Why Data is Key to the Sustainability Challenge

How European sustainability strategy leaders are harnessing data to tackle new regulatory demands.

PAC

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INTRODUCTION

The topic of sustainability is firmly under the microscope in boardrooms across Europe.

The majority of large and mid-sized enterprises across all industry sectors in the region have formalized their sustainability strategies in recent years, including commitments to achieving net zero carbon status and reducing their broader environmental impact.

However, factors such as mounting economic headwinds coupled with the effects of geopolitical instability, means that business leaders need to juggle their sustainability initiatives with other pressing priorities.

At the same time, many of those organizations that have taken their first steps to build a clear view of their starting point in areas such as carbon consumption, are realizing that the task ahead of them is greater than they initially thought. As a result, brands such as Unilever and BP have pushed back some of their sustainability-related targets to provide themselves with a more realistic timeframe.

So, does this mean that sustainability has been side-lined? In this White Paper, industry analyst firm PAC analyses the results of a recent study based on briefings with sustainability strategy leaders at 550 businesses across Europe. These companies were split across a variety of industry sectors (including manufacturing, energy & utilities and transport), and include the views of executives shaping sustainability strategies across multiple areas of the organization, including both business and digital/IT leaders.

This analysis also explores the critical area of data and how businesses harness it to meet the pressing demands of stakeholders such as regulators and investors. It also looks at how data is being exploited to accelerate their time-to-value with focused initiatives that are helping them to build some early momentum with their sustainability journeys.

AUTHOR

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HAS SUSTAINABILITY BEEN SIDE-LINED?

Sustainability remains a critical topic for most European organizations, and a significant proportion believe that the future of their business depends on it.

PAC's survey of senior sustainability strategy leaders found that 89% either agreed or strongly agreed that the success of their sustainability strategies will determine their survival in years to come, while a similar level (93%) stated that it remains one of their organization's top priorities.

What is Driving Investment?

There are multiple stakeholder groups that sustainability strategies are designed to address. Some 88% state that they will only be able to attract and retain customers if they become more sustainable, and this is something that is backed up by wider research in markets such as consumer product goods. For example, a **Global Cosmetics Industry** survey identified that two thirds of consumers view sustainability as a "very important" factor when considering the purchase of a beauty product.

At a time of ongoing talent shortages across many areas of the workforce, sustainability is also having a growing impact on where individuals choose to work. PAC's study found that 80% said that it would impact their future ability to recruit and retain the best talent, while research from accountancy group **KPMG** found that 20% of office workers would turn down a job if a company's sustainability credentials were deemed lacking.

Investors Help Shape the Market

Another vital group is the investment community, and 90% of strategy leaders believe that sustainability will be key to their ability to secure funding. Many European banking groups are shaking up their product offerings in order to keep pace with evolving investor preferences. **HSBC** announced that it has stopped financing new oil and gas projects, while **Deutsche Bank** is among a growing number of banks that incorporate key performance indicators relating to carbon emissions reduction into financing deals. As we shall explore, investors are now demanding greater transparency into sustainability metrics as part of the standard financial reporting process.

But has the increasingly challenging and volatile economic backdrop pushed sustainability back down the list of priorities in recent quarters? Encouragingly, the study found that more than half of businesses (**54%**) stated that it had actually increased in importance (led by companies in the energy & utilities and transport sectors), while **31%** stated that it remained at the same level. Only **15%** of businesses said it had become less of a priority (*see Fig 1*).

Fig 1. Is sustainability still a boardroom priority?

54%
31%
15%

It has increased in importance during the last 12 months

It has retained the same level of importance over the last 12 months

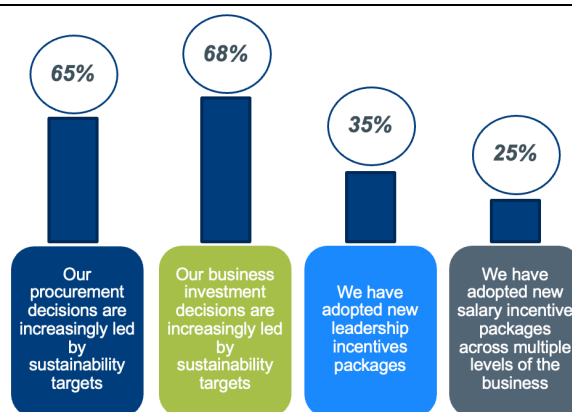It has become less of a priority for our organization in the last 12 months

Budget Backing for Sustainability

On an even more positive note, these statements are being backed up by investment (*see Fig 2*). The study found that more than half of European businesses (59%) plan to increase their spending on sustainability initiatives in 2024, with a quarter (26%) maintaining the same level of funding as last year. Just 15% expect their sustainability-related spending to decrease this year, and while some companies may have extended the timeframes for reaching their targets, they continue to commit significant sums to new sustainability initiatives. For example, life sciences giant **Merck** recently announced it would invest €1.5bn in a new, carbon-neutral research site in Darmstadt, Germany, powered by photovoltaics, geothermal energy and air-source heat pumps.

In some cases, businesses view their sustainability initiatives as vital to achieving wider cost efficiency drives, particularly given the ongoing high energy costs facing organizations across the region. **Unilever** claims to have saved more than €1bn in costs over the last decade as a result of shifting to renewable energy sources and through broader energy efficiency measures. Steel manufacturer **Arcelor Mittal** claims it is on track to gain €10m in annual cost savings at one of its largest factories through investment in energy-efficient production technologies, and has saved more than €200m in annual costs through group-wide energy efficiency measures over the last 15 years.

Fig 2. What steps are businesses taking to make their culture more sustainable?

65% — Our procurement decisions are increasingly led by sustainability targets

68% — Our business investment decisions are increasingly led by sustainability targets

35% — We have adopted new leadership incentives packages

25% — We have adopted new salary incentive packages across multiple levels of the business

Driving a Cultural Change

Perhaps the most important – and probably the most difficult - success factor for any major sustainability strategy is to change the organization's culture. Unless colleagues adapt the ways that they work on a day-to-day basis, and transition towards more sustainable practices, it will be impossible for businesses to realize their goals. The PAC study found that companies are attempting to incentivize change in different ways, with two thirds of businesses (**65%**) stating that procurement decisions are increasingly led by sustainability targets (*see Fig 2*). **BT Group**, which invests more than £100m annually on its network infrastructure alone, has mandated that the sustainability credentials of its potential suppliers should be the most important criteria influencing procurement decisions.
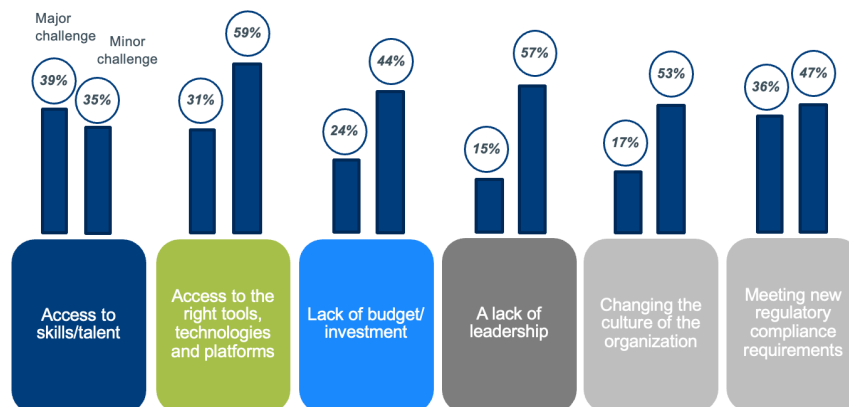
More than one third (**35%**) of businesses state that their leadership team now has salary incentive packages that are based on the progress of the sustainability strategy. Credit card giant **Mastercard**, has one of the most ambitious programs in place, implementing sustainability-related remuneration packages at a boardroom level, and more recently, extending this across the entire workforce. Indeed, the PAC study found that a quarter of organizations have also rolled out similar packages across broader sections of the business. One example is metal processing company **Deutsche Nickel**, which installed dashboards with real-time overall equipment effectiveness (OEE) insights on production equipment. The operating staff were then paid an additional bonus on top of their basic hourly rate if the machines ran at an effectiveness level in excess of 80%.

Key Obstacles to Sustainability Strategies

The success of all these measures heavily depends on how organizations can process and harness the right datasets, and provide the key stakeholders – from the boardroom to the finance or procurement function – with the insight at the fingertips to be able to make the right calls.

Having access to the right tools, talent and technologies to tackle this issue was flagged up as a challenge to sustainability strategies by **90%** of European businesses, including **78%** of manufacturing organizations. We shall explore this topic in greater depth in the next section, but it is an important pointer to how the success of digital/data transformation and sustainability strategies is inextricably linked.

Fig 3. What are the key challenges to delivering your sustainability strategies?

Major challenge	Minor challenge				
39%	35%				
	59%				
31%		44%	57%	53%	47%
	24%	15%	17%	36%	
Access to skills/talent	Access to the right tools, technologies and platforms	Lack of budget/ investment	A lack of leadership	Changing the culture of the organization	Meeting new regulatory compliance requirements

Compliance and Budget Pressure

A lack of budget and investment is cited as a challenge by over two thirds (**68%**) of the participants in the study. One of the key trends in 2024 is that many businesses are prioritizing those initiatives that can deliver a rapid return on investment. Improving energy efficiency and reducing energy costs is a priority area, and technology tools and infrastructure that can help businesses understand where these savings can be made remains a dynamic area of spending.

PAC expects investment in this area to grow by more than 30% in 2024 across Europe. This will be driven by businesses pushing ahead with sustainability-related technology projects that can deliver a rapid ROI as an entry point to broader digitalization initiatives across the business.

Meeting regulatory compliance is named as a challenge by **83%** of businesses, including more than three quarters (**78%**) of manufacturing organizations. European companies are being pushed to move at a faster pace on this issue than their counterparts in other regions, and as we shall explore in the next section, many have a lot of distance to cover at speed in order to meet the demands of a rapidly-evolving regulatory landscape.
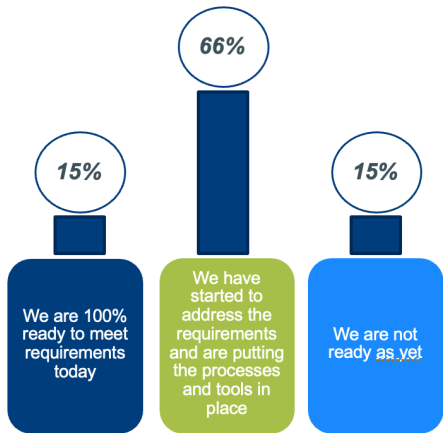
TACKLING THE DATA CHALLENGE

Europe is at the forefront of driving businesses to action on sustainability through regulatory pressure. The European Union introduced the Corporate Sustainability Reporting Directive (CSRD) in 2023, which requires companies with business activities in Europe to comply with a region-wide standard on non-financial reporting, in a move designed to improve the transparency and comparability of companies' ESG status and progress.

Evolving Regulatory Drivers

Regulation is also evolving at a local level. Germany unveiled the Energy Efficiency Act, which became policy in 2023 and is aimed at driving a more efficient use of energy by public authorities, companies and data centers. Businesses whose annual energy consumption exceeds 15 gigawatt hours are now required to implement energy or environmental management systems and to document and publish their energy efficiency measures in detail.

The PAC study found that for the majority of businesses, compliance with these demands remains a work in progress. Just **15%** claim to be 100% ready today (including **19%** of manufacturing companies) and two thirds (**66%**) state that they are in the process of putting the right processes and tools in place (*see Fig 4*). This is a huge, but essential task, given that companies will face heavy financial penalties for non-compliance. This is currently set by the different member states, but non-compliance in Germany would result in fines of up to either €10m, 5% of annual revenue, or twice the amount of the profits gained / losses avoided.

Fig 4. How ready are businesses to meet sustainability regulatory requirements?

66% We have started to address the requirements and are putting the processes and tools in place

15% We are 100% ready to meet requirements today

15% We are not ready as yet

Dependence on Manual Effort

Technology presents a major opportunity for sustainability strategy leaders to improve their insight, and one of the major challenges highlighted by the study was an overdependence on manual effort. For example, the study found that almost half of European businesses (**48%**) still rely, at least partially, on manual effort to track their carbon footprint, with just **18%** claiming to have a "single pane of glass" view on all relevant insight from across the organization. This is supported by research from consulting group **Bain & Co,** which found that sustainability teams typically spend as much as 70% of their time on data collection.
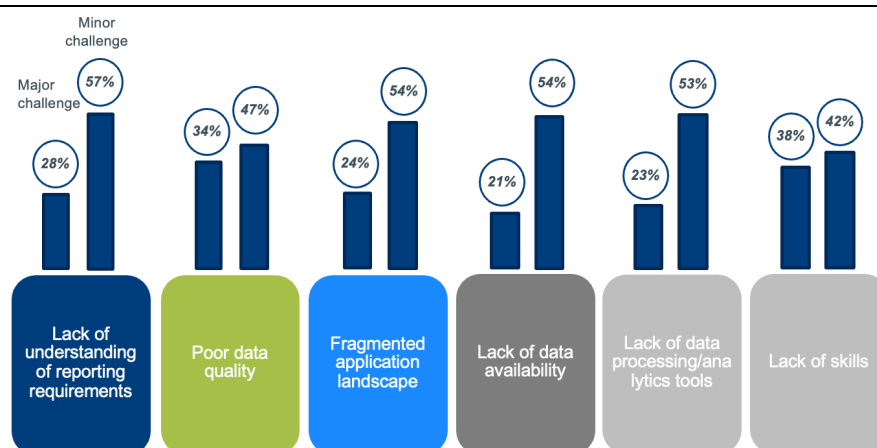
However, even when a business looks to harness the data across its organization and apply a level of automation to its collection, processing and management to support the new regulatory requirements, there are multiple other challenges that strategy leaders perceive as holding them back.

The Data Quality Issue

Some **81%** of organizations view poor data quality as a barrier to achieving regulatory compliance (*see Fig 5*). "Rubbish in, rubbish out" is a frequently-cited maxim that encourages businesses to take a robust approach to data stewardship. There is a strong correlation between those organizations that are starting to demonstrate real momentum in their sustainability strategies and those with a strong underpinning data strategy. Electronics giant **Philips** recently achieved the highest ever score in S&P Global Ratings' assessment of its ESG strategies, targets, and performance. The company has already achieved Net Zero status on a Scope 1 and 2 basis, and has committed to having at least 50% of its suppliers committed to science-based targets for carbon emissions reduction by 2025.

Strategy leaders have to combine taking an effective approach to data management with the need to move at pace in order to meet regulatory demands. But applying data-relate tools and technology does not necessarily solve the problem by itself. For example, one consumer products goods manufacturer implemented building control technology, which saved critical data that was required to support key metrics for investors, in a data lake. The data was fragmented and lacked the relevant context, making it unfit for purpose. However, the company was able to rectify this with a data gateway solution that enabled it to retrieve the data out of the data lake, identify and address errors and significantly enhance quality.

Fig 5. What are the main challenges to sustainability regulatory compliance?

	Major challenge	Minor challenge
Lack of understanding of reporting requirements	28%	57%
Poor data quality	34%	47%
Fragmented application landscape	24%	54%
Lack of data availability	21%	54%
Lack of data processing/analytics tools	23%	53%
Lack of skills	38%	42%

A Fragmented Data Landscape

Very few companies are able to easily pull together a consolidated view of their sustainability-related data, because of the fragmented nature of their underlying systems. More than three quarters of participants in the study (**78%**) highlight a fragmented application landscape as a blocker for their sustainability compliance initiatives. This is flagged up as a particular challenge by companies in the energy and utilities (**85%**) and manufacturing (**80%**) sectors. But across all industries, businesses need to access data that is stored across multiple applications, with varying (and sometimes none) levels of integration between them. This is a major challenge for businesses in asset-centric industries such as manufacturing and energy and utilities, where their enterprise IT and operations technology (OT) environments typically exist in different silos.

This can slow down the rate of progress as businesses have to create different use cases to better harness the data from each silo. The gap between the two areas makes it difficult to drive the kind of connection between business stakeholders in areas such as finance, and the production environment. This is critical to enabling the cultural change initiatives we discussed in the earlier section.

Solving the Data Access Challenge

In order to tackle this issue, some companies are leveraging reusable data infrastructures, that are able to integrate all these assets without mediation. The advantage is that they require a minimal level of initial investment, as no or very little additional hardware is required for connectivity, and can scale efficiently as the number of use cases expands. Data infrastructure solutions can also provide a much faster way to tackle issues such as a fragmented application landscape (highlighted as a challenge by **78%** of the participants) as they can be seamlessly integrated across a diverse range of applications, such as enterprise resource planning and manufacturing execution systems.

A lack of data availability is viewed as a challenge to sustainability regulatory compliance by three quarters (**75%**) of strategy leaders, who are faced with both a fragmented and complex application landscape, but also access restrictions due to IT security constraints. And as with any data-centric role, **80%** of businesses also cite a lack of skills as a challenge in this area. This is another important factor that will drive the use of technology and automation solutions to ensure that data is processed at a speed and at a level of quality that meets shifting regulatory demands.

Fig 6. What is the level of overlap between your cloud computing and your sustainability strategies?
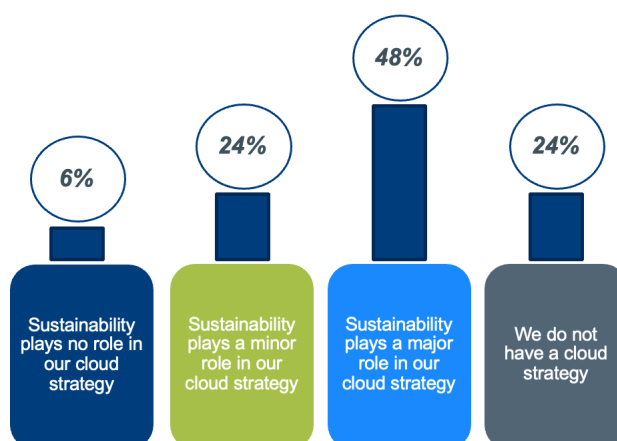
Cloud Computing and Sustainability

One of the factors that organizations must weigh up as part of their digital strategy to support their sustainability data targets is how it will work alongside their approach to cloud computing.

More of the data that businesses now need to harness as part of their sustainability requirements and strategies resides in the cloud, but as many businesses have discovered, this can bring new challenges in terms of cost and scalability. Almost half (**48%**) of businesses state that sustainability considerations play a major role in shaping their cloud strategy (*see Fig 6*), but in this regard, cloud represents a double-edge sword. There are some potential energy efficiency and broader environmental benefits to phasing out proprietary data center infrastructure. However, many companies have struggled to keep on top of both the scale at which cloud services are deployed across the different parts of their organization, as well as the parallel rises in cost and energy consumption.

Some businesses are tackling this issue by implementing hybrid solutions that combine the flexibility of cloud delivery models with on-premises, edge components that ensure that costs do not spiral out of control. By using platforms that handle data transformation, processing and contextualization on the shop floor, companies can ensure that they only send ready-to-use and prepared data into the cloud. This will help to manage cloud consumption at a time when many businesses are finding that the cost of running their escalating workloads in the cloud – particularly those relating to AI initiatives – are being increasingly difficult to manage.

CONCLUSIONS

To answer the question posed in the first section of this paper, it is clear from the study that the issue of sustainability has not been side-lined.

For many businesses, it has increased in importance, and despite wider economic pressures, sustainability strategies are being backed up by increasing levels of investment.

Accelerating Sustainability with Data

Regulation is a particularly important driver in Europe, although it is not the only one. Organizations are also having to respond to growing pressure from their customers, employees and investors as well, and many believe that the future survival of their business will depend on the success of their sustainability initiatives.

Data presents both a huge opportunity and a challenge for sustainability strategy leaders. It is vital to helping businesses understand their current position and report their progress to these different stakeholder groups. Providing a clear and accurate picture will be essential as regulatory scrutiny intensifies and businesses have to overcome customer fatigue over perceived "greenwashing."
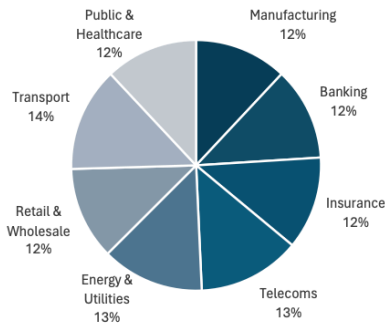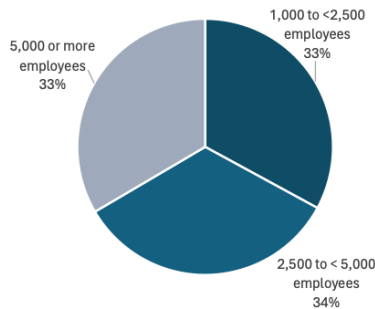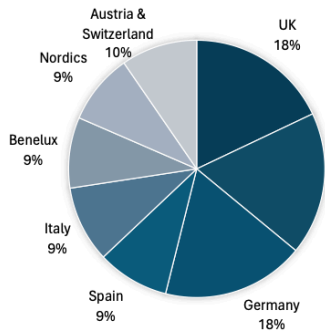
Finding the Right Solutions

There has been an explosion in the availability of tools designed to help businesses identify and process the right data sets, but many of them fail to tackle the critical, underlying challenges relating to data accessibility and quality, and overcoming aging and siloed application landscapes. Organizations should look to harness solutions that can provide an easy way to unlock and integrate data from all relevant sources at speed, regardless of the nature or developer of the application.

A robust data strategy is essential, and it needs to be underpinned not just by dedicated teams of data experts, but through the development of a business-wide culture that helps everyone from the factory floor to the boardroom understand the value of data to helping the organization achieve its sustainability targets. To become a sustainable business requires cultural change, and data will be the biggest asset in this journey.

BREAKDOWN OF STUDY PARTICIPANTS

| . Breakdown by Country | Breakdown by Company Size. | Breakdown by Industry Sector |

Breakdown by Country: UK 18%, France 18%, Germany 18%, Spain 9%, Italy 9%, Benelux 9%, Nordics 9%, Austria & Switzerland 10%

Breakdown by Company Size: 1,000 to <2,500 employees 33%, 2,500 to < 5,000 employees 34%, 5,000 or more employees 33%

Breakdown by Industry Sector: Manufacturing 12%, Banking 12%, Insurance 12%, Telecoms 13%, Energy & Utilities 13%, Retail & Wholesale 12%, Transport 14%, Public & Healthcare 12%

ABOUT CYBUS

Cybus is a German software company specialising in data integration in large production environments. With its factory data hub solution Connectware, Cybus enables the seamless collection, processing and distribution of industrial data and ensures smooth communication between heterogeneous production and IT/cloud systems. The scalable, centralised DataOps software supports a standardised architecture across multiple factory sites and is specifically designed to meet the needs of production-critical processes. Global companies such as Liebherr and KRONE rely on Cybus to increase the efficiency, sustainability and innovation of their production processes.

For more information, please visit www.cybus.io.

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