Digital operating models
How leading companies achieve results in the digital world

pwc

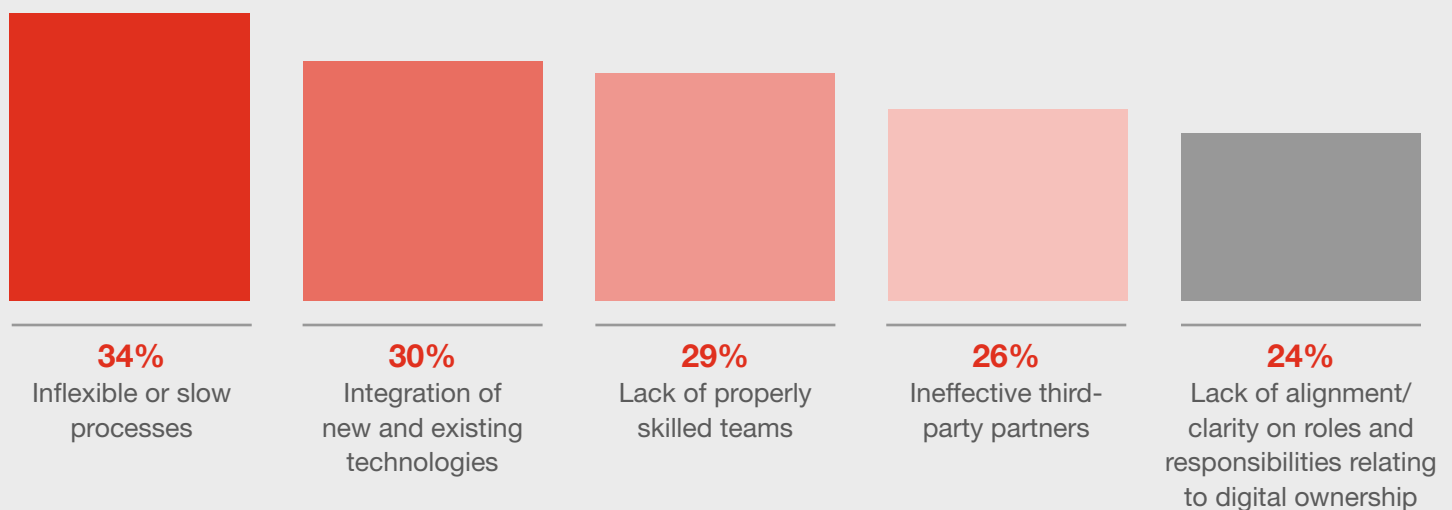# Why do some companies consistently outperform their peers?

Digital technology continues to transform the enterprise in powerful and profound ways. It is transforming the way we work, the way brands perceive and present themselves, even the structure and behavior of entire organizations. This transformation is happening at a lightning pace that is only accelerating.

Today, many organizations have moved beyond pondering digital strategies. Now, executives are asking: "How do we achieve results in a digital world?" That's a key difference, because "digital" is no longer something distinct. Rather, it is a force that crosses a wide range of disciplinary and organizational boundaries within the enterprise and across its extended value chain—all of which requires a massive shift in thinking about how to execute and operate. Digital is no longer just about marketing and the customer experience, while those are still important. The employee experience also needs to be reimagined in a digital world, as do all production, supply chain, and service operations.

We've been studying this evolution for nearly a decade through our Digital IQ research and have identified what sets leading organizations apart. Now, we seek

Top barriers to executing digital strategy

34%	**30%**	**29%**	**26%**	**24%**
Inflexible or slow processes	Integration of new and existing technologies	Lack of properly skilled teams	Ineffective third-party partners	Lack of alignment/clarity on roles and responsibilities relating to digital ownership

Source: PwC, *2015 Global Digital IQ® Survey*; Base: 1,988
Q: What is the leading challenge to your organization achieving its digital vision?

to dive deeper and uncover what makes them tick. For this report, we identified a dozen global companies that have cracked the digital code—turning high-level talk about digital strategy into meaningful, high-quality, operational action across the enterprise in a consistent, fast, and predictable way. These companies are globally located and span major industry sectors, including consumer goods, travel and hospitality, financial services, healthcare, and retail. Our goal was to learn from these digital exemplars and identify the leading practices of a digital operating model.

One of the most fundamental characteristics of a digital operating model is the recognition that digital, properly executed, is not a new department in the company. Rather, it is a set of enabling technologies and new ways of working that fuses analytics with human-centered design that influences the organization across the board. As such, success requires *revolutionary* changes to the way work is done, not evolutionary baby steps. In this

sense, digital disruption impacts the enterprise itself, not just the markets in which it competes. This can (and should) affect the entire mindset of the enterprise. For one retail company in our study, that meant transitioning from thinking of itself as a food company to becoming an ecommerce company that specializes in food and investing in a coherent set of capabilities that reflect this strategic shift. These kinds of changes don't happen overnight, and any organization hoping to follow in the footsteps of these leaders should expect to expend considerable effort on the transition.

Our analysis uncovered six key findings—all actionable, operational tactics—that can help organizations better execute on their digital strategies. These are not necessarily universal behaviors—not every company we interviewed undertakes every one of these six actions— but they are all leading practices of this cohort. Adopting as many of these operating model practices as possible is a sure step toward digital success.

Six leading digital operating model practices

1. Redefine what digital means to the enterprise.

2. Appoint a Chief Digital Officer or equivalent.

3. Focus on platform capabilities.

4. Invest in digital hubs.

5. Build and optimize agile delivery pods.

6. Prioritize talent recruitment and retention.

1. Redefine what digital means to the enterprise.

A strong digital operating model begins by re-evaluating the very idea of digital. This can be a complex undertaking because digital is a term with no set definition. What it doesn't mean is simply developing a mobile app and upgrading the corporate website. Today, digital goes beyond the front-end customer experience and extends deeply into the enterprise and impacts every facet of the business. It can take some effort to digest that idea and set priorities for what capabilities to build and how to operationalize them.

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Digital includes not only consumer marketing but also the way we collaborate with our customers.

Vice President, Global Customer Marketing, Consumer Products

What defines digital success?

How can digital capabilities be leveraged to make the overall enterprise more efficient and effective? How can digital be used not just to increase the speed of the organization but also to improve quality, lower costs, and mitigate risks? Digital leaders recognize the difficulty in answering these questions but work to use digital tools to improve efficiency organization-wide. As a corollary to this, digital leaders expect their business ideas on emerging technology and digitally enabled innovation to be implemented in all parts of their businesses, both from a top-down and bottom-up perspective. The ideal digital planning cycle involves a two- to three-year horizon, optimally with continual revisions in response to market forces, much as a software company releases products on an ongoing basis.

Opportunities to improve enterprise efficiency and effectiveness can be found at every intersection of the digital and physical world. Some leading digital organizations further define digital as every interaction they have with customers and employees. Even though not every customer and employee touchpoint today includes digital, digital leaders see this mindset as proactive and a key way of differentiating themselves from the competition. That does not, however, mean merely chasing after the latest trends because they have a digital component.

Finally, digital leaders know that in defining digital, it's critical to look beyond direct competition. Differentiation can be found by digging into the best practices of unrelated industries to understand how digital is driving their successes and determining how to adapt those tactics for their own digital operating model. Indeed, customer and employee expectations are defined by their most recent interactions, regardless of where they occur.

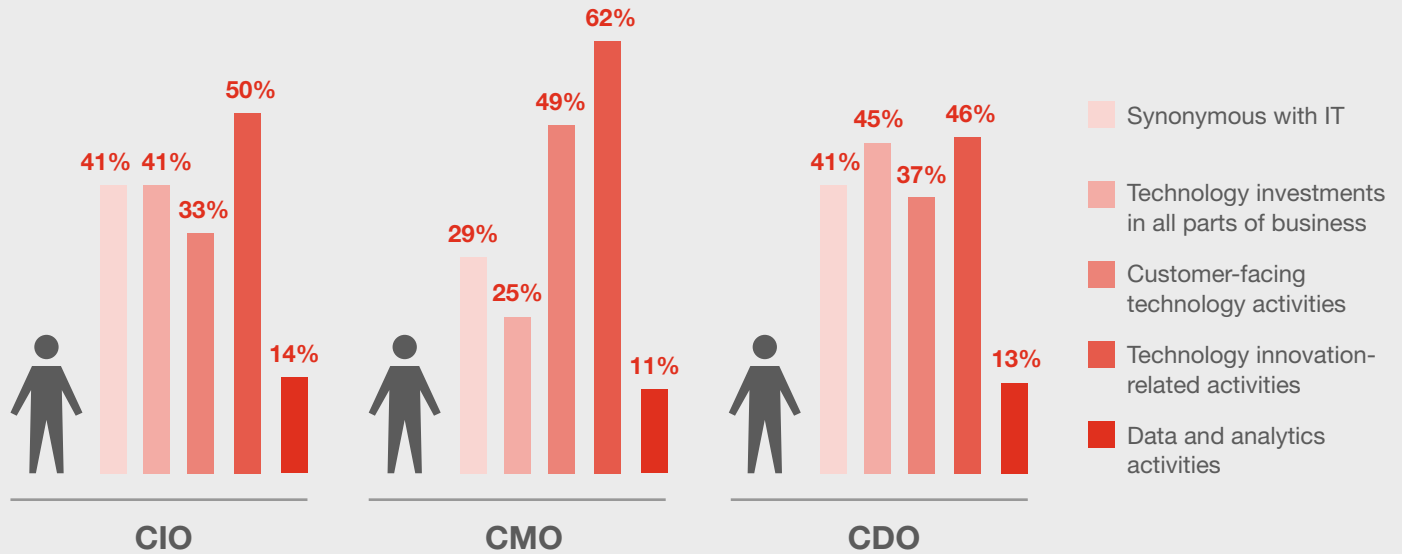Improving efficiency organization-wide

Interacting with customers and employees

Learning from and leveraging best practices from other industries

Digital disconnect: how leaders see digital

CIO
- 41% Synonymous with IT
- 41% Technology investments in all parts of business
- 33% Customer-facing technology activities
- 50% Technology innovation-related activities
- 14% Data and analytics activities

CMO
- 29%
- 25%
- 49%
- 62%
- 11%

CDO
- 41%
- 45%
- 37%
- 46%
- 13%

Legend:
- Synonymous with IT
- Technology investments in all parts of business
- Customer-facing technology activities
- Technology innovation-related activities
- Data and analytics activities

Source: PwC, *2015 Global Digital IQ® Survey*; Base: 1,988
Q: How does your organization define digital? Select up to two statements that best describe your company.

"…this has been a **challenge** to define"

"improving employee **processes and ways of working**"

"an internal setup to enable employees with IT to **connect with the customer**"

"positioning our business to **operate with a competitive advantage** in a world that is digital"

2. Appoint a Chief Digital Officer or equivalent.

Chief Digital Officer (CDO) is still a long way from becoming a standard job title. Of the world's largest public companies, less than 10 percent have a CDO, either in name or responsibility, while more than half of the digital leaders we studied do. Digital leaders by and large do tend to recognize the importance of this position, however, though titles other than CDO are common. Generally, a CEO will create a CDO position when the financial effects of the company's digital challenges become tangible and to encourage a more enterprise-wide approach to digital efforts.

What does a CDO do? Well, that varies too, but ultimately the job involves accountability for anything related to digital technology and experience design. At a financial services provider, the CDO position was created to unite two digital teams that had evolved separately. Now the web and mobile teams work together under a single banner. For a retailer, the CDO position was designed to head up development of digital products for online channels. All told, PwC's Strategy& research has uncovered five different archetypes for the CDO role, which can range from sales-centric positions to jobs that focus more on how digital disrupts operations and the supply chain.

Regardless of the specific title and responsibilities, having broad support for the CDO and for digital initiatives within the C-suite is critical to success. It's worth noting that a CDO does not and should not replace the CIO. When a CDO is present, a healthy collaboration between the CMO and CIO is still critical to building the organization's digital capabilities and driving new ways of working in the organization. It is the explicit endorsement of the CEO that enables a CDO's leadership to permeate all aspects of the business and to deliver impactful solutions across disparate teams, data, and third parties.

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The CDO is a bridge between tech and marketing.

VP Ecommerce, Retailer

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[The team is] still small enough that the CDO has the pulse on every major project.

Chief Digital Officer, Retail and Consumer

3. Focus on platform capabilities.

Digital leaders leverage digital to inform the overall perspective of how the company operates. This can involve some profoundly "big bets" that change the entire focus of the organization. Like the food company that reimagined itself as an ecommerce one, a well-known toy company we studied changed its organizational focus to being an entertainment company that also happens to make physical toys.

These kinds of sea changes are also part of what digital leaders define as shifts to the platform, and building out the capabilities of that platform is a major focus of these organizations. This platform approach varies from company to company though it often revolves around the concepts of consistency and standardization—establishing consistency across code bases, standardizing processes and development tools, and consolidating technical platforms. These types of activities are key because they free an enterprise to look at the bigger picture. When the IT organization is stuck in the weeds, too much effort is often wasted on low-level maintenance and bug fixes. When a proper platform is developed, resources can suddenly be reclaimed.

For example, at one financial services firm, the company's technology audit uncovered over 100 different websites being operated under different brands. Each site had to be maintained separately. If one piece of data changed, it had to be updated on each site individually, requiring a massive amount of time and invariably leading to an inconsistent user experience. As part of the company's upgraded digital strategy, these sites were all consolidated under a single platform, which helped accelerate building out a more coherent set of capabilities and experiences.

Platforms work in tandem with agile methodologies, which are another essential component of a high-functioning digital operating model. Without a platform in place, agile is unlikely to take root, and the company is prone to fall back into traditional, waterfall-like development methodologies. Failure to develop a platform limits architectural options, the depth of services the organization can provide, and its overall ability to innovate. Conversely, with a platform in place, the organization is more likely to overcome inertia in building more scalable and repeatable methodologies that can be applied across the board in a variety of scenarios, even when third parties have to be brought into the fold.

Remember that the platform is abstracted from the day-to-day of development. It is not the place to add a new feature to the company's mobile app but rather a place for the development of company-wide digital strategies. More tactical development activities like this occur in specific organizational structures, which we'll describe within the next two sections.

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Over two decades of product development had been distributed across various business units, causing resource duplication, process redundancies, and inconsistencies.

Chief Information Officer, Financial Services

4. Invest in digital hubs.

Digital leaders are driving a new concept in the way all kinds of work is structured, through what is known as the digital hub.

The digital hub is a way of enabling digital operations, and it works through the principle that physical proximity can remove unnecessary hurdles that slow the agility of the enterprise. This is an outgrowth of agile development methodology, but the digital hub takes this idea to a much deeper level by actually placing cross-functional teams in the same physical environment, where they can work together, side by side, using the same methodologies and tactics while learning from one another. These hubs can be distributed geographically around the world rather than being exclusively located in offshore zones. Hubs are best located where pockets of digital talent already exist and in areas where

communication with other hubs and headquarters is not problematic.

This is a surprising and possibly even counterintuitive idea given today's focus on virtual teams, a globally-located workforce, and flexible work structures. But digital leaders have shown that this concept works by creating more consistency in delivery, improving the predictability of long-term planning, and lowering the overall cost of doing business. Leaders say that digital hubs foster an environment of creativity and collaboration across team members and aid them in identifying new opportunities and solutions to problems. Digital hubs also foster a closer relationship between digitally-focused talent and other cross-functional team members on key initiatives. Hubs can be dynamic and exciting places for those who work in them; hub-based employees are often

" [Hubs] help prevent a clash of roles and responsibilities between digital initiatives.

Chief Digital Officer, Financial Services

excited to come to work there, and they tend to be more engaged than workers in traditional environments.

One key aspect of digital hubs is that they need not be located in the same place as corporate headquarters, and in many cases it's actually more productive if they are not. Critically, having flexibility in locating digital hubs can give organizations better access to key talent. For example, one consumer goods company discovered it was unable to attract talent to its home base in a rural zone. By working to construct a hub in a major urban center (in another country), it gained instant access to some of the brightest and most digitally savvy workers in the region.

Note that the digital hub isn't merely a satellite office. It is a place where the organization locates key talent and drives new methods for how this talent works with the rest of the organization. As teams are developed, org chart lines begin to blur (just as the line between business and technology has begun to blur), and the methods of recognizing, motivating, and compensating these workers is typically altered as well.

Building a digital hub—or, for larger organizations, a number of digital hubs in different locations around the globe—is not without significant challenges. Some hubs may be located far from company leadership. As well, the hub's inherent integration may result in an exclusionary atmosphere that may be hard for other groups, including management, to penetrate. Coordinating activities among multiple hubs can be particularly difficult; one leader describes multi-hub coordination as the greatest challenge she faces in dealing with hubs. There's also the question of whether hubs can be virtual instead of physical. One company studied for this report has had some success with this through the use of sophisticated telepresence technology, though this represents a substantial financial investment (considering relocation costs, real estate, furnishing, telecommunications needs, and more) and requires a significant change to working habits.

However a hub is organized, digital leaders say that hubs enable the creation of more effective, tactical working teams. We'll discuss those small, operational teams— delivery pods—in the following section.

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5. Build and optimize
agile delivery pods.

Agile methodologies continue to rise in prominence, and agile has become a mindset that now applies well beyond the software development team. In digitally leading companies, agile has become the basis for an alliance among business, IT, and third-party vendors, and support from the C-suite is driving its adoption across the enterprise as part of an ongoing evolution.
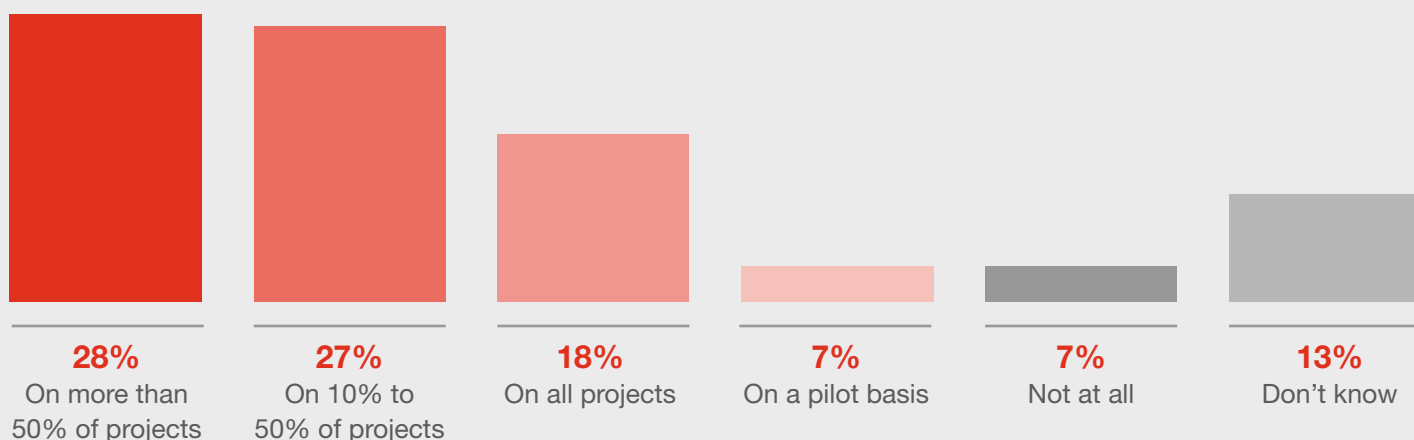
Digital leaders are using the principles of agile to change their business culture. Nowhere is this more visible than in the concept of delivery pods, which are small teams made up of cross-functional employees that follow consistent rules in regard to reporting, planning, and the definition of roles. While pods are designed to be repeatable and consistent in structure, they maintain a level of autonomy in the way they distribute their workload. Not every pod will have the same estimation hierarchy or sprint schedule, but they will all be required to report on activities in the same way.

One of the key aspects of successfully creating and managing delivery pods surrounds the issue of continuity. Key roles, such as scrum masters, must be kept consistent, and the specific responsibilities of a pod must be consistent as well. For example, if an airline company creates a pod with the goal of analyzing and improving booking conversion, it will always be tasked with that goal. Finally, pods must maintain continuity in scoping estimation—business product owners must be involved in every step of the process and the pod's original team members should never be removed from the process. The aim of this continuity is to prevent lost functionality, mistranslated specifications, or scope creep, with the ultimate business goal of improving customer satisfaction and reducing time to market.

Pods have to learn to work in new and sometimes groundbreaking ways, but having them work together, with access to a common set of information (like analytics, business rules, and so on) lets them execute much more quickly than traditional organizations. For example, an enterprise may integrate security and quality assurance processes into its pods' development methodology in order to speed up production while reducing errors. Empowered to make decisions in real-time, the typical cycle of emails, meetings, action plans, and status reports is avoided. In fact, pods may have no need for meetings at all, since they work in a co-located space wherein they are always connected to one another.

How often organizations use agile

| 28% On more than 50% of projects | 27% On 10% to 50% of projects | 18% On all projects | 7% On a pilot basis | 7% Not at all | 13% Don't know |

Source: PwC, *2015 Global Digital IQ® Survey*; Base: 1,988
Q: To what extent are you currently using agile approaches in your organization?

From dispersed teams to agile delivery pods
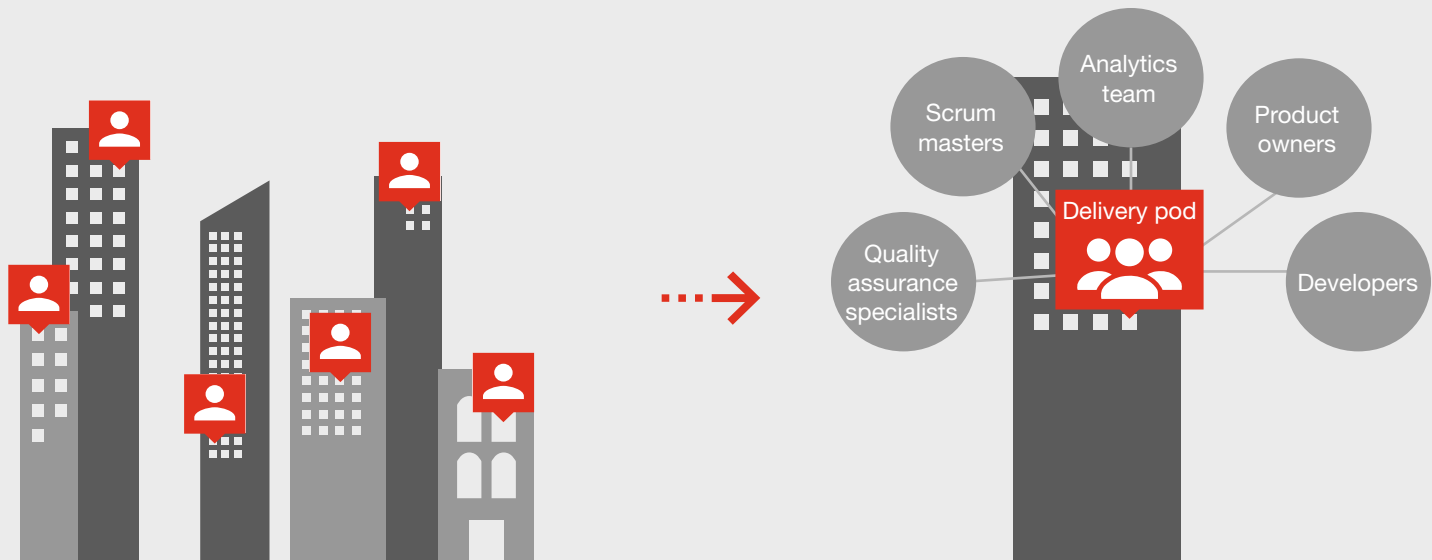
Pods can be thought of as essentially smaller components within digital hubs. A pod structure can vary considerably depending on the organization or product. One leading enterprise limits pods to eight to 12 people. Others manage pods of closer to 20 people (though often they cite a goal of decreasing this size). Critically, within an organization, the roles within each pod are consistent, which helps with the mobilization and blueprinting of new work. While different pods may scale roles differently, the overall structure of these pods will generally be the same. Consistency should be maintained, even across different locations, in order to ensure the structure is repeatable and scalable.

Note that pods are not renegade groups that operate free from corporate oversight. In fact, one of the major goals of delivery pods is to work in a fully transparent manner and to develop consistent operational methodologies that can be repeated in other pods. Pods still have aggressive goals to meet and must generally adhere to the agile practices (scrum, etc.) established in the rest of the company. However, the internal structure of the pod allows it to adjust and execute more quickly within this framework, eliminating redundancies and improving communication. In essence, pods are the lowest common denominator in getting a product from inception to the market.

Pods are designed to be highly visible archetypes of working that the rest of the company can learn from and eventually model. Having strong internal managers included in the pod is a key to success. While pods should not be saddled with having to develop detailed business cases and should be freed from the red tape of such bureaucratic items as business requirement documents, leading companies continually reprioritize the initiatives that pods are working on, and some of these are subject to more rigorous business cases before initial funding or the release of new funding. These challenges have led to the rise of new operating model frameworks that help organizations scale agile.

6. Prioritize talent recruitment and retention.

The common thread in all of the above is talent, and it is having *consistent*, *diverse*, and *multi-disciplinary* talent that makes these other actions possible. Again in contrast to emerging trends in the enterprise, digital leaders are not using third parties or contractors to fill key roles and complete mission-critical work, though dedicated staff may be supplemented with freelance talent and ecosystem partners in periods of demand spikes and when specialized talent is needed. Digital leaders have found it is essential these teams remain consistent in order to drive predictability and continuity.

Digital leaders use any number of methods to attract and engage top-tier talent. Having a strong brand and progressive culture is naturally a big help here, as is the ability to pay a premium for this talent. To get the right employees, digital leaders are increasingly adapting to the demands of top talent as these employees seek non-traditional roles, benefits, incentives, rewards, pay scales, and workplace environments. Empowerment is absolutely critical to motivation: Digital employees are increasingly given ownership over new initiatives and the leeway to

improve their workplace experiences. The structures of digital hubs and delivery pods can be a big help here.

Finding this top talent, of course, isn't easy. Digital leaders naturally look for specific technical skills in new hires, but they also understand the importance of finding employees who will work well together and demonstrate a strong cultural fit with the organization. Once hired, keeping these employees engaged is of paramount importance.

Digital leaders are constantly questioning whether it makes sense to retrain and develop non-digital workers or hire new digital talent outright. Educating and training disparate groups of people throughout the organization on digital skills they don't possess can be a costly and time-consuming endeavor, so enterprises must weigh whether to retrain internal staff or hire digital natives on a case-by-case basis. In general, a combination of approaches is often used to raise the overall Digital IQ of the organization.

> "
> # The men and women I am hiring want to change the world.
>
> Chief Digital Officer, Financial Services

> "
> # We have to get the people who will love working here.
>
> VP Ecommerce, Retailer

The path forward

Digital leaders have identified and adopted some key behaviors, and many of these make immediate, intuitive sense. Of course having strong, formally identified leadership will help to drive success, and concepts like agile and a focus on building platforms have taken hold in a large portion of the enterprise world.

But some of the other behaviors of digital leaders are less obvious, and will require extensive rethinking on behalf of the enterprise when it comes to organizational structure, human resources, and C-suite leadership. The concepts of digital hubs and delivery pods represent a massive shift in day-to-day operations across numerous lines of business. A shift away from outsourcing and offshoring—tactics so popular in business today—requires new and different thinking about the enterprise's overall business strategy.

And yet, the hardest part of all of this is that these changes must be marked by revolution, not evolution—that an enterprise wishing to adopt a high-functioning digital operating model cannot afford to spend years tinkering with incremental process changes. Change must be quick and permanent, or else it is likely doomed to failure.

Even digital leaders admit this can be a difficult task. Executive behaviors are not transforming at the pace of digital, and rogue development projects remain a problem. Onboarding parts of the business that have historically been disconnected from digital operations can be particularly difficult. But overcoming resistance to change, well, that's just another characteristic of true digital leadership.

What do digital leaders have in common?

The organizations we studied don't behave identically, and their policies, actions, and strategies tend to vary in some ways. That said, there are some universalities. Here's a look at the traits and actions (good and bad) that *all* digital leaders share.

Key actions

- Set strategic roadmaps with horizons of two to three years; executive leadership sets overall priorities.
- Additional priorities are set within digital steering groups (Marketing, Sales, IT, Operations, Legal, etc.).
- Evaluate priorities every few months.
- Use some form of agile as a backbone.
- Operate (or have plans to operate) several digital hubs.
- Strategies are less about capabilities and more about desired customer experiences.
- Employee enablement is becoming prioritized and streamlined.
- Digital talent will ultimately be universal across the enterprise.

Key pain points

- Entire enterprise is still not agile, despite enterprise projects being developed with agile methodologies.
- Heavy investment in new talent required.
- Reluctant to train or give responsibilities to pre-agile staff.
- Slow to incorporate employee enablement priorities, which can lead to rogue development that threatens long-term efficiencies.
- Too many digital demands with too little supply of talent.
- Many core IT updates still run on waterfall processes.
- Major IT programs create operational dependencies.
- Ongoing friction between functional siloes requires execute commitment to change management.

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Thank you to the executives and organizations that participated in our digital operating model study. For an in-depth discussion of what we learned and how you can apply these leading practices to your organization, contact:

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Study methodology

PwC has been studying digital strategy and execution since 2007 when its *Digital IQ* study originated. For this study, we identified a dozen exemplars and dug deeper to understand how leading organizations across multiple industries are structured to deliver efficient, predictable, and quality digital products. The goal was to identify who is ultimately responsible for digital within an organization and to understand how these organizations are structured to deliver consistently and quickly. From November 2015 to May 2016, we interviewed dozens of key members of the digital organizations across these companies to drill down and develop the digital operating model.

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