

DATA REPORT

Approaches to sustainability vary widely

Key findings from the Uptime Institute Sustainability and Climate Change Survey (Q2 2023)

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Sustainability continues to be a priority for the data center industry in 2023. Most organizations perform climate resiliency assessments, and nearly half have set goals to achieve net-zero carbon emissions. Operators report that their sustainability initiatives not only benefit the environment — they also reduce operating costs and improve customer engagement.

However, strategies for achieving these goals vary widely. Some operators overlook significant sources of operational carbon emissions; others are vulnerable to regulatory or market changes. This Data Report investigates these challenges and provides insight into how to achieve more effective sustainability strategies.

The Uptime Institute Sustainability and Climate Change Survey 2022, conducted online in December 2022 and January 2023, had more than 700 end-user respondents. This report highlights some of the findings.

KEY POINTS

- Most data center organizations (70%) conduct climate-related resiliency assessments, despite only half being formally required to. However, these assessments do not track or report the same metrics consistently.
- Nearly half of organizations have set goals to achieve net-zero carbon emissions — the greatest proportion of these organizations are located in Europe. The majority expect to reach their goals by 2030.
- More than 90% of organizations with a net-zero target include interim carbon reduction goals, but less than half (40%) set them for their third-party IT operations partners.
- The top challenges organizations face in meeting their sustainability goals are: to reduce energy use, to procure renewable energy, to create an effective sustainability strategy, to measure Scope 3 emissions and to hire and retain staff.

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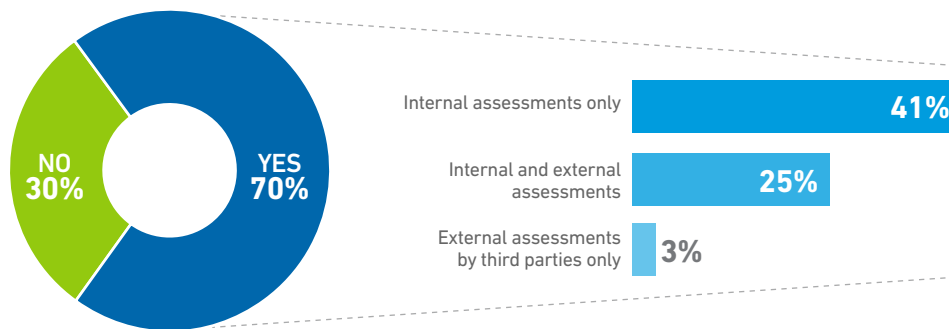
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Most assess climate resiliency, but methods are mixed

Most data center organizations conduct resiliency assessments related to climate change (Figure 1). However, the majority of these assessments are internal and do not follow a consistent process. This may change in the next few years due to incoming regulations in many major economic centers. These regulations will require operators to report on resiliency using the Task Force on Climate-Related Financial Disclosures framework. Examples include the EU’s Corporate Sustainability Reporting Directive (CSRD), the UK’s climate-related financial disclosure laws, and the US Securities and Exchange Commission’s proposed climate rule.

Figure 1

Does your organization currently conduct climate change / weather-related resiliency assessments for your data center infrastructure? (n=322)



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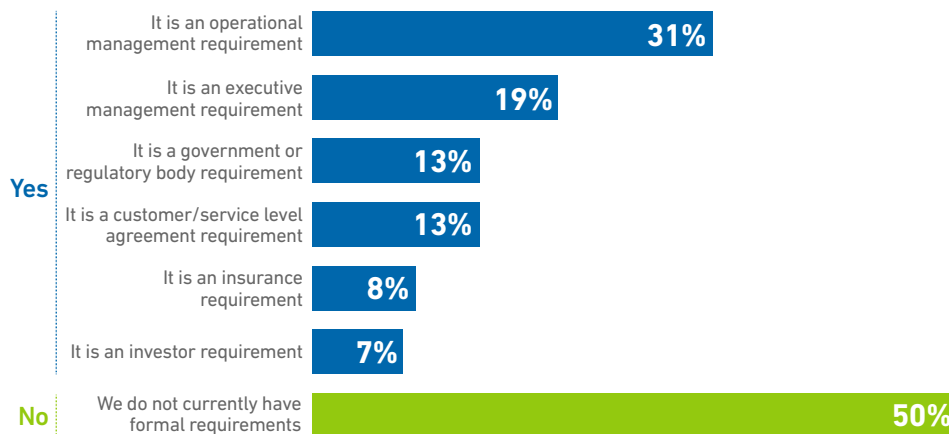


Half of operators are not required to assess climate resiliency

Although most operators say they conduct climate-related resiliency assessments (Figure 1), only 50% are formally required to (Figure 2). This does not necessarily indicate that half of the industry is unprepared. Only 8% of respondents say their insurers require them to conduct assessments, but the actual percentage is likely to be much higher. For example, evaluating physical risks is a typical insurance requirement for most data center organizations, and this includes weather-related threats. This means that much of the data needed for assessing and reporting climate resiliency may already be present, but not explicitly categorized as such.

Figure 2

Are you formally required to conduct climate change / weather-related resiliency assessments for your data center infrastructure? Choose all that apply. (n=317)



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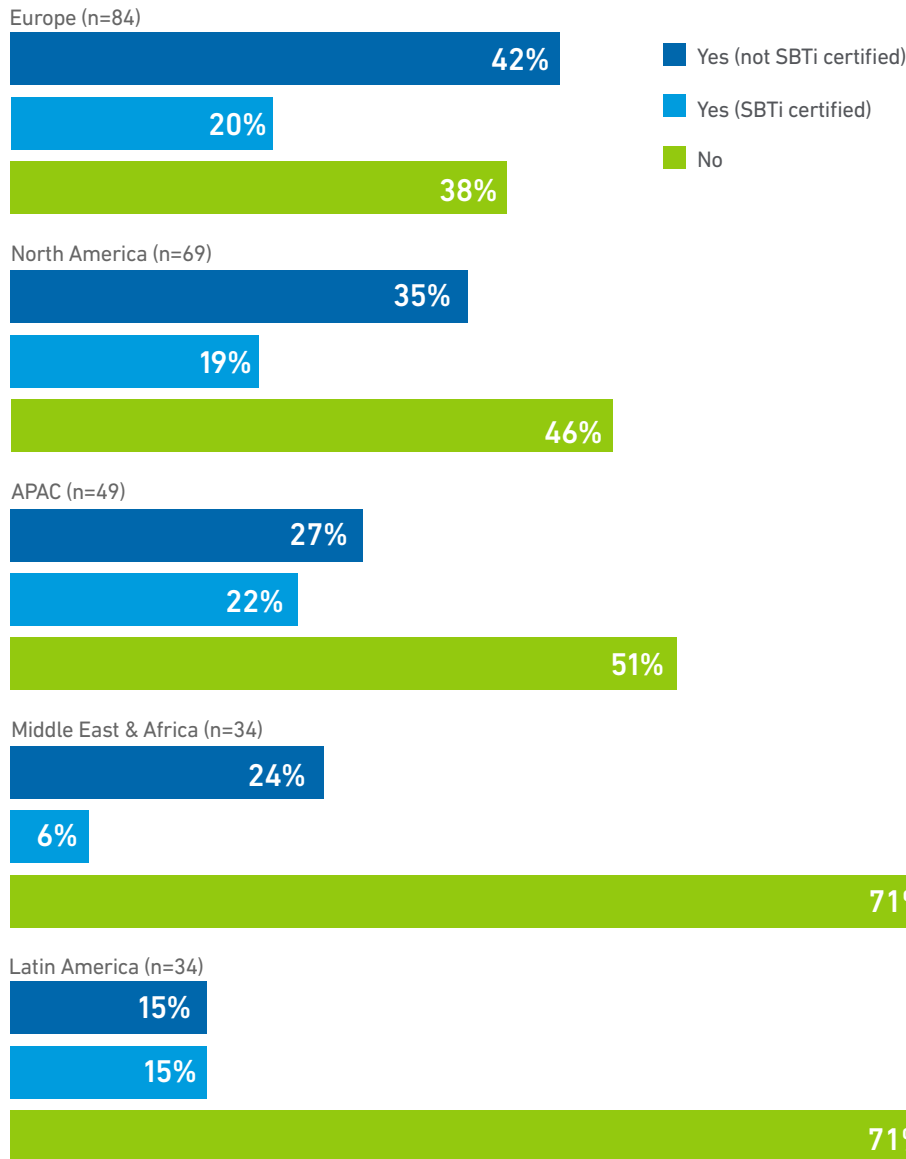


Europe leads the way in setting net-zero goals

Nearly half of organizations have set net-zero greenhouse gas emissions goals, and the greatest proportion of them are in Europe (**Figure 3**). This is largely driven by the EU’s aim to achieve net-zero by 2050 and the Climate Neutral Data Center Pact commitment — an initiative to make European data centers climate neutral by 2030, which has helped establish frameworks for reporting net-zero progress. Upcoming regulations, such as the EU’s CSRD, will also bring stricter requirements for reporting and reducing carbon emissions. Few organizations certify their net-zero goals through the Science Based Targets initiative (SBTi), most likely because it is voluntary and its requirements are more rigorous than both the Climate Neutral Data Center Pact and the CSRD.

Figure 3

Does your organization have a greenhouse gas net-zero emissions goal?



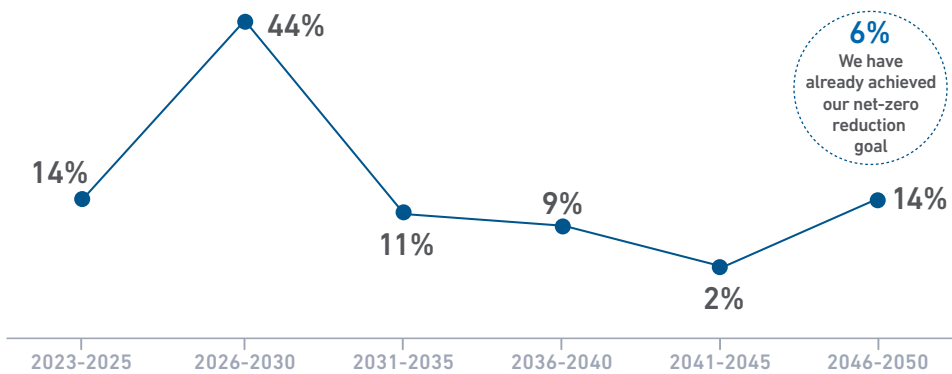
(Responses for "Don't know" are not included.)

Most expect to achieve net-zero goals by 2030

Of the respondents that say they have set net-zero goals, almost two-thirds (64%) have either achieved them, or expect to by 2030 (Figure 4). This will be extremely challenging for organizations that rely heavily on renewable energy certificates (RECs) or guarantees of origin (GOs) to offset their emissions. Few grids can provide electricity using sufficient emission-free fuel sources, and most regions currently lack the technology and infrastructure they need to deliver reliable carbon-free energy. As these organizations' goals near their 2030 deadline, the demand for RECs and GOs is likely to drive price spikes, which may result in many organizations reassessing the high cost of achieving their sustainability targets.

Figure 4

In what year does your organization expect to achieve its greenhouse gas net-zero emissions goal? (n=125)



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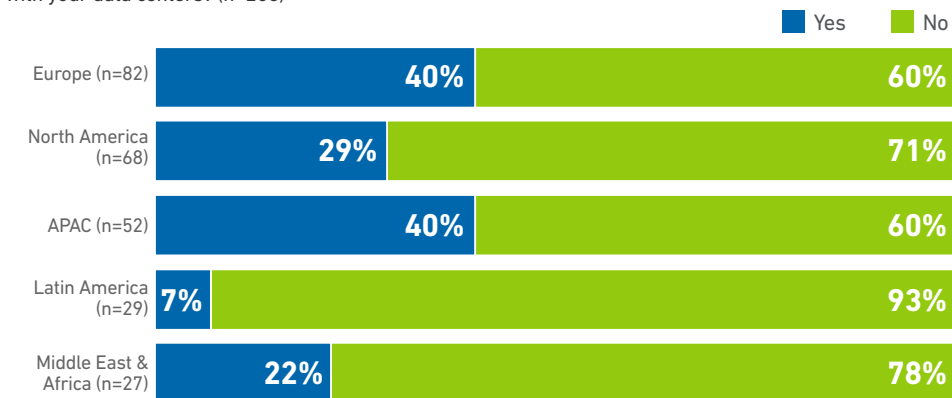


Europe and APAC buy the most carbon offsets

Respondents from Europe and the Asia-Pacific (APAC) region report the highest proportion of carbon offset purchases (such as RECs and GOs) in 2022 (Figure 5). This is probably because the retail energy supply of renewable energy is not meeting the high demand — partly driven by ambitious carbon reduction goals in these regions (Figure 3). There are very low rates of carbon offset purchases in Latin America and in the Middle East and Africa. These data center markets are smaller and are still developing. Consequently, they will prioritize infrastructure reliability ahead of setting sustainability goals.

Figure 5

Does your organization buy carbon offsets (including RECs) to balance out carbon emissions associated with your data centers? (n=258)



(Responses for "Don't know" are not included)

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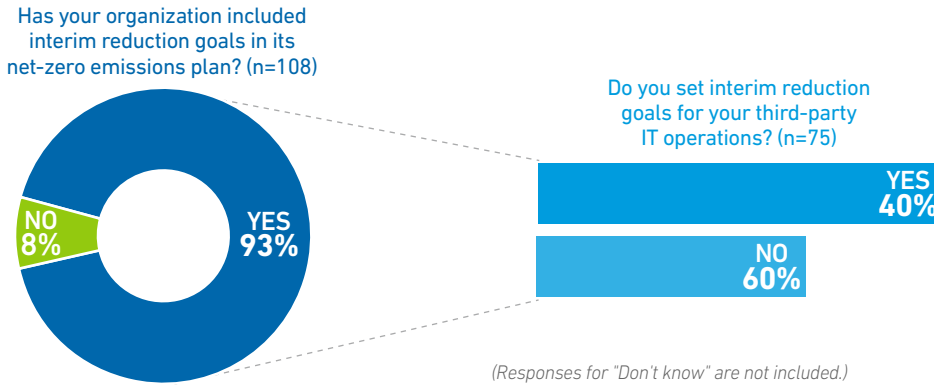


Less than half set interim net-zero goals for third-party IT

Although most respondents include interim carbon reduction goals in their own net-zero strategies, less than half (40%) do so for their third-party IT operations (**Figure 6**). Some organizations write off the emissions generated from workloads after provisioning them to a third party — an action that leads to inaccurate carbon accounting and that will become less acceptable over time. Although new rules and practices relating to third-party IT are yet to be established, it is likely that organizations will be required to track and encourage efficient operations of their outsourced services.

Figure 6

Has your organization included interim reduction goals in its net-zero emissions plan? Do you set interim reduction goals for your third-party IT operations?



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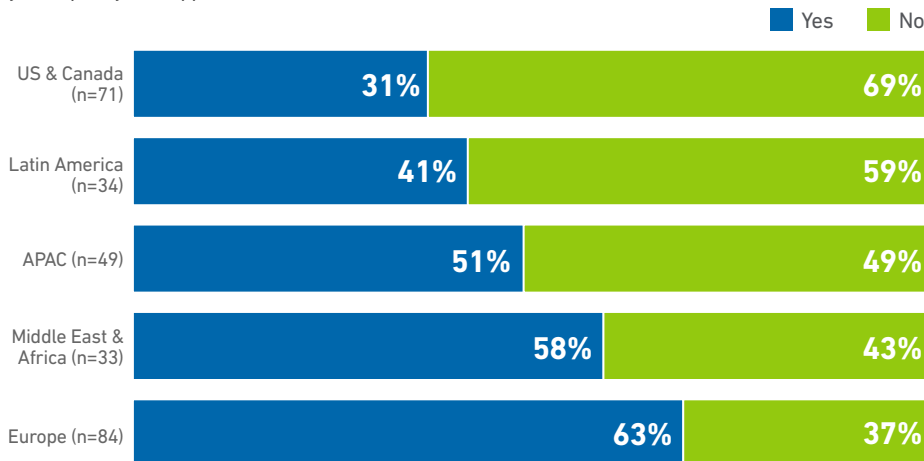


Fewer North American operators require suppliers to lower carbon

Operators in the Americas are less likely than those in other regions to require their suppliers to reduce carbon emissions (**Figure 7**). Because attitudes towards sustainability are more mixed in these regions than others, there is less regulatory and commercial pressure to work with sustainable suppliers. Another factor may be that, because the Americas rely heavily on imports (see *Uptime Institute Data Center Supply Chain Survey 2022*), operators have been focused on securing additional, temporary supplies rather than establishing long-term emissions reduction goals.

Figure 7

Do you require your suppliers to reduce their carbon emissions? (n=271)



(Responses for "Don't know" are not included.)

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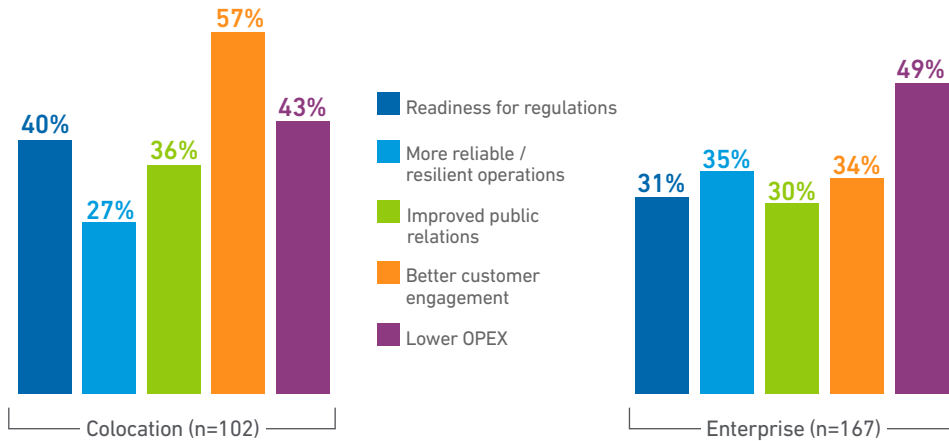


Colo sustainability is driven by customer engagement

Colocation providers view better customer engagement as one of the primary benefits of sustainability initiatives, by 23 percentage points more than enterprises (**Figure 8**). This is because colocation customers are increasingly prioritizing sustainability when choosing a provider. Customers of enterprise data centers are more diffuse and less likely to engage with sustainability efforts than colocation customers. This explains why enterprises are more likely to view lower operating costs and more reliable and resilient operations as primary benefits of their organization’s sustainability initiatives.

Figure 8

Apart from improved environmental performance, which of the following would you say are the primary benefits of your organization’s sustainability initiatives? Choose no more than two.



(Only the top 5 response categories are shown in the chart.)

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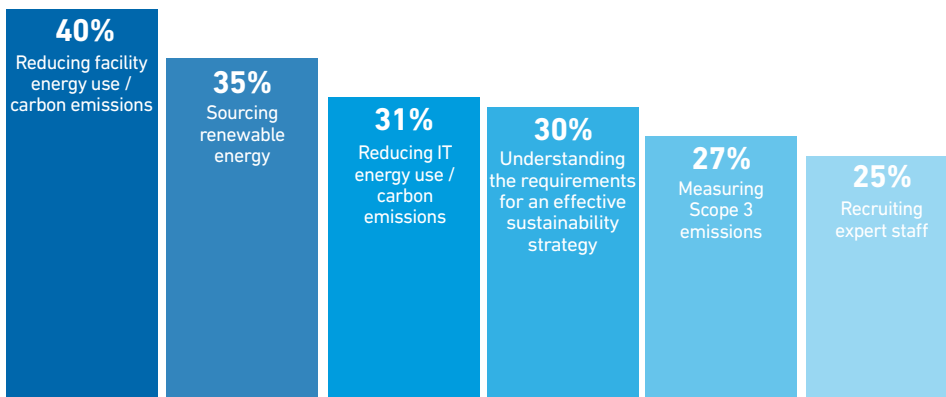


Sustainability progress: six key challenges

Operators know that achieving sustainability goals will not be easy. Respondents say cutting energy consumption and improving carbon emissions within the data center are their top challenges (**Figure 9**). Operators also recognize the challenge of reducing IT equipment emissions (it is widely accepted that most IT equipment is used inefficiently). Renewable energy procurement and Scope 3 emissions management are also proving difficult for operators — as are setting strategies and recruiting expert staff.

Figure 9

In terms of your organization, which of these represent the greatest challenges to achieving your sustainability goals over the next three to five years? Choose no more than two. (n=288)

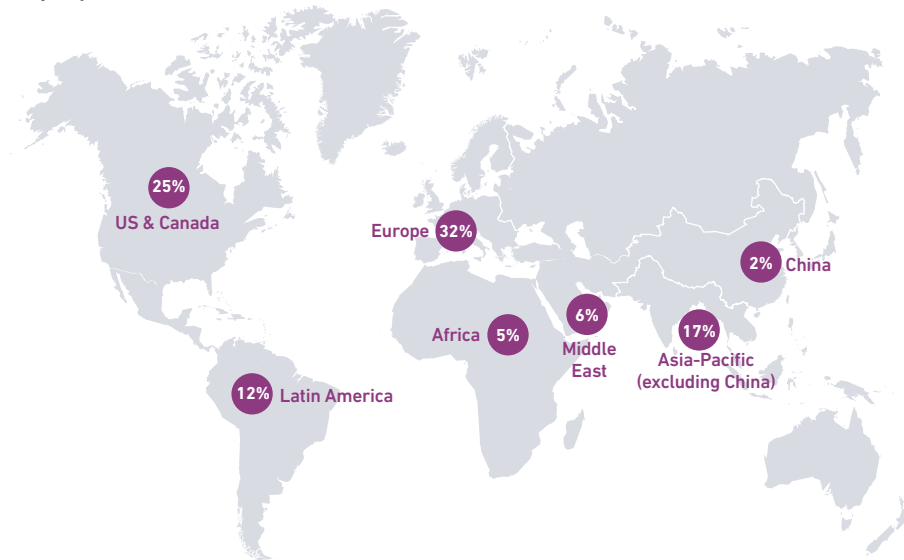


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Uptime Institute Sustainability and Climate Change Survey 2022: end-user demographics

Company location (n=742)



Verticals (n=740)

Enterprise data center owner / operator



Data center design or engineering firm



Vendor / product supplier



Consultant / advisory firm



Colocation provider



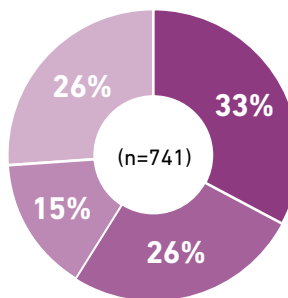
Cloud / hosting provider



Other



Digital infrastructure environment



- We own and / or operate one or more data centers
- We own and / or operate one or more data centers and use colocation
- We do not own or operate data centers, but we use colocation
- None of the above

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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