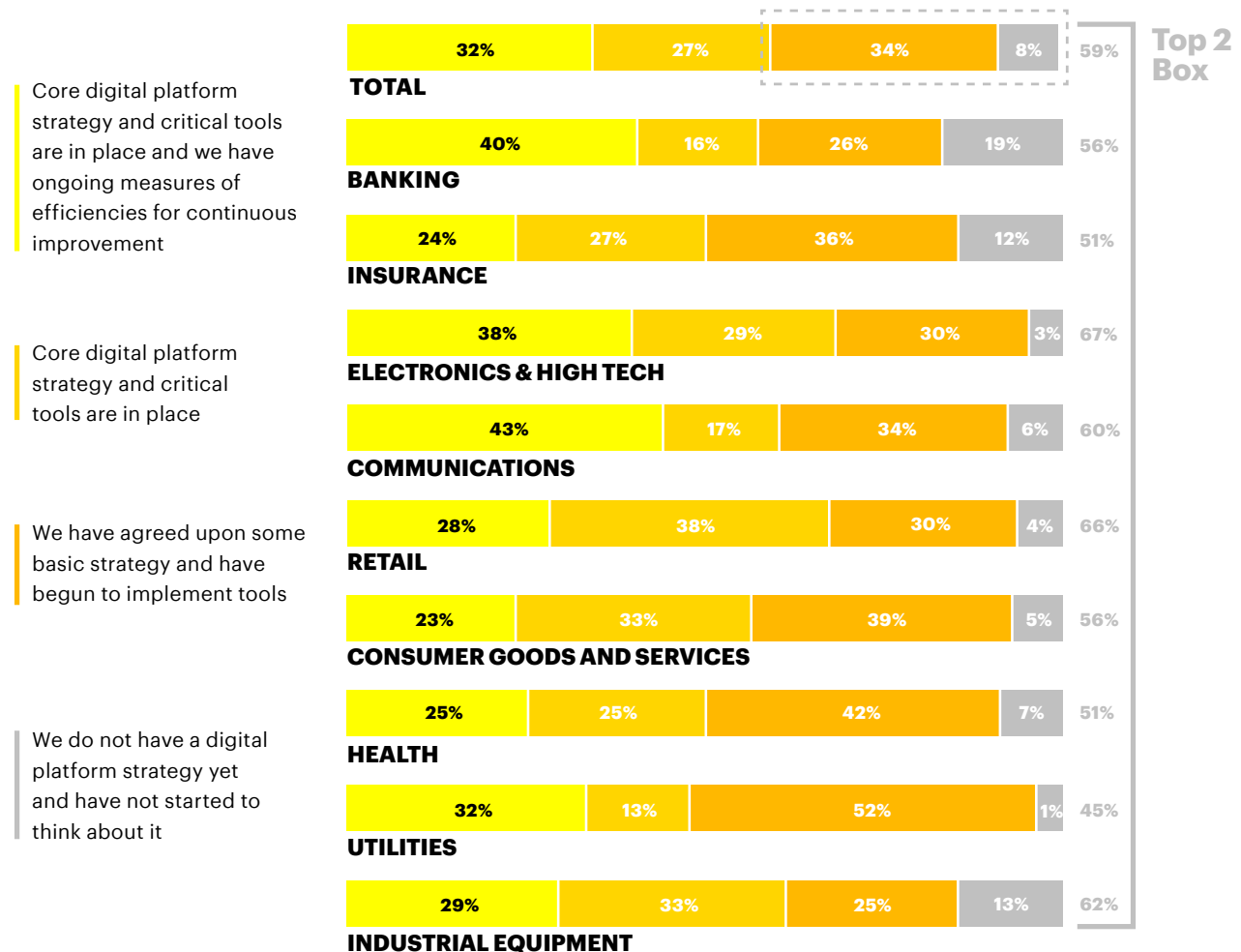## WHAT'S HAPPENING WITH DIGITAL PLATFORMS TODAY?

As noted earlier, our research suggests most companies have determined the role platforms should play in their business strategy. That's a great start. But we also found that actual implementation of platforms varies from company to company and industry to industry.
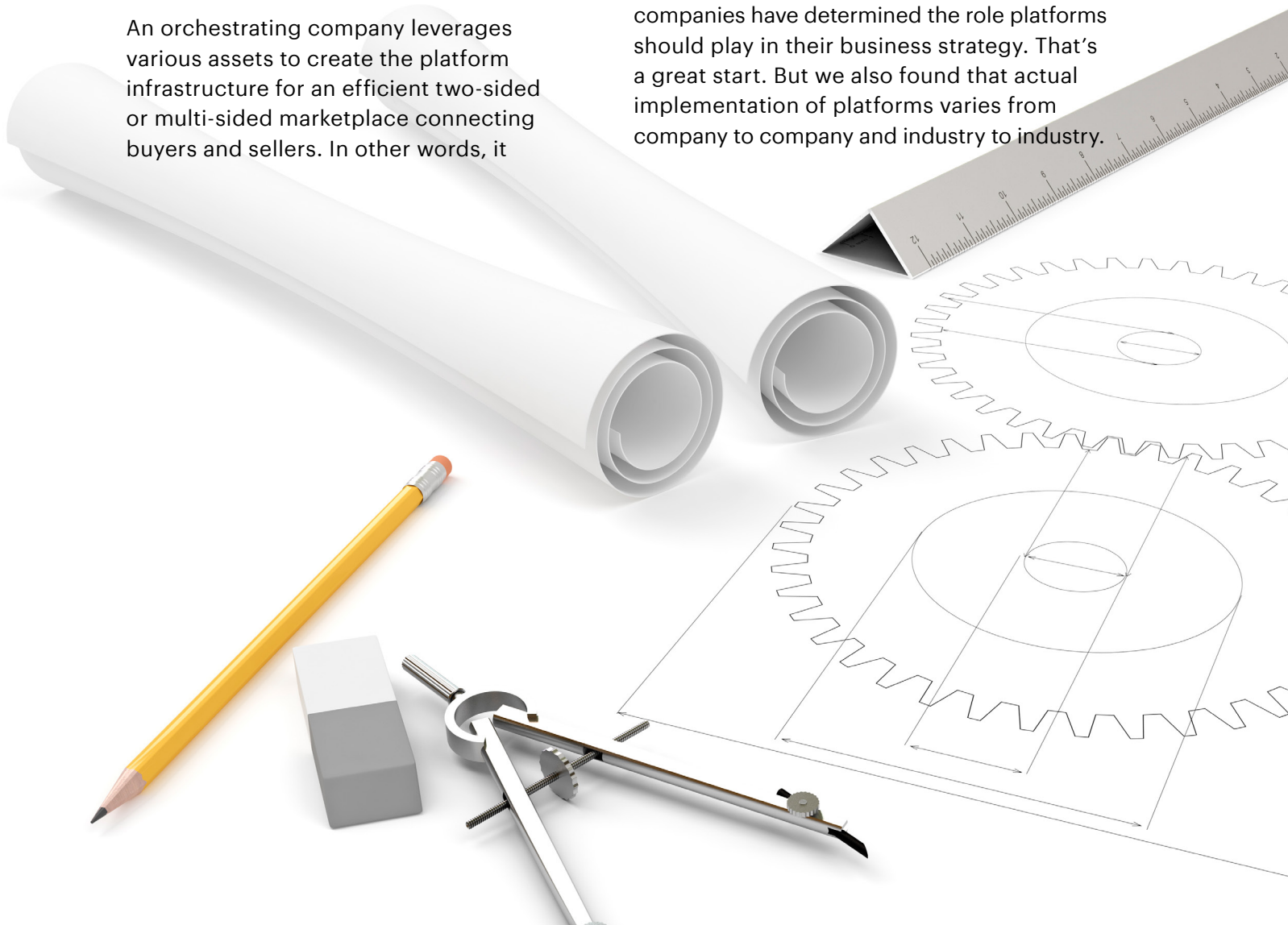
IMPLEMENTATION TO DATE AND PLANS FOR THE FUTURE

Just under six in 10 executives said their company has a core digital platform strategy and tools in place, with half of those executives also indicating their organization measures efficiencies on an ongoing basis to continuously improve their platforms (Figure 3). However, four in 10 companies have yet to get their platforms off the ground: Thirty-four percent have agreed upon some basic strategy and only have begun to implement tools, and 8 percent don't yet have a digital platform strategy and haven't even started to think about it.

Figure 3: Digital platform adoption progress to date

Legend:
- Core digital platform strategy and critical tools are in place and we have ongoing measures of efficiencies for continuous improvement
- Core digital platform strategy and critical tools are in place
- We have agreed upon some basic strategy and have begun to implement tools
- We do not have a digital platform strategy yet and have not started to think about it

Top 2 Box

Category					Top 2 Box
TOTAL	32%	27%	34%	8%	59%
BANKING	40%	16%	26%	19%	56%
INSURANCE	24%	27%	36%	12%	51%
ELECTRONICS & HIGH TECH	38%	29%	30%	3%	67%
COMMUNICATIONS	43%	17%	34%	6%	60%
RETAIL	28%	38%	30%	4%	66%
CONSUMER GOODS AND SERVICES	23%	33%	39%	5%	56%
HEALTH	25%	25%	42%	7%	51%
UTILITIES	32%	13%	52%	1%	45%
INDUSTRIAL EQUIPMENT	29%	33%	25%	13%	62%

Actual platform use today is most prevalent among electronics/high-tech companies and retailers, which our survey found are the furthest along in deploying them. At the other end of the spectrum, utilities, health companies, and insurance companies lag behind.

Overall, platforms command significant investment among companies in our research, and spending is expected to jump in the coming years. Sixty-five percent of companies currently dedicate between 11 percent and 20 percent of their IT budget to digital platforms today. In the next three years, four in 10

companies plan to boost what they spend on digital platforms by more than 10 percent, while the average investment across all companies is projected increase by 3 percent.

As they invest in digital platforms, just under seven in 10 executives said they prefer to develop them by partnering with external vendors (Figure 4). Among those executives, systems integrators are the leading choice, followed by original equipment manufacturers, enterprise software providers, and cloud infrastructure providers. Companies are more likely to pay for their platforms via non-traditional pricing models—either pay-as-you-go or subscription-based—than to use traditional commercial models (Figure 5).

Figure 4: Preferred ways to develop digital platforms

Leverage ecosystem partner to provide the capabilities

We develop/plan to develop in-house

MODE OF ADOPTION

8%

23%

69%

We develop/plan to develop these in collaboration with an external vendor

Enterprise software providers (e.g. SAP, Oracle)

Cloud infrastructure providers (e.g., Azure, AWS)

System Integrators (e.g., Accenture, IBM)

TYPE OF THIRD PARTY

13%

36%

22%

29%

Original Equipment Manufacturer (OEM) (e.g. Siemens Mindsphere, GE Predix)

Figure 5: Preferred payment models for digital platforms

Pay as you go	19%
Subscription—by transaction/consumption-based	19%
Subscription— by outcome (risk/cost-sharing model)	6%
Traditional commercial models like system integration and maintenance	24%
Capex	18%
Opex	13%

44%

BENEFITS COMPANIES EXPECT PLATFORMS TO DELIVER

Regardless of how far along they are in platform adoption, most companies see platforms as key to advancing growth-oriented initiatives (Figure 6).

Figure 6: How companies benefit from digital platforms

Benefit	Percentage
Enable new ways of engaging with customers (rethinking new channels)	53%
Develop platform-as-a-business (e.g., marketplaces like Airbnb, Uber)	50%
Reimagine experience for customers or employees (e.g., digital agencies (AR/VR)	44%
Intelligence-driven enterprise to optimize operations	44%
Launch products-as-services (e.g., Netflix)	44%
Co-create new services with ecosystem partners (e.g., enable third-party developers)	29%
Distributed process automation (intelligent edge devices)	18%

Source: Accenture Digital Platforms Survey, 2018

For example, 53 percent of executives said digital platforms enable new ways of engaging with customers—a benefit that industrial equipment manufacturers are most likely to cite (71 percent). GE is a good example. The company has built an application platform that runs a variety of digital industrial solutions that enable its customers to generate deep insights from their industrial data that helps them improve their processes, lower their costs, and reduce risk. Case in point: Through sensors mounted on its turbines at a power-plant customer, GE was able to detect some irregularities in how the turbines were operating and proactively notify the customer of the issue. While inspecting the turbines, the customer found a defect in the equipment and scheduled downtime to replace the faulty component—thus avoiding the risk of a catastrophic failure.[3]

Exactly half of participating executives indicated digital platforms can also help their companies develop a platform-as-as-business model (i.e., orchestrate the platform). This use of digital platforms is most prevalent among communications (66 percent) and electronics/ high-tech (65 percent) companies. TripAdvisor, for instance, started as a simple site to host user-generated travel reviews but has grown into a massive disruptive force whose platform connects users with 7.5 million accommodations, airlines, attractions, and restaurants around the world—thus aggregating a formerly highly fragmented industry. TripAdvisor-branded sites now see an average of 455 million unique visitors every month.[4]

Forty-four percent said platforms can drive a reimagining of experiences for customers or employees—for which Amazon has become famous. Amazon's powerful platform has been instrumental in the company's reinvention of the retail shopping experience, providing unparalleled convenience, selection, and personalization that consumers now expect from all the companies they buy from.

Forty-four percent also reported platforms can help them launch products as a service. A classic example is Michelin's move from a pure product focus—i.e., making tires—to offering "tire-as-a-service" by leveraging data from connected engines and tire sensors, as well as GPS devices. This service helps reduce fleet operators' fuel consumption and reduce their overall costs, and allows them to pay for tires on a kilometers-driven basis instead of purchasing the tires outright.[5]

CHARACTERISTICS COMPANIES LOOK FOR IN A DIGITAL PLATFORM

Achieving such benefits hinges on a platform's inherent characteristics and capabilities. Broadly speaking, these boil down to three key requirements, cited by about eight in 10 executives in our survey.

First, a platform must be flexible, extensible, and modular with an open architecture. Applications built on a digital platform change and evolve rapidly. An open, modular architecture that promotes scale, as well as the reuse of a common set of functions built on standards-based services, enables a company to keep pace with new technologies and changes in ecosystem demands.

Second, it must be able to deliver products and services externally to customers. To meet the needs of different customers and partners, a platform must support multiple channels (e.g., mobile devices and web), as well as provide access to its services via APIs while consuming data from other platforms via their APIs. This is critical to the exchange of value among all ecosystem participants.

Third, it must enable companies to deliver broad, vertical solutions rather than specific ones. The broader the range of services the digital platform provides, the greater a company's ability to deliver an expansive set of applications (including cross-offering and mash-up applications). This increases both the consumption and the valueof the data and services used across a company's business and channels.
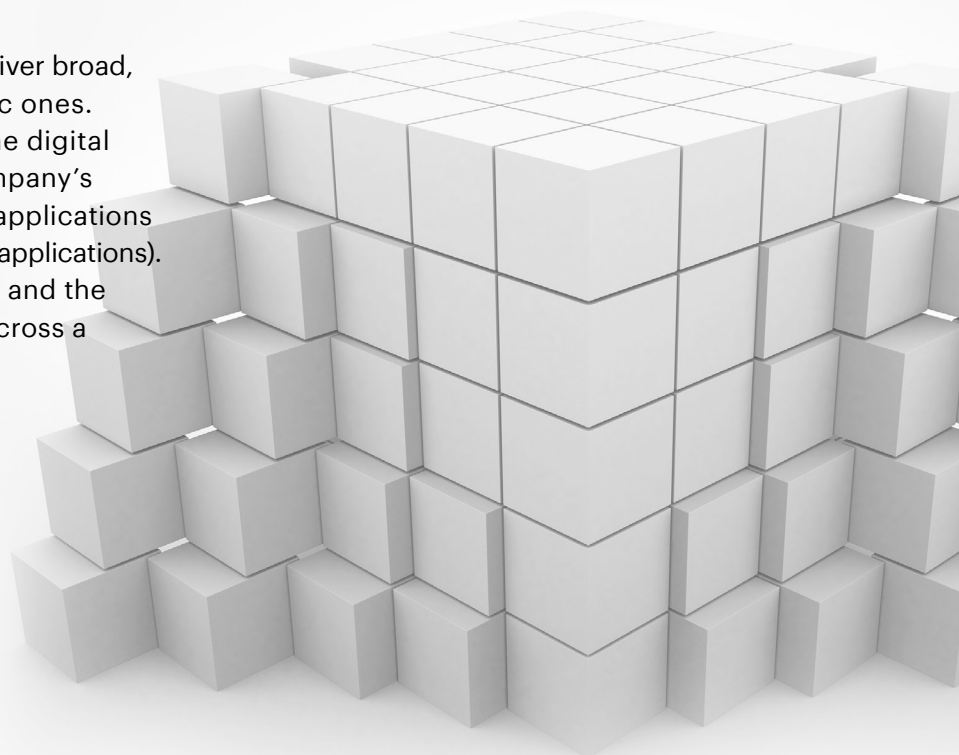
WHAT ARE THE DIGITAL PLATFORMS OF TOMORROW?

Digital platforms have been around for quite some time and have evolved as new technologies, participants, and use cases have emerged. This trend will continue as platforms become even more fundamental to how companies and industries operate.

Currently, the platform vendor landscape is fragmented and continues to diversify. Eventually, best-practice architectures will develop around key horizontal elements, with vertical specializations—for example, smart parking, connected insurance, or fleet management enhancements.

Within a few years, semi-autonomous features will arrive on the scene, as machine-to-machine connectivity and analytics become more embedded in platform features. These platforms will increasingly incorporate edge analytics—in which data is analyzed at the source and insights are shared instantly instead of being sent to remote cloud or enterprise data centers—while delivering industry-agnostic functions (such as geolocation, identification, and security enabled by beacons). We also expect to see platforms that feature mixed reality capabilities, which enable a new class of products that merge the physical and digital worlds. For example, by combining IoT and augmented reality, these platforms will offer companies new ways to design, monitor, and manage products.

In the longer term, the platform will become the core of all self-governing activities. No human directions will be needed, as strong ecosystem integration driven by artificial intelligence and associated technologies will enable frictionless actions.

For instance, the platform will enable autonomous vehicles to fulfill their promise to make roads safer, reduce environmental impact, create more compelling products and applications for consumers, and generate fresh new revenue streams for companies. In the manufacturing sector, the platform will support devices that connect field agents directly to the factory floor or the broader supply chain so they can detect potential issues and take preventive actions in real time.

New platforms also will emerge to support the monetization of the data generated by the billions of connected devices in operation around the world. These data marketplaces will unite buyers and sellers to unlock the value in IoT data assets. In fact, a number of start-ups are already competing to become the "eBay of IoT data" and have advanced proofs of concepts they hope to eventually scale. Once established, these marketplaces could provide significant new revenue streams for companies with rich data to sell, and valuable new data that buyers can use to can augment their own data to improve insights and decision making.

WHERE DO COMPANIES GO FROM HERE?

It's clear the future of business is platforms and that, without a sound platform strategy, a company will find itself increasingly at a competitive disadvantage and will struggle to grow. If they haven't already, companies must define whether they participate in emerging industry platforms or operate a platform that benefits the industry ecosystem. As they do so, they need to think critically about what role they can most effectively play, now and in the future, and what advantages exist in participating in certain ecosystems while intentionally opting out of others.

With a digital platform strategy and plan in place, a company then should define an initial set of use cases that support that strategy and identify specific services and implementation patterns common across those use cases. These common services and patterns, in turn, form the starting point for identifying the company's best approach to developing its digital platform (i.e., buy, build, or partner). Leading cloud providers, industry platforms, and SaaS vendors offer a wide range of services; many companies use a mix of providers to fulfill their strategy's requirements.

Importantly, as companies build out their platform, they need to keep in mind the core tenets of a successful platform: extensibility, flexibility, scalability, and technology openness. These are critical to building digital solutions that can evolve and expand rapidly and accommodate unknown future requirements—something all companies will need to compete and grow in the future.

END NOTES

[1] We define digital platforms as a foundational technology that allows for the creation of new services facilitating an exchange between producers and consumers of information, products, or services; and that enhances an organization's digital processes and capabilities. Digital platforms connect both people and/or things to provide data-driven intelligence as well as actions that extend the digital business ecosystem.

[2] "Platform Economy: Technology-driven Business Model Innovation from the Outside in," Accenture, 2016, https://www.accenture.com/t20160823T222808Z__w__/us-en/_acnmedia/Accenture/Omobono/TechnologyVision/pdf/Platform-Economy-Technology-Vision-2016.pdfla=en#zoom=50

[3] "Power Plant Avoids Catastrophe by Proactively Replacing Faulty Transition Piece," GE case study, https://www.ge.com/digital/stories/power-plant-avoids-catastrophe-proactively-replacing-faulty-transition-piece, accessed May 2, 2018.

[4] "About TripAdvisor," TripAdvisor media room, https://tripadvisor.mediaroom.com/US-about-us, accessed May 2, 2018.

[5] Driving Unconventional Growth Through the Industrial Internet of Things, Accenture, 2015. https://www.accenture.com/ph-en/_acnmedia/Accenture/next-gen/reassembling-industry/pdf/Accenture-Driving-Unconventional-Growth-through-IIoT.pdf; Accenture Collaborates With Michelin To Launch Michelin solutions, A New Mobility-Focused Business Based on Accenture Cloud Platform, Accenture Newsroom, July 19, 2013, https://newsroom.accenture.com/subjects/alliances/accenture-collaborates-with-michelin-to-launch-michelins-new-mobility-focused-business-based-on-accenture-cloud-platform.htm

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ABOUT THE RESEARCH

Accenture surveyed 500 C-level executives in 12 countries (Germany, Australia, Brazil, China, France, Italy, Japan, Singapore, Spain, United Kingdom-Ireland, and the United States). Respondents represented companies across nine industries (banking, insurance, electronics and high-tech, communications, retail, consumer goods and services, health, utilities, and industrial equipment) with annual revenue of at least US$500 million (19 percent had revenues of more than US$10 billion). Sixty-nine percent of companies were business-to-business firms while the remainder were business-to-consumer enterprises.

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