

Forbes insights

Delivering On Demand:

Momentum Builds
Toward Flexible IT

IN ASSOCIATION WITH

DELL Technologies AND **intel**.



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Introduction

These days, it's well understood that technology has changed the way we manage businesses, serve customers and plan for the future. But the key to digital transformation doesn't start with the way we use technology; it starts with the way we *acquire* it. This sets the stage for success down the line.

Flexible IT-based computing models—which include cloud computing and the integration of on-demand infrastructure services—provide a path to agility and speed. By moving to these models, IT executives have the opportunity to respond to the needs of their businesses in a matter of days, not months.

There are many options for developing a modern architecture built on flexible IT-based models. These include subscribing to infrastructure-as-a-service capabilities, leveraging application programming interfaces, employing containers or leasing equipment maintained by third-party providers. Since moving to flexible IT means faster and more responsive ways of working, it also leads to positive changes across organizations—IT staff no longer need to devote time to fixing, patching and debugging, and instead they can devote more time to engaging with the business. Since IT departments need to increase their adaptability and be able to meet evolving business demands, companies have an opportunity to reevaluate their current IT acquisition model and consider the benefits of flexible, consumption-based approaches.

For organizations already immersed in this new, flexible IT world, technology is having a direct impact on business growth. "We believe in the power of hybrid multi-cloud architectures that integrate our on-premises infrastructure with cloud-based solutions for reliability, productivity, agility and on-demand scalability," says Greg Ogle, vice president of global IT infrastructure and cloud operations at Equinix, which is the world's largest data center and colocation infrastructure provider. "For example, our core quote-to-cash platform uses an on-premises database with all application and web

servers deployed in a managed hosting provider connected via our Equinix Fabric interconnection platform. We also leverage several SaaS applications to support various business functions."

Daragh Mahon, EVP and CIO of transportation and logistics company Werner Enterprises, also sees the benefits of flexible IT, saying this approach "allows us to move to a modern tech stack that is expandable and connectable. It [also] allows the people who are focused on writing software today to be very industry specific. We don't need infrastructure people—we need people who can focus on what makes us different in the marketplace."

To better understand the challenges IT leaders are facing and how they're acquiring the assets they need, Dell Technologies, Intel and Forbes Insights surveyed 800 executives and IT decision makers from mid-to-large organizations across the globe. In this report, we explore various IT consumption models and the benefits organizations are seeing from leveraging flexible IT-based models.

The Challenges Ahead In Business Technology

Why is flexible IT such an urgent requirement today?

For too many companies, acquiring technology infrastructure resources is an arduous, lengthy and time-consuming process. Business requirements need to be scoped. Decisions need to be made about whether to upgrade, replace or move to something entirely different. Changes and acquisitions have to be delivered within often-constrained budgets. Quotes need to be solicited, and executives need to sign off. New equipment and software needs to be installed. Users need retraining. Consultants need to be brought in, and for an organization with multiple systems, the process of refreshing can be an endless strain on IT staff and a drain on organizational resources.

The challenges wrought by the digital economy mean entire industries could be supplanted by digital upstarts. Industries such as retail and media are already seeing their business models upended.

When it comes to IT challenges, 2 in 3 IT leaders say keeping IT initiatives in balance with business requirements is difficult. A majority of survey respondents also report it's challenging to ensure business resiliency, that it takes too long to put technology solutions in place, that it's difficult to keep up with business demands and too many of their solutions are siloed to be effective (Fig 1).

From a business perspective, the pressure is on organizations to deliver software and services faster and more effectively while also serving an ever-growing customer base. A majority of survey respondents have increased their rate of product releases (Fig 2) and seen their customer base grow (Fig 3). At the same time, most report only small improvements in time to market or no improvement at all over the past three years (Fig 4).

Once deployed, uptime becomes a crucial measure of IT infrastructure success and is necessary in an era of rapid digital transformation. However, this is still a challenge for

a majority of organizations. While just about all, 97%, report they have been able to increase uptime over the past three years, such increases have primarily been in the single digits. Only 26% of all respondents indicate they've been able to increase their uptime significantly, at levels exceeding 10% (Fig 5).

Figure 1
Top IT Challenges

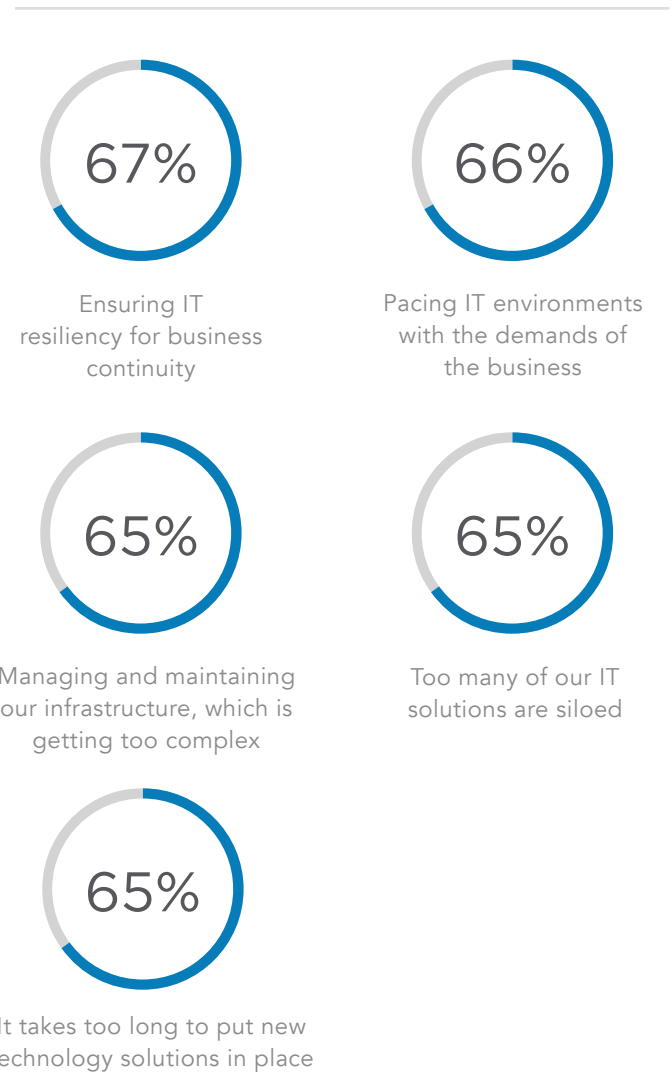


Figure 2

How has your company's rate of product or service releases changed over the past three years?

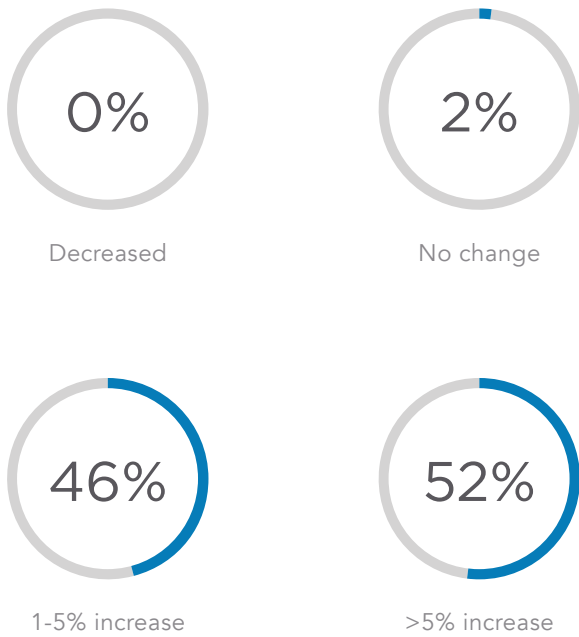
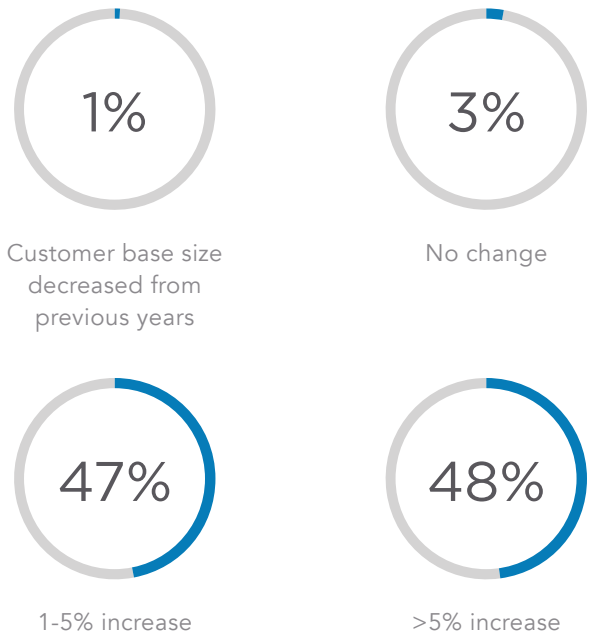


Figure 3

How has the size of your company's customer base changed over the past three years?



*Totals do not equal 100% due to rounding.

Figure 4

How has your company's time to market for product or service delivery changed over the past three years?

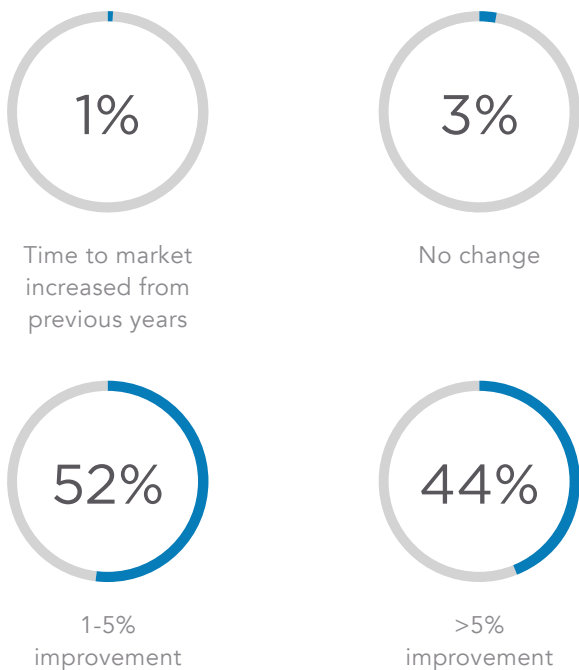
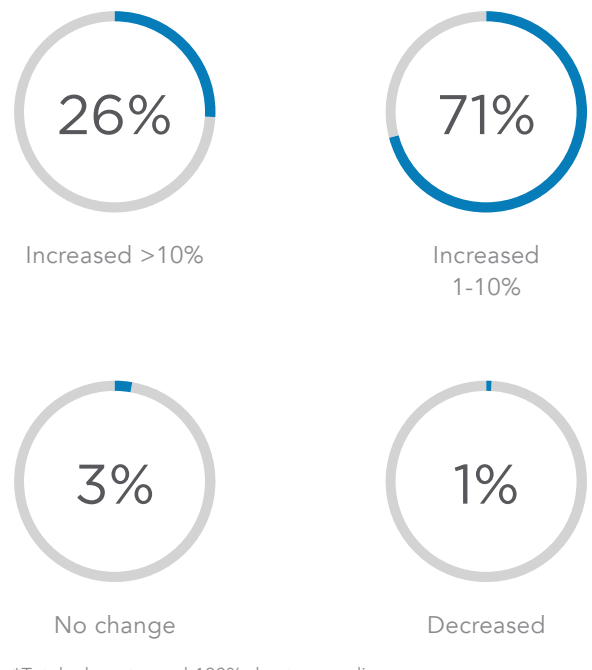


Figure 5

How has IT uptime within your organization changed over the past three years?



*Totals do not equal 100% due to rounding.

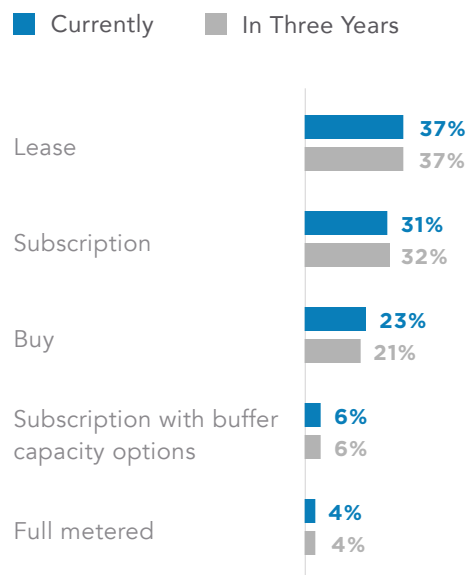
Consumption Patterns Among Organizations Today

One of the most revolutionary changes to sweep across organizations in recent years is the ability to acquire needed IT systems on demand without making major investments.

When looking at the various IT procurement models, we find that leasing is the most prevalent and will remain so for the foreseeable future. On average, 37% of all systems are leased. Close to one-third of IT assets are acquired through a subscription, and at this time, 23% of organizations have purchased their IT assets outright, a share that will decline somewhat to 21% within three years (Fig 6).

Figure 6

Provide your IT infrastructure mix by percentages.



For this report, we've zoomed in on two unique groups of respondents based on their dominant mode of acquisition. These groups will be referenced throughout the report:

- **Buy:** This group is 13% of the sample and represents respondents who purchased 50% or more of their company's IT assets upfront.
- **Consumption-based:** This group is 32% of the sample and represents respondents who acquired 50% or more of their IT assets via subscription. Full metered and subscription with buffer capacity are included here.

When looking at these procurement models more closely, we noticed three key patterns:

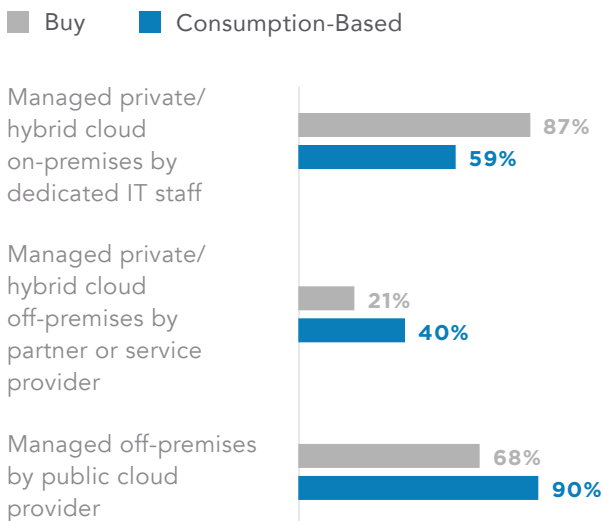
1. Cloud paves the way to the consumption-based IT model

While all-cloud and all-on-premises organizations exist, most fall along a continuum between these two IT consumption patterns. It's notable as well that the IT infrastructures covered in this survey are likely to be equally managed by in-house staff as well as off-premises: 61% of all respondents maintain on-site systems with dedicated IT staff and 88% use the services of a public cloud provider. Adoption of cloud and third-party services is strongest among those predominantly consuming consumption-based services (Fig 7).

At Werner Enterprises, a "cloud-first" policy is paving the way to a major IT transformation, Mahon says. "For us to grow and reach our revenue goals for the next two to five years, we had to replace our previous technology. About 80% of our systems were on-premises. Our goal is to have at least 80% cloud-based software and only build where we can differentiate in the marketplace."

Figure 7

How do you currently manage components of your information technology infrastructure?



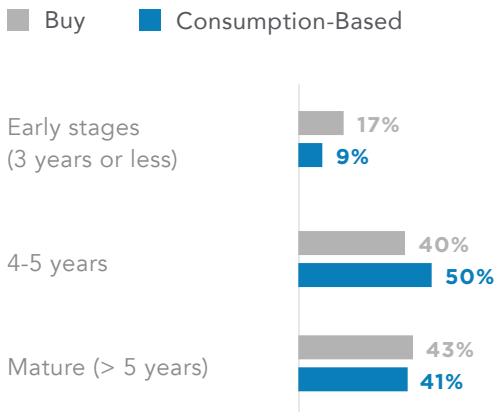
2. Organizations have gained experience with the consumption-based IT model

A majority of organizations, 60%, have ascribed to their current IT consumption-model approaches only within the past five years, suggesting considerable movement in this market. Still, given the four- to five-year horizons for many IT budget processes, it's significant that at least 15% have made a switch in their approaches within the past three years.

Even so, we see evidence that the consumption-based IT model has been employed for some time, reflecting a degree of maturity for this approach. More than 40% of both system buyers and subscribers report having been with their respective approaches for more than five years (Fig 8).

Figure 8

How long have you been procuring or acquiring IT infrastructure through the acquisition model you primarily use today?



3. Consumption-based IT is on the rise

The research shows the upfront purchasing model is losing momentum. The Buy group in our survey currently buys 69% of their infrastructure mix, but they expect that number to drop to 55% in the next three years. Much of that shift is in favor of consumption-based IT models, which they're expecting to grow from 11% to 18%.

The Consumption-Based group, on the other hand, expects to remain remarkably consistent in the use of their procurement model, most likely because they're getting the performance they need. This group currently uses consumption-based IT models for 70% of their infrastructure mix and in three years they expect it to be roughly the same (69%).



Benefits Delivered Via Consumption-Based IT

Digital transformation has accelerated overnight and IT needs to be provided in a timely, dynamic manner that meets challenges and opportunities head-on.

Organizations relying primarily on consumption-based IT are more likely to be moving into the digital realm. Close to three-fourths of consumption-based IT adopters, 72%, predict most of their operations will be digitized three years from now—14% more than the overall sample. When it comes to digital transformation, a majority of consumption-based users, 61%, also expect to be delivering digital experiences to their customers—13% more than the survey total.

A majority of consumption-based organizations also intend to leverage more artificial intelligence (AI). About half expect that much of their decision making as well as their customer interactions will be driven or supported by AI versus only 41% and 42% of the Buy group (Fig 9).

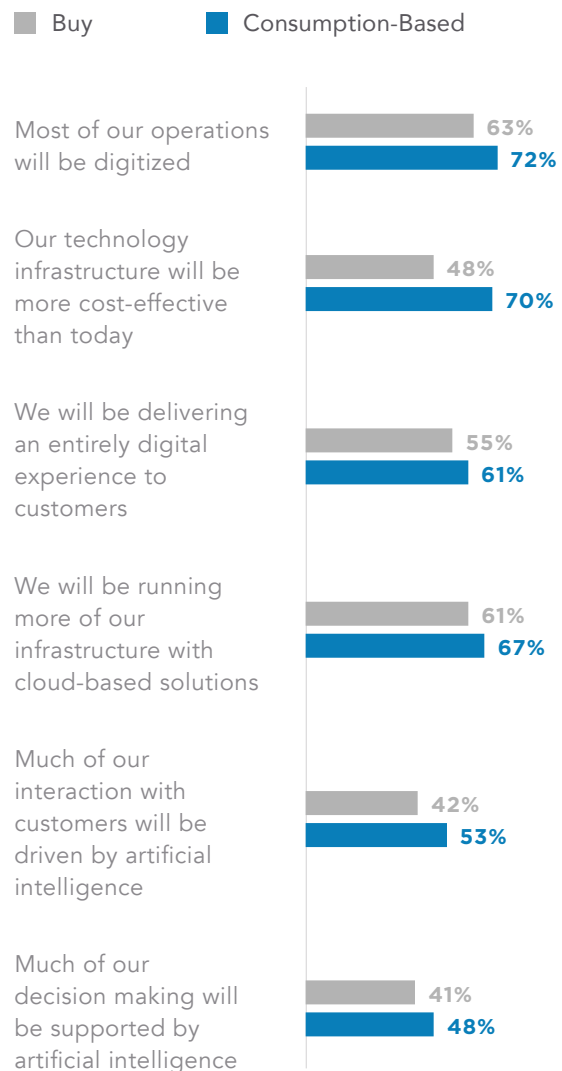
All of this highlights an increased desire for greater flexibility in digital development and deployment unencumbered by existing IT hardware or systems assets. This is seen in the growing movement toward consumption-based resource acquisition approaches, such as those employed by Equinix.

At Equinix, the adoption of a consumption-based IT model has enabled the company to transition to a diverse environment that incorporates PaaS, IaaS, network and on-premises server infrastructures. “This shift has led to several benefits, such as improved flexibility and agility to manage IT infrastructure requirements; ease of cloud transition, allowing us to support the ongoing stakeholder needs; better control on equipment refresh cycles; and improved visibility into spend patterns for our annual budget planning,” says Ogle.

Figure 9

Please rate the likelihood of the following when it comes to the state of your organization’s infrastructure three years from now.

% who said “likely” and “extremely likely”



Historically, those requiring as-a-service IT resources have leaned on public cloud services. But not every workload works optimally in every public cloud, and the increasingly diverse and siloed cloud landscape has resulted in an enormous amount of IT complexity. Consumption-based IT takes the best of the public cloud experience and applies it to the existing operational realities of on-premises, edge and public cloud environments.

Employing consumption-based IT models that don't require upfront expenditures is translating to the bottom line. The survey finds that organizations relying on consumption-based IT were more likely to be the fastest-growing companies: 62% of the Consumption-Based group indicated greater than 5% revenue growth over the past three years and are 27% more likely than the Buy group to be seeing such growth.

The other benefits of consumption-based IT approaches include:

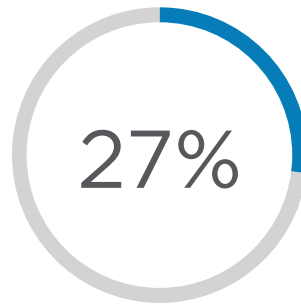
Quicker approvals for IT purchases

The survey looked at the average amount of time needed to design and implement IT assets, from budget approval through implementation. The Consumption-Based group was 1.3x more likely than the Buy group to indicate that the length of time for securing approval for planned purchases has decreased by more than 10%.

Additionally, the Buy group was more than 5x more likely than the Consumption-Based group to say that the length of time for securing unplanned purchases has lengthened or not decreased at all over the past three years.

By being able to get management approvals for upgrades or new purchases more quickly, consumption-based organizations are better able to respond to new opportunities, whether they be seasonal market changes or matching offerings from competitors.

Organizations relying on consumption-based IT were



more likely to have seen revenue growth above 5% over the past three years.

Speedier deployments

Once approved, it may take several months to build and put new systems into production, which may hamper a business' ability to quickly react to market changes and opportunities. A company may merge or make an acquisition, opening up new product lines that require a reorientation of IT systems to meet these new additions or a need to integrate with another company's systems. Or, sales and marketing teams may see a sales promotion is underperforming and need to make adjustments in demand planning, which requires a shifting of IT assets.

Consumption-based organizations are able to integrate solutions at a faster clip. Forty-two percent of these organizations report taking a month or less to integrate a new infrastructure component, from scoping to deployment. By comparison, only 37% of the Buy group are able to move this fast.

Higher user satisfaction

Those employing a consumption-based IT model are much more likely to be seeing user satisfaction with their IT services. Eighty-one percent of these organizations report high levels of satisfaction with application and data security, which is nearly 1.2x more than their Buy counterparts.

Consumption-based users are also nearly 1.2x more likely to have seen greater success in mitigating usage costs as well as discovering and locating timely data. Consumption-based IT also provides greater adaptability—these users are 23% more likely than the Buy group to cite advantages here (Fig 10).

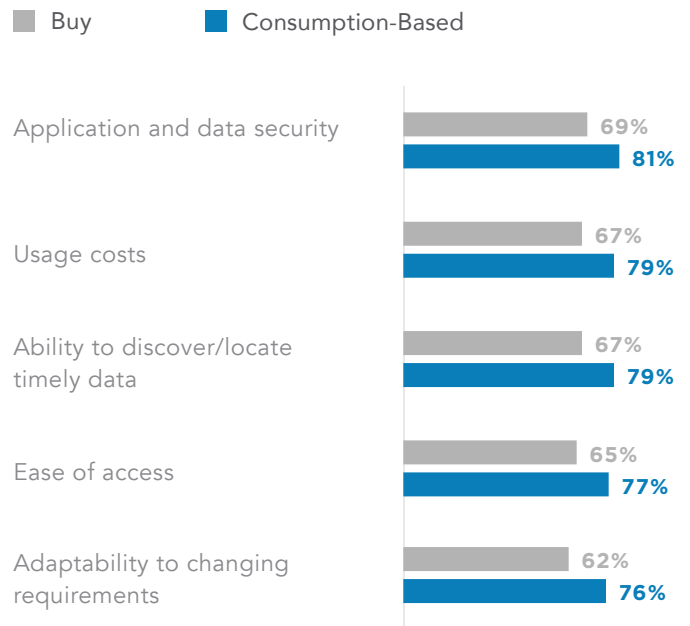
Greater capabilities

When it comes to the benefits seen from the growth in IT infrastructure, companies that rely on consumption-based IT models are out front. Those primarily tied into consumption-based IT assets are the most likely to report higher levels of customer satisfaction and experience—nearly 1.2x as much as their Buy counterparts.

Figure 10

Please rate the degree of end-user satisfaction with your organization's current levels of IT services in the following areas.

% who said "somewhat satisfied" and "extremely satisfied"



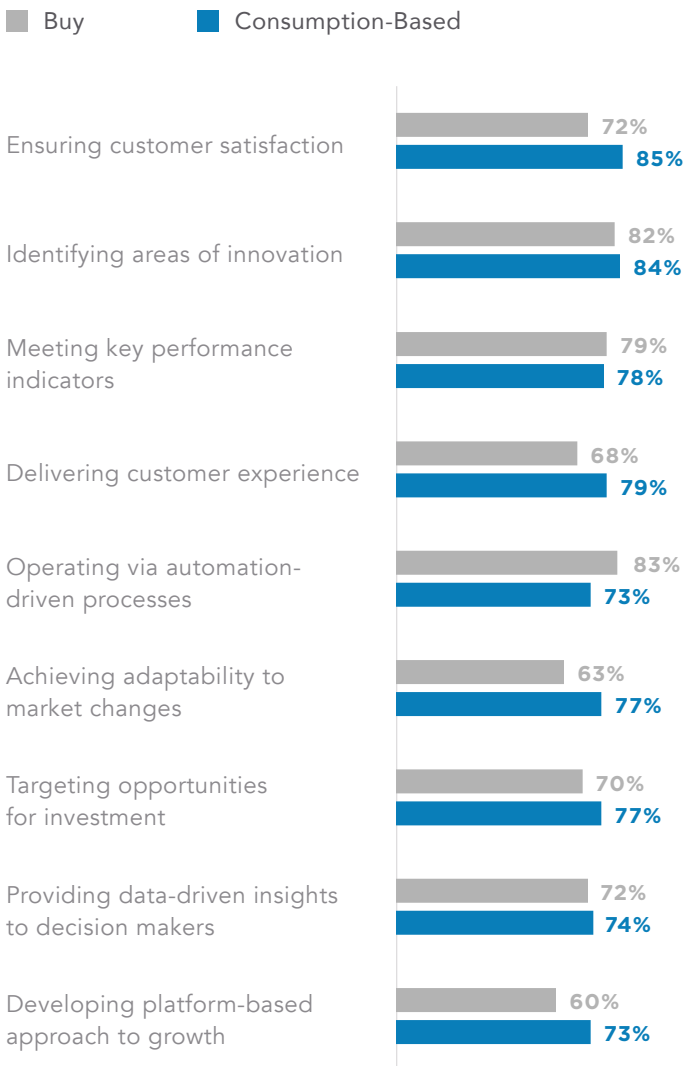
The Buy models lag in many of these areas, the survey shows, which may reflect the expectations among customers for consistent and easy-to-navigate systems that are provided by cloud providers (Fig 11).

At Werner Enterprises, flexible, consumption-based IT ensures increased computing power and timely services that enable the company to further enhance its critical event management systems and on-road breakdown systems, which are key to serving their trucking and logistics customer base. “We also want to improve our estimated time of arrival—one of the nuts that the trucking industry has yet to crack. We’re going to put a lot of effort into that using technology,” says Mahon.

Figure 11

Please rate how your company’s capabilities in the following areas have changed over the past three years.

% who said “some improvements” and “substantial improvements”



Conclusion

The survey demonstrates the increased role that consumption-based IT models play in moving businesses forward and driving innovation.

While organizations' plans for transformation have accelerated, it is still an evolutionary process that requires rethinking and reorganizing systems across a broad range of functions. Most organizations have adopted flexible options for acquiring technology assets, and those employing consumption-based IT models—most closely tied to cloud computing—are the most likely to have seen their capabilities increase, especially in terms of ensuring customer satisfaction, identifying areas of innovation and meeting key performance indicators.

This is because moving to consumption-based IT reduces the lengthy, often multi-year upgrade cycles that encumber progress. "You don't have to upgrade systems and that's the beauty of it," says Mahon. "You go from a three-to-five-year cycle to no cycle. Our purchasing of infrastructure over the next 18 to 36 months will almost disappear to zero. If I had my way, we'd never have to buy another server again."

For Ogle, IT's role is at the core of how his company taps technology, people and processes to impact business performance. "We are engaging at the highest levels and continually innovating and reinventing ourselves to deliver on IT's true potential within the organization."

Today's organizations are faced with unparalleled levels of change and global competition. Our findings show that consumption-based IT models allow organizations the agility and flexibility to quickly adapt to business requirements, which can be different from month to month, even day to day.

Learn more about how flexibility and payment predictability can help you achieve your IT and business goals [here](#).

Methodology

The findings in this report are based on a Forbes Insights global survey of 800 IT decision makers.

Conducted in November and December of 2020, 47% of respondents were C-level executives, including chief information officers, chief innovation officers, chief technology officers and chief information security officers. The remaining respondents were executive vice presidents/senior vice presidents/vice presidents (13%), directors (12%), IT architects (13%) and managers (15%).

Respondents came from a variety of industries, including retail, financial services, technology, manufacturing and telecommunications. All respondents came from firms with at least 500 employees

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