



Report

Data Waste Index

Research Analysis

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Abstract

Corporate responsibility for green initiatives continues to grow. The environmental impact of a business's actions has become crucial to retaining partner and customer loyalty. Businesses using data must keep their practices streamlined, minimizing energy consumption and carbon emissions, rather than adding to them, through data wastage and unnecessary data storage.

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Foreword: Does your tech help or hinder U.K. sustainability?

Over the course of my career, I've been lucky enough to witness a huge amount of innovation in the tech space. And as we all search for solutions to alleviate some of the world's biggest environmental issues, that innovation is only going to grow.

In fact, 70% of the United Nations' 169 targets for its Sustainable Development Goals (SDGs) can be directly helped by technologies.

And yet, we can't be oblivious to the unnecessary levels of energy consumption that tech usage can involve, particularly when it comes to data. The global datasphere will amount to 180ZB by 2025, according to Statista. That's a lot of data storage, which pushes up levels of energy consumption and carbon emissions.

Data has proven to be a useful and strategic tool for businesses by improving efficiency and providing decision makers with real-time intelligence for making targeted and lucrative choices. In this way, effective data usage has quickly become the key to remaining competitive.

However, corporate responsibility for green initiatives continues to grow. The environmental impact of a business' actions has become a larger influence in retaining partner and customer loyalty. So, businesses using data must be mindful that their practices are streamlined, minimizing energy consumption and carbon emissions, rather than adding to it through data wastage and unnecessary data storage.

Sustainability is a focus for NetApp, especially as a technology partner. It also seems to be an area of consideration for IT leaders, with 74% currently feeling that better data management could reduce their organization's carbon emissions, according to our latest research. However, this view is less shared outside the IT department, making positive changes to data management harder to implement.

The current data landscape in the United Kingdom indicates a clear missed opportunity to reduce carbon emissions by decreasing data wastage—thus blocking the advantages of more sustainable data practices. I hope that, through this report, our findings will help provide guidance to the numerous opportunities that could result and provide a benchmark for those wanting to understand how to reduce carbon emissions caused by unnecessary data usage and storage further.

—Matt Watts, Chief Technology Evangelist, NetApp

An overview of U.K. data wastage

- 74% of IT leaders believe that better data management could reduce carbon emissions—but organizations still aren't making it a priority.
- 75% of IT leaders are finding excess data storage to be a constant source of stress as part of their working day.
- 48% of IT leaders are struggling to keep up with the demand of managing their data estate.
- 41% of the data stored by organizations is unused or unwanted.
- On average, IT leaders believe that their data estates need to be reduced by 44% in the next year alone.
- 40% of IT departments feel that they lack the resources necessary to remove unwanted and unused data.
- 56% of IT leaders say that removing old and unwanted data could have the biggest positive impact on a data department.

The environmental cost of data waste

There are many reasons why data waste accumulates. But the broad reason is often a legacy of poor technology habits. For instance, a business might focus on reaping customer data to inform marketing decisions. However, it might not have the same level of data practices in place to assess and dispose of old data, which leads to a buildup of data being stored unnecessarily.

As a result, two-fifths (41%) of data currently stored by U.K. organizations is unused or unwanted. The repercussion of this unnecessary data is that businesses are spending budget and emissions on storage and energy consumption when they don't need to.

So, how does this data wastage translate for the average U.K. business in terms of energy cost?

Given that the average organization spends a whopping £300,000 each year on storing data, that equates to £120,000 of wasted investment—£10,000 per month.

Businesses aren't only risking paying financially but could also sacrifice the quality of our environment by increasing detrimental carbon emissions.

Cleaning up data estates as a priority

Removing unwanted and unused data from business estates isn't at the top of the agenda for a lot of businesses, despite sustainability being a key concern for IT leaders and the wider organization.

Currently, a fifth (20%) of IT professionals are working to identify unused and unwanted data on an annual basis. And 6% say that they conduct a data audit with the intention of disposal less than annually. Despite the lack of attention being paid here, 83% of IT professionals maintain that their department prioritizes sustainability initiatives.

So, perhaps many IT professionals are holding off conducting data waste disposal due to the scale of the task—especially if disposal practices have been irregular or less than annual. Resources to alleviate such a buildup of redundant data might not be readily available, especially when departments are trying to tighten their purse strings.

However, more promisingly, some professionals are beginning to remove unwanted and unused data from their systems more stringent – that is, on a regular basis. Nearly half (47%) are conducting data disposal on their systems once per quarter at a maximum, whereas 36% have implemented the practice once per week.

As data remains ever more foundational to efficient business practices, regular data monitoring will prove critical to maintaining sustainability within U.K. businesses. IT leaders who are currently disposing of data on an ad hoc basis will need to implement more regular practices to keep on top of the sheer amount of insight feeding into the company's infrastructure.

IT leaders lacking data removal support

Many IT leaders have been held back from cleaning unnecessary data from their systems because of a lack of support, leading to increased stress levels in the workplace. Some 40% of IT leaders now feel that their department is short of the tools needed for removing data wastage. In comparison, 33% feel that they have enough to tackle the issue as it stands.

As a result, the majority (75%) of IT leaders are finding that excess data storage has become an ongoing source of stress during their working day. With so many feeling ill-prepared to handle the issue sufficiently, challenges have mounted. These difficulties commonly include fear of backlash from customers (42%), having an overwhelming amount of data to sift through (34%), and understanding how much data they store and where (33%).

Digging a bit deeper into these common challenges suggests two alarming conclusions. First, some IT leaders don't feel protected or supported enough by their organization to confidently perform their duties. Not only does this create an unfulfilling work environment, but it hinders leaders from taking any big actions that might contribute to influential business growth and more efficient processes.

Second, current data estates might not comply with regulations, especially if about a third of IT leaders feel overwhelmed by their data or struggle to pinpoint its location. This situation is particularly worrying because data practices will have to evolve continually to align with future regulations. And if leaders don't have the data visibility to act, the business could face hefty legal consequences such as reputational damage and large fines.

To further complicate IT leaders' ability to dispose of data wastage effectively, those surveyed also say that they encounter additional issues including:

- Fearing that they are inadvertently removing useful data (31%)
- Communicating with different departments (28%)
- Understanding which data is useful and which isn't (27%)
- Finding inconsistencies in data quality (21%)
- Fearing backlash from colleagues or stakeholders (20%)
- Having enough time to handle data wastage (17%)
- Encountering inconsistencies in how or where data is stored (16%)
- Receiving enough support to carry out data waste disposal (16%)
- Not understanding who owns the data (9%)
- Other challenges (6%)

It's clear that many IT leaders have the intention but not the tools or confidence to differentiate between useful and useless data, leading to hesitation in reducing data wastage. Accordingly, 48% of IT leaders are struggling to keep up with the demands of their data estate.

There are many disadvantages to this situation. Of course, the focus of this report highlights how inaction surrounding data wastage can unnecessarily contribute to environmentally damaging emissions.

However, the plethora of challenges raised by IT leaders who are currently trying to untangle their data shows that businesses could also be left wide open to the risks of noncompliance and the expense of inefficiency. That's why receiving additional support now is more crucial than ever.

Supporting IT teams with the right tools for data storage

IT departments need to be given the right tools so that they can feel confident and empowered to sort and dispose of data waste effectively. Accomplishing this task will not only unlock the benefits of a more authentic sustainability initiative, but also improve efficiency and confirm compliance.

Reaping the rewards of streamlined data practices is certainly appealing. Impressively, 28% of IT departments are currently operating with a dedicated sustainability lead.

Why have some businesses been motivated to act in bettering the departments' sustainable data usage, including decreasing data wastage? The reasons vary. Exactly a quarter (25%) of IT leaders currently feel that the biggest incentive is the reduction in their carbon footprint. Other leaders feel that they should take action with the aim of reducing cost (16%), protecting and maintaining customer relationships (15%), and improving data visibility (11%).

Despite numerous scathing U.K. headlines reporting incidents of poor and irresponsible data storage, only 4% of IT leaders felt threatened into action by the potential of reputational damage caused by retaining data waste.

So, what's stopping U.K. businesses from dumping unused data for good? It's certainly not IT leaders—the majority of whom (75%) are well aware of the carbon implications of holding onto excess data storage.

The issue, as discussed earlier, is that IT teams aren't equipped with the digital tools necessary for sifting through the sheer amount of data—and therefore can't tackle the problem confidently. Considering the rate of data collection among U.K. businesses, manually sorting data based on its use case and value isn't only impractical and inefficient but unfeasible.

The latest figures show that there's a demand for digital tools to enhance the skills of IT personnel who need to tackle data wastage. The technologies that employees feel would be most useful include:

- Cloud computing (53%)
- Artificial intelligence (45%)
- Edge storage (44%)
- Machine learning (28%)
- Tape-based storage (20%)
- Other (3%)

2023 challenges and opportunities

Businesses are heavily investing in data storage, with organizations spending an average of £300,000 per year in maintaining data. Yet these data management efforts are performing below what such a big investment warrants.

This misalignment between investment and results suggests that IT budget is being channeled into the wrong aspects of data management. It means that there could be an opportunity for businesses to refocus their approach to data management in 2023, in order to increase the value they receive from their investment and decrease their carbon footprint.

As IT leaders begin to navigate the year, they should expect to encounter numerous challenges as they deal with their data management (which includes disposing of their data waste). The biggest difficulties plaguing the minds of IT leaders right now center on the turbulent U.K. economy, which could be why lack of resource has been such a prevalent concern throughout our research. Top challenges include dealing with labor costs (22%), currency fluctuations (17%), and material shortages (13%).

Worries surrounding fluctuating regulations (11%) and the climate crisis (9%) follow closely behind. These worries indicate that now might be an ideal time to tackle data wastage, considering the negative influence it can have on both regulatory compliance and carbon emissions if neglected.

Some U.K. businesses are also worrying about other issues, but to a lesser extent. These issues include:

- Skills shortages (6%)
- Material costs (6%)
- Construction costs (4%)
- Infrastructure constraints (4%)
- Geographical constraints (4%)

Data can be a huge asset in creating efficiency and pinpointing potential problems before they arise. However, this can happen only if data is accurate and streamlined. Having an excessive amount of redundant data can actually have the opposite effect by causing inaccurate insights and no visibility—making strategic decision-making hard.

Many businesses are likely to have too much data to be able to see how to solve their pressing issues. A majority (61%) of IT leaders say that their data estates will increase in size over the coming year. This growth is problematic, with the average IT leader feeling their data estates need to be reduced by a huge 44% in the next 12 months.

Of course, removing data waste from systems would immediately have a positive effect on a company's carbon footprint. Three-quarters (74%) agree that better data management (which includes acting against data wastage) would significantly reduce carbon emissions.

Removing old and unwanted data is also seen by more than half (56%) of IT leaders as having the largest positive impact on a data department—indicating that professionals have faced multiple issues caused associated with having too much redundant data. Improving capacity planning (50%), hiring a more skilled workforce (42%), and investing in a more efficient IT infrastructure (40%) are also regarded as potentially having a major impact on improving U.K. businesses.

Other solutions for strengthening data departments and its sustainability efforts include:

- Improving flexible and remote working options (35%)
- Monitoring outputs and results more closely (26%)
- Improving reporting (23%)
- Outsourcing data management (20%)

There's a clear competitive advantage to be gained for organizations that can efficiently audit and dispose of data waste regularly. Businesses across the United Kingdom are currently emitting a huge amount of unnecessary carbon by storing data they don't need. By rectifying this situation, with the help of smart digital tools, businesses will not only be able to cut the cost of data storage expense but also to significantly reduce their impact on the environment.

Conscious efforts to reduce carbon emissions will bolster the authenticity of brands looking to meet customer and partner expectations of working with sustainable businesses. Meanwhile, streamlining data will provide business leaders with the critical visibility that they need to make strategic decisions and build resilience against the backdrop of an extremely turbulent economy and challenging market.

About the research

Vitreous World conducted this research on behalf of NetApp in December 2022. The objective was to understand U.K. IT leaders' attitudes to data wastage and to uncover the challenges and opportunities currently emerging in the market. The research surveyed 100 data storage and data management decision makers from across the United Kingdom. Respondents represented small, medium, and large-sized businesses and were pooled from junior management, middle management, senior management, and owner/partner level.

For more information about the research, contact Joanne.Merriweather@NetApp.com

To find out more about NetApp® and how it can help you with data wastage, visit [Sustainability in Tech and Technology at NetApp](#)

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