Uptime Institute's 2024 Data Center Maintenance Survey

JULY 2024

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SUMMARY

A majority of respondents to Uptime Institute's 2024 Data Center Maintenance Survey said they use different sources to maintain its data center equipment – including third-party services, OEM vendors, and their own in-house employees.

Electrical switchboards (81%) and transformers (75%) were most maintained by third-party service providers. Generators (84%), chillers (69%), and UPS batteries (68%) were most maintained by OEM vendors. Filters (84%) and pumps (60%) were most maintained by in-house employees.

Operators described the same top three factors for changing their strategies both over the past 12 months and in the coming 12 months. Those factors are supply chain challenges, staffing challenges, and budget challenges.

ABOUT THIS SURVEY

Uptime Institute's 2024 Data Center Maintence Survey was conducted between April 1, 2024 and May 7, 2024 and had a total of 163 respondents from organizations that own/operate data centers and are Uptime Institute Network members.

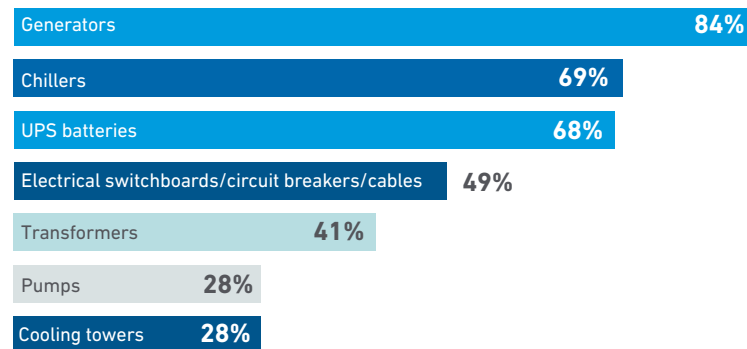## Operators use various sources to perform data center maintenance

I. Who performs maintenance on your data center equipment? Choose all that apply. (n=163)

- 87% — Third-party service providers
- 80% — Equipment OEM vendors
- 72% — In-house employees
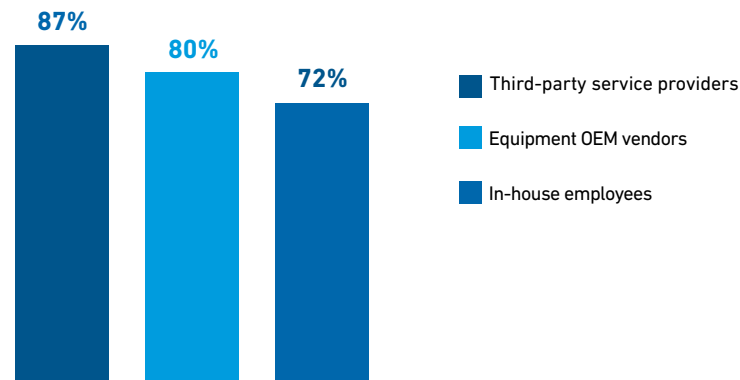
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Maintenance services provided by OEM vendors

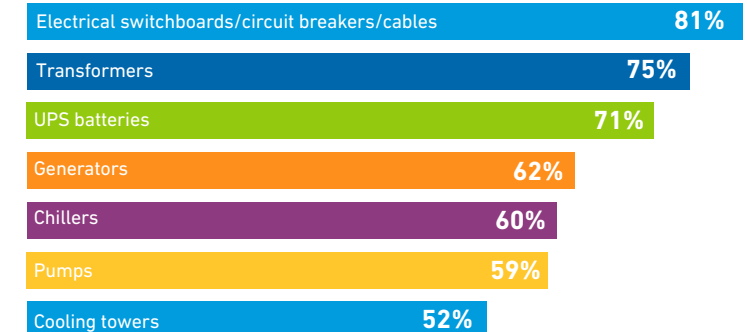**III. And for which pieces of equipment does your equipment OEM vendors perform maintenance on in your data center(s)? Choose all that apply. (n=123)**

Equipment	%
Generators	84%
Chillers	69%
UPS batteries	68%
Electrical switchboards/circuit breakers/cables	49%
Transformers	41%
Pumps	28%
Cooling towers	28%

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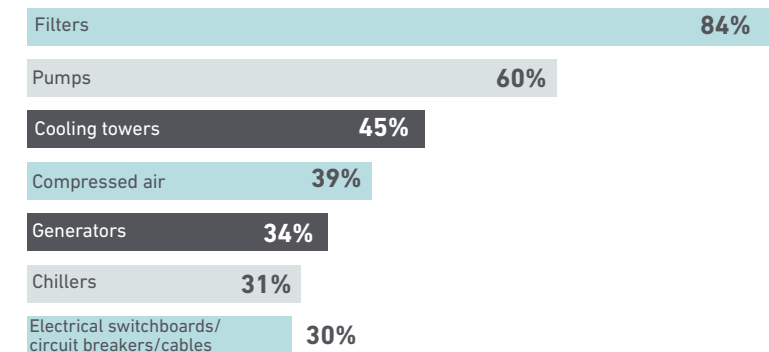## Maintenance services provided by third parties

II. For which pieces of equipment do third-party service providers perform maintenance on in your data center(s)? Choose all that apply. Choose all that apply.

Equipment	%
Electrical switchboards/circuit breakers/cables	81%
Transformers	75%
UPS batteries	71%
Generators	62%
Chillers	60%
Pumps	59%
Cooling towers	52%

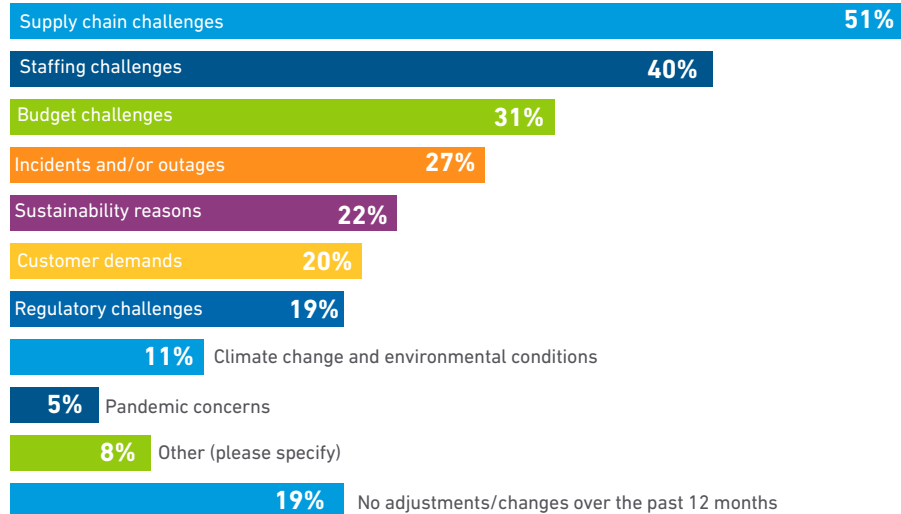UPTIME INSTITUTE 2024 DATA CENTER MAINTENANCE SURVEY

Maintenance services performed in-house

IV. For which pieces of equipment do your in-house employees perform maintenance? Choose all that apply. (n=109)

Equipment	%
Filters	84%
Pumps	60%
Cooling towers	45%
Compressed air	39%
Generators	34%
Chillers	31%
Electrical switchboards/circuit breakers/cables	30%

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Changes in maintenance strategies over past 12 months

V. Which of the following factors have caused your organization to adjust/change its maintenance strategies over the past 12 months? Choose all that apply.(n=146)
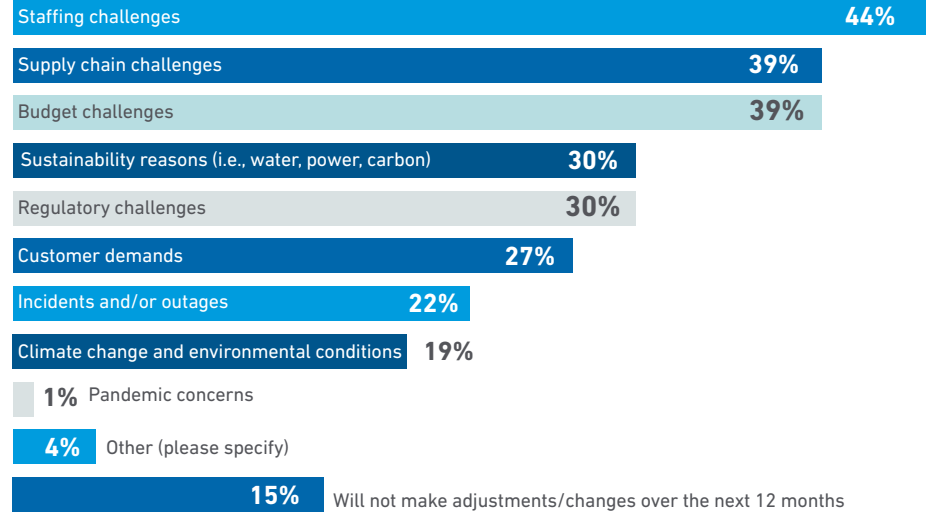
Factor	%
Supply chain challenges	51%
Staffing challenges	40%
Budget challenges	31%
Incidents and/or outages	27%
Sustainability reasons	22%
Customer demands	20%
Regulatory challenges	19%
Climate change and environmental conditions	11%
Pandemic concerns	5%
Other (please specify)	8%
No adjustments/changes over the past 12 months	19%

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Changes to maintenance strategies over next 12 months

VI. Thinking about the next 12 months, which factors do you expect will adjust/change your organization's maintenance strategies? Choose all that apply. (n=146)
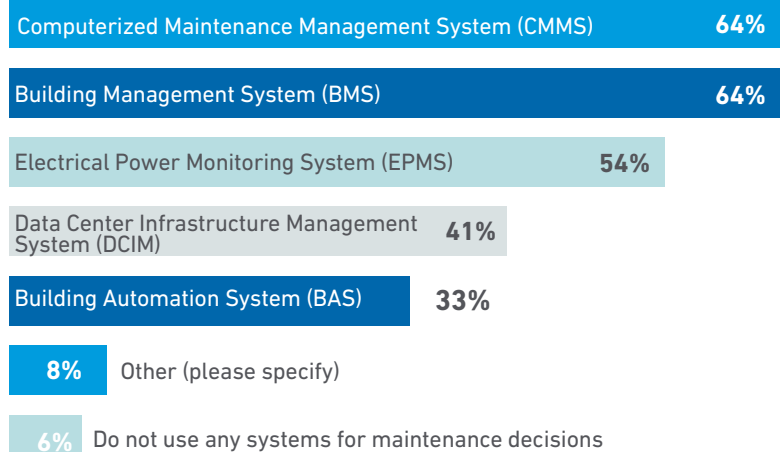
Factor	%
Staffing challenges	44%
Supply chain challenges	39%
Budget challenges	39%
Sustainability reasons (i.e., water, power, carbon)	30%
Regulatory challenges	30%
Customer demands	27%
Incidents and/or outages	22%
Climate change and environmental conditions	19%
Pandemic concerns	1%
Other (please specify)	4%
Will not make adjustments/changes over the next 12 months	15%

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Systems used for making maintenance decisions

VII. Which of the following systems - if any - does your organization use to make maintenance decisions in its data center(s)? Choose all that apply (n=146)
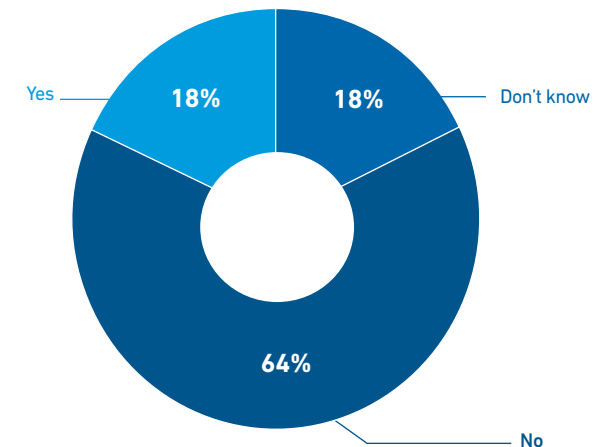
System	%
Computerized Maintenance Management System (CMMS)	64%
Building Management System (BMS)	64%
Electrical Power Monitoring System (EPMS)	54%
Data Center Infrastructure Management System (DCIM)	41%
Building Automation System (BAS)	33%
Other (please specify)	8%
Do not use any systems for maintenance decisions	6%

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Majority of operators do not use Failure Cause Remedy codes

VIII. Failure Cause Remedy codes (FCRs) identify what type of work needs to be performed to return equipment to working order. Does your organization use Failure Cause Remedy codes? (n=146)
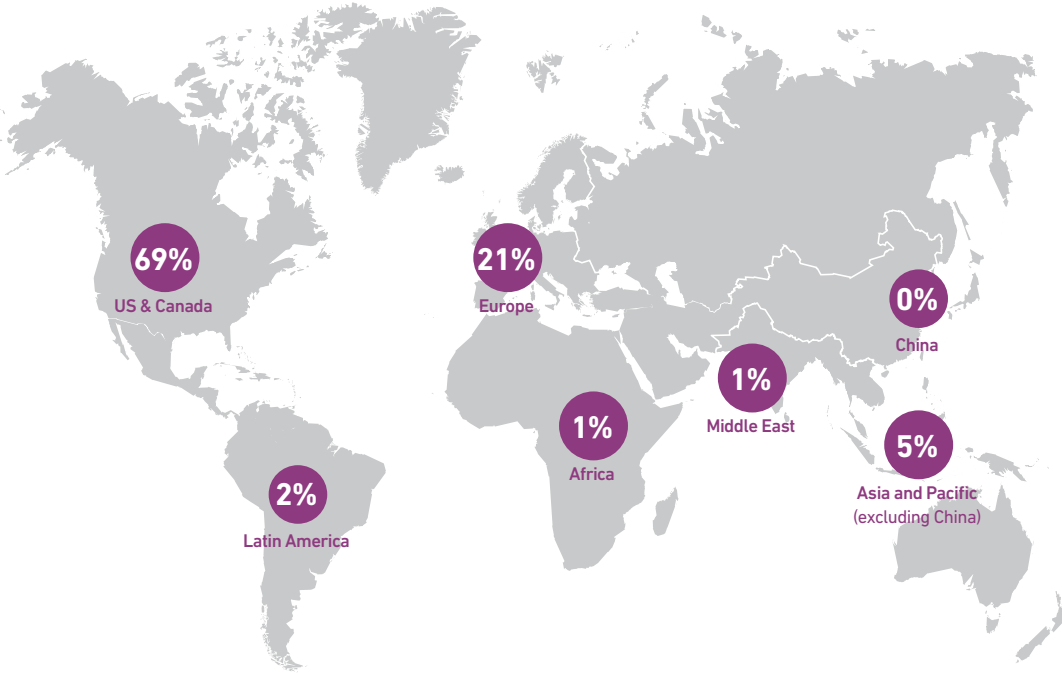

- Yes: 18%
- Don't know: 18%
- No: 64%

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Demographics

Respondents' location (n=163)

- 69% US & Canada
- 21% Europe
- 0% China
- 1% Middle East
- 1% Africa
- 5% Asia and Pacific (excluding China)
- 2% Latin America

Digital infrastructure environment (n=163)

76% Enterprise data center owner / operator

17% Colocation provider

1% Cloud/Hosting

6% Other

Verticals (n=144)

Vertical	Percentage
Financial	32%
Colocation / multi-tenant data centers	27%
Telecommunications	10%
Healthcare/Pharmaceutical	8%
Technology	7%
Retail/Wholesale/Distribution	4%
Insurance	3%
Software and / or cloud services	3%
Government	2%
Other	5%
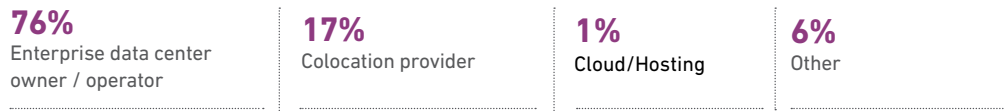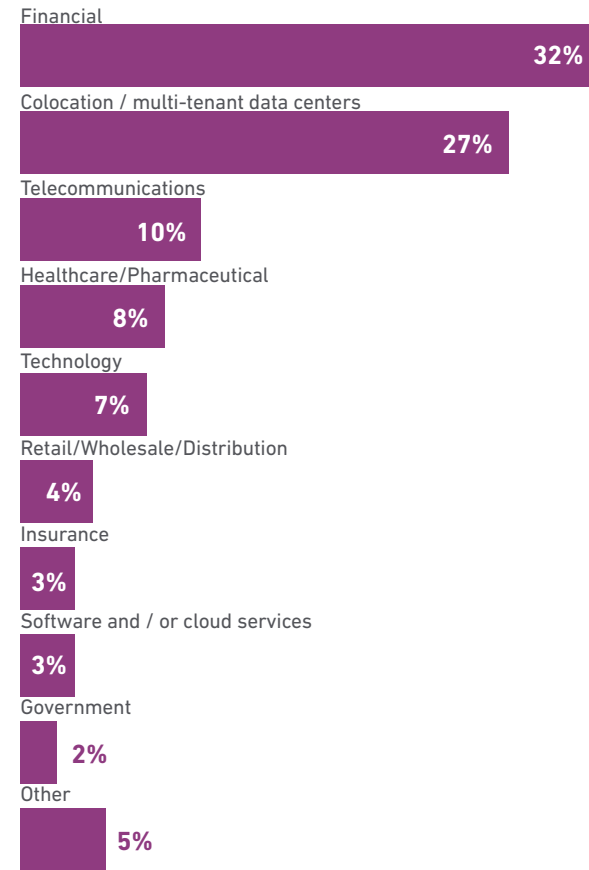
Authors

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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. For more information, please visit www.uptimeinstitute.com