DATA REPORT

Uptime Institute Data Center and IT Spending Survey 2022

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Having adjusted to the business uncertainty and logistical disruptions caused by the COVID-19 pandemic (impacting both equipment and staff), the data center industry continues to face unprecedented challenges. Most operators are continuing to grow their capacity despite supply-chain issues and rising costs for power, hardware and labor. Results from Uptime Institute's Data Center and IT Spending Survey 2022 reveal how enterprise operators and colocation providers are adapting their spending strategies to meet the growing demand for digital services.

The Uptime Institute Data Center and IT Spending Survey 2022, conducted online in July and August 2022, had 711 respondents. The survey collected data from three main groups:

- Enterprise data center owners / operators (n=241).
- Colocation providers (n=90).
- Vendors / product providers / consultants (n=380).

KEY POINTS

- Capacity expansion is the main driver behind planned increases in spending over the next two to three years for all operator respondents.
- Most enterprise operators that are growing capacity are planning to extend their existing facilities and almost half say they will construct new data centers.
- Most enterprise respondents believe provisioning workloads on-premises to be cheaper than provisioning through colocation or cloud. Of those using colocation services, 37% found costs to be higher than expected.
- Enterprise and colocation operators have seen the greatest unit cost increases in power over the past year.
- For enterprise operators, higher energy costs have been nearly matched by increases in unit costs of IT hardware — except in Europe, where energy price hikes continue to have greater impact.

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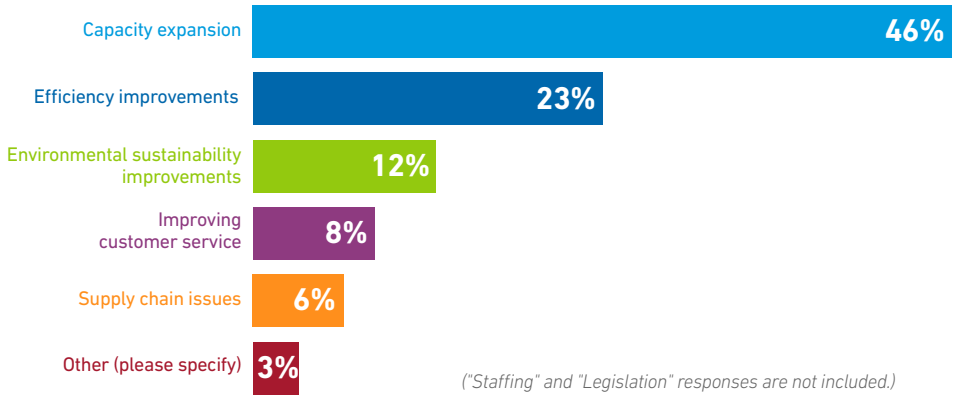
Expansion drives planned spending increases

Nearly half (46%) of all operator respondents cite capacity expansion as being the greatest driver behind planned increases in spending (**Figure 1**). Efficiency improvement is the top driver for 23% of respondents, while only 12% cite environmental sustainability-related improvements. There is likely to be considerable overlap between these two criteria, however. Improving air flow, for example, improves energy efficiency in cooling — and, consequently, reduces associated carbon emissions. Taken together, planned expenditure on improving efficiency and sustainability (at 35%) is closer to planned spending on capacity expansion (46%).

Figure 1

Which of these is the biggest overall driver of your planned spending increase? (n=197)



("Staffing" and "Legislation" responses are not included.)

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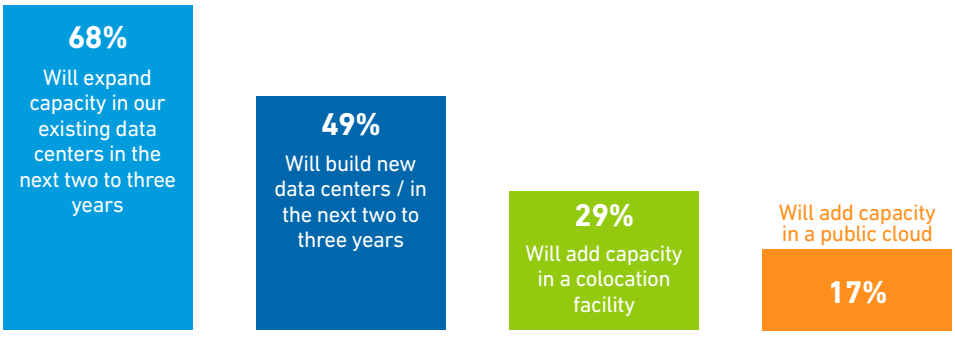
Nearly half of expanding enterprises are planning new builds

Most enterprise respondents (90%) will be adding IT/data center capacity over the next two to three years (n=134). Of this group, almost half (49%) expect to construct new facilities (**Figure 2**). This is likely due to the resumption of projects delayed by the COVID-19 pandemic and increasing demand for highly available and secured IT services. The number who say they will build new facilities is higher than might have been expected; however, the construction of new facilities does not rule out the closure of older or less-efficient facilities. The perception, shared by many enterprises, that keeping some workloads on-premises costs less over time, is also likely to play into the appetite for more enterprise capacity.

Figure 2

Some organizations add capacity by expanding their own data centers or building new ones. What about your organization? Choose all that apply. (n=119)

Respondents: Enterprises only



("Other" and "Don't know" responses are not included.)

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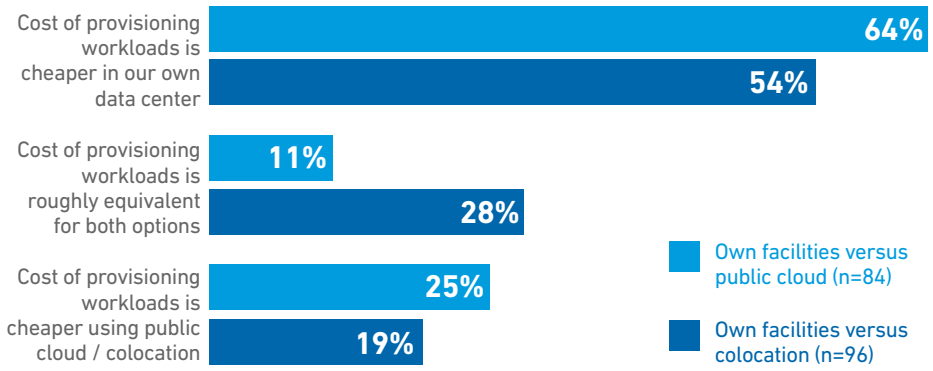
Colo / cloud viewed as more expensive than on-premises

More than half of enterprise respondents (54%) compared the cost of provisioning workloads in their own data centers versus public cloud and colocation facilities (n=214). Of these, most found keeping workloads on premises to be less expensive (**Figure 3**). Comparing the cost of provisioning at different venues is not an exact science, because there are several factors involved, some of them long term and unpredictable. However, it is clear that the large majority of those operators already committed to their own data centers see little financial advantage in closing them down.

Figure 3

When comparing the cost of colocation facilities and cloud versus your own data center, what did you discover? Choose all that apply.



("Other" responses are not included.)

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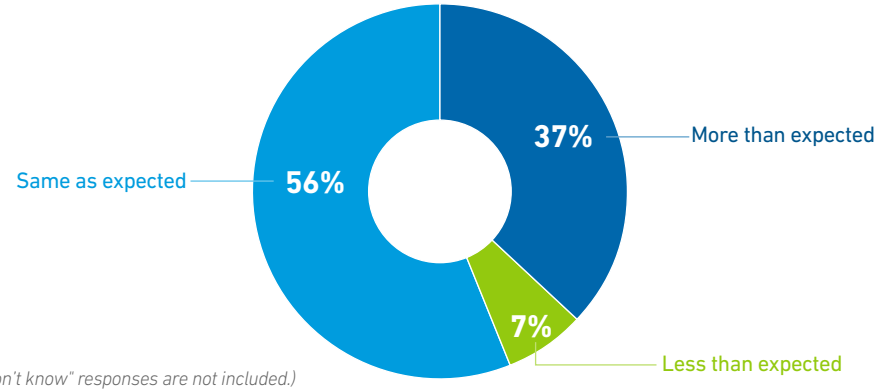
Colo costs are higher than expected for many operators

Enterprises found provisioning workloads in colocation to be more expensive than on-premises (n=96), as shown in **Figure 3** (54%). In support of this, over a third of operators currently using colocation services found costs to be higher than expected (**Figure 4**). This might be explained by the pricing complexities of key services that colocation facilities rely on (cabling, custom requests, interconnection fees, etc.). Dramatic increases in power and labor costs, together with higher prices from supply-chain issues — which are often passed on to colocation tenants directly — likely impacted these results.

Figure 4

Taking all colocation costs into account, would you say the use of a colo facility is costing your organization more than, less than or the same as expected when it decided to make use of a colo facility? (n=83)



("Don't know" responses are not included.)

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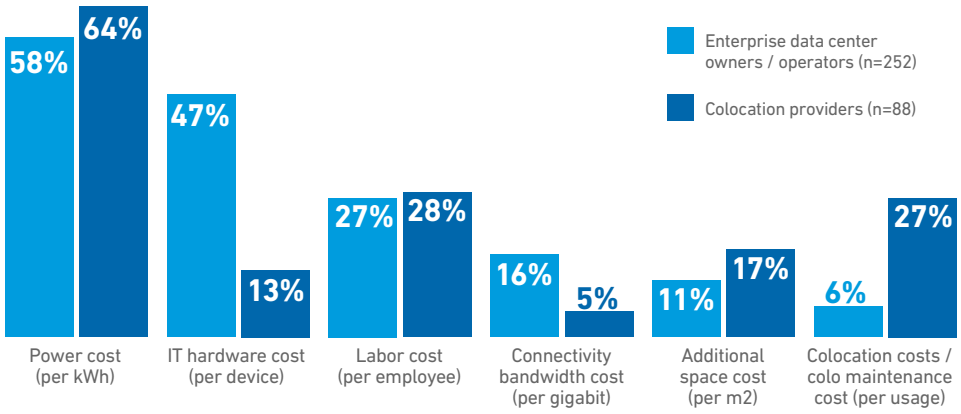
Power and labor drive up operational costs

Colocation respondents cite power costs, followed by labor, as having increased the most over the past year (Figure 5). These are ongoing operational costs, rather than capital outlays, and suggest higher costs are likely to continue for some time. IT hardware costs have also risen significantly and these are affecting enterprises more than colocation facilities.

Figure 5

Regarding your organization's colocation or enterprise data center expenses, in which areas has your organization experienced the greatest unit cost increase over the past 12 months? Choose no more than two.



("Other", "Don't know" and "Public cloud (per resource)" responses are not included.)

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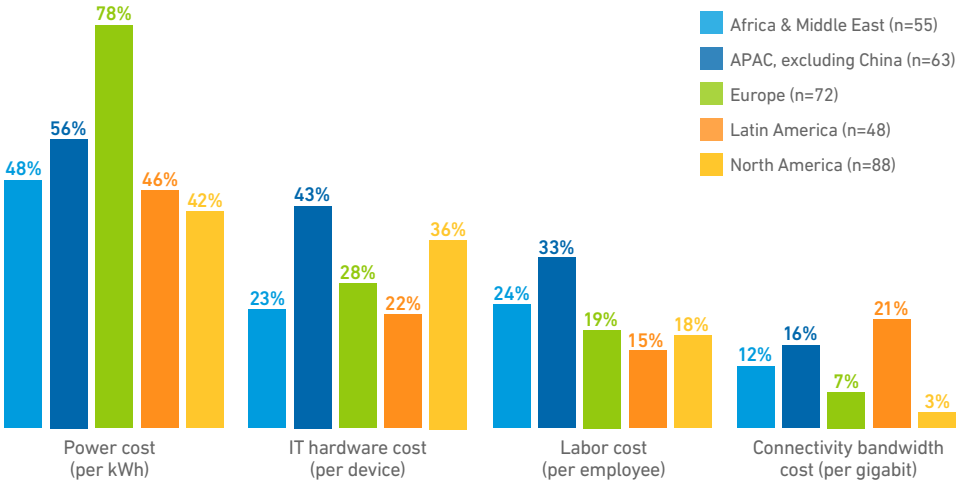
Europe affected most by power cost increases

The global energy crisis (exacerbated by the conflict in Ukraine) has caused a painful surge in costs in Europe, but it has not impacted power prices in North America and the Asia-Pacific (APAC) region (excluding China) to the same extent (**Figure 6**). For North America and APAC (excluding China), unit cost increases for IT hardware are more comparable to those for energy – owing to supply chain issues and inflation.

Figure 6

Regarding your organization's data center expenses, in which areas has your organization experienced the greatest unit cost increases over the past 12 months? Choose no more than two. (n=326)



(China, n=14, reponses are not included.)

(Only the top 4 response categories are included.)

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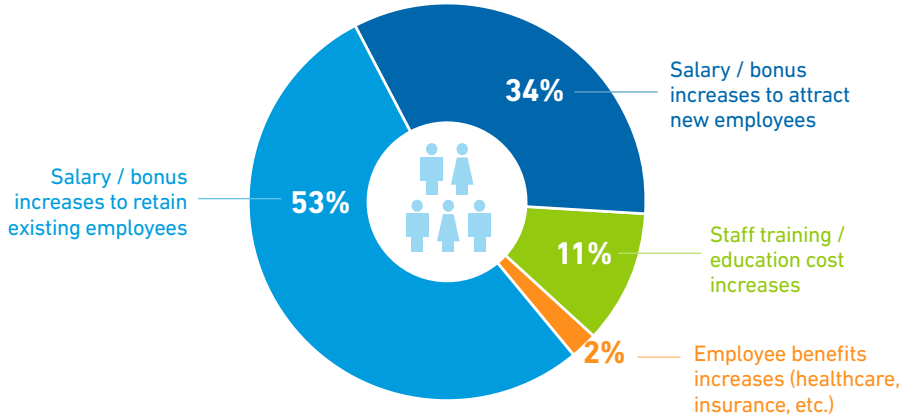
Labor spending driven by staff retention efforts

Over half of respondents (53%) reported higher labor costs, mainly arising from efforts to retain existing staff (**Figure 7**). Factors that are likely to affect these costs in the future include an increasingly competitive market for skilled workers, rollouts of next-generation technologies and the growing use of artificial intelligence.

Figure 7

Which of the following has been the primary driver of increased unit labor costs (per employee) over the past 12 months? (n=80)



("Other" and "Don't know" responses are not included.)

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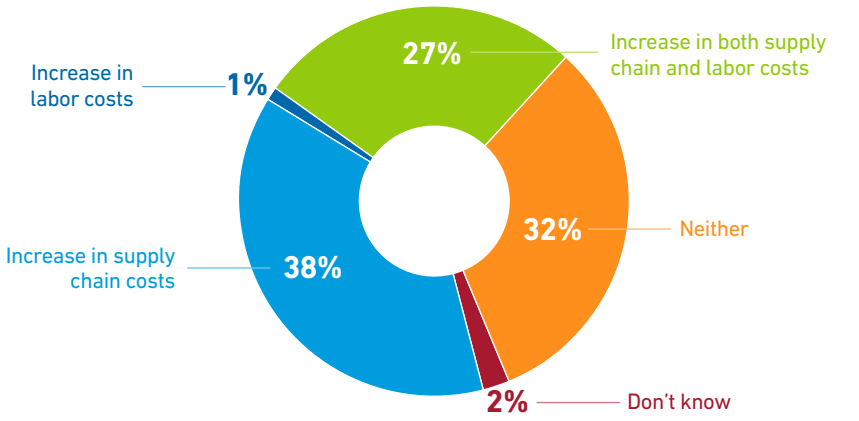
Supply chain costs are a key factor in project delays

Increased supply chain costs were a factor in 65% of capital project delays for all operator respondents (**Figure 8**). These increases may have caused delays by driving operators to investigate alternative equipment or suppliers with lower prices, adjust their capital project plans to better match market prices or availability or to wait for market conditions to improve.

Figure 8

Did an increase in supply chain costs or labor costs drive your data center capital project delays? (n=165)



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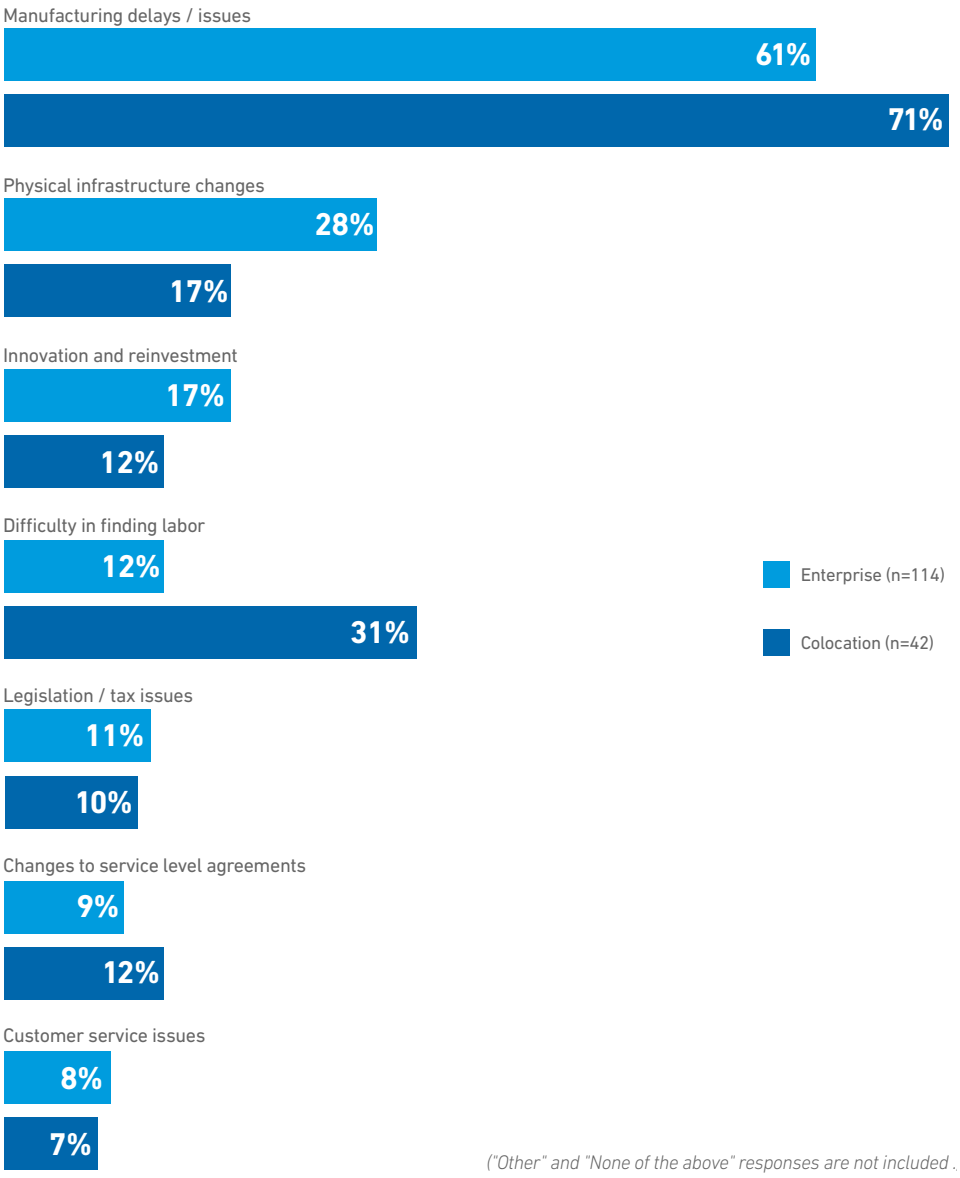
Manufacturing issues are delaying capital projects

Outside of cost increases, manufacturing issues were the primary cause of capital project delays for both enterprise operators and colocation providers (**Figure 9**). These and other response categories shown in **Figure 9** are largely beyond the control of owners and / or operators. While the COVID-19 pandemic has largely passed, geopolitical and economic conditions suggest that manufacturing issues will continue, contributing to ongoing delays or price increases.

Figure 9

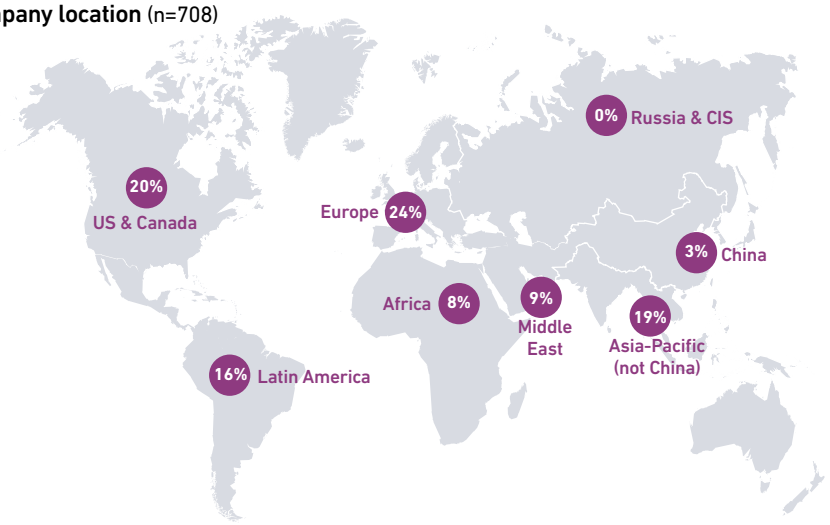
Which of these additional factors — if any — have been driving data center capital project delays? Choose all that apply.



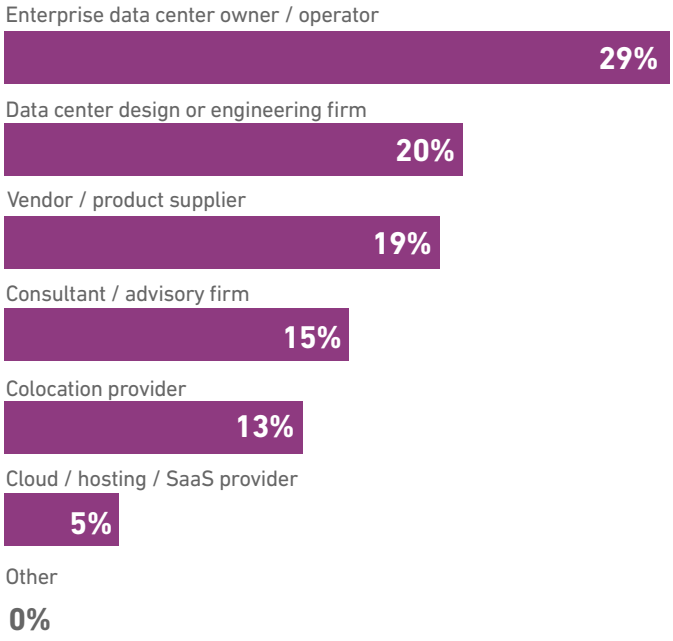
("Other" and "None of the above" responses are not included.)

Uptime Institute Global Data Center Survey 2022: end-user demographics

Company location (n=708)



Verticals (n=709)



Job function (n=711)

- **14%** Critical facilities manager
- **17%** Senior executive (VP or C-level)
- **17%** Design engineer
- **19%** Consultant
- **10%** IT manager
- **5%** Critical facilities operations staff
- **3%** IT operations staff
- **15%** Other

All general queries

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About Uptime Institute

Uptime Institute is the Global Digital Infrastructure Authority. Its Tier Standard is the IT industry's most trusted and adopted global standard for the proper design, construction, and operation of data centers – the backbone of the digital economy. For over 25 years, the company has served as the standard for data center reliability, sustainability, and efficiency, providing customers assurance that their digital infrastructure can perform at a level that is consistent with their business needs across a wide array of operating conditions.

With its data center Tier Standard & Certifications, Management & Operations reviews, broad range of related risk and performance assessments, and accredited educational curriculum completed by over 10,000 data center professionals, Uptime Institute has helped thousands of companies, in over 100 countries to optimize critical IT assets while managing costs, resources, and efficiency.

Uptime Institute is headquartered in New York, NY, with offices in Seattle, London, Sao Paulo, Dubai, Singapore and Taipei.

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