

2021 State of the Data Center:

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# COLOCATION IS THE NEXUS FOR HYBRID AND MULTI-CLOUD IT-DRIVEN BUSINESS SUCCESS



As businesses empower remote workers and fortify their digital footprint in response to pandemic-induced changes, colocation has emerged as an essential pillar in a diverse IT architecture designed to fuel transformation, foster resiliency and drive business outcomes.

Today's modern computing landscape must deliver the highest levels of security and cost controls to keep operations at peak performance. This is a lesson many IT leaders learned this past year as they reinvented business processes and adjusted to ongoing market shifts and the need for new digital services for competitive advantage.

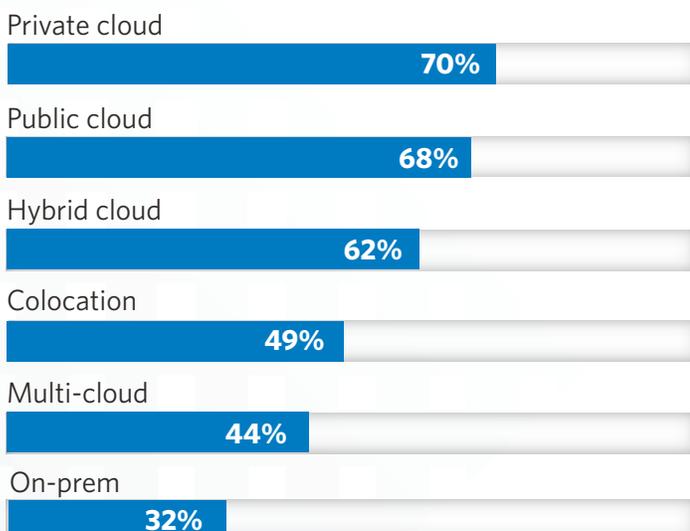
Across this new business reality, colocation has emerged as a key part of the modern IT enterprise, serving as the nexus for bridging multiple cloud and service providers and offering a robust foundation for driving innovation, according to the 2021 State of the Data Center survey, conducted by IDG on behalf of CoreSite.

This report examines the findings, compiled from an annual quantitative survey and a series of seven in-depth interviews with senior enterprise IT decision makers, regarding how colocation can bridge multiple cloud and service providers and offer a robust, cost-effective and resilient foundation for driving innovation.

## COLOCATION IS AN **ESSENTIAL PART OF TODAY'S HYBRID IT ENVIRONMENT**

The enterprise infrastructure mix continues to be extremely diverse—and colocation continues to be a central pillar, according to the 2021 survey results.

### Infrastructure Mix—What Today's Organizations Are Using



With a broad array of available services, hardware options and connections to leading networks and cloud providers, colocation gives companies the flexibility to architect an agile and resilient infrastructure. Colocation enables shifting with changing business needs without an over-reliance on cloud providers or the need for companies to upgrade their own legacy data centers.

The 2021 State of the Data Center survey found companies gravitating to an operating expense (OpEx) model for about half of their IT spending (46%). Colocation services cater to this approach because of the flexibility and access to modern data center capabilities without the significant capital investment.

Companies that accelerated cloud migration during the COVID-19 pandemic to accommodate a remote workforce and distributed business processes are also shifting some workloads back to a hybrid environment. This includes both on-premises and colocation, for reasons such as cost savings, redundancy, diversity and resiliency.

IDC writes that “cloud repatriation has been a growing trend in recent years. Many companies that have uncritically embraced cloud-first strategies have seen costs increase, performance drop, or compliance being challenged and are now moving workloads and data off a public cloud environment to a different infrastructure.”

In IDC's 2019 Cloud Pulse survey, 85% of organizations said they were repatriating workloads from cloud environments, up 5% from the previous year. The reasons behind cloud repatriation are varied. According to the 2019 IDC survey, security (47%), cost (42%), performance (32%) and regulatory compliance (28%) are the top drivers for repatriation initiatives.

"For enterprises to leverage technology to the best of its possibilities, it's not just about looking at where hardware or software sits, it's about how they manage the collective IT infrastructure as an integrated set of resources," says Steve Smith, chief revenue officer for CoreSite. "It's about establishing the most effective way to do that from a performance, cost and security perspective and layering in stacks of various IT resources where they need to be."

As part of that collective infrastructure, confidence is growing in colocation's ability to drive successful business outcomes. Ninety-three percent (93%) of respondents to the 2021 State of the Data Center survey say colocation can enable digital transformation, vs. 81% last year.

### Colocation Enables Digital Transformation



Having colocation as part of hybrid infrastructure enables enterprises to concentrate high-value workloads such as artificial intelligence (AI), machine learning (ML), customer relationship management (CRM) and mobile apps in their own data centers while pivoting other types of workloads to colocation to optimize IT expertise and computing resources.

As part of the infrastructure mix, colocation also facilitates agile scaling of computing resources in high-traffic regions and helps accommodate high-performance workloads such as enterprise resource planning (ERP) and business intelligence (BI)/data warehouse, allowing organizations to better serve customers—who increasingly expect a near real-time response to their ever-changing needs.

With the budget savings gleaned from reduced data center spend, companies can shift resources—both dollars and internal staff—to higher-value tasks to achieve desired business outcomes as well as digital

innovation. Internal employees at most companies surveyed (88%) are managing the delivery of IT architecture, which is slightly higher than last year. However, respondents report having managed service providers (56%) and consultants (57%) within arm's reach, providing an avenue to outsource maintenance work and day-to-day support, the survey found.

Building out a diversified IT architecture makes good business sense, especially after last year's wake-up call that reliance on a single provider or sole computing architecture vastly increases a company's risk exposure.

"Depending on just Amazon or Google Cloud Platform or just one colocation center or one on-premises center is just too risky," says a senior director at a \$11.3 billion digital company, which maintains an infrastructure that is split between on-premises, colocation and the cloud. "We want to have more redundancy built into our systems. We also want to make sure that different arrangements provide us different benefits germane to certain businesses. The larger your business, the more hybrid and diverse your strategy has to be."

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— Senior Director,  
\$11.3 billion digital company

## HOW COLOCATION DRIVES BUSINESS OUTCOMES

Colocation's growing appeal is reflected in several market growth projections:

- **IDC puts the 2020 U.S. colocation market at \$9 billion, growing to \$12.2 billion by 2024 at a compound annual growth rate (CAGR) of 8%.**
- **Grand View Research estimates the global data center colocation market size was valued at \$40.31 billion U.S. in 2019 and is expected to grow at a CAGR of 12.9% from 2020 to 2027.**

- **Gartner makes the boldest prediction, saying that by 2025, 85% of infrastructure strategies will integrate on-premises, colocation, cloud and edge delivery options, compared with 20% in 2020.**

Colocation adoption is surging for several reasons. Companies are turning to colocation as a complement to public cloud as they consolidate and downsize their legacy data center footprint, but still favor a hybrid approach and an environment that affords greater controls.

In addition, companies are gravitating towards colocation providers that offer ancillary services that are either lacking or hard to replicate in traditional data center environments. Specifically, they want colocation providers that deliver:

- **Virtualized workloads**
- **Advanced security**
- **Interconnection services such as native on-ramps to cloud providers**
- **More cost-effective and flexible networking services**

With better economics than building out or upgrading on-site enterprise data centers to address these high-end capabilities, a colocation strategy helps lower total cost of ownership, a benefit cited by 35% of respondents to this year's IDG survey.

Colocation offers more of a fixed, controlled cost model compared to other OpEx models like public cloud, which can vary significantly and quickly escalate costs if not managed properly.

In addition, enterprises can save on cloud connectivity costs (up to 60% compared to traditional telco or

software-defined networking offerings) as well as data replication expenses (estimated to be cut by as much as 70%). How? By taking advantage of a colocation provider's direct interconnection capabilities and the elimination of egress charges when restoring data from certain local cloud availability zones.

That was certainly the case for one human capital management (HCM) SaaS provider, which is moving to a hybrid, multi-cloud infrastructure buoyed by colocation to avoid unnecessary capital costs and to concentrate its time and resources on where they can add value. "I don't want to build my own data center—our competency is designing, engineering and maintaining software," says a senior director at the SaaS provider. "I don't want to have a high-end generator expert on staff and the same goes for HVAC or physical security. I don't want to get into the business of peering with carriers. Those are things that a colocation business provides."

One of the primary motivators for moving workloads to colocation is to improve the stability, redundancy and uptime of infrastructure, a benefit cited by 52% of respondents to this year's IDG survey, down slightly from last year's 58%.

Uptime of operations continues to be a key challenge for companies, particularly as so many workloads and business processes are digitized. A 2018 [Uptime Institute survey](#) found that 31% of operators had experienced an IT downtime incident or severe degradation in the last year while 48% confirmed they experienced at least one outage at their site or that of a service provider within the last three years. While it's hard to put a price tag on the average cost of downtime, the Uptime survey estimates about one-third of reported outages cost between \$250,000 and \$1M. Another 15% cost more than \$1M.

Increasing capacity via colocation is one way to safeguard against such costly downtime, especially given the new realities of the post-pandemic workplace. "We see that working from home is going to be the strategic direction moving forward," notes the vice president of IT for a \$30 billion global financial services company. "Even with the vaccine rollout, we'll be working more from home, and investment in both on-prem and colocation will increase with that."

Beyond a need for increased flexibility, scalability and security, enterprises are migrating workloads to



colocation for other reasons. According to the 2021 State of the Data Center survey, the most prevalent are:

- **38%** — **Garnering efficiencies in hardware and virtual environment to achieve optimal performance**
- **34%** — **Access to an ecosystem of partners providing services**
- **34%** — **Ability to tap into networking and interconnection services for access to a wide range of cloud and other service providers**

Interconnection to cloud providers is also critical for 34% of survey respondents. (See Key Drivers for Moving to Colocation.)

For the \$30 billion global financial services provider, access to native cloud on-ramps and interconnection services is a significant differentiator when choosing a colocation provider. Specifically, a colocation provider’s ability to offer high-speed connections to leading public clouds like Microsoft Azure and AWS will serve as critical connective tissue to sync a diverse on-premises and multi-cloud IT infrastructure. “I need to seamlessly transfer workloads from public cloud to colos, and Amazon and Azure charge a lot for the data transfer,” the firm’s VP of IT notes. “A direct connection helps cut down on those costs.”

The ability to maintain control yet have presence in critical geographic locales to address the needs of key customers or high-performance workloads is also an advantage colocation can deliver. Specifically, colocation providers that have relationships with the major cloud providers as well as control over their own real estate portfolios are well situated to provide customers with the best of what cloud and on-premises models have to offer.

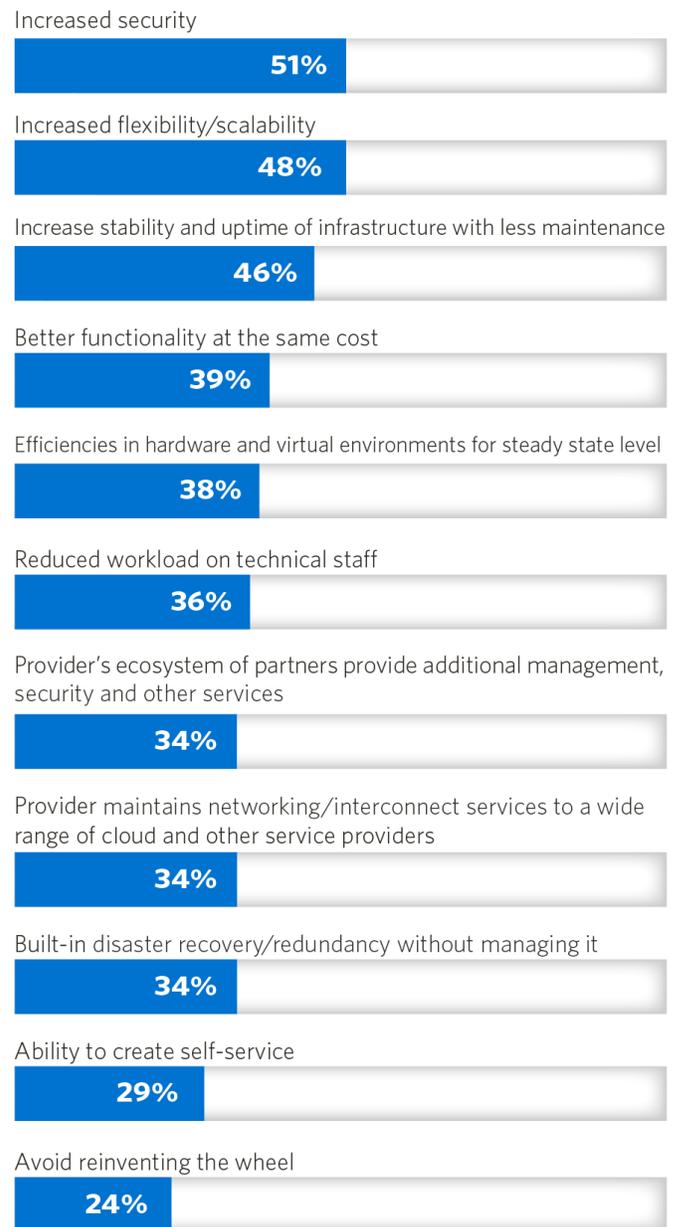
“With multi-cloud reaching mainstream, in order for the model to work effectively, you can’t do it out of your own data center where there is limited connectivity and no native on-ramps,” says CoreSite’s Smith. “You also can’t do it with a colocation provider that isn’t highly connected to all those different services.”

Security, scalability/flexibility and support/service quality remain important attributes for selecting a colocation provider, according to the IDG survey. (See Most Important Attributes for Colocation Providers.)

While security is now the No. 1 attribute sought in a colocation provider (19% vs. 15% in 2020), network choice and partner ecosystem are fast becoming key differentiators—5% this year vs. only 1% in 2020.

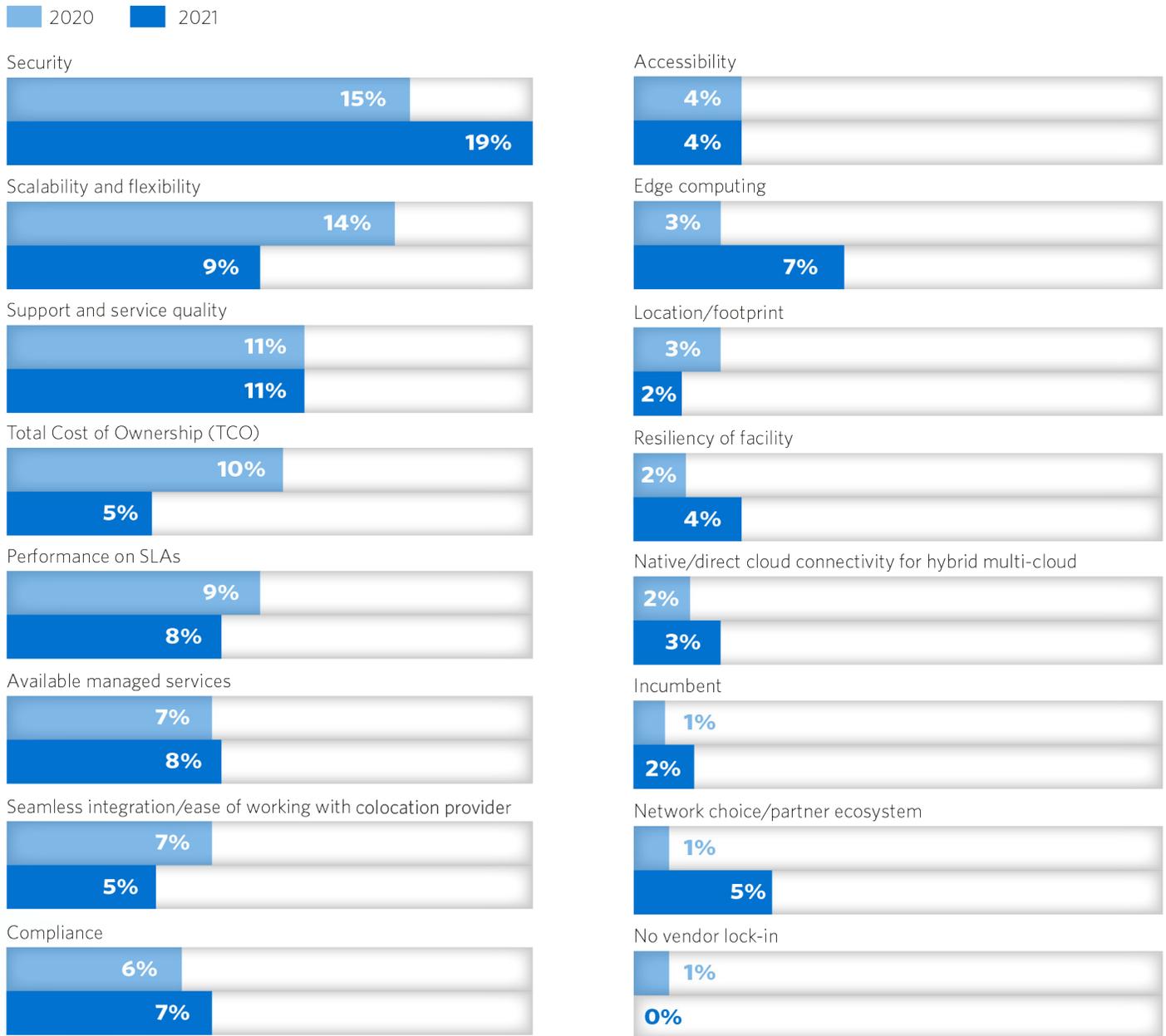
“Part of our challenge ties back to security since we have so much sensitive information,” says the IT director at a healthcare provider. “Until we get comfortable that it’s actually secure in the cloud, a lot is going to stay on-premises,” and colocation remains an essential part of that foundation.

### Key Drivers for Moving to Colocation



Source: IDG

## Most Important Attributes for Colocation Providers



Source: IDG

## BUSINESSES ARE STRIKING THE RIGHT IT INFRASTRUCTURE MIX

While there is no one-size-fits-all formula for the optimal IT infrastructure mix, there are emerging patterns in how workloads are being distributed. According to the IDG survey, colocation is the preferred mode for ensuring continuous operations and dynamic resiliency, cited by 42%

of respondents (compared to only 27% for on-premises and 28% for cloud).

Colocation is also the platform of choice for performance-oriented core applications such as enterprise resource planning (ERP) (29%), content delivery/media processing (39%), business intelligence (BI)/data warehouse and data analytics applications (37%) and Internet of Things (IoT) applications (36%). (See The Top Workloads for Colocation on page 7.)

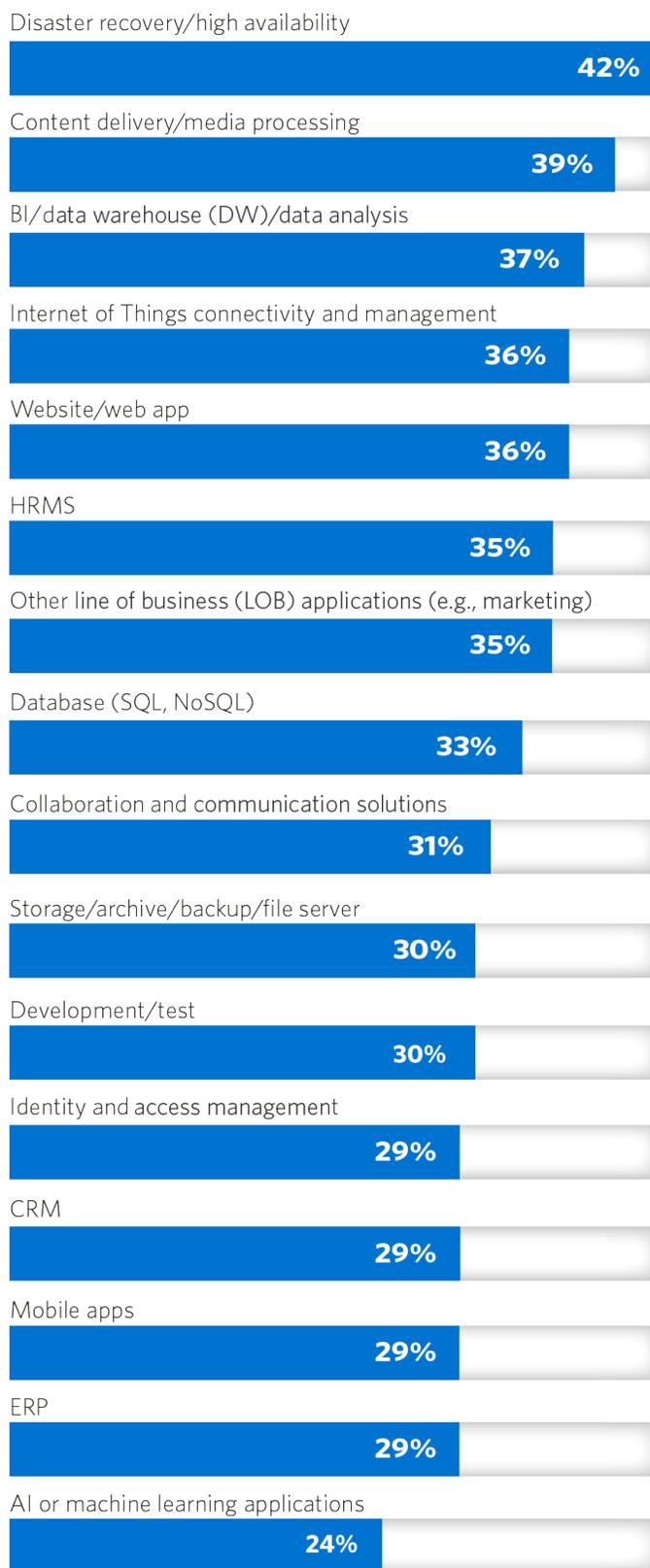
Cloud remains the preferred platform to run development/test (36%) and identity and access management (39%) workloads. Cloud is also dominant for storage/backup and archival workloads, especially for tiering storage for data that isn't required for day-to-day needs.

Moving forward, on-premises environments will be favored for AI/ML workloads (55%) along with CRM and mobile apps (36% each), but the model isn't dominant anywhere else, the research found. Even systems with personal identifiable information (PII) requirements are less likely to stay on-premises this year compared to 2020 (39% vs. 49% last year). Storage/backup, BI/data warehousing and other line of business (LOB) applications are moving away from the cloud, and workloads with sensitive data are likely candidates for colocation, not cloud.

"EPIC, a healthcare system that contains a lot of patient data, would be the last thing we'd move to the cloud because it's highly sensitive, and another is PeopleSoft for financials and HR because it has a lot of employee data," says an IT director at a \$10 billion healthcare provider. "Those would be colocation based."

As colocation cements its place in the enterprise IT infrastructure mix, it is gaining momentum for apps like ERP, databases and LOB applications as well as for data warehousing and data analytics workloads—all critical to enabling digital transformation, the research found. Legacy and mainframe productivity applications are more likely to be migrated to colocation facilities this year (55% vs. 52% in 2020)—a shift that enables organizations to prioritize new AI/ML applications in their own data centers. Colocation's ability to help scale computing resources more quickly to be responsive to customers and the ability to direct reduced data center spend to higher-value initiatives are all reasons survey respondents believe a colocation strategy helps accelerate digital transformation.

## The Top Workloads for Colocation



Source: IDG

Formulating an IT infrastructure roadmap and workload migration schedule are not rash decisions—most companies take seven to 12 months to map out a strategy, according to the IDG research.

For example, the \$10 billion healthcare provider uses a ranking system to plan out its migration. Some of the process is automated while other decisions are made on a case-by-case basis, but there's a general rule of thumb: "The faster something needs to happen, the more likely it is we move it to colocation. The more individualized something is, the more likely it is that it stays on colocation," explains the IT director at the \$10 billion healthcare provider. "The more aggregated something can be and the more delay we can tolerate—those workloads move to the cloud."

## THE BOTTOM LINE

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To rise to the challenges of a post-pandemic era, companies need a diverse, multi-cloud infrastructure that allows them to digitally transform and drive successful business outcomes. Colocation is a central pillar of that flexible and resilient IT infrastructure mix, helping companies meet the challenges of today while reaching their promise for tomorrow.

Learn how CoreSite can fuel your digital transformation journey.

Visit [www.coresite.com](http://www.coresite.com)

### Tips for Bringing Colocation into the Mix

**Start small.** Don't try to rationalize your entire IT infrastructure and move everything at once. Start with one targeted geographic or functional area and move workloads into colocation on your own path and at your own pace.

**Be strategic.** Plant a flag where you want to end up but start with an area that is strategic and can demonstrate the value that colocation delivers. Build momentum from there.

**Conduct due diligence.** Not all colocation providers are created equal. Think long-term about what you might need and evaluate partners with those capabilities in mind. Colocation providers with a large ecosystem of partners and services, including native on-ramps to key cloud platforms and networks, are best positioned to meet long-term needs.

### About the Survey

In March of 2021, IDG conducted online quantitative surveys among 300 U.S.-based IT leaders across all industries. Respondents work at companies with 500+ employees, and either have or plan to adopt a colocation solution.

Researchers also conducted seven one-on-one qualitative interviews with senior IT executives at large enterprises to gain further insights into their use of colocation services. The research was sponsored by CoreSite.

