CXO priorities

UK DATA CENTRE TRENDS AND PRIORITIES REPORT 2024

A CXO priorities Report

CONTENTS

INTRODUCTION

Today's digital world is moving at an incredible pace. No sooner have organisations rolled out a sophisticated new piece of technology, there's a new one out there that does it better, and faster. This has been an ongoing trend for several years now, but it is one which continues to gather momentum – particularly with the advent of Artificial Intelligence. Generative AI, for example, is now being used broadly and the net will be cast even wider as more businesses explore and tap into the benefits this technology heralds. It is certainly true that tools such as this have potential to improve business outcomes but thought must be given to the infrastructure that serves as the backbone of this digital economy.

Data centres truly are the beating heart of society today and, with this pace of digitalisation, they are under more pressure than ever before. Data centre managers and their teams have several competing priorities to manage every day. More digitalisation means a greater attack surface – data security is paramount. More digitalisation means more power usage – so finding energy and cost-efficient ways to manage this is key. And of course, more power and more heat means a greater need for efficient cooling technologies. All of this while keeping in mind the wider implications of these power-hungry facilities on carbon emissions and a requirement to lower these.

To find out more about these key challenges, Intelligent Data Centres and CXO Priorities surveyed those grappling with these issues each day.

Some key highlights from the findings include:

- The most significant challenges in data centre management are infrastructure modernisation and data security

- Over one third of respondents (33%) affirm having a comprehensive sustainability strategy already in place

- Almost a quarter of respondents (30%) prioritise increasing the use of renewable energy sources

- Over one third of respondents (34%) emphasise sustainability by incorporating criteria into procurement processes

- Almost half (45%) of respondents agreed that AI will ultimately be a force for good for the data centre sector

METHODOLOGY

We surveyed 150 data centre and infrastructure managers based in the UK. The majority (90%) were from organisations of more than 1,500 employees, while the remainder were from companies with 500 – 1,000 members of staff.

CHAPTER 1
KEY CHALLENGES AND THE SUSTAINABILITY MISSION

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Infrastructure modernisation	15%
Data security	14%
Maintaining uptime	10%
Skill/staff shortages	9%
Business Continuity strategies	9%
Supply chain issues	8%
Cost management	8%
Scalability	8%
Meeting sustainability targets	6%
Regulatory pressures	6%
Project delivery pressures	2%
Other	5%

QUESTION 1

What do you consider the two biggest challenges of data centre management?
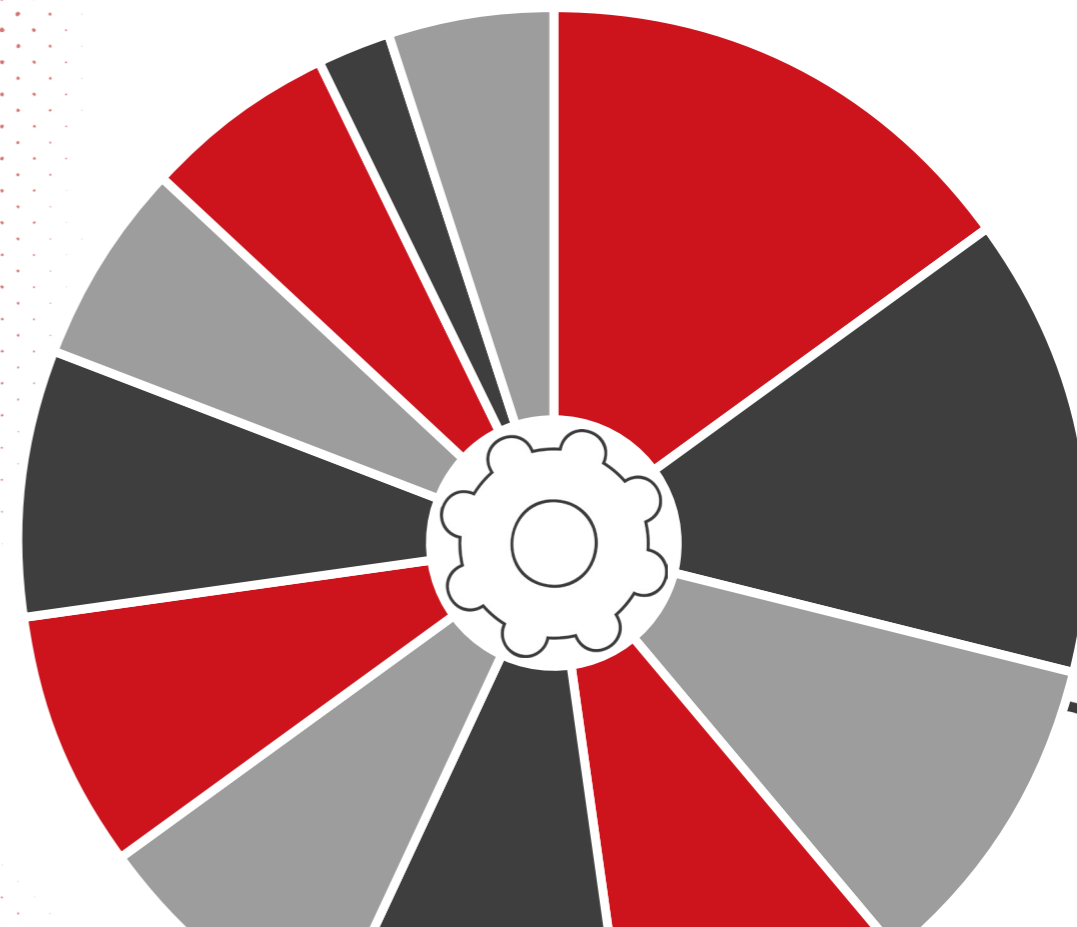
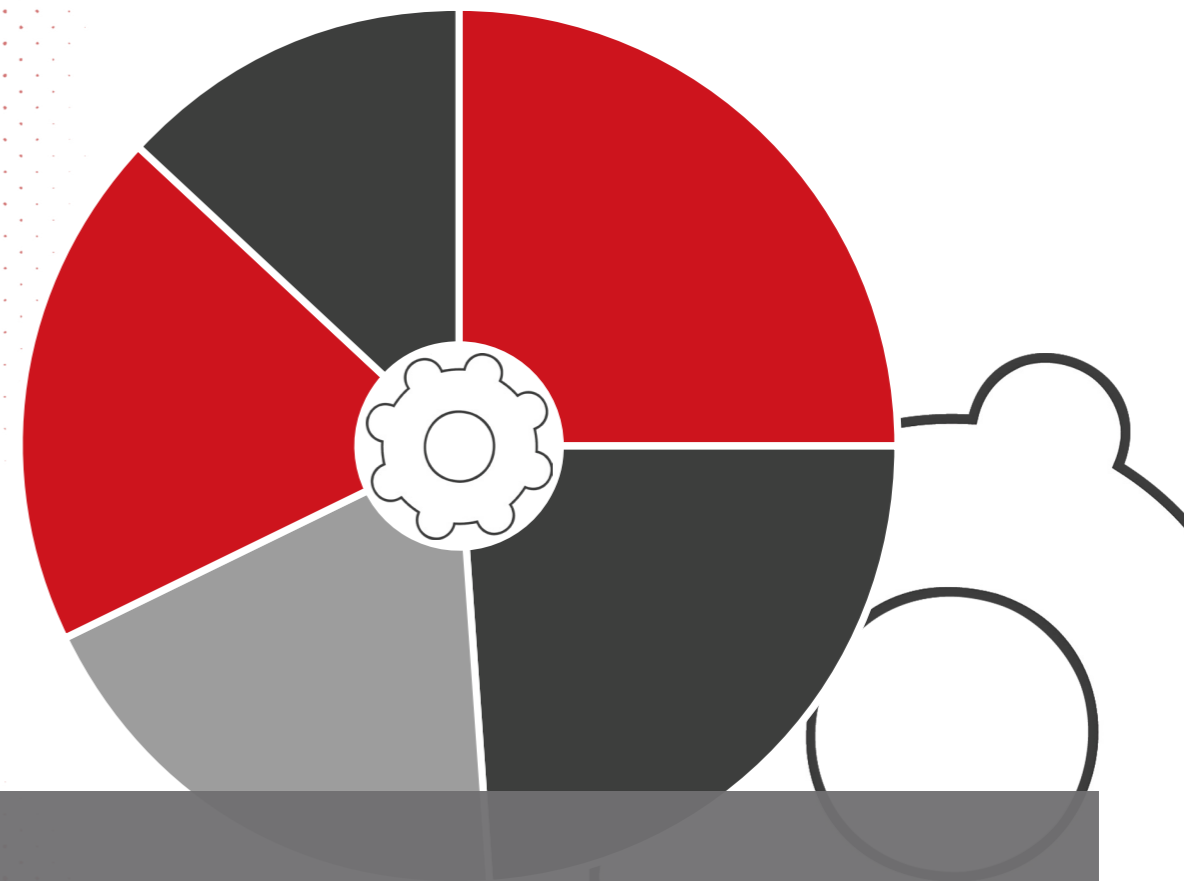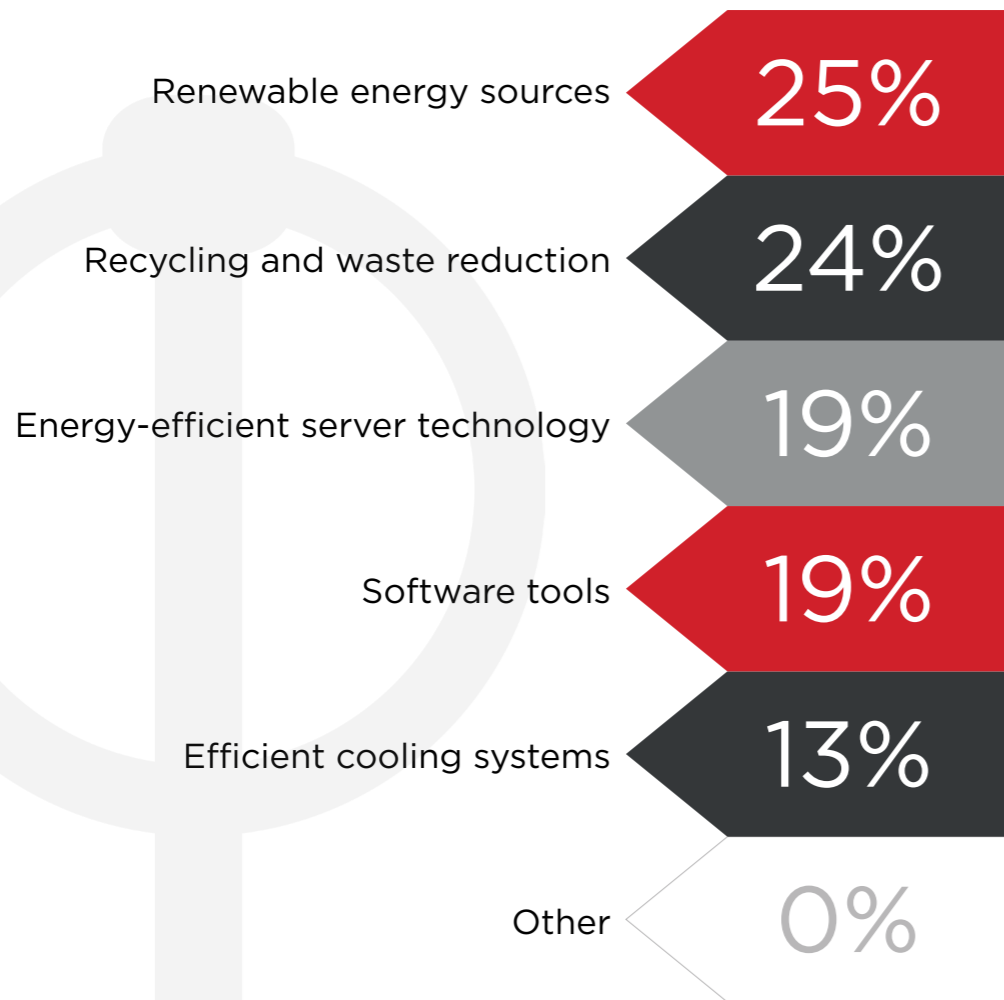## KEY FINDINGS

Data centre teams are constantly juggling multiple priorities and the findings – being widely split across a range of diverse areas – support this assertion. The most significant challenges in data centre management, however, are infrastructure modernisation (15%) and data security (14%). These concerns underscore a critical focus on evolving technologies and safeguarding sensitive information. Additionally, maintaining uptime (10%) and addressing skill/staff shortages (9%) represent ongoing operational challenges. The collective emphasis on infrastructure updates, security, operational continuity and workforce-related issues highlights the complex landscape of concerns within the data centre management domain. Addressing these challenges will ensure robust, secure and efficient data centre operations.

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How does your organisation currently integrate sustainability practices into its data centre operations?

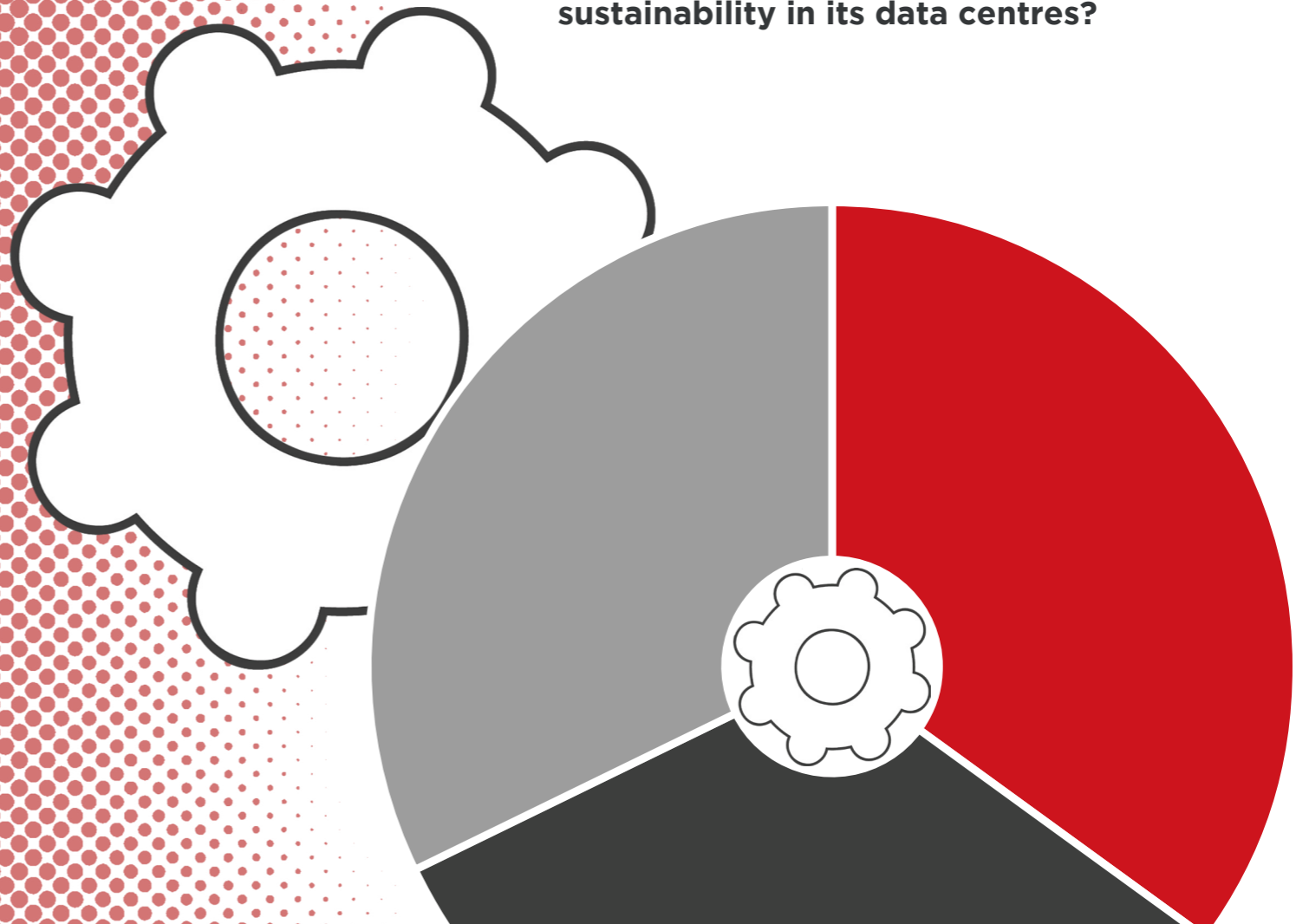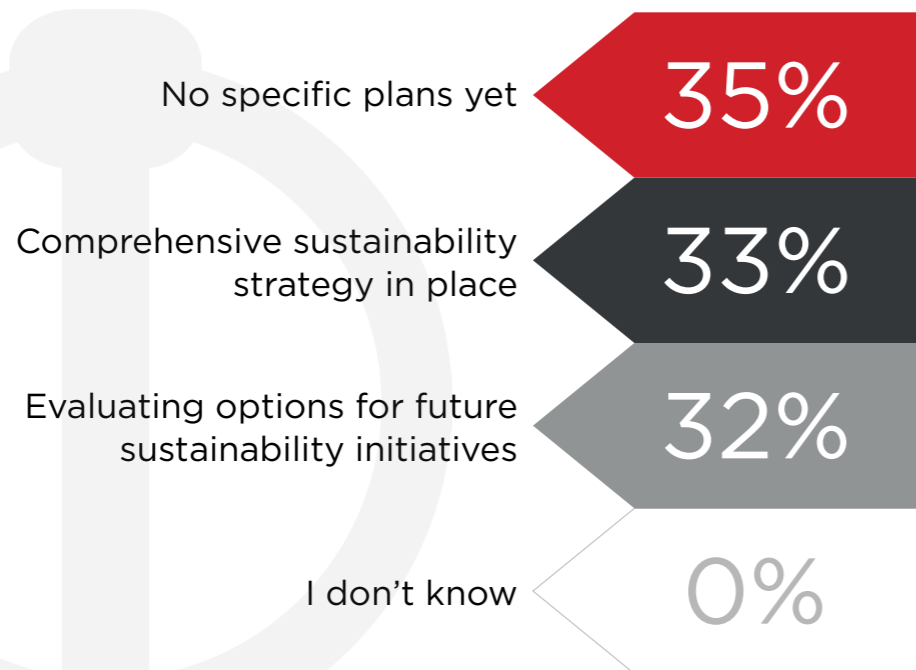|	
Renewable energy sources	25%
Recycling and waste reduction	24%
Energy-efficient server technology	19%
Software tools	19%
Efficient cooling systems	13%
Other	0%

KEY FINDINGS

Responses reveal diverse strategies with 25% emphasising the integration of renewable energy sources, indicating a commitment to cleaner power. Additionally, 24% of respondents focused on recycling and waste reduction, showcasing efforts to minimise environmental impact. Nearly one fifth (19%) employ energy-efficient server technology, highlighting a technological approach to reducing power consumption. Software tools also contribute, with 19% utilising them for enhanced efficiency. Efficient cooling systems, chosen by 13%, demonstrate attention to overall resource optimisation.

This array of responses underscores a multifaceted approach to integrating sustainability across various facets of data centre operations.

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To what extent does your organisation have long-term plans for improving sustainability in its data centres?

No specific plans yet — **35%**

Comprehensive sustainability strategy in place — **33%**

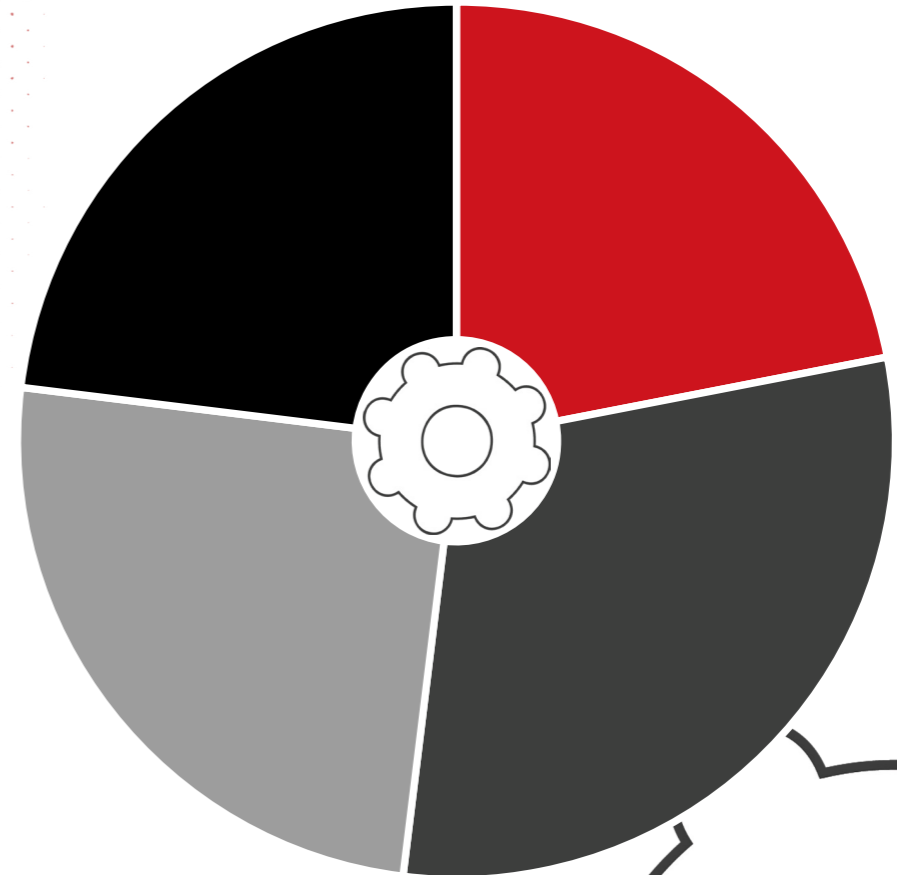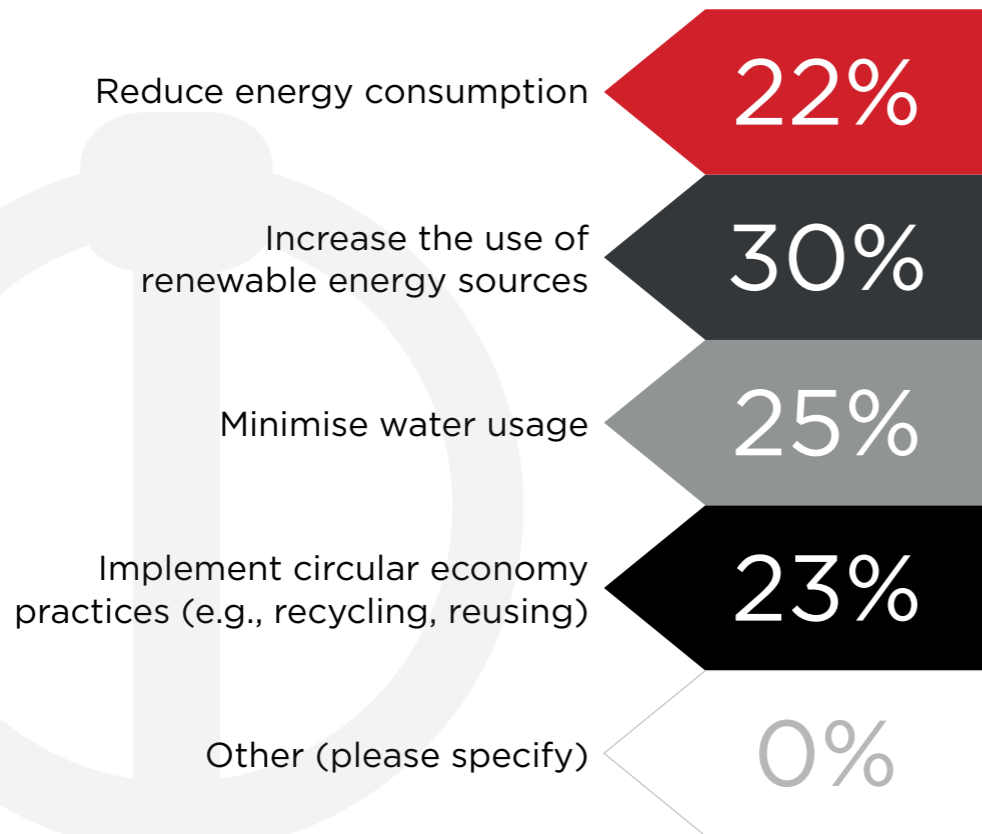Evaluating options for future sustainability initiatives — **32%**

I don't know — **0%**

KEY FINDINGS

Notably over one third of respondents (33%) affirm having a comprehensive sustainability strategy already in place signalling a proactive commitment to eco-friendly practices. Another 32% are actively evaluating options for future sustainability initiatives indicating a strategic and forward-looking approach. On the contrary, 35% admit to having no specific plans yet suggesting a notable portion of respondents may be in the early stages of considering or developing their sustainability roadmap. This diverse distribution underscores the varied stages of organisational commitment and preparedness in addressing sustainability concerns in data centre operations.

priorities

In the next 3–5 years, what key sustainability goals or targets does your organisation aim to achieve in its data centre operations?

Reduce energy consumption **22%**

Increase the use of renewable energy sources **30%**

Minimise water usage **25%**

Implement circular economy practices (e.g., recycling, reusing) **23%**
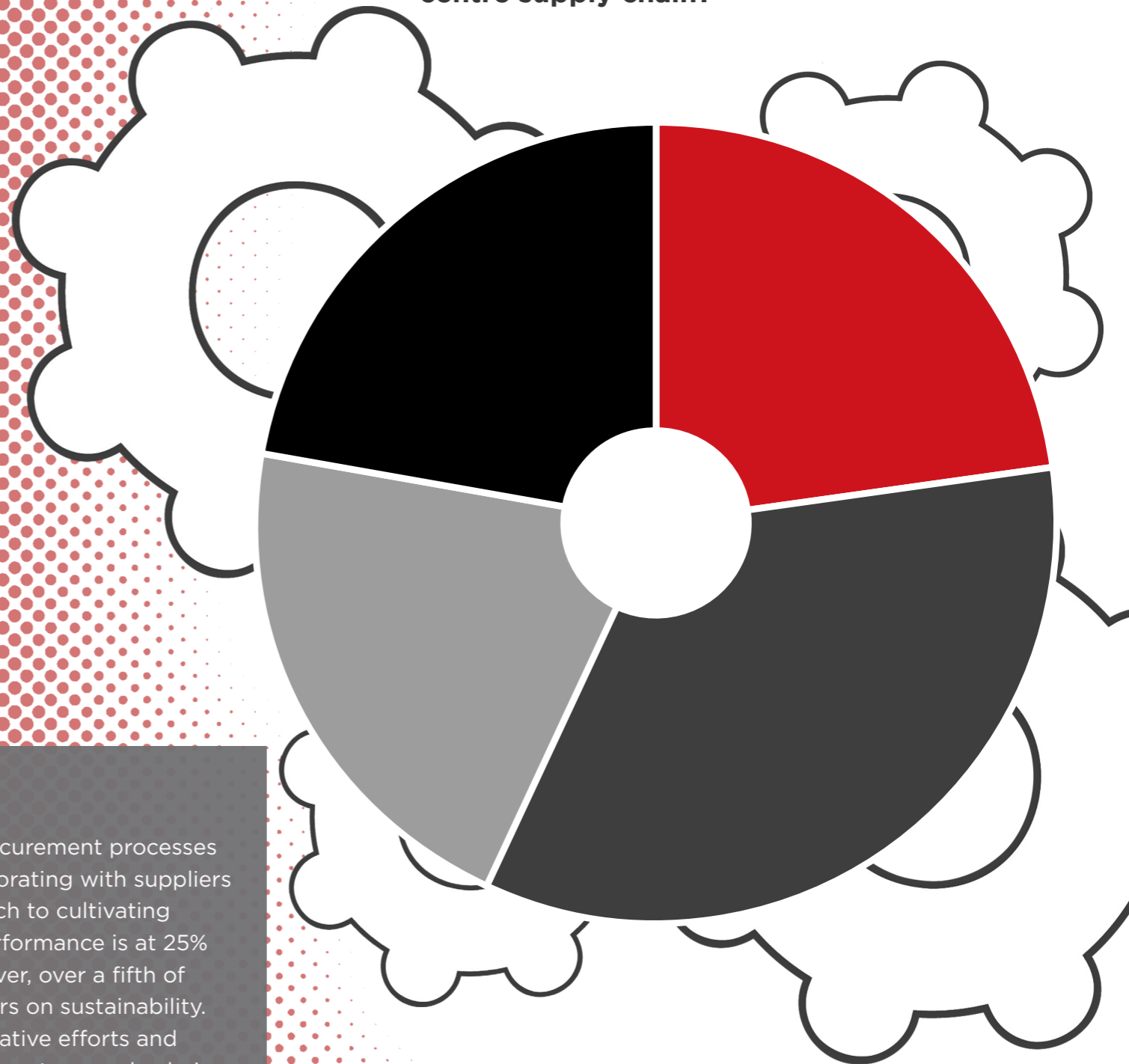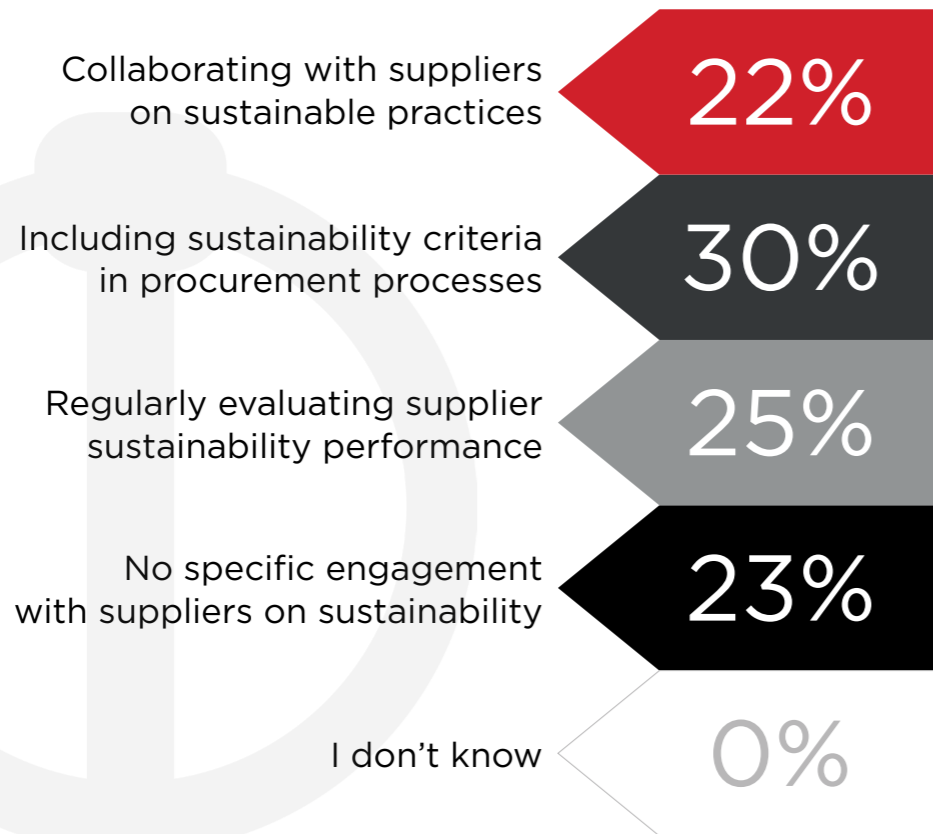
Other (please specify) 0%

KEY FINDINGS

A total of 30% of respondents prioritise increasing the use of renewable energy sources which emphasises a shift towards cleaner and more sustainable power. Meanwhile a quarter of respondents (25%) aim to minimise water usage highlighting a commitment to resource efficiency. Recycling and reusing encapsulated in circular economy practices are on the agenda for of one fifth (23%) of respondents. This shows a dedication to reducing environmental impact. In summary, these results underscore a growing industry focus on multifaceted sustainability goals, spanning energy efficiency, resource conservation and eco-friendly practices.

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How does your organisation engage with suppliers and partners to ensure sustainability throughout the data centre supply chain?

Collaborating with suppliers on sustainable practices — **22%**

Including sustainability criteria in procurement processes — **30%**

Regularly evaluating supplier sustainability performance — **25%**

No specific engagement with suppliers on sustainability — **23%**
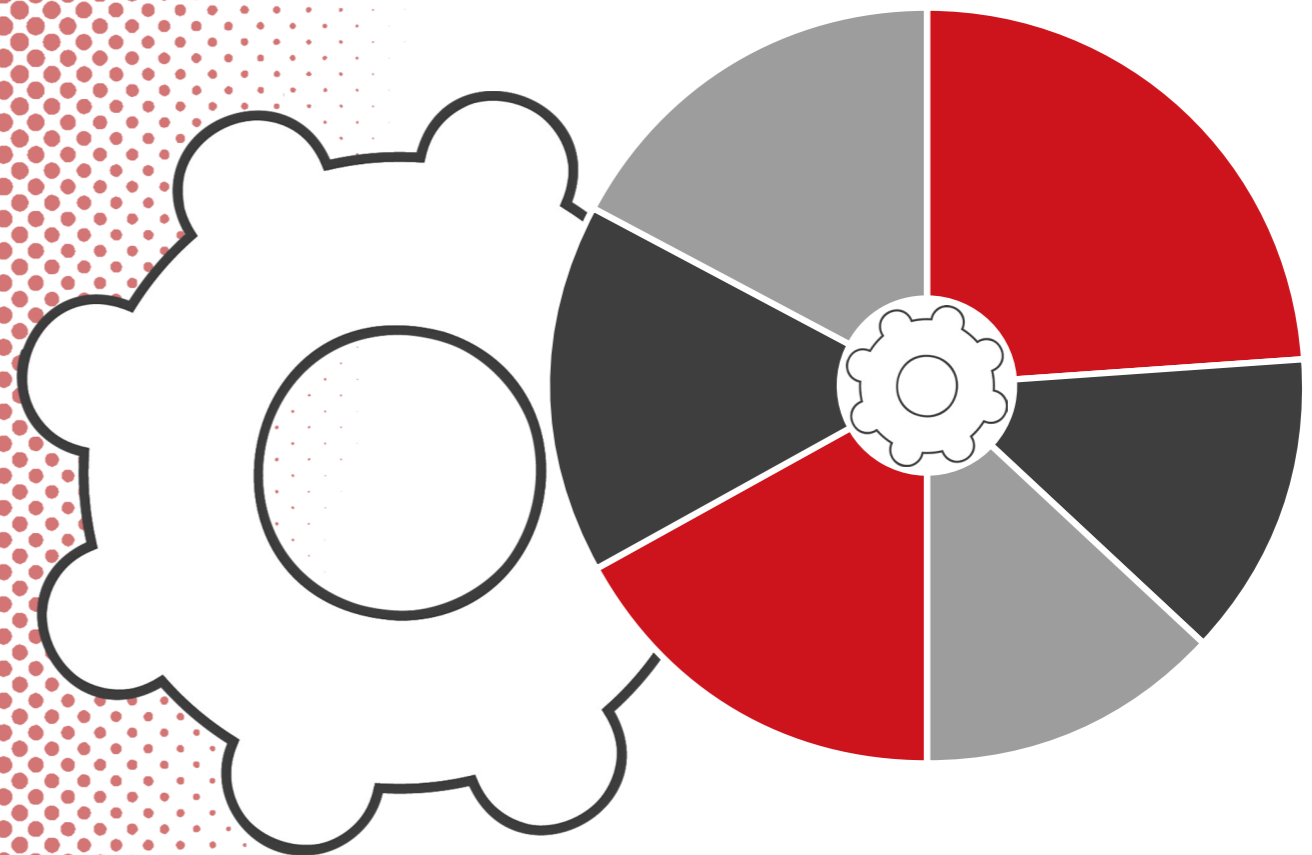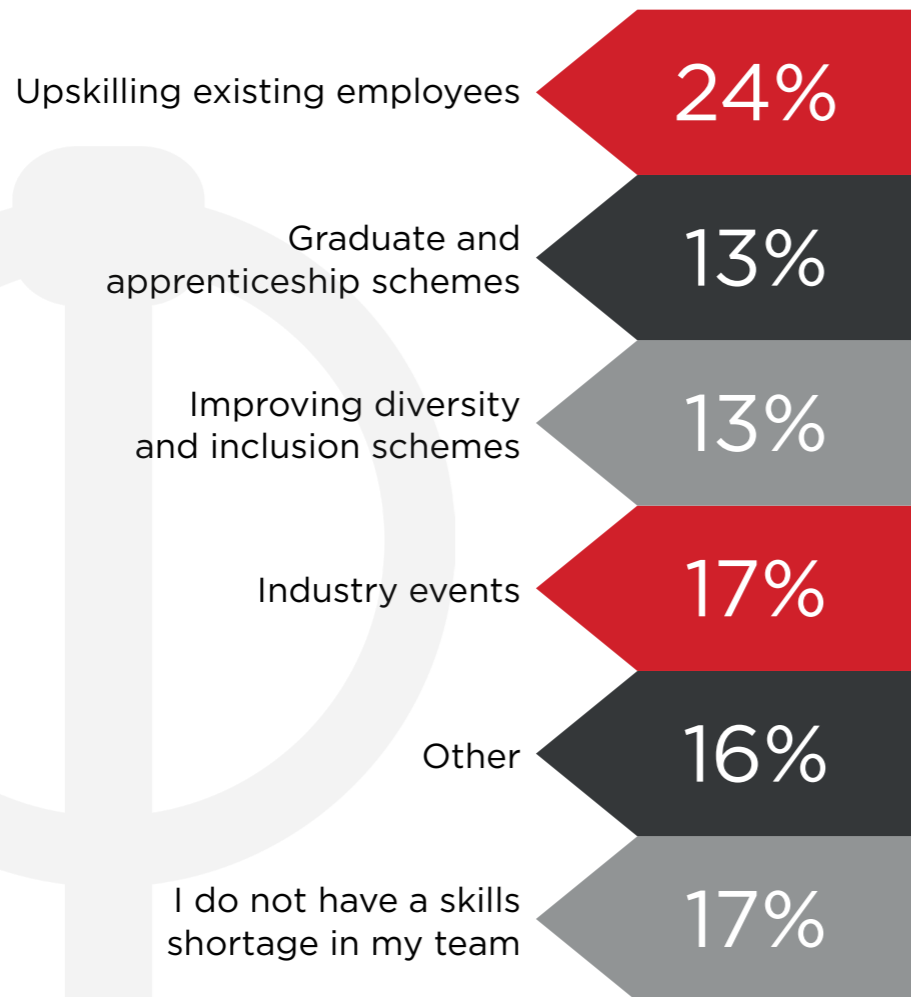
I don't know — **0%**

KEY FINDINGS

A total of 30% emphasise sustainability by incorporating criteria into procurement processes reflecting a strategic integration of environmental considerations. Collaborating with suppliers on sustainable practices is chosen by 22%, indicating a hands-on approach to cultivating eco-friendly partnerships. Regularly evaluating supplier sustainability performance is at 25% showing a commitment to ongoing assessment and improvement. However, over a fifth of respondents (23%) admit to having no specific engagement with suppliers on sustainability. This indicates a portion of respondents are yet to prioritise such collaborative efforts and confirms varied approaches to embedding sustainability across the data centre supply chain.
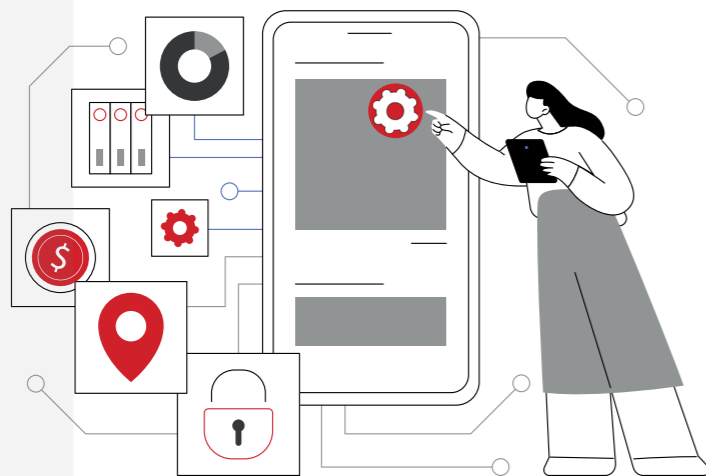
QUESTION 6

**How are you addressing the skills
and staff shortages within your team?**

Upskilling existing employees — **24%**

Graduate and
apprenticeship schemes — **13%**

Improving diversity
and inclusion schemes — **13%**

Industry events — **17%**

Other — **16%**

I do not have a skills
shortage in my team — **17%**

KEY FINDINGS

The predominant approach to addressing skills and staff shortages (24%) involves upskilling existing employees showcasing a commitment to internal development. Industry events (17%) demonstrate an external engagement strategy for talent acquisition. Graduate and apprenticeship schemes and improving diversity and inclusion schemes (13%) highlight efforts to inject fresh talent into the workforce. It also signals a recognition of the importance of diverse perspectives in overcoming shortages. This diverse set of responses underscores the wide-ranging strategies employed by organisations to address workforce challenges that currently exist.
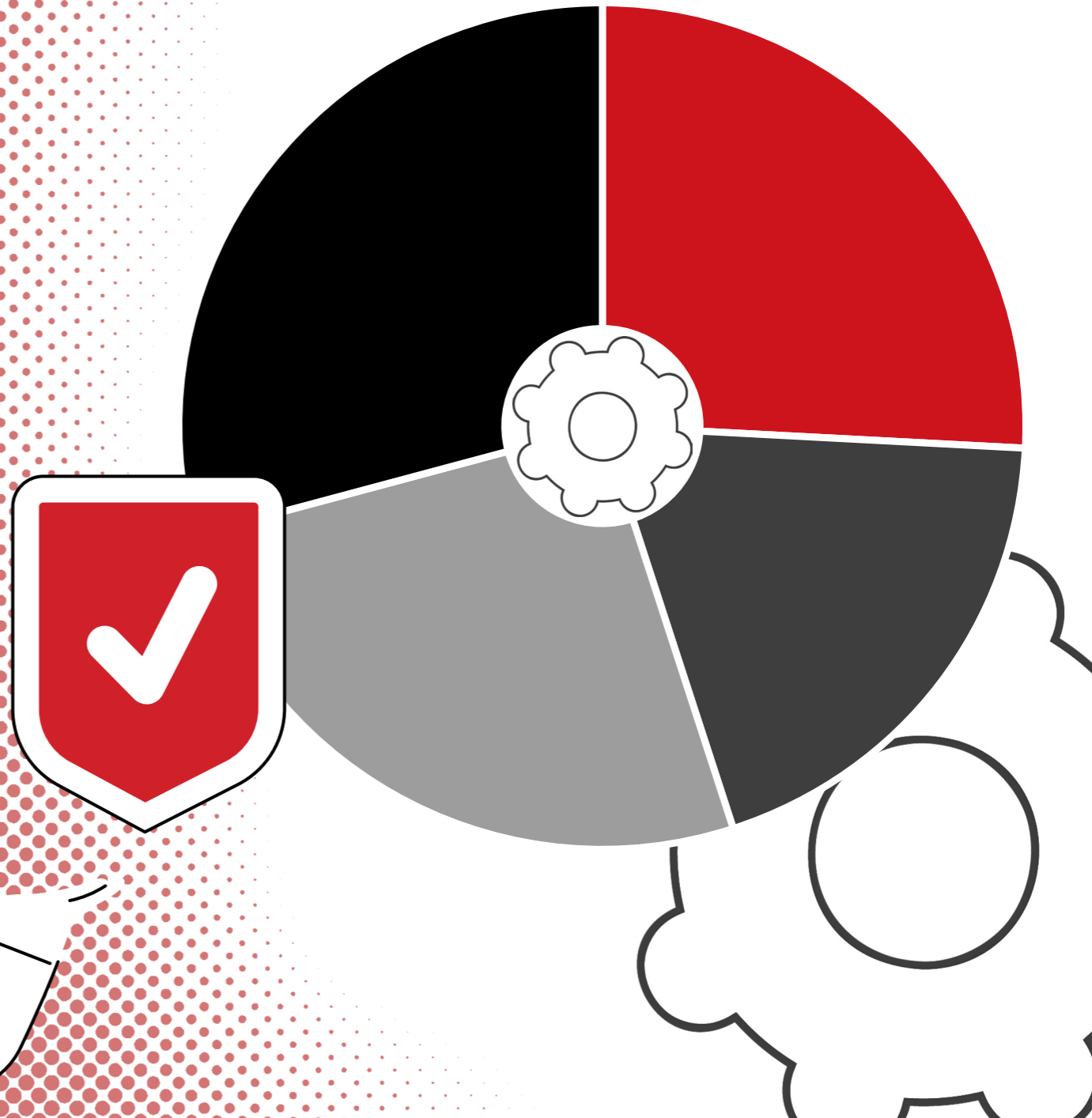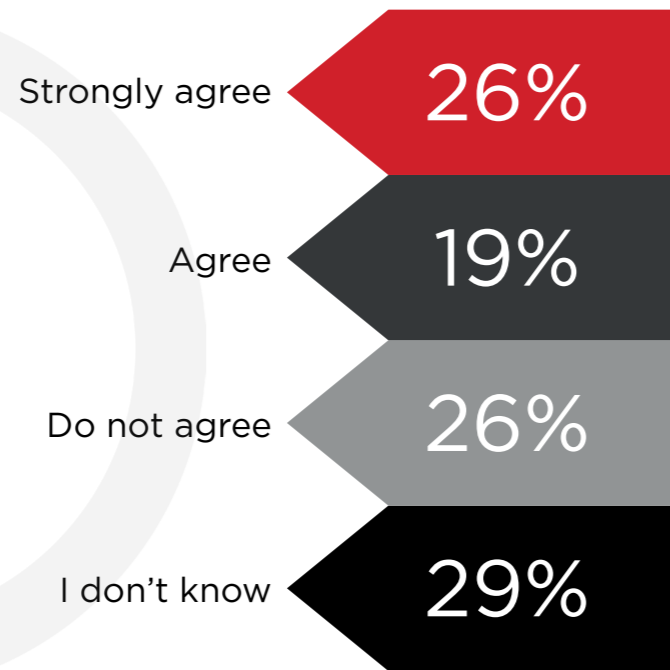
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CHAPTER2
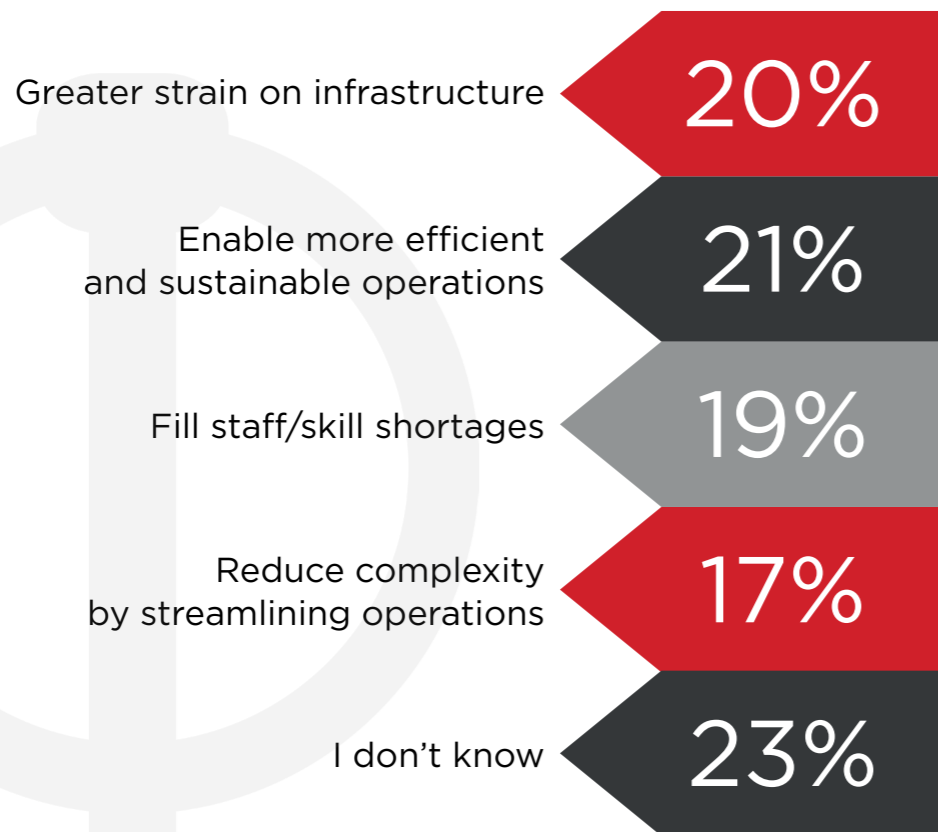## AI, PRIORITIES AND THE FUTURE OF DATA CENTRES

AI

CXO priorities
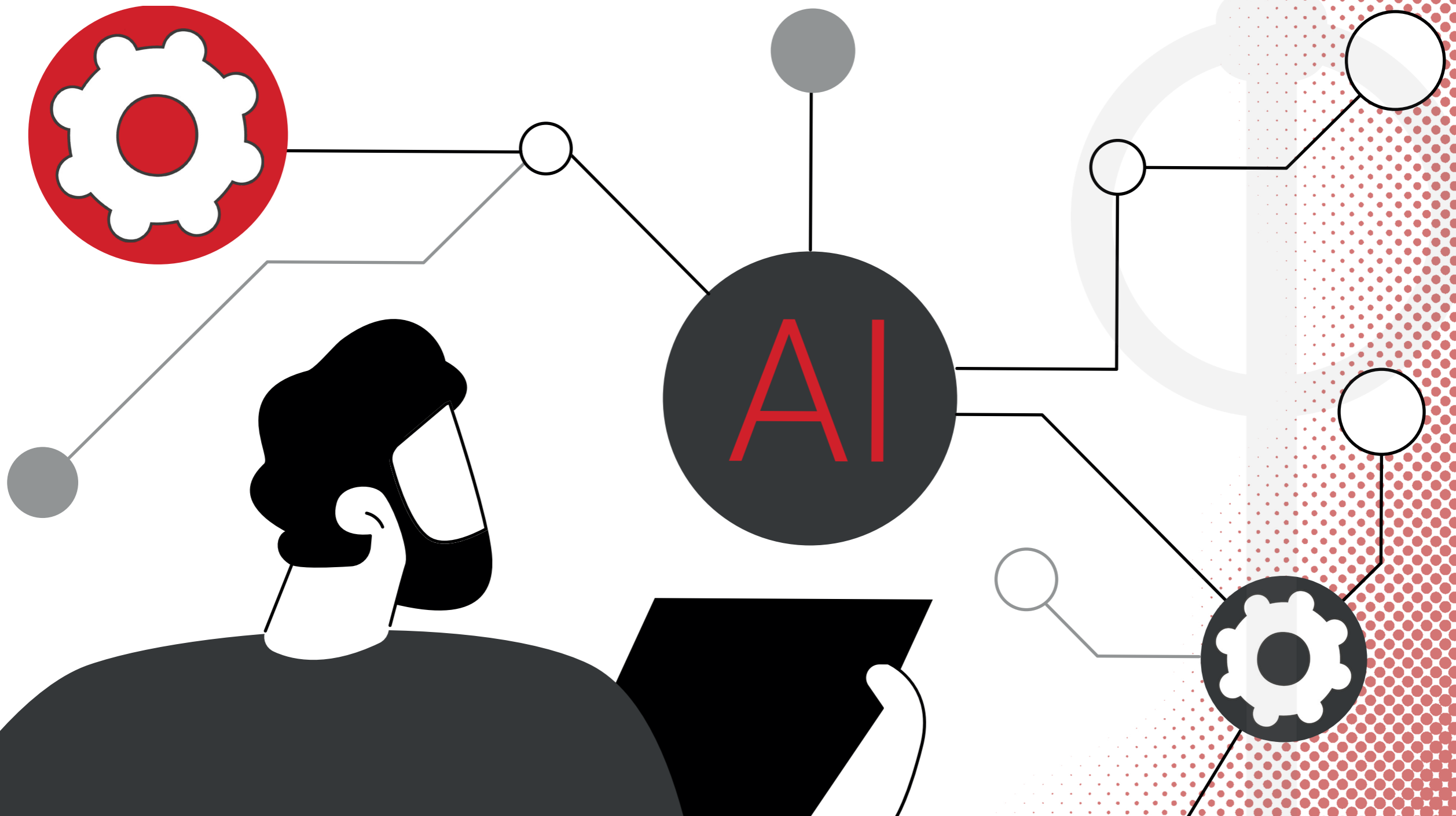
QUESTION 7

**How far do you agree with the
following statement – 'AI will
be a force for good for the data
centre sector'?**

Strongly agree **26%**
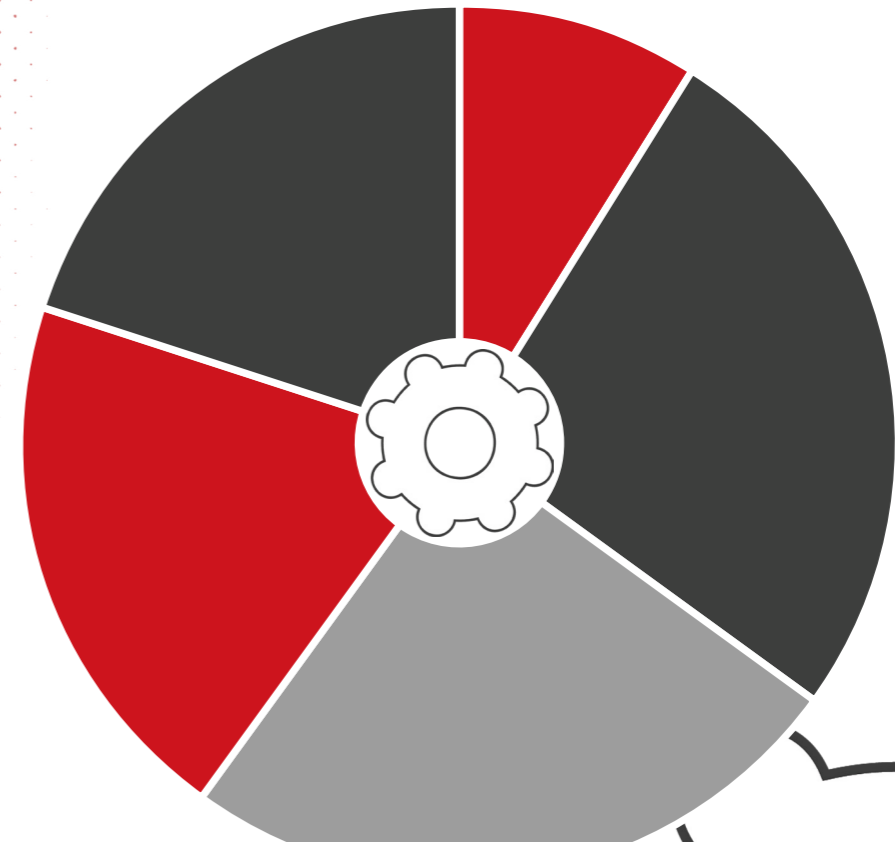
Agree **19%**

Do not agree **26%**

I don't know **29%**

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What do you see as the biggest impact of AI on the data centre industry?

Greater strain on infrastructure — **20%**

Enable more efficient and sustainable operations — **21%**

Fill staff/skill shortages — **19%**

Reduce complexity by streamlining operations — **17%**

I don't know — **23%**

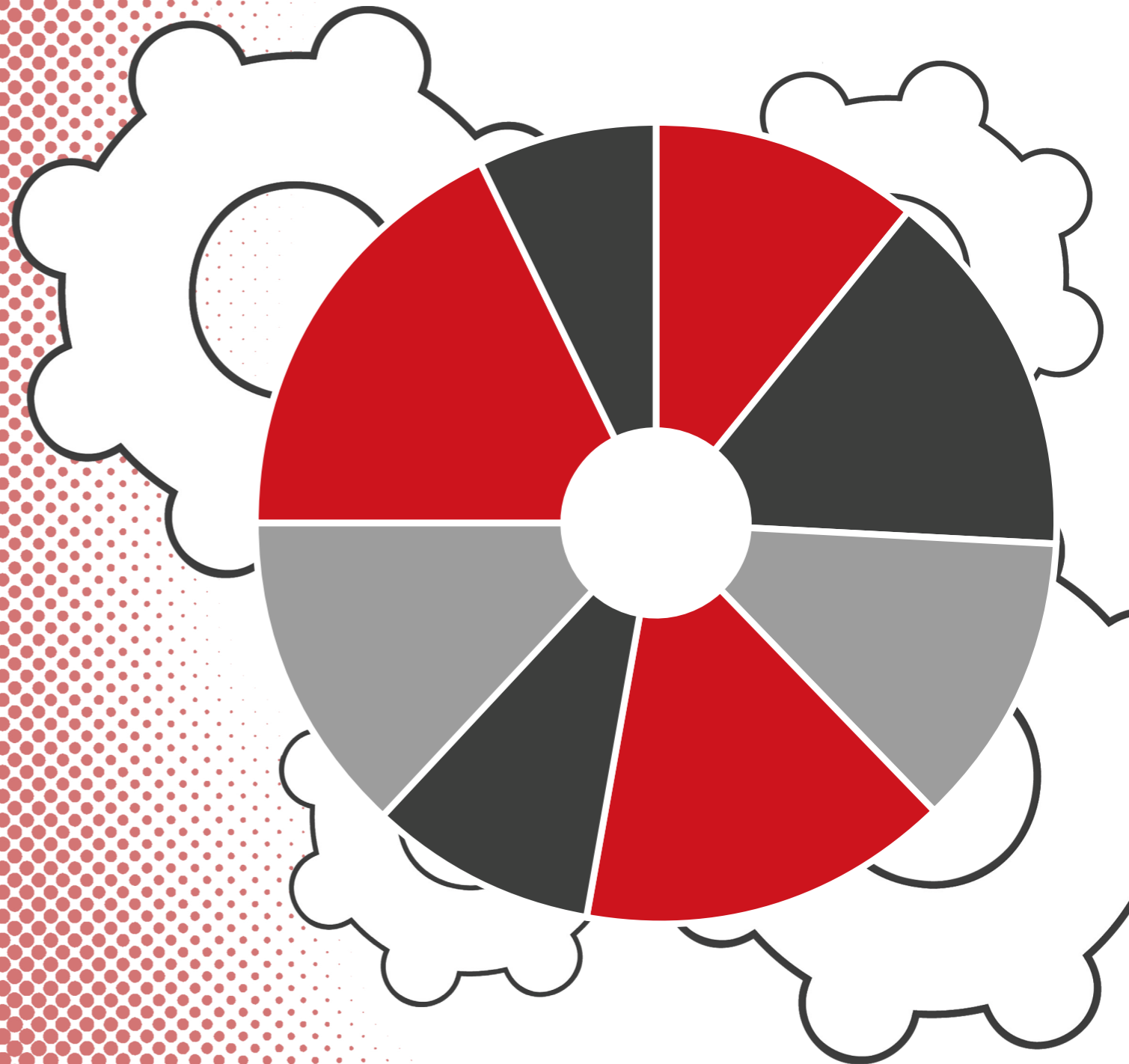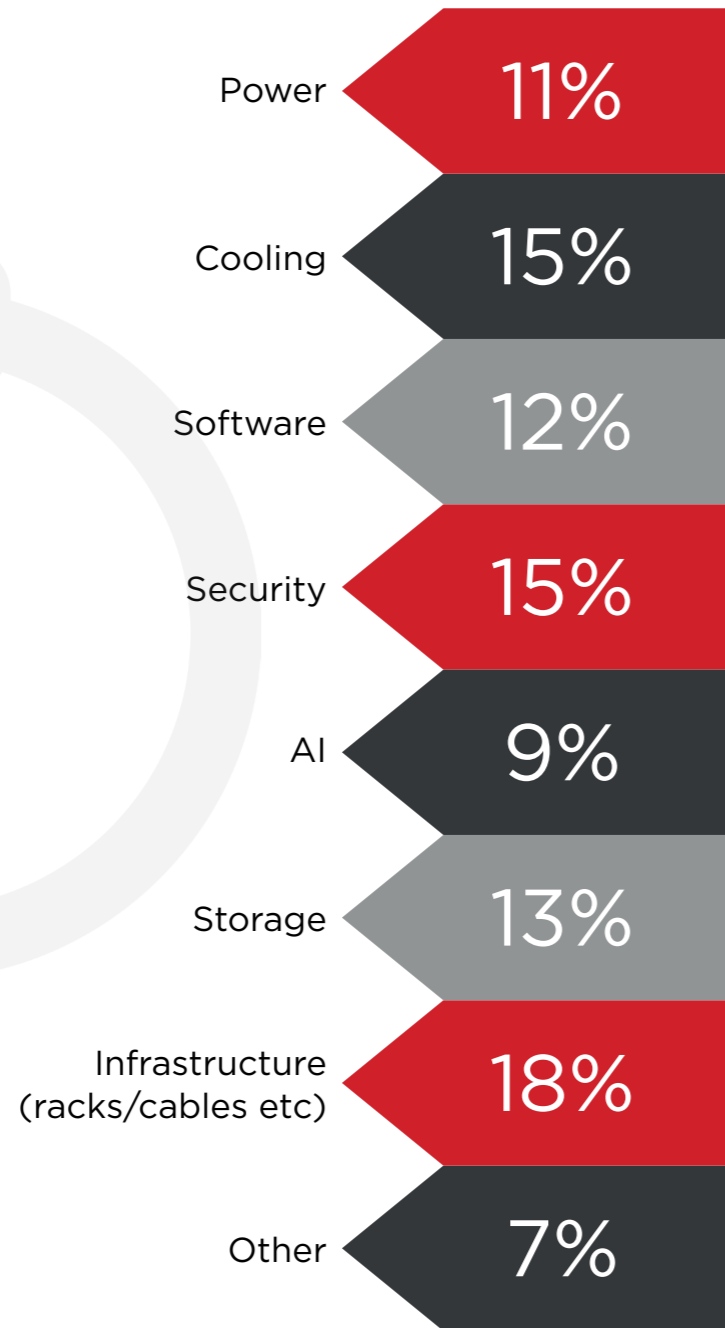### KEY FINDINGS

Artificial Intelligence has been touted as a game-changer for many industries and the data centre sector is set to feel the impact of this technology. As the infrastructure that serves organisations now widely utilising Gen AI, data centres are under increasing strain to process these workloads. However, almost half (45%) of respondents agreed that AI will ultimately be a force for good for the data centre sector. Indeed, 21% of respondents said they believe AI will enable more efficient and sustainable operations, while 19% said the technology could help address staff and skill shortages. A further 17% said it could reduce complexity by streamlining operations.
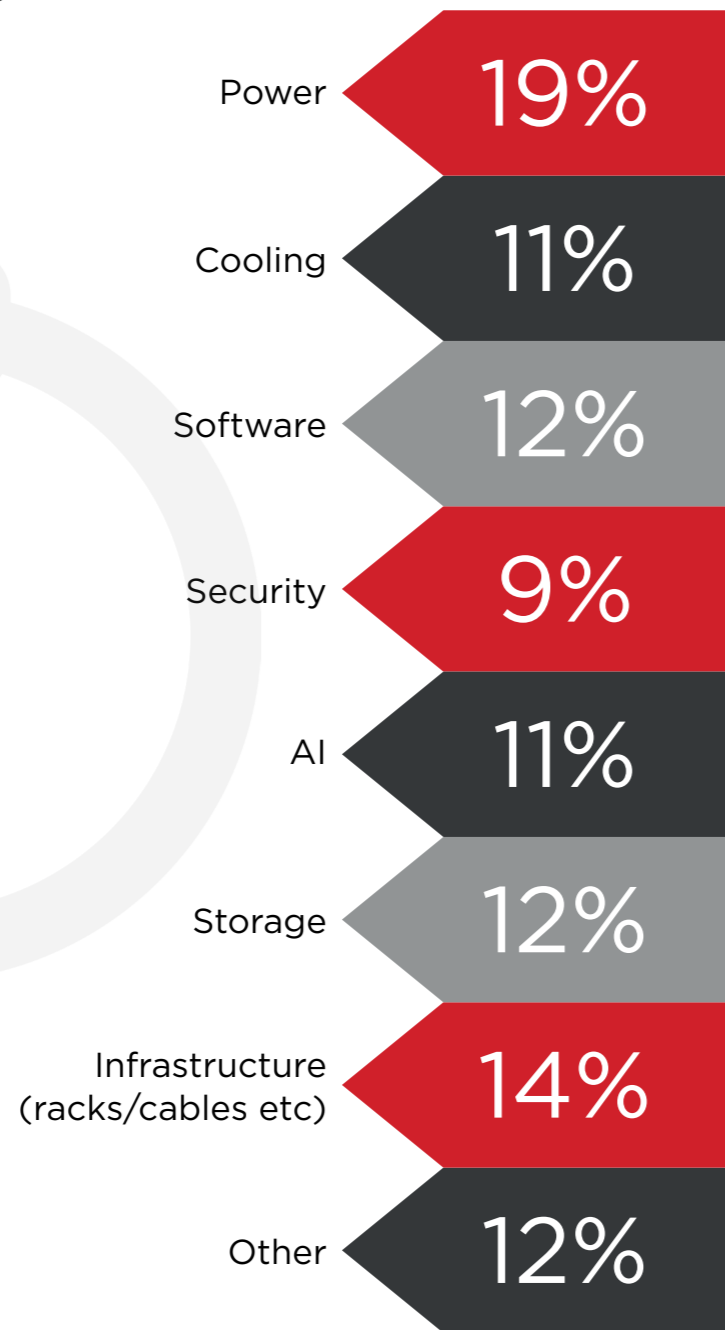
The data shows a range of opinions on the role of AI in the data centre sector, with varying levels of optimism, concerns and uncertainty.

QUESTION 9

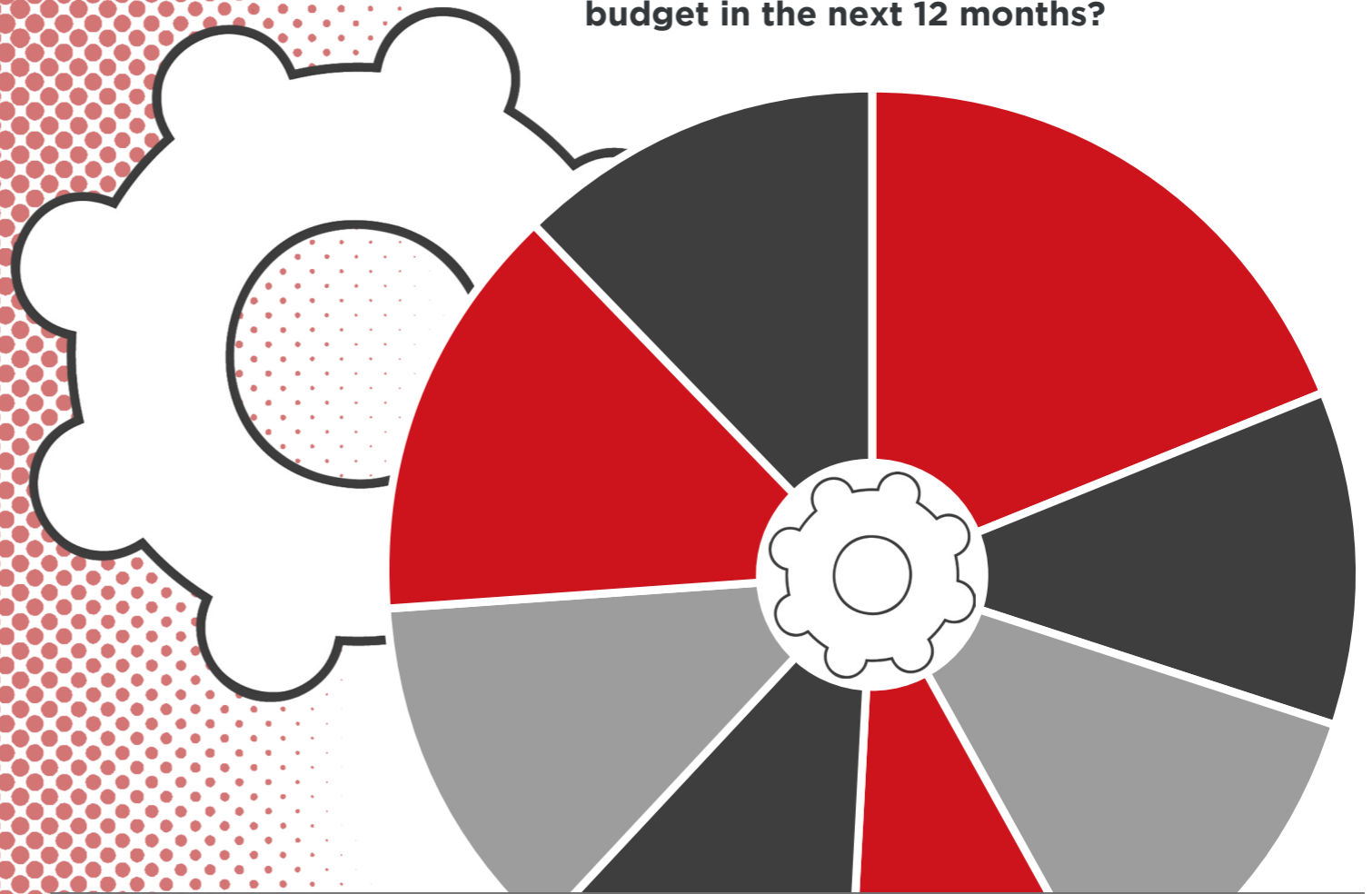**Which areas will be your key priorities in the next 12 months?**

- Power **11%**
- Cooling **15%**
- Software **12%**
- Security **15%**
- AI **9%**
- Storage **13%**
- Infrastructure (racks/cables etc) **18%**
- Other **7%**

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QUESTION 10

To which two areas do you expect to allocate the largest portion of your budget in the next 12 months?

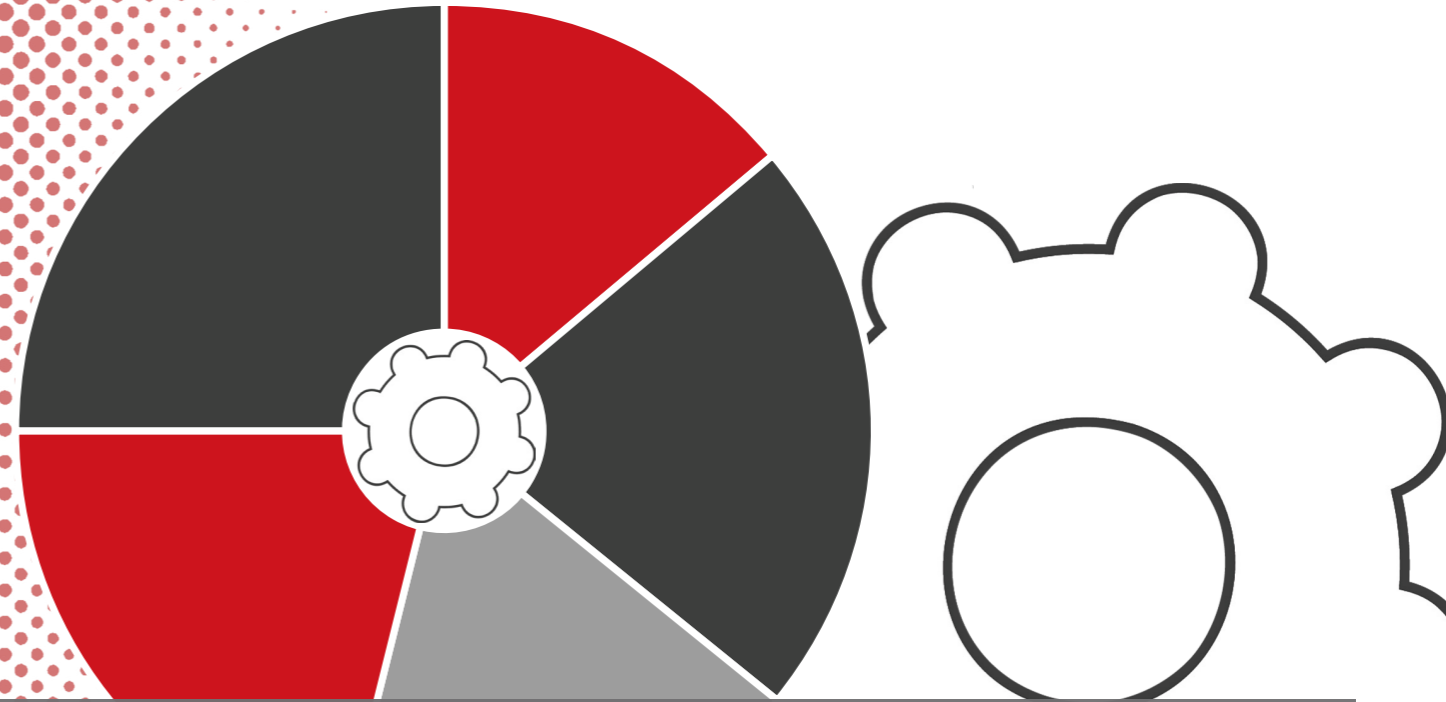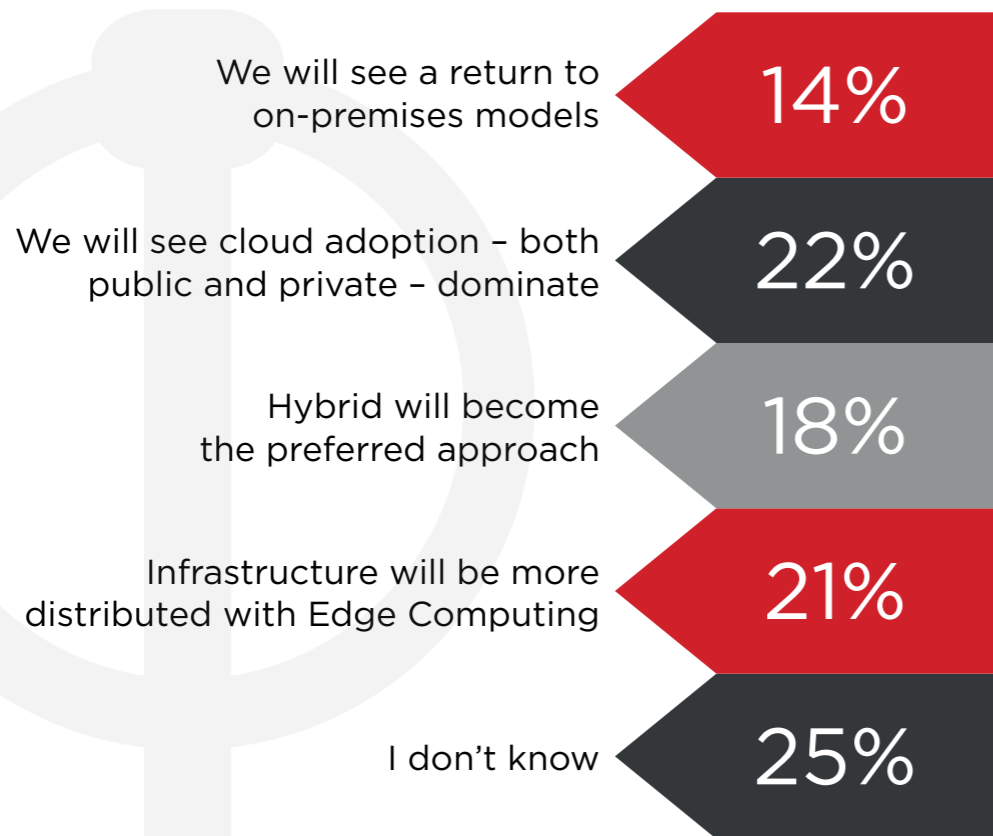| Area	%
Power	19%
Cooling	11%
Software	12%
Security	9%
AI	11%
Storage	12%
Infrastructure (racks/cables etc)	14%
Other	12%

KEY FINDINGS

As perhaps expected, priorities for the year ahead fall in multiple areas for data centre managers. The key areas of focus are infrastructure, cooling and security. This suggests a well-rounded approach to managing data centres, addressing both physical and cybersecurity concerns. However, software, storage and power were also key considerations. While not the top priority, the acknowledgment of AI capabilities at 9% indicates a growing interest in leveraging Artificial Intelligence within data centres.

Interestingly, it appears that budget allocation does not necessarily align with these priority areas, as power received the highest budget allocation. Infrastructure, which was a significant focus area, received a slightly lower budget share (14%) while software and storage each took 12%.

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QUESTION 11

How do you see infrastructure management evolving over the next 3–5 years?

We will see a return to on-premises models — **14%**

We will see cloud adoption – both public and private – dominate — **22%**

Hybrid will become the preferred approach — **18%**

Infrastructure will be more distributed with Edge Computing — **21%**

I don't know — **25%**

KEY FINDINGS

The question around how infrastructure will look in the future is one that is frequently pondered. With new technology constantly emerging and the advent of AI, infrastructure requirements will keep evolving to ensure continuity of digital services. Over recent years, we have witnessed the growth of cloud which has in turn led to hyperscale data centres and colocation facilities, along with IoT and Edge Computing.

A minority of respondents (14%) anticipate a return to an on-premises model. This suggests that while some organisations – particularly those in heavily regulated industries – may consider or maintain on-premises infrastructure, we are unlikely to see a full return to on-prem. A significant portion of respondents (22%) foresee the dominance of cloud adoption, both in public and private forms. This aligns with the ongoing trend of organisations migrating to the cloud to leverage its scalability, flexibility and cost-effectiveness.

A notable percentage (18%) predict that a hybrid approach will become the preferred model for infrastructure management. This indicates a recognition of the benefits of combining on-premises and cloud solutions while 21% anticipate a shift towards more distributed infrastructure with the incorporation of Edge Computing. This aligns with the growing importance of Edge Computing in processing data closer to the source. The remaining 25% of respondents expressed uncertainty about the future of infrastructure management. This may reflect the complexity and unpredictability of technological advancements and business needs.

CONCLUSION

The findings from this CXO Priorities research shines a light on the complex challenges and evolving strategies within the data centre management domain. A key overarching theme is the constant juggling of priorities by data centre teams, which is clear in the diverse areas of focus identified by respondents. Despite this, certain challenges do emerge as focal points for the industry.

Challenges in data centre management

Infrastructure modernisation and data security stand out as the most significant challenges. These concerns underscore a critical focus on adopting evolving technologies while safeguarding sensitive information. Additionally, maintaining uptime and addressing skill/ staff shortages represent ongoing operational challenges. The collective emphasis on these areas highlights the complex landscape of concerns within data centre management.

Sustainability initiatives

Diverse sustainability strategies are evident, with a quarter emphasising the integration of renewable energy sources and 24% focusing on recycling and waste reduction. This multifaceted approach, incorporating energy-efficient server technology, software tools and efficient cooling systems, highlights a commitment to environmental responsibility across various facets of data centre operations. Over one third of respondents affirm having a comprehensive sustainability strategy, indicating a proactive commitment to eco-friendly practices.
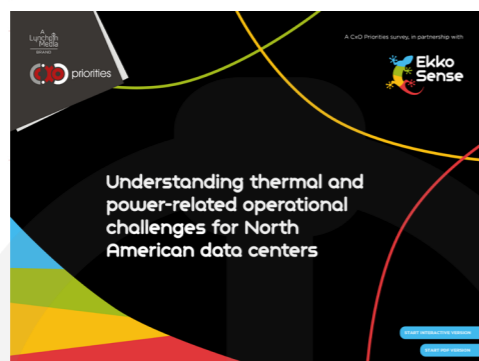
Future trends and uncertainties

Looking ahead, respondents express a mix of optimism, concerns and uncertainty regarding the role of Artificial Intelligence (AI) in the data centre sector. While 45% believe AI will be a force for good, the diversity of opinions reflects the varied expectations and challenges associated with integrating AI capabilities. The priorities for the upcoming year indicate a well-rounded approach to data centre management, with infrastructure, cooling and security at the forefront.

Infrastructure evolution

Anticipations about the future of infrastructure reveal a dynamic landscape. While cloud adoption dominates, a significant portion envisions a hybrid approach and 21% foresee a shift towards more distributed infrastructure with Edge Computing. This reflects the industry's adaptability to emerging technologies and a recognition of the need for a diversified approach. However, 25% expressed uncertainty which highlights the challenges of predicting infrastructure evolution against a constantly moving technology landscape.

In conclusion, the data illustrates a data centre sector at the crossroads of innovation and challenges. Navigating this complex landscape requires a holistic approach, incorporating sustainability practices, addressing evolving technological needs and aligning priorities with budget allocations. As the industry steers towards a future marked by AI, evolving infrastructure models and heightened environmental consciousness, strategic decision-making will be paramount in ensuring the resilience and efficiency of data centre operations.

By

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