



Sustainability: Attitudes and Technology Trends

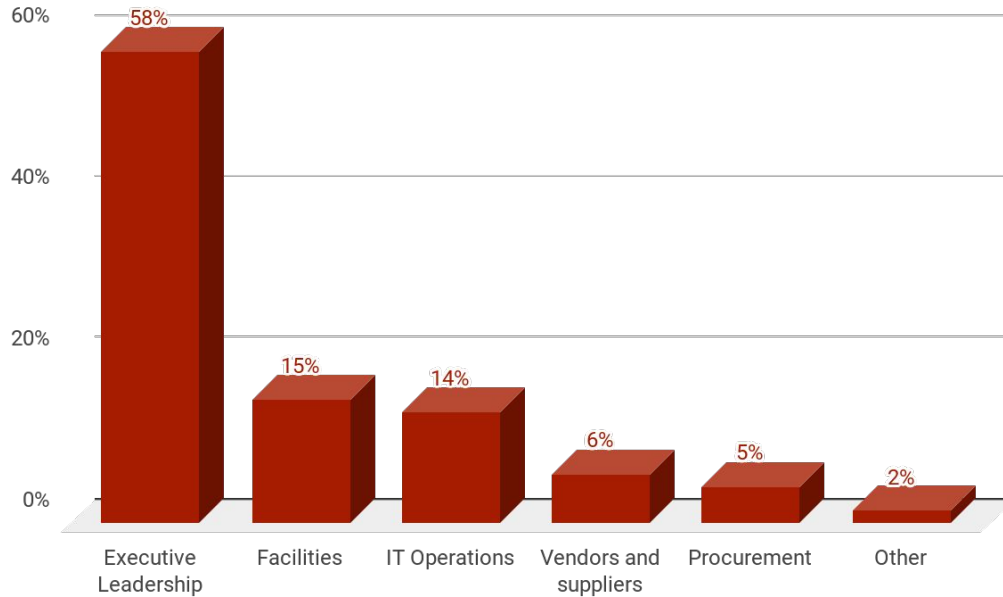
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Research underwritten by:

Honeywell



Which of these major stakeholders can have the greatest impact on data center efficiency and sustainability?



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Analyst comment:

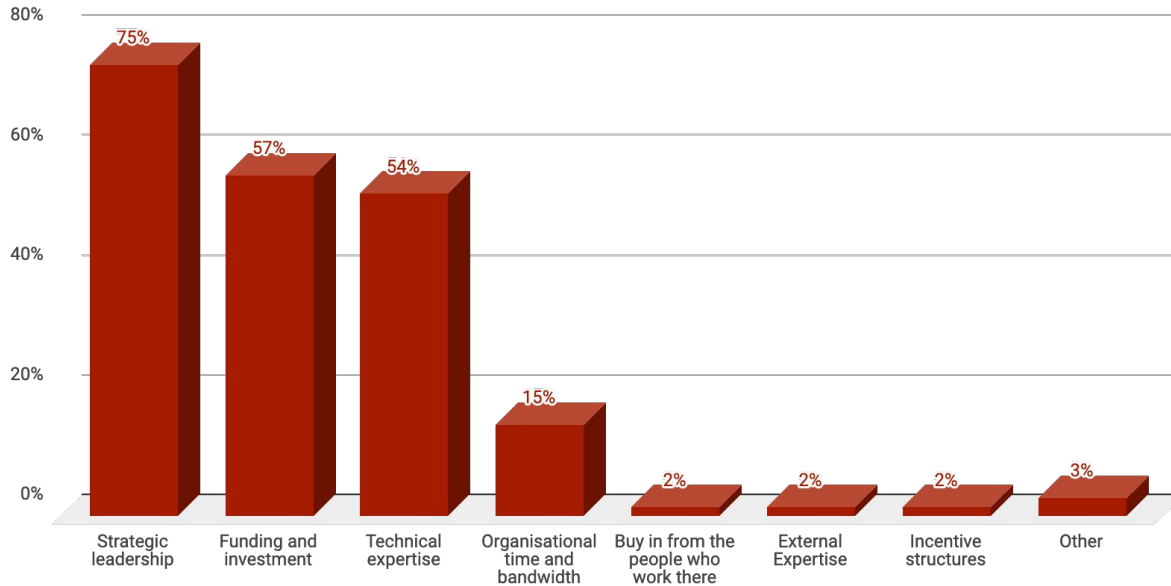
Executive leadership (58%) is seen to have the greatest impact on data center efficiency strategies.

This is consistent with our previous research.

When we asked this question five years ago, the importance of senior management was far less important as sustainability was left more to individual units, or specialist teams with decision making in isolated silos.

Now however, in line with its growing urgency, it's the direction from the top that can have the greatest impact.

Key factors in making a sustainability strategy successful



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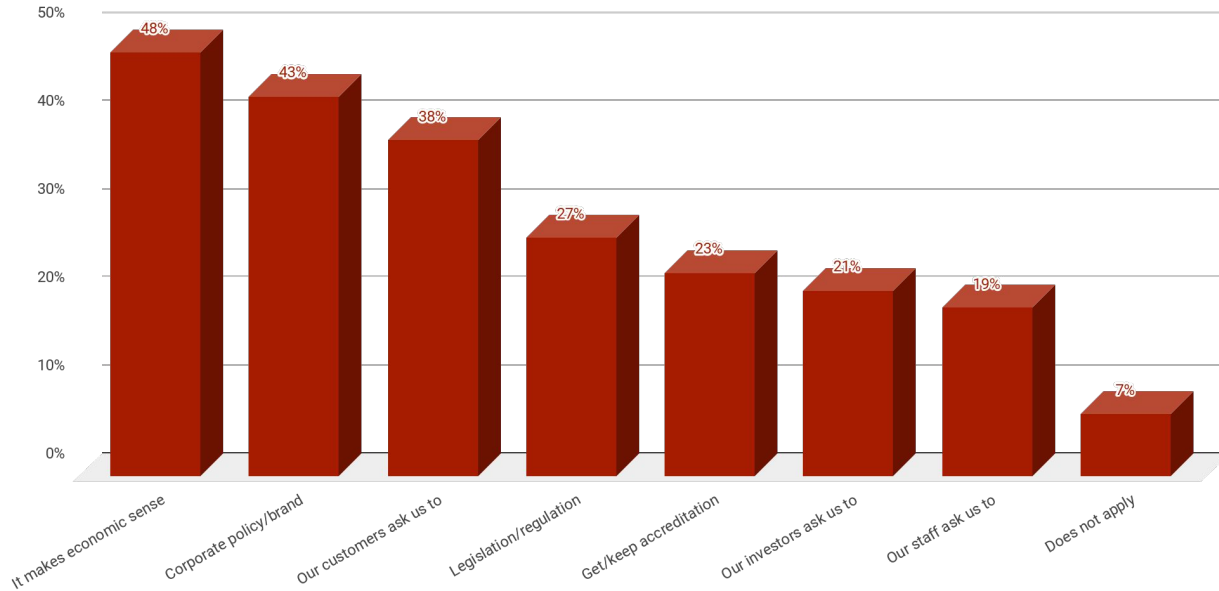
Analyst comment:

Echoing the importance of executive leadership, it is strategic leadership (75%) that is seen by our respondents as the most important factor in a successful strategy.

It's this leadership strategy put in place, from ambitious roadmaps to incentive structures that is driving change. And an organisation's time and bandwidth are no longer seen as barriers to focusing on sustainability, instead it's an increasing part of core business goals.

Two further factors gain high ratings, Funding and Investment (57%) underlines how decisions made at boardroom level can unlock positive projects while technical expertise (54%) indicates the importance of available skills to deliver the strategy.

Why does your organisation pursue data center sustainability strategies?



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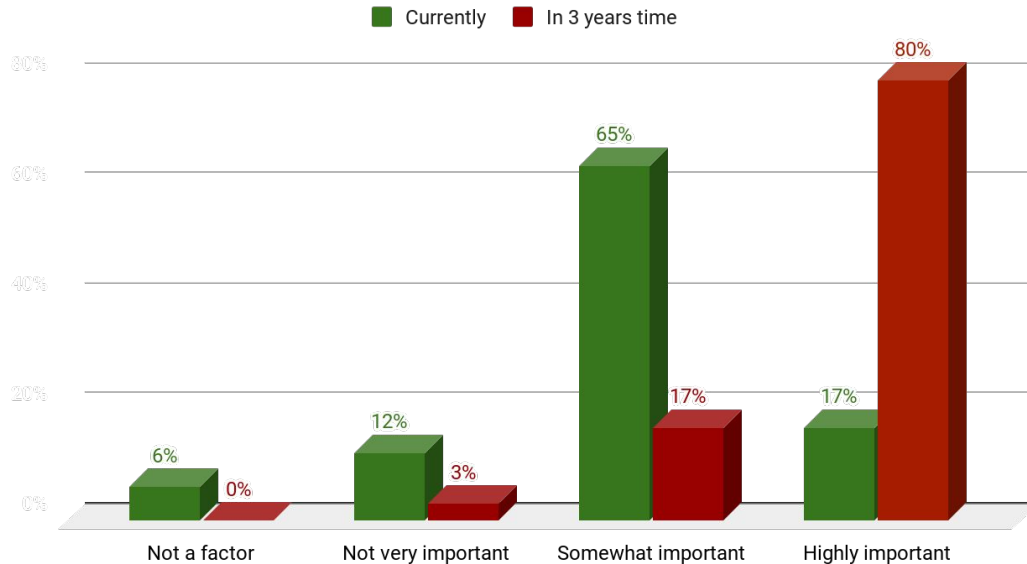
Analyst comment:

The sample here helps further dispel the myth that sustainability is just a business cost, with 48% of respondents stating that it makes economic sense to develop sustainability strategies.

Putting it at the heart of your organisation is now seen as making good financial sense. Corporate policy is rated second highest (43%) again highlighting the importance of leadership.

Pressure from customers is rated as third (38%) - although it's likely that this number will grow as sustainability becomes increasingly a requirement.

How important are efficient and sustainable best practices in terms of attracting clients and winning business?



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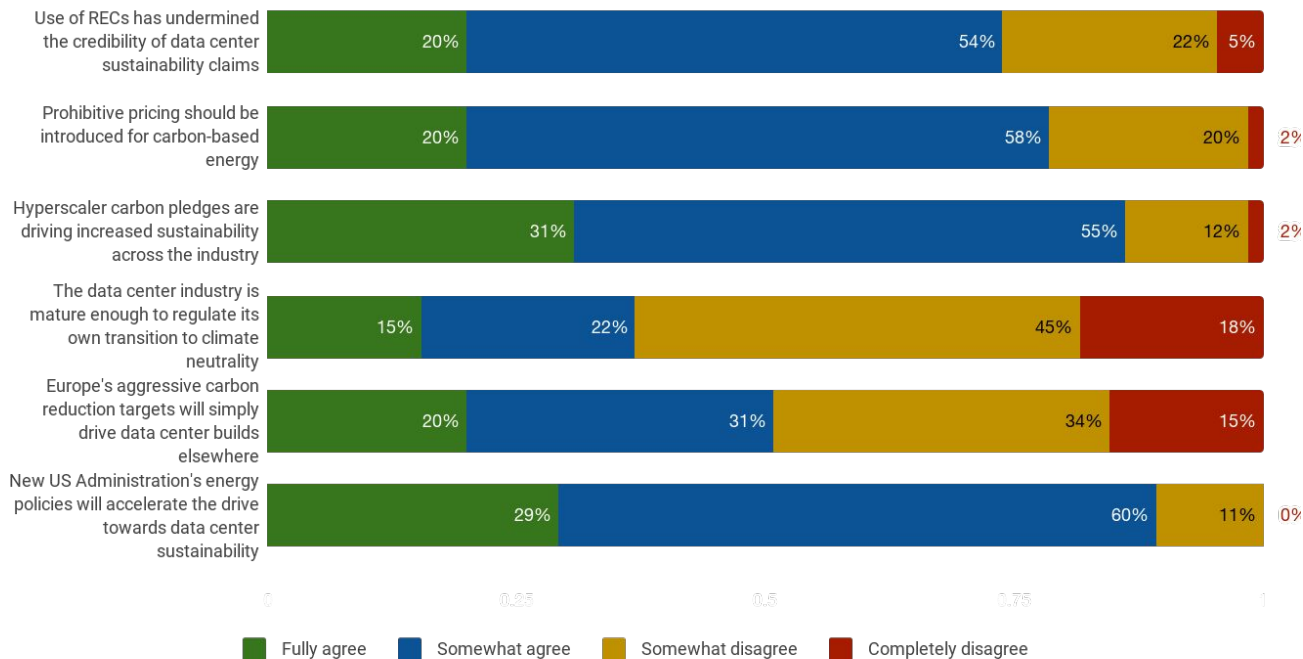
Analyst comment:

These results emphatically show how rapidly the importance of sustainable best practices will grow in terms of attracting clients.

Currently, a majority (65%) see such practices as somewhat important. 80% of respondents predict that in three years sustainability will become even more important.

Echoing the words written on our website and in our magazine, and spoken at our events, these numbers underline the powerful role that sustainability is playing and needs to play further.

Agreement with Attitude Statements: Policy & Pricing



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Analyst comment:

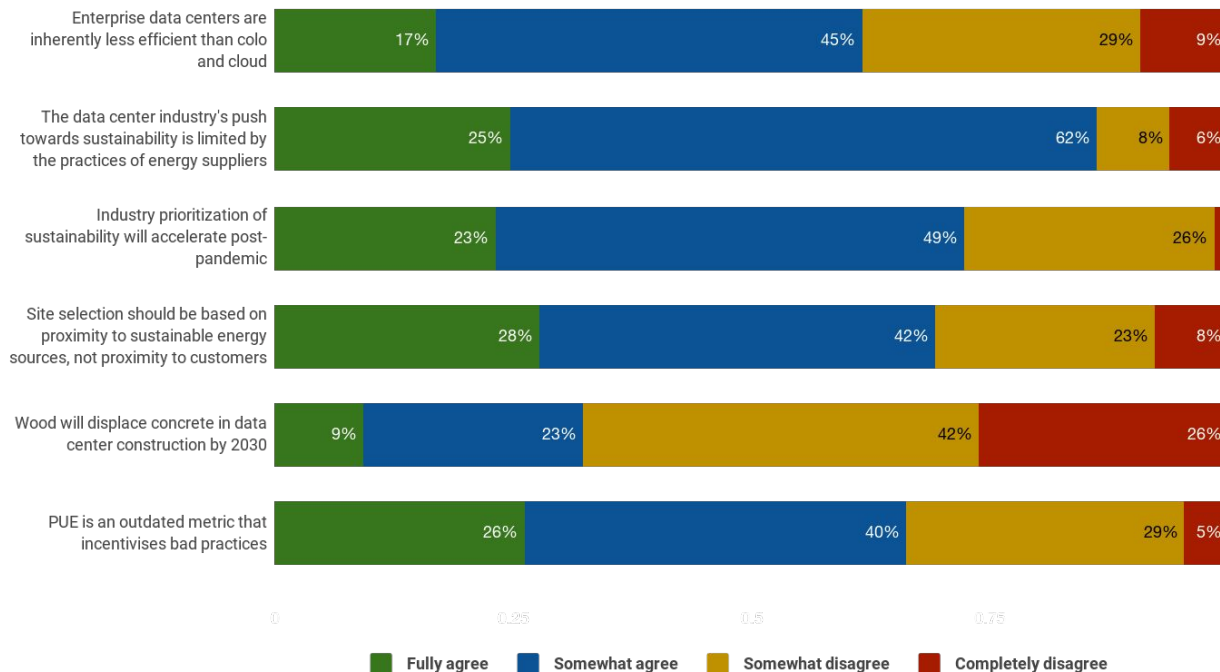
This data indicates current industry opinion.

There is agreement that the industry we are at a point of transition driven by changes in environmental policy in the USA and hyperscale carbon pledges. There's more muted agreement on policy and pricing.

Our respondents believe that the industry needs to be more regulated when it comes to sustainability with 63% believing the industry is not mature enough to manage its own transition to climate neutrality.

Broadly, there are few people agreeing or disagreeing strongly with any of these statements. The industry is indicated by this sample is uncertain and hesitant.

Agreement with Attitude Statements: Design & Operation



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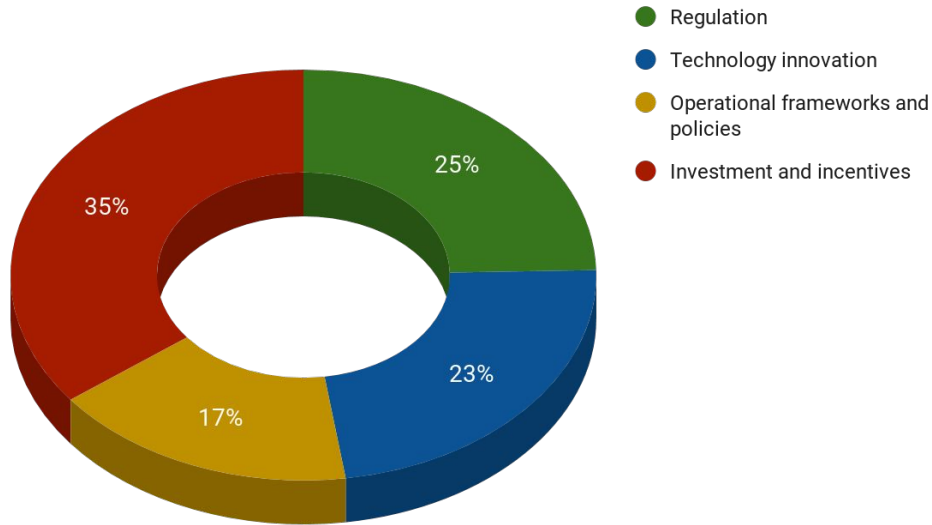
Analyst comment:

Limitations in the practice of energy suppliers are seen by an overwhelming 87% of respondents as hindering the push towards sustainability. Although 72% see end of the COVID-19 pandemic as being positive for the prioritization of sustainability,

Proponents of wood displacing concrete for data center construction will be disappointed that a majority don't see this as a likely source of sustainable design and operation.

Again, most respondents sit towards the midpoint rather than at the extremes of opinion. In terms of some of the ideas here - something better than PUE, site selection based on proximity to renewables, wood as a construction material - this indicates some willingness to consider these ideas as they evolve.

What will accelerate the industry's journey towards Net-Zero most effectively?



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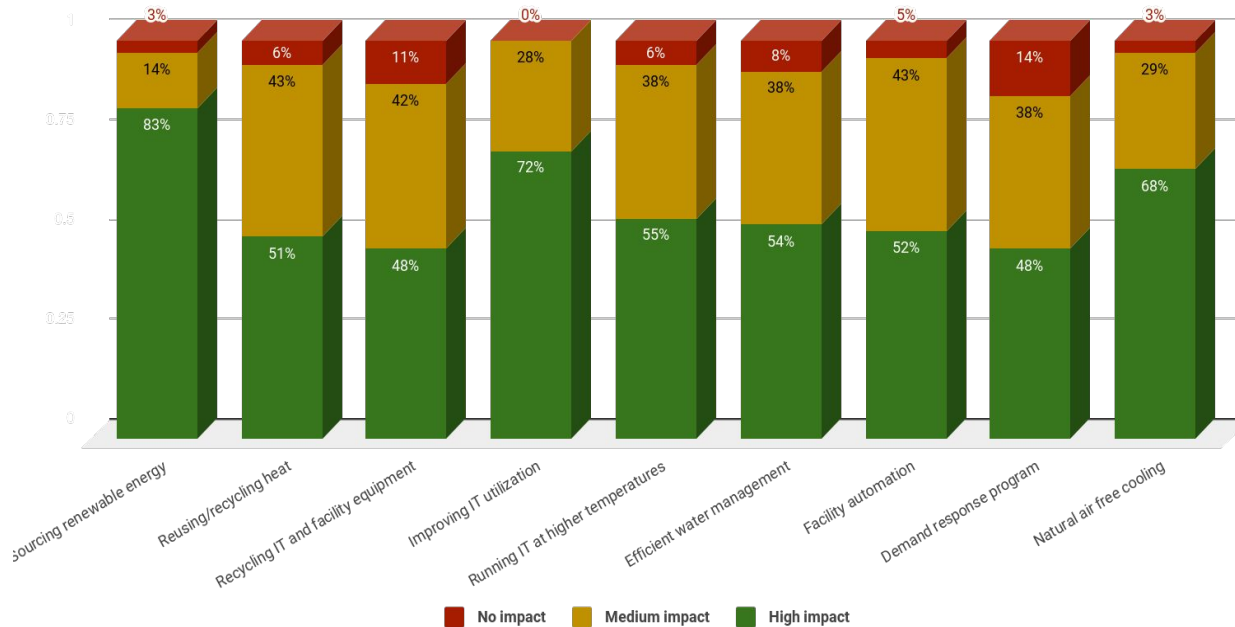
Analyst comment:

The sample here indicates that no single major driver emerges as the most likely to deliver major change. All parts of our industry are important in the journey towards Net-Zero.

There's no silver bullet for achieving carbon neutrality, and each department and team along with customers and suppliers need to genuinely collaborate to move the green agenda forward.

This varied picture links into our earlier data highlighting the importance of senior management and strategy in order to ensure these different aspects all work together in harmony.

Which of the following practices will have the highest impact on data center energy efficiency?



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Analyst comment:

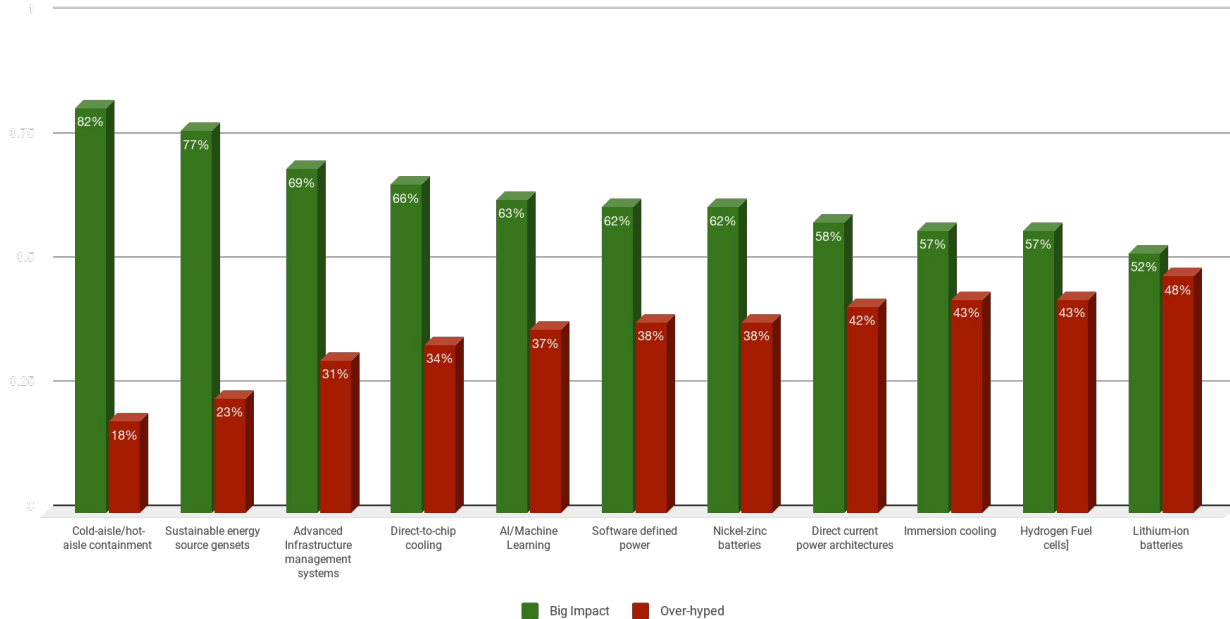
With 'high impact' scores given by a majority of the sample here for most of these practices, it is worth taking a look in detail at the most popular.

Sourcing renewable energy is seen by 83% of respondents as having a 'high Impact' on energy efficiency.

And this shows a confusion around renewability v efficiency. Sourcing energy from renewable sources does not per se mean you are efficient. You might have a renewable energy source and still waste the energy that comes from it.

This confusion indicates the ongoing importance of education and consistency around sustainability in terms of the terminology we use around it.

Which of these infrastructure solutions do you believe will have the biggest impact on sustainability and which are over-hyped?



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Analyst comment:

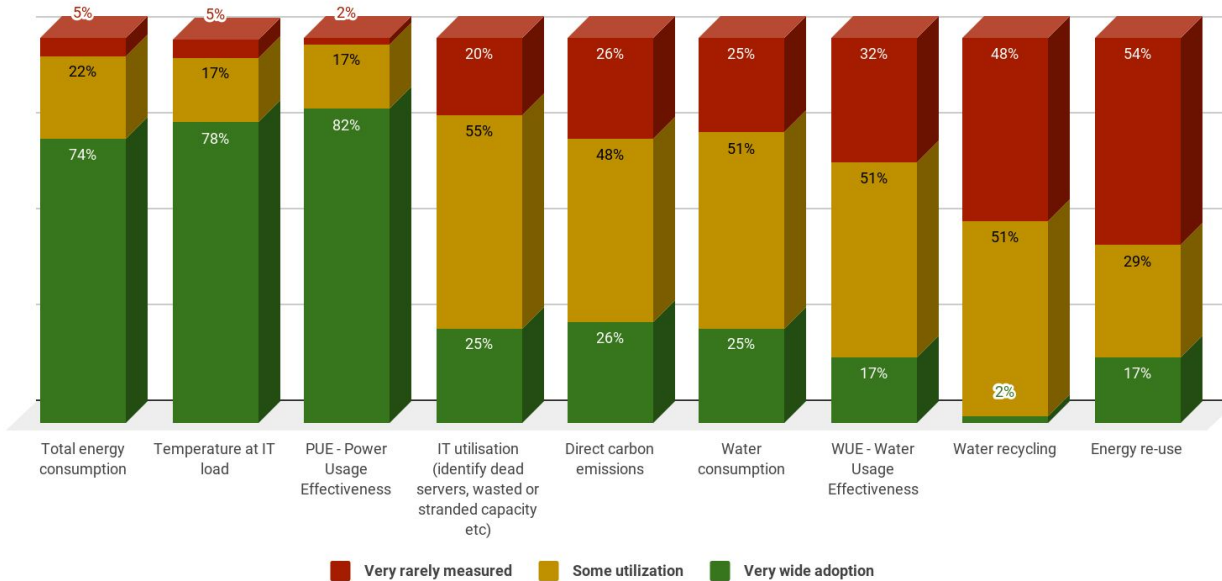
The wide variety of technology and opinions around each of them in are indicated in this sample.

Batteries, hydrogen fuels cells and immersion cooling are seen as the most over hyped - these are all technologies which have enjoyed substantial media coverage usually in conjunction with major hyperscale facilities.

Cold aisle/hot aisle containment and gensets sourcing green energy are both more established technologies and these are seen as having the biggest impact.

AI/Machine Learning and SDS rank in the middle but are likely to be seen as having a big impact as they come online at more facilities..

Which of the following metrics are most widely adopted by operators?



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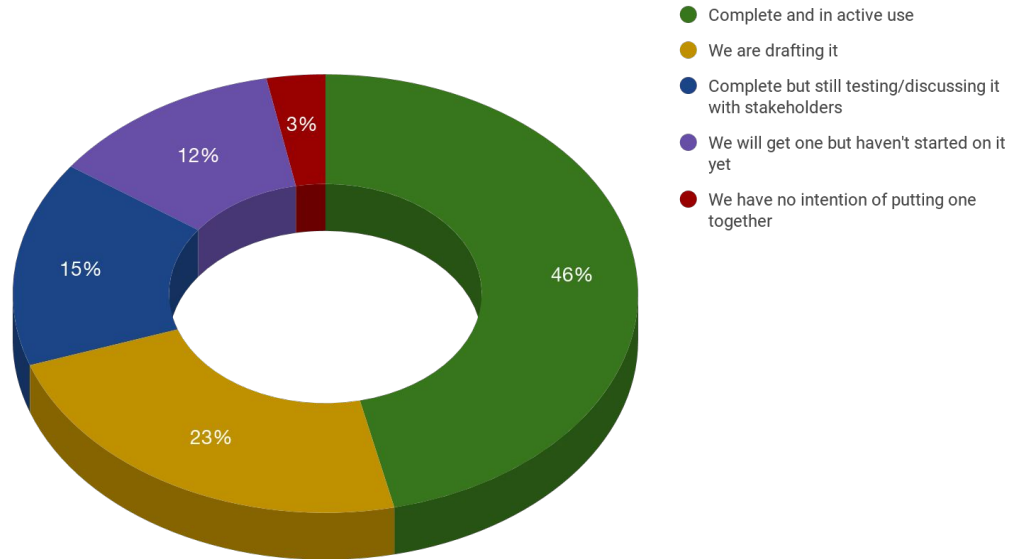
Analyst comment:

This data shows a fairly wide spread of adopted metrics. Those around energy, temperature and PUE are almost universally measured.

Whilst water is monitored far less, with particularly low scores around water usage effectiveness and recycling, Energy re-use is also monitored less.

This again demonstrates a need for a wider monitoring of resources and processes beyond just energy consumption, but also a great opportunity for savings and a big impact when these aspects are adopted.

How far has your organisation got with creating a formal sustainability road map?



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Analyst comment:

This final set of data is positive showing the 85% of the sample have at least started on formal roadmap and this is essential for a successful sustainability strategy.

Yes, there are still deniers but the 15% who are yet to have one, or don't intend to do one, will likely be a far smaller minority next time we ask our community their thoughts on sustainability,



Conclusion

The results found in this survey gives proof, if it were needed, that sustainability is now at the heart of the data center industry. It's increasingly directed from the C-Suite and can be seen not just as a moral imperative but as potentially giving a competitive advantage. This focus is something relatively new. Previously sustainability initiatives were typically the domain of just one team, heavily siloed and not always focused or effective.

Now, however, sustainability for data centers is becoming increasingly central to business operations and commercial strategy.

Yes, there is plenty of work to be done. This report highlights areas of confusion around language, question marks around 'hype' and an acknowledgement that more legislation is needed to ensure genuine change does happen.

But as CEOs discover that “sustainability” and “profitability” are increasingly synonymous, and a sustainably managed company is increasingly attractive to investors and customers, the path towards a greener future for our industry is clear to see.

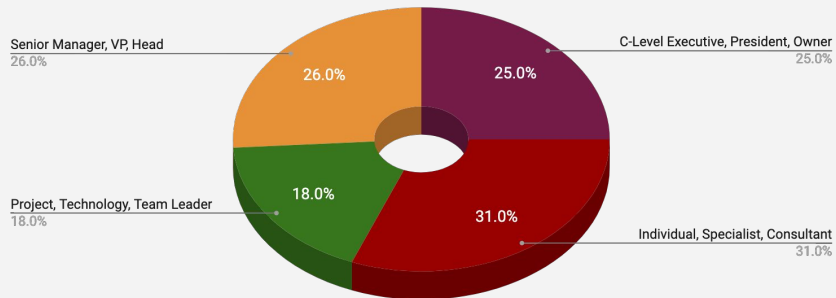
This report was created from the findings of a survey conducted on 24-25 April, 2021 at DCD>Towards Net Zero. Live audience surveys are conducted at all DCD virtual conferences to gain valuable insights into market opinions and technology adoption trends.

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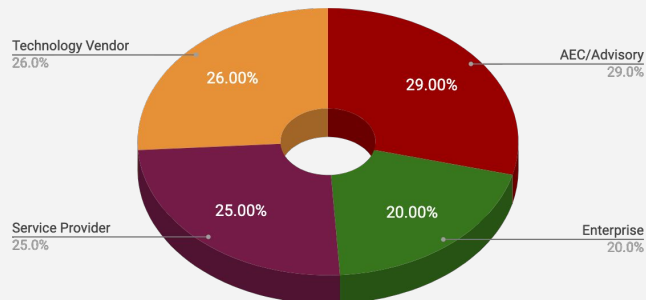
Participant Profile - Seniority:

C-Level executives and senior managers account for 51% of the sample; 31% are specialists or consultants and the remaining 18% are project, tech or team leaders.



Participant Profile - Company Type:

The sample balances different industry sectors with 29% being service providers, 26% being technology vendors, AEC or Advisory providing 25% and the remaining being made up of those in Enterprise.



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