THE ESG IMPERATIVE

RETHINKING BUSINESS FOR A SUSTAINABLE FUTURE

February, 2023

GBM

THE ESG IMPERATIVE:

Rethinking Business for a Sustainable Future

The global average temperature has risen by 1°C since the 1800s, chiefly due to a rise in the greenhouse gas emissions generated by human activities, such as the burning of oil, gas, and coal. More dramatically, the global average temperature has risen by more than 0.2°C per decade over the last 40 years, and the concentration of carbon dioxide in the atmosphere — which is 50% higher than pre-industrial levels — is increasing at an unprecedented rate. As a result of this global warming, earth faces intense droughts, severe fires, rising sea levels, floods, catastrophic storms, desertification, and declines in biodiversity.

Thousands of scientists and government officials concur that limiting the increase in global temperature to 1.5°C would help humanity avoid the worst climate effects and maintain a habitable planet. However, present research predicts a 2.8°C rise in temperature by the end of the century. To keep the global temperature under control and develop a low-carbon green future, every stakeholder, from governments to business leaders, needs to focus on environmental sustainability.

FROM RIO EARTH SUMMIT TO COP28 UAE:

The Arduous Task of the International Community

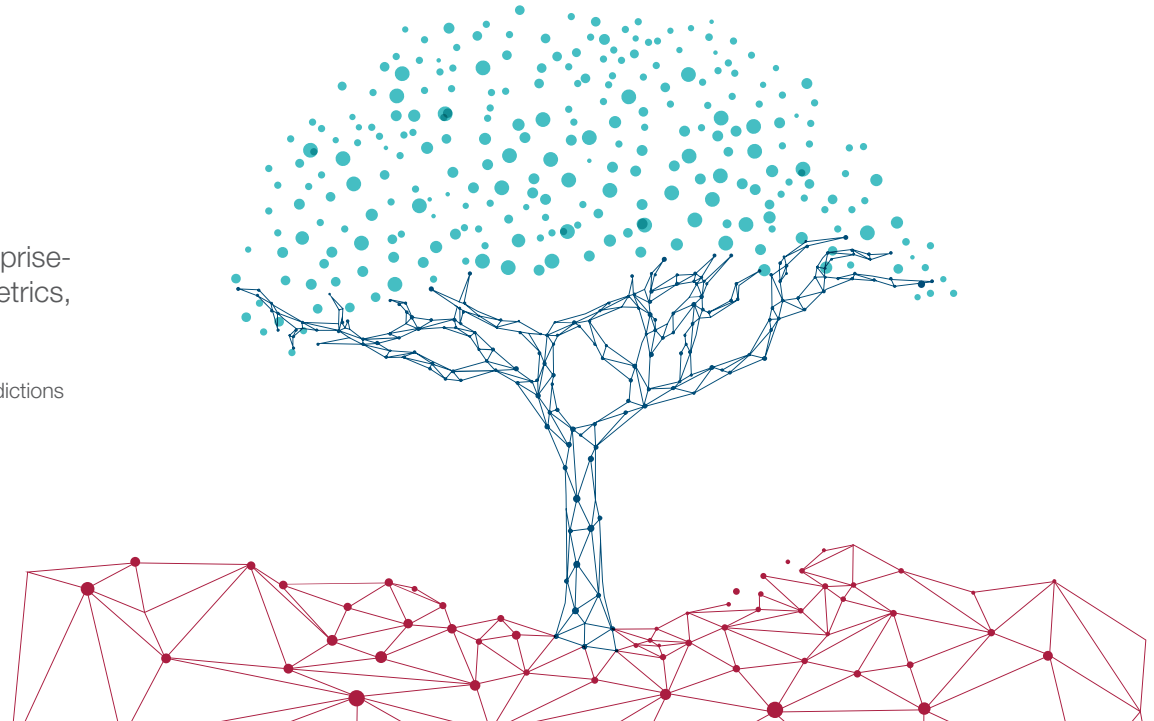
To forestall the risk of breaching a critical tipping point, governments convened the first United Nations Framework Convention on Climate Change (UNFCCC) — also called the Rio Earth Summit — in 1992. The Kyoto Protocol, which marked the first global commitment to reduce greenhouse gas emissions, was subsequently adopted in 1997. Another milestone in the drive toward a sustainable future was reached in 2015 (COP 21 Paris Agreement), as parties to the UNFCCC committed to keeping the sustained rise in global temperature since the pre-industrial era below 2°C. Over the years, the focus has shifted from negotiations and goal setting to increased private-sector engagement, wider policy coordination, and the greater implementation and tracking of sustainability initiatives. For example, the United Nations Climate Change Conference in Glasgow, Scotland (commonly referred to as COP26), concentrated on outlining the goals and levels of cooperation needed to limit the global temperature increase to 1.5°C. The COP27 event in Sharm el-Sheikh, Egypt, raised the concerns of the developing world and further looked at the accountability, transparency, and implementation of sustainability-related measures.
While all parties to the UNFCCC have committed to speeding up climate-related actions,

MORE COMPANIES TO REPORT CARBON DATA

BY 2024, 80% OF G2000 COMPANIES

will capture carbon data and report their enterprise-wide carbon footprints using quantifiable metrics, compared with just 50% today.

Source: IDC FutureScape: Worldwide Sustainability/ESG 2023 Predictions



progress has been patchy since the first event due to escalating economic, energy, and food security crises and military conflicts, such as the Russia-Ukraine war. At COP28, which will take place in the United Arab Emirates (UAE) in the last quarter of 2023, participants must take stock of the progress made toward the achievement of the Paris Agreement and address a host of evolving concerns, including energy transition modalities and the financial mechanisms required to pay for environmental loss and damage (i.e., how countries that have financially benefitted from fossil fuel investments will compensate other nations that have suffered unavoidable and direct permanent damage from climate change).

RESETTING CORPORATE STRATEGY FOR SUSTAINABILITY

In light of maintaining a balance between Profitability and Sustainability, organizations see Corporate Sustainability as the capacity to remain productive over time and to safeguard their potential for long term profitability.

In parallel with the accelerated climate-related actions at the global and country-level, sustainability has risen to the top of organizations' agendas and moved into the public consciousness during the past few years. Environmental, social, and governance (ESG) measurements have become core metrics by which organizations are assessed by investors, partners, customers, and employees. Organizations now realize that sustainability cannot simply be managed randomly or regarded as a "point in time" consideration; rather, sustainability needs to be integrated into the overall company strategy. Consequently, many organizations in the region featured in our recently conducted survey across UAE, Kuwait, Qatar, Oman, Bahrain, and Egypt are resetting their corporate strategies for sustainability. According to IDC's Environmental Sustainability Survey, more than 62% of organizations indicated that sustainability is very important or extremely important as a component of their overall corporate strategy (Figure 1).

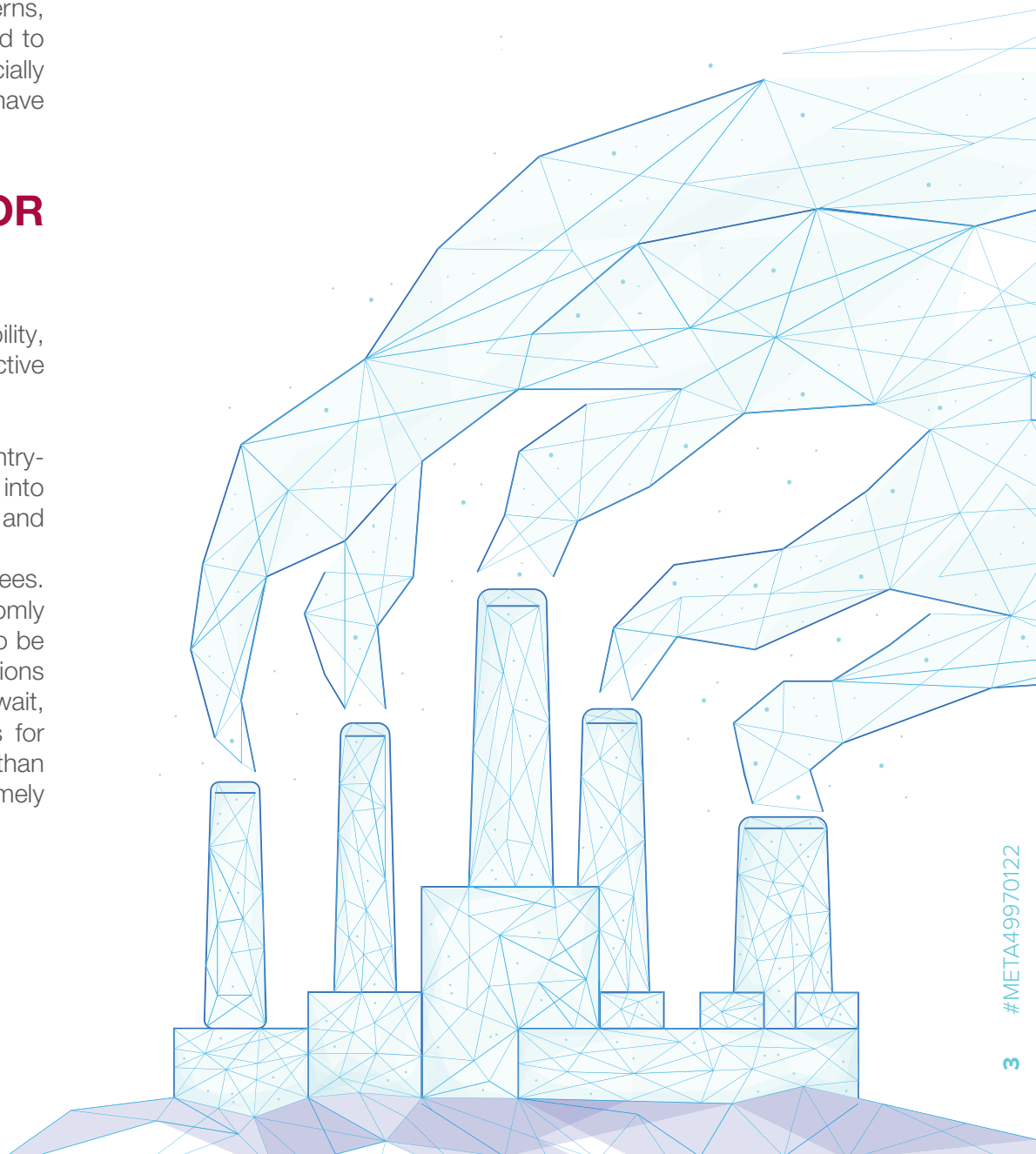
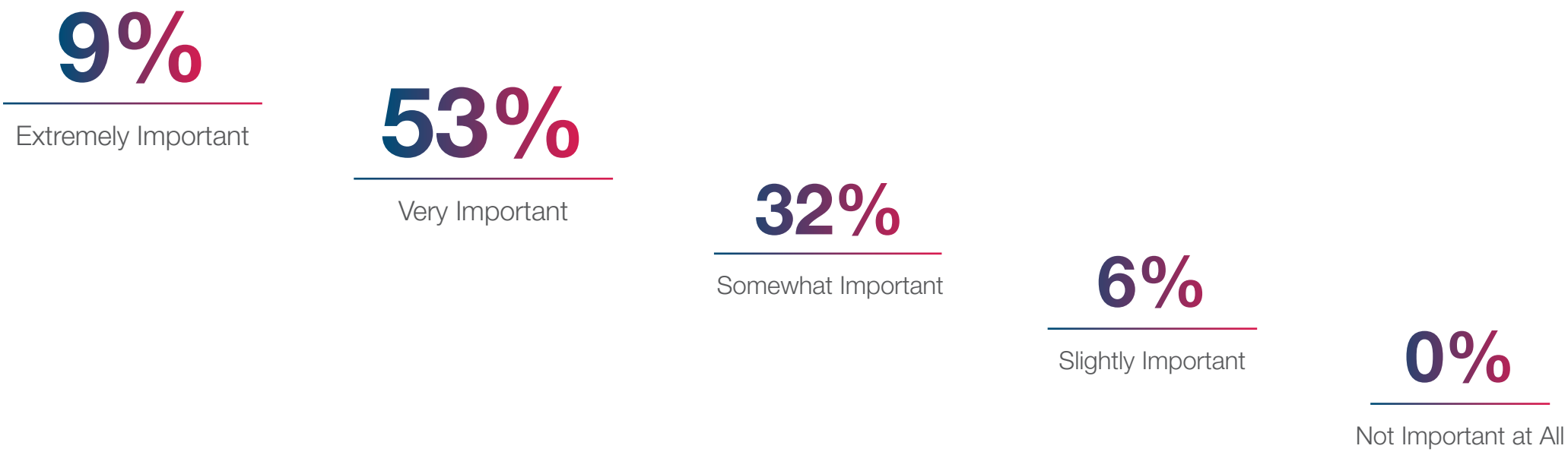


Figure 1. The Growing Role of Sustainability in Corporate Strategy

How important is sustainability as a component of your overall corporate strategy (or as a priority for your organization)?

62% OF SURVEYED ORGANIZATIONS IN THE REGION HIGHLIGHTED THAT SUSTAINABILITY IS VERY CRITICAL FOR THEIR CORPORATE STRATEGY



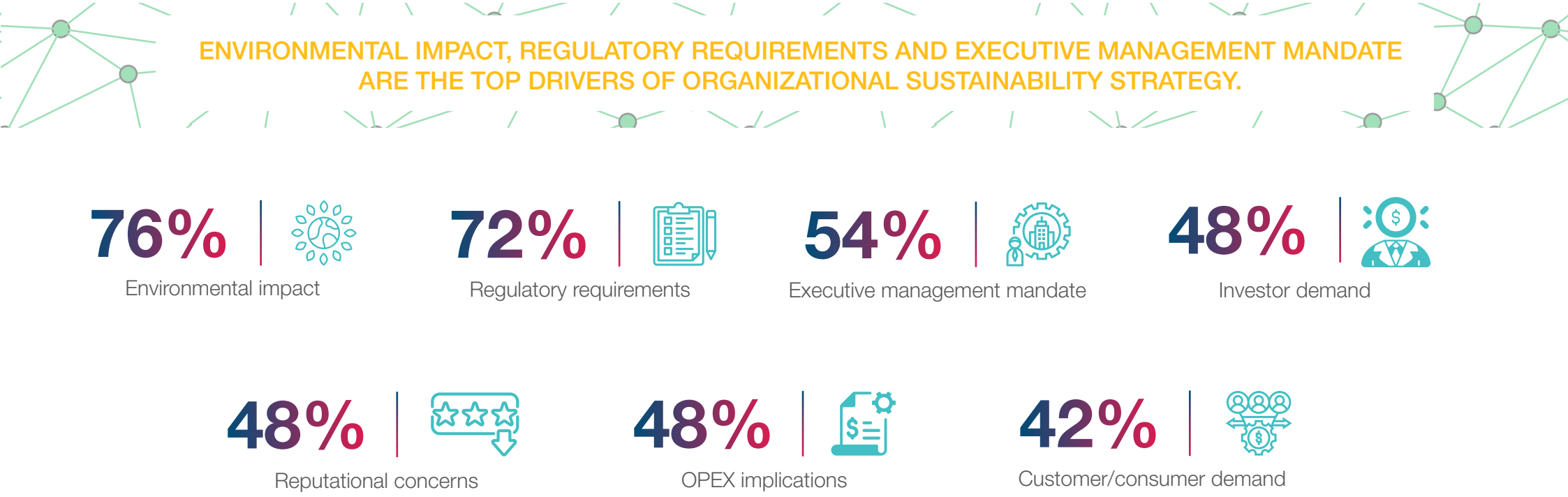
Source: IDC Environmental Sustainability Survey, MEA (UAE, Kuwait, Qatar, Oman, Bahrain, Egypt), N=225 (January 2023)

Environmental impact — that is, the effect of an organization's waste and pollution, use of natural resources, and contribution to climate change — is a critical consideration in corporate sustainability strategies. As illustrated in Figure 2, 76% of organizations surveyed by IDC identified environmental impact as the top driver of their sustainability strategies. In addition to environmental impact, growing regulatory requirements play an important role in organizations' sustainability strategies. However, regulatory requirements for sustainability can vary depending on the country, industry, or specific activity of an organization. For example, organizations may need to comply with environmental regulations that prescribe how to manage different types of pollution (such as air and water), emissions regulations that require the production of energy consumption and greenhouse gas emission reports, or supply chain regulations that ensure suppliers comply with relevant sustainability guidelines. Organizations may also have to follow transparency and disclosure regulations that compel them to disclose details about their energy consumption, water usage, and greenhouse gas emissions to investors, customers, and the public. Moreover, organizations need to keep abreast of any new or changing sustainability requirements because regulations are constantly evolving and in flux.

Figure 2. Top Drivers of Organizational Sustainability Strategies

What are the top drivers of your organization's sustainability strategy?

ENVIRONMENTAL IMPACT, REGULATORY REQUIREMENTS AND EXECUTIVE MANAGEMENT MANDATE ARE THE TOP DRIVERS OF ORGANIZATIONAL SUSTAINABILITY STRATEGY.



Source: IDC Environmental Sustainability Survey, January 2023

According to IDC's Future Enterprise Resiliency and Spending Survey, Wave 4, from May 2022, over 70% of organizations with 10,000+ employees have set net-zero carbon targets. However, as net-zero commitments become mainstream and focus shifts from forming targets to verifying the achievements, organizations will increasingly face credibility issues. Indeed, at COP27, participants advocated for more consistent environmental standards, greater accountability, and more openness and integrity in the implementation of energy transition plans.

Sustainability transformation is a marathon rather than a sprint and, in this journey, organizations will face many challenges. As shown in Figure 3, more than half of surveyed organizations (52%) consider technological barriers as their greatest challenge. Many organizations do not have access to or knowledge of relevant technologies that can help them reduce their environmental impact. That said, digital technologies that facilitate sustainability transformation are fast evolving, including emerging technologies such as artificial intelligence (AI), Internet of Things (IoT), and predictive analytics.

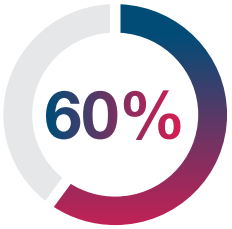
Some 48% of survey participants also highlighted that the multitude of issues often addressed in environmental objectives is a key challenge. These issues may pertain to complex, interconnected areas such as air and water pollution, waste management, and biodiversity loss that are difficult to address holistically and effectively. It is not surprising then that a lack of adequate skills and resources is another significant challenge, as stated by 47% of respondents.

Figure 3. Challenges in Achieving Environmental Sustainability Objectives

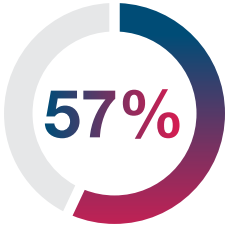
What are the biggest challenges for your organization in achieving environmental sustainability objectives?

DEALING WITH TECHNOLOGICAL BARRIERS, ECOSYSTEM COMPLEXITY, AND LACK OF SKILL STAND OUT AS THE BIGGEST CHALLENGES.

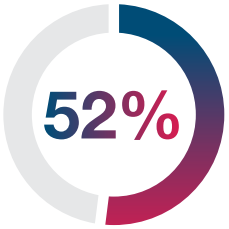
Sustainability roles



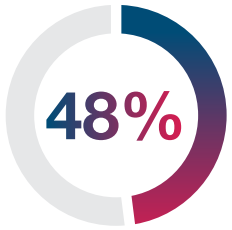
Ecosystem complexity (coordination with partners)



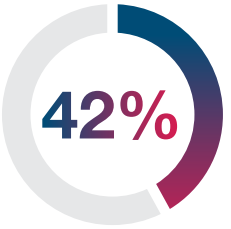
Inadequate skills and resources



Technological barriers

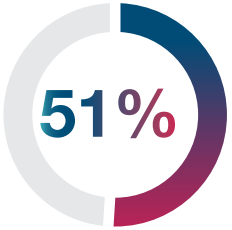


Lack of government support/funding

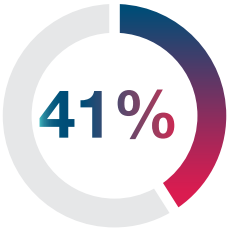


Lack of initiative prioritization/ coordination

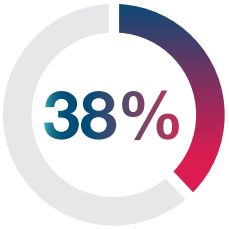
IT roles



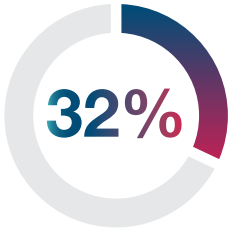
Technological barriers



Regulatory barriers



Lack of government support/funding



Lack of insights from data

Unclear ROI and economic benefits

Source: IDC Environmental Sustainability Survey, January 2023

Line of Business roles

Source: IDC Environmental Sustainability Survey, January 2023

An analysis of the responses by respondent role reveals additional nuances. Some 60% of sustainability executives regard ecosystem complexity as the greatest challenge, followed by Inadequate skills and resources (57%) and technological barriers (52%). Regulatory barriers were at the bottom of the list of challenges cited by sustainability executives (21% of respondents). In contrast, IT executives perceive technological barriers as the greatest hurdle (51%), followed by regulatory barriers (41%) and a lack of government support (38%). For line-of-business executives, technological barriers (53%), regulatory hurdles (44%), and a lack of skills and resources (39%) are perceived as significant challenges.

These differences in perceived challenges illustrate the diversity of views on sustainability focus areas, initiatives, and ambitions. They are indicative of the still relatively low level of maturity within the sustainability domain.

NAVIGATING SUSTAINABILITY REPORTING OPTIONS

To disclose their exposure to climate-related risks, many organizations use a variety of reporting systems and standards such as the Global Reporting Initiative (GRI), the Task Force on Climate-Related Financial Disclosures (TCFD), and the International Financial Reporting Standards Foundation (IFRS Foundation). According to IDC's survey, there is no dominant standard for sustainability-related reporting in the MEA region; however, SDG, CDP, GRI, and ISO are the most prominent standards for sustainability reporting. While the standards landscape is fragmented, consolidation is taking place to streamline the methods used in planning energy transitions, enhancing transparency, and setting sustainability and climate change targets. To simplify how organizations make sustainability disclosures, the IFRS Foundation formed the independent International Financial Reporting Standards Foundation (ISSB) tasked with developing a global baseline of high-quality sustainability disclosure standards that address investors' information needs. Going forward, the integration of sustainability standards and certifications — which are presently voluntary guidelines used by companies to demonstrate their commitment to good environmental, social, ethical, and governance practices — will pave the way for the implementation of stricter regulations. It will also lead to the creation of mandatory rules and regulations.

Figure 4. Sustainability-Related Reporting

Which of the following sustainability-related reporting standards are important for your organization?

IFRS (INTERNATIONAL FINANCIAL REPORTING STANDARDS) FOUNDATION NOW DEMANDS CLIMATE-RELATED FINANCIAL DISCLOSURES, WHICH WILL INCREASE THE IMPORTANCE OF SUCH REPORTING IN THE SHORT TERM.

57%	United Nation's SDG (Sustainable Development Goals)	**57%**	Carbon Disclosure Project (CDP)
56%	Global Reporting Initiative (GRI), Standards	**51%**	International organization for standardization (ISO)
43%	Life Cycle Assessment (LCA) Standards	**39%**	Task Force on Climate-related Financial Disclosures (TCFD)
34%	The EU Corporate Sustainability Reporting Directive (CSRD)	**28%**	Principles for Responsive Investments (PRI)
23%	IFRS S2 Climate-related Disclosures	**19%**	IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information

Source: IDC Environmental Sustainability Survey, January 2023

As the host of COP28, the UAE currently stands out, positioning itself as a regional sustainable finance hub through numerous regulatory actions, especially those undertaken by the capital markets regulator and financial free zone regulators in Abu Dhabi and Dubai. The requirements include issuing a statement covering the company's view of its own ESG initiatives and concerns and a sustainability report complying with GRI standards. Sustainability standards and requirements in local markets must also be met. Reports need to be completed annually, within three months of the fiscal year-end.

FROM GOAL SETTING TO REALIZING SUSTAINABLE BUSINESS

Over the past few years, sustainability has been increasingly linked to corporate strategies and business outcomes. Sustainability initiatives have become central to how an organization is assessed by investors, partners, customers, and employees. Organizations have consequently realized that such initiatives cannot simply be managed casually; rather, they must be integrated into an overarching company strategy. According to IDC's recent Middle East, Turkey, and Africa CIO Survey (December2022), sustainability is among the top five business priorities of the organizations in the region. Banks and investors are working harder than ever to take advantage of the multitrillion-dollar financing opportunities created by the shift to a low-carbon economy. At the same time, organizations seeking funding for their operations must maintain better ESG ratings and develop exit strategies for controversial (i.e., non-sustainable) business activities. Accordingly, many organizations are already publishing ESG and sustainability reports in anticipation of future reporting mandates. Just like the way balance sheets are essential in financial reporting, ESG ratings will become central to an organization's survival in the near future.

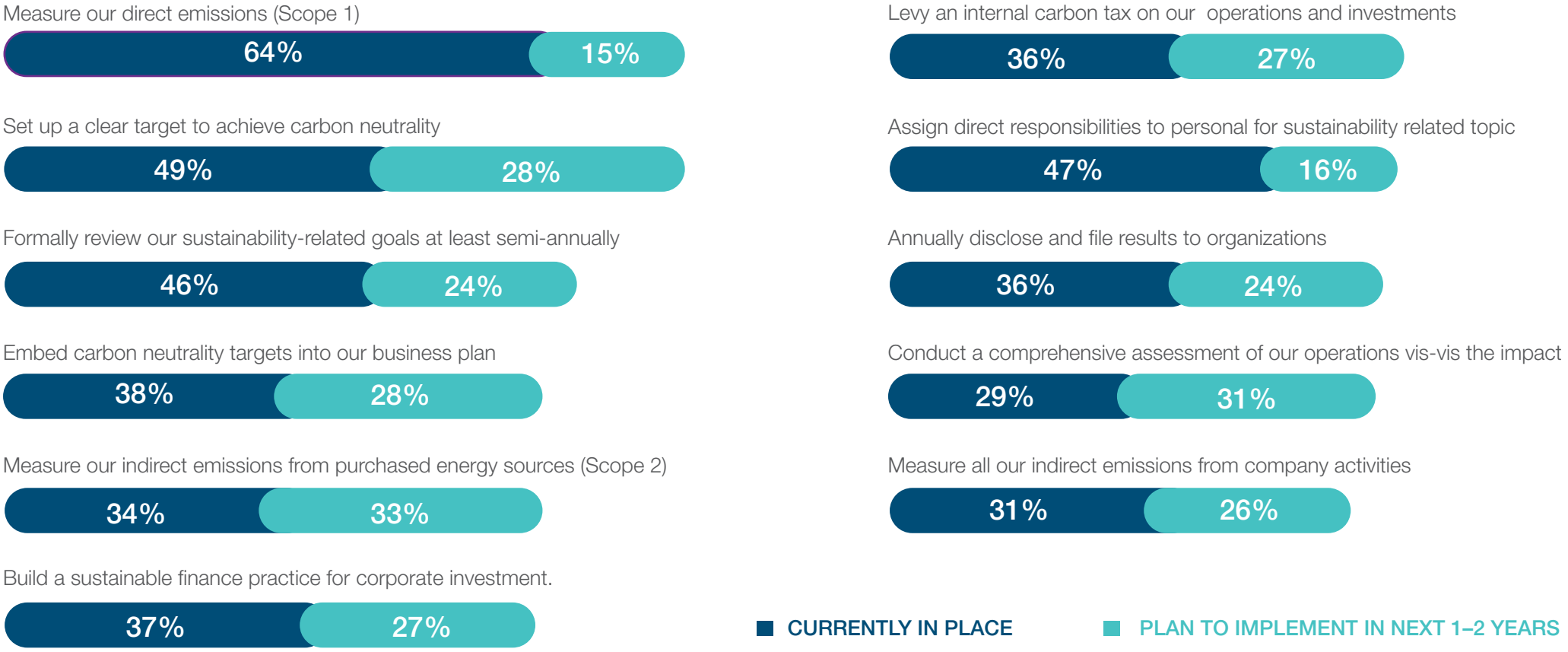
By 2024, IDC predicts that 80% of G2000 companies will capture carbon data and report their enterprise-wide carbon footprints using quantifiable metrics, compared with 50% today.

Figure 5 illustrates that nearly two thirds (64%) of surveyed companies are actively measuring their direct emissions (Scope 1). In addition, nearly half have set clear targets for carbon neutrality, and more have plans to do so. Conversely, only one third of respondents are presently tracking or measuring their indirect emissions (Scopes 2 and 3), but many more are planning to do so going forward.

Figure 5. Sustainability-Related Operational Practices

Which of the following sustainability-related operational practices do you conduct?

64% OF SURVEYED COMPANIES ARE ACTIVELY MEASURING THEIR DIRECT EMISSIONS (SCOPE 1) AND NEARLY HALF HAVE SET CLEAR TARGETS FOR CARBON NEUTRALITY, AND MORE HAVE PLANS TO DO SO.



Source: IDC Environmental Sustainability Survey, January 2023

Organizations must collect, curate, analyze, and report ESG data to fulfil new legal requirements and demonstrate how they are meeting their sustainability goals and targets. To do so, however, organizations need to make significant investments in technology that automates their operations. Organizations that genuinely want to transform their operations and gain a competitive edge through sustainability initiatives need to do more than just report ESG data and tick boxes; they also need to progress steadily along their sustainability maturity journeys by integrating ESG into every aspect of their operations.

The survey results show that a range of initiatives are underway or being planned, including the assigning of direct responsibility for sustainability to personnel, implementing sustainability improvement solutions, and the tracking of sustainability goals. Given the concrete plans to implement further sustainability initiatives in various areas, organizations have clearly recognized the importance of running ESG programs and its impact on their business performance.

At the same time, business leaders recognize that sustainability transformation is more complex than previously anticipated. It is a marathon, rather than a sprint (as depicted in Figure 6). Many organizations worldwide have already embarked on sustainability programs. However, even such progressive organizations are struggling to effectively access and use data for their sustainability programs. At the operational level, many organizations do not have a standardized approach to sustainability reporting. Their efforts are siloed, and they lack effective IT tools for the automation of data flows.

As shown in Figure 6, there are five broad maturity levels for sustainability. Per the survey results, most companies are still in early stages but have ambitions to advance their sustainability efforts. As ESG ambitions grow, the inherent complexity of corporate sustainability will increase. The following analysis of survey results indicates where the focus areas of ESG investments are headed.

Figure 6. An Organization's Sustainability Journey

MOST SURVEYED COMPANIES ARE STILL IN EARLY STAGES OF MATURITY FOR SUSTAINABILITY BUT HAVE AMBITIONS TO ADVANCE THEIR SUSTAINABILITY EFFORTS.

Ad hoc

No defined strategy
No measurement
Sustainability not a business priority

Repeatable

ESG an important business issue for executive leadership
Leaders in the process of developing a strategy to meet goals

Optimized

Sustainability embedded into the business model and overall strategy
Technology investments to measure and track ESG performance and progress
Governance model with accountability across functions

Opportunistic

Recognition of the need to address ESG
Actions and efforts siloed and uncoordinated
Lack of accountability

Managed

Material ESG issues identified by executive leadership
Sustainability program implemented by leaders to meet goals

Source: IDC, 2022

INVESTMENTS FOR SUSTAINABILITY

A successful sustainability strategy needs investment and the gradual development of a holistic framework that covers the entire asset life cycle, from procurement to decommissioning, including upstream and downstream supply chain.

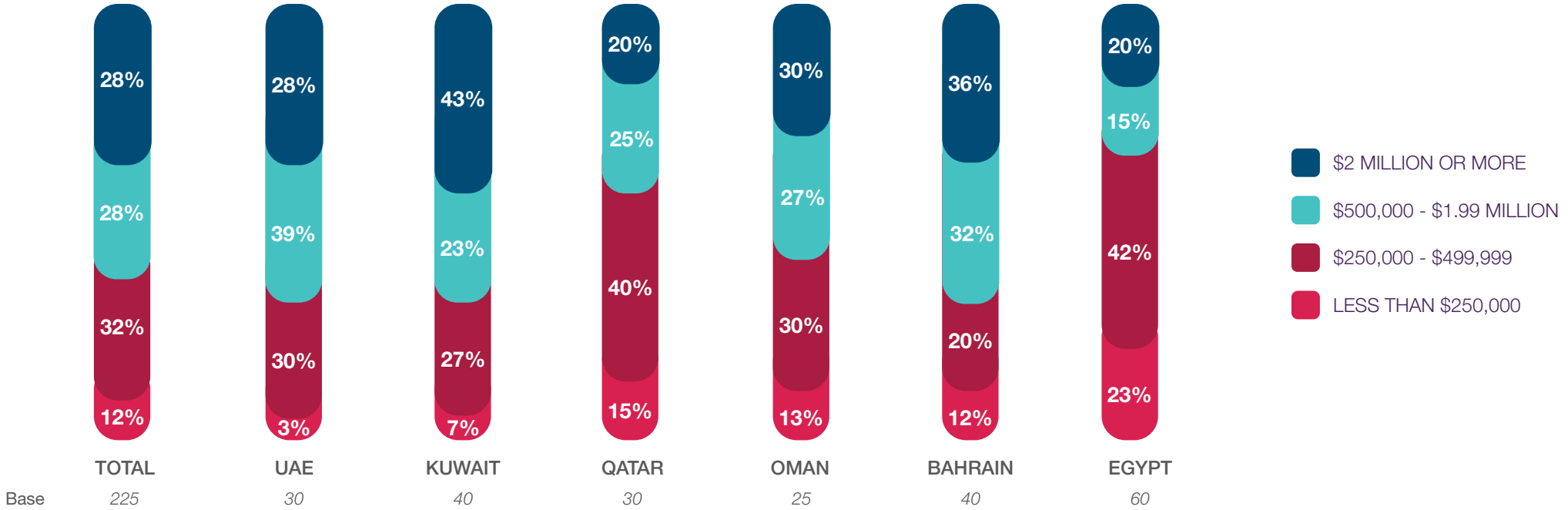
Some 60% of survey respondents plan to invest between $250,000 and $2 million on sustainability initiatives in 2023 (see Figure 7). In addition, 28% will invest between $2 and $10 million. These results indicate that sustainability is becoming a substantial item in the budget planning process. As such, the figures can be expected to increase further as companies embark on end-to-end sustainability journeys.

Sustainability investments are particularly pronounced in the UAE, Bahrain, and Kuwait (Figure 7). In each of these countries, over two thirds of respondents (67%) plan to invest more than $500,000 in sustainability during 2023. This is a clear indication of significant sustainability awareness and intention for action.

Figure 7. Sustainability Budgets of Organizations in the Middle East

Which of the following sustainability-related operational practices do you conduct?

SUSTAINABILITY INVESTMENTS ARE PARTICULARLY PRONOUNCED IN THE UAE, BAHRAIN, AND KUWAIT AND OVER TWO THIRDS OF RESPONDENTS IN EACH COUNTRY PLAN TO INVEST MORE THAN $500,000 IN SUSTAINABILITY DURING 2023.



Source: IDC Environmental Sustainability Survey, January 2023

TOWARD SUSTAINABLE SUPPLY CHAINS: CONNECTING THE DOTS

As regulatory requirements become stricter, and as partners and investors demand more sustainable behavior from organizations, the supply chain will increasingly come into focus. Greater attention will be paid to supply chain transparency and resource efficiency as organizations attempt to measure Scope 3 emissions and minimize the environmental harm of procured materials.

Figure 8 illustrates the clear focus on materials. More than three quarters of surveyed companies (77%) demand transparency on how waste is managed, recycled, or reused.

The raw materials and 'conflict minerals' used in the supply chain are secondary areas of focus. Some 64% of overall respondents stated that they mandate suppliers to provide information on such material.

Figure 8. The State of Sustainability Transformation in the Supply Chain

Which of the following sustainability-related operational practices do you conduct?

MORE THAN THREE QUARTERS OF SURVEYED COMPANIES DEMAND TRANSPARENCY ON HOW WASTE IS MANAGED, RECYCLED, OR REUSED.

77%	Managing / recycling / reusing waste
64%	Refurbish/reuse/recycle/mitigate usage or substitute the critical raw materials
59%	Material proof on their ESG strategy
48%	Sustainability-related certifications and/or process standardizations (e.g., ISO, EcoVadis, GRI, IFRS–ISSB, TCFD)
46%	Upstream carbon emissions
46%	Proof on setting science-based ESG targets

Source: IDC Environmental Sustainability Survey, January 2023

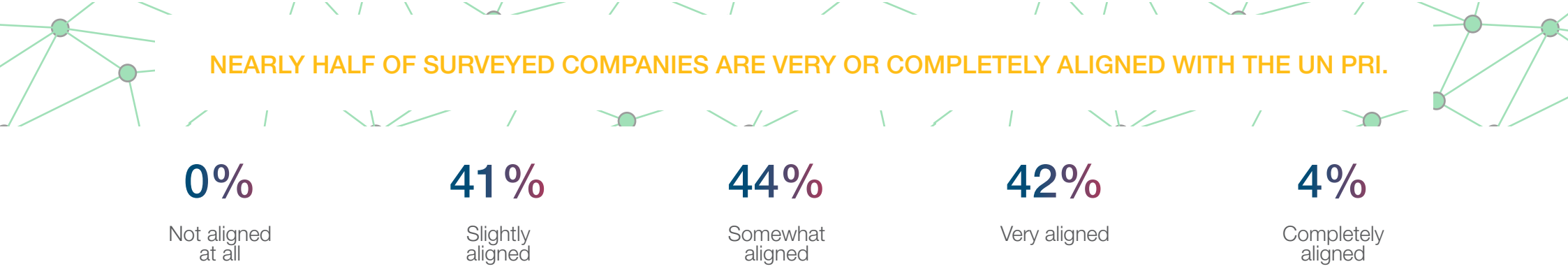
Beyond waste and raw materials, 59% of overall respondents want to receive information about their suppliers' ESG strategies. This information is of particular interest to companies in Bahrain (72%) and Kuwait (70%). Supply chain partners will thus be under greater scrutiny to develop and implement sustainable business practices. Responsible investment portfolios and sustainable finance are increasingly required in the global financial system.

Figure 9 illustrates that the large majority (90%) of surveyed companies are at least somewhat aligned with the UN PRI, and nearly half (46%) are very or completely aligned. Acceptance of the UN PRI indicates organizations are aware of and taking steps toward ESG-compatible investment decisions, even though no concrete rules are outlined within the principles themselves.

Figure 9. Incorporating ESG into Investment Practice

The UN's PRI offers possible avenues for incorporating ESG issues into investment practices. How aligned are your organization's investments with the UN's PRI?

NEARLY HALF OF SURVEYED COMPANIES ARE VERY OR COMPLETELY ALIGNED WITH THE UN PRI.



Source: IDC Environmental Sustainability Survey, January 2023

ACCELERATING ENVIRONMENTAL SUSTAINABILITY EFFORTS THROUGH DIGITAL TECHNOLOGIES

To build a resilient and persistent environmental sustainability strategy, several components should come together, including renewable energy sources for powering datacenters and a modern, energy efficient, and cloud-native IT infrastructure for more flexible and efficient compute and storage resource management.

There are two important drivers behind organizational adoption of digital cloud-native IT architecture. First, modern IT architecture is more environmentally friendly and contributes to the achievement of sustainability. Second, modern IT infrastructure lays the foundation for a robust data-driven monitoring, reporting, and prediction mechanism tied to sustainability goals (such as gaining a competitive advantage, driving efficiencies and cost savings, and mitigating any negative impacts on society and the environment).

Extending the life cycles of IT equipment, driving efficiency, and reducing the environmental footprints of datacenters stand out as key initiatives for many organizations. Some organizations have already launched initiatives to reduce the energy consumption of their datacenters, and many more are planning similar efforts (source: IDC CIO Survey). Datacenter modernization initiatives and investments in resource-saving hardware also stand out as strategic initiatives for many organizations. Collectively, the sustainability-related investments across the Middle East and North Africa region — which are extensions of cloudification initiatives — lie primarily at the IT infrastructure layer.

The introduction of new IT applications that ensure the achievement of the sustainability goals is also an important consideration for some organizations. These applications will be critical in monitoring, measuring, reporting, and predicting how well organizations perform on the sustainability front. They will thus be leveraged to improve the efficiency of sustainability initiatives and deliver greater value to society and government — for example, lower carbon emissions will mean normalized weather patterns over the long term. However, the introduction of such applications will be unsuccessful if the organization is not data driven. The only way to build a data-driven organization is to instill a culture that empowers employees to turn data into business value. Moreover, people, processes, data, applications, and underlying infrastructure should be tackled in a holistic manner.

RETHINKING SUSTAINABILITY BY DEVELOPING A DATA-DRIVEN MINDSET

A data-driven mindset gives organizations the ability to make better strategic, tactical, and operational decisions. Indeed, the adage "better decisions lead to better outcomes" is valid for all technology-enabled business use cases — including sustainability-related ones.

Organizations need to invest in a broad set of capabilities to create data-driven processes. Organizations will only succeed in their data-driven business journeys by implementing the right technologies and building data cultures. Enterprises should develop a data culture based around using, collaborating, and innovating with data. By doing so, they can deliver differentiated business value to customers.

To instill a data culture, organizations should:

PEOPLE

Hire people with data skills and expect them to actively use data in their job roles

ATTITUDES

Encourage experimentation and eliminate the fear of failure

VALUES

Create and promote a mission statement about the use of data

GOALS

Evaluate how employees use data to achieve business goals

SOCIAL

Foster internal and external collaboration for ideation and data innovation

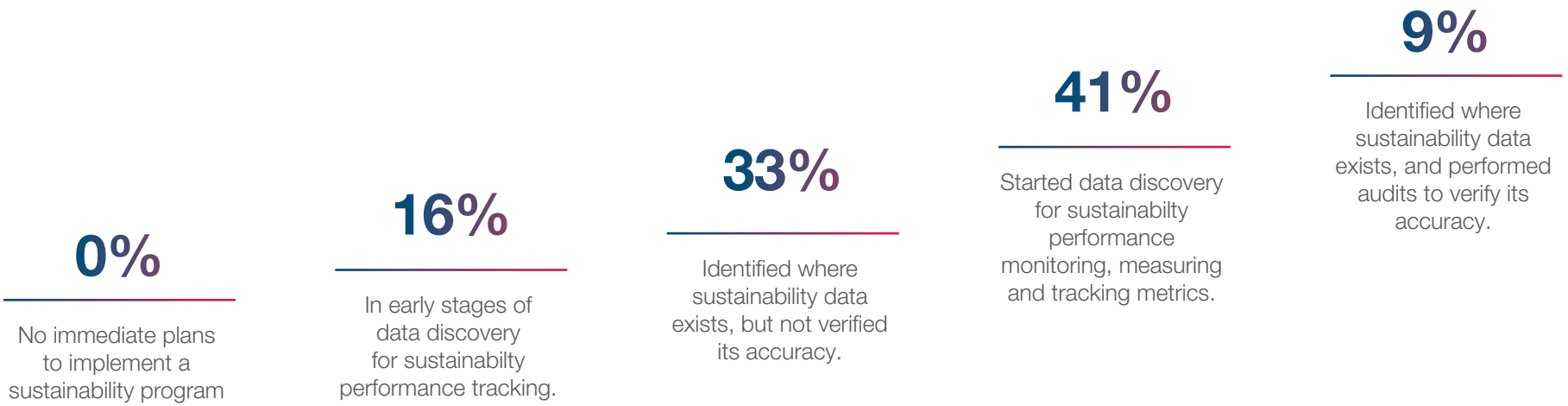
Leadership is a key driving factor of sustainability. Leadership has an important role in setting and communicating the right vision and values across the organization. Leaders encourage employees to take ownership of data, support collaborations between cross-functional teams to drive innovation, and facilitate the adoption of technologies to achieve better business outcomes.

Figure 10 displays the maturity of data management practices across organizations surveyed from a sustainability angle. According to the IDC survey, 31% (16%+15%) of organizations have low-maturity data practices. These organizations struggle with siloed information and low data quality but experiment with Big Data and real-time analytics use cases. They only have basic analytics capabilities that are built on structured data sources. Another 31% of organizations are in a slightly better maturity state, with data architectures that facilitate data flows across internal external sources. These organizations have more advanced data architecture capabilities that enable the use of sustainability-related analytics tools by lines of business.

Figure 10. Organization's Sustainability Program Maturity

Which of the following statements best reflects the current state of your organization's sustainability program in terms of access to and use of required data?

49% OF THE SURVEYED ORGANIZATIONS ARE AT THE EARLY STAGES OF THEIR SUSTAINABILITY JOURNEY IN TERMS OF ACCESS TO AND USE OF DATA.



Source: IDC Environmental Sustainability Survey, January 2023

Some 24% of organizations are highly mature, with data platforms that provide lines of business with universal data access and self-service analytical capabilities. These mature organizations can achieve operational efficiency and cost savings and offer environmentally sustainable digital products and services that accelerate revenue growth. Based on the survey, only 13% of the organizations have a sustainability practice that is deeply rooted across their operations. These organizations can leverage AI capabilities to support real-time predictive analytics. Overall, the survey shows that many organizations across the surveyed countries must further invest in their data management capabilities to maximize the value that can be derived from sustainability initiatives.

Figure 11 shows the maturity of a sustainability program from a data perspective. Some 16% of organizations are still in the planning phase of their sustainability programs, and 41% have just started the data discovery process for sustainability initiatives. In other words, 57% of the surveyed organizations are at the early stages of their sustainability journey. According to the survey, only 33% of organizations have identified the sustainability-related data distributed across their operations; however, these organizations have not yet checked the accuracy of that data. Only 9% have full control over their sustainability data — this control enables them to build sustainability-related use cases and maximize the value that they can derive from data.

Figure 11. Organization's Approach to Data Management

Which response below best represents your organization's approach to data management for environmental sustainability initiatives?

ONLY 13% OF THE SURVEYED ORGANIZATIONS HAVE A SUSTAINABILITY PRACTICE THAT IS DEEPLY ROOTED ACROSS THEIR OPERATIONS.

16%

Siloed information, data quality and intergration issues

15%

Basic analytics and reporting, data warehousing.

31%

Data architecture framework

24%

Data platform; universal access, self-service analytics

13%

Advanced analytics and embedded AI/ ML capabilities

Source: IDC Environmental Sustainability Survey, January 2023

According to two thirds of surveyed organizations (Figure 12), the top three success factors for driving a data-driven sustainability practice include sustainability-related data skills, automated and centralized data management platforms, and high-quality data. In terms of challenges (Figure 13), data quality is a top concern. This challenge can be addressed by improving internal data governance processes, leveraging third-party data management tools, and empowering line-of-business users to take ownership of their data.

Figure 12. Improving Organization's Environmental Sustainability via Data

Which of the following do you think is needed for your organization to use data and extract value to improve your environmental sustainability practice?

THE TOP THREE SUCCESS FACTORS FOR DRIVING A DATA-DRIVEN SUSTAINABILITY PRACTICE INCLUDE SUSTAINABILITY-RELATED DATA SKILLS, AUTOMATED AND CENTRALIZED DATA MANAGEMENT PLATFORMS, AND HIGH-QUALITY DATA.

Source: IDC Environmental Sustainability Survey, January 2023

Figure 13. Environmental Sustainability-Related Data Challenges

What are your organization's top environmental sustainability-related data challenges today?

UNLIKE FINANCIAL DATA THAT HAS OWNERS AND MANAGERS, SUSTAINABILITY-RELATED DATA HAS NO DEDICATED CONTROLLER ACROSS MOST ORGANIZATIONS.

60%

Lack of sustainability data quality

58%

Lack of tools for better sustainability reporting/ analysis

49%

Challenges with sustainability data sharing

44%

Lack of skilled resources for sustainability data management and reporting

43%

Challenges with the need to use data that is not managed till now

42%

Incomplete/inconsistent sustainability standards

38%

Challenges with sustainability data distribution across the organization / multiple clouds

37%

Challenges with compliance with sustainability regulations and standards

31%

Lack of standardization to capture, store and analyze sustainability data (which is relatively new compared to financial reporting)

28%

Inability to integrate external third-party data into our systems

Source: IDC Environmental Sustainability Survey, January 2023

Unlike financial data that has owners and managers, sustainability-related data has no dedicated controller across most organizations. As such, organizations should strive to manage the entire life cycle of sustainability data. Some 60% of surveyed organizations aim to automatically locate, ingest, and consolidate data from different internal and external sources onto a centralized data management platform to derive hidden insights. If they succeed in this effort, they can subsequently use AI to augment the value derived from the centralized data. A shared data platform also allows energy and water consumption, carbon emission, waste management, and other sustainability-related metrics to be handled in a standardized manner.

One out of every two surveyed organizations rely on technology solution providers for sustainability-related training sessions and ideation of relevant sustainability use cases (Figure 12). Some 58% of the surveyed organizations highlight identifying the right software tools for driving sustainability initiatives as a major challenge (Figure 13). Based on the survey findings, Organizations must engage trusted technology solution providers and address their own internal challenges, particularly as 42% indicated that they want to establish better data strategies (Figure12). They must work with technology providers to develop a data-driven sustainability strategy that is an integral part of a broader digital transformation effort. The building of a robust data architecture should be one key component of this strategy. This architecture should have the capacity to handle distributed internal and external data sources, which — according to survey findings — stands out as an important challenge.

ADOPTION OF DIGITAL TECHNOLOGIES TO ACHIEVE SUSTAINABILITY GOALS

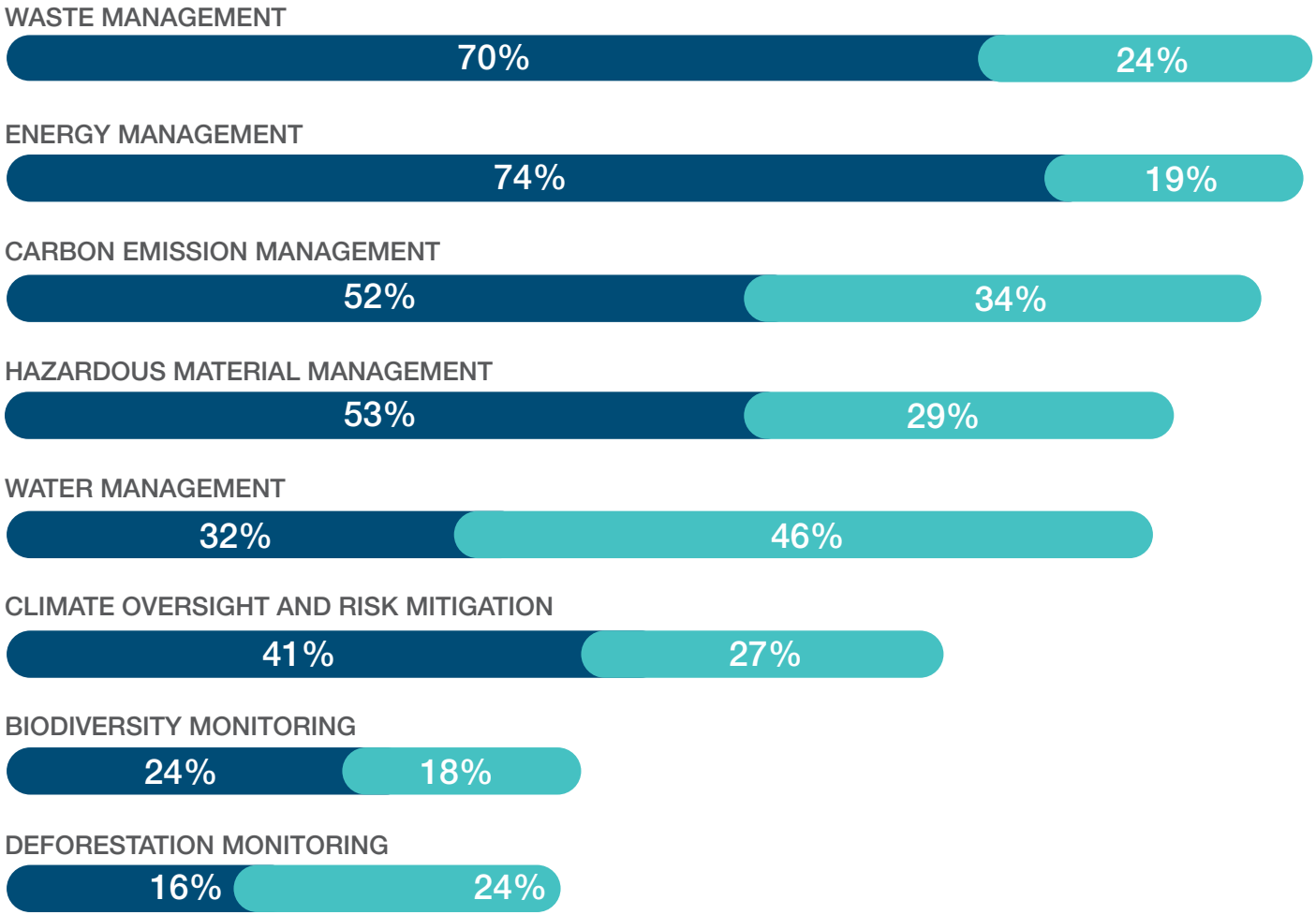
A mature data-driven business model makes it relatively easy for organizations to align themselves with global/local sustainability goals and capitalize on prevailing sustainability opportunities. Figure 14 shows organizations' sustainability focus areas that will require investments in software solutions.

Based on the survey findings, there is notable progress across waste, energy, carbon emission, and hazardous material management efforts. There will certainly be further adoption of digital technologies across all these areas. In fact, 46% of surveyed organizations are planning to invest in water management solutions and 34% are planning to further invest in carbon emission management solutions. However, most of these isolated investments need to be managed and governed in a centralized manner to drive organization-wide success and reap the benefits of solutions based on advanced analytics and AI technologies. Moreover, organizations should make further progress in establishing more mature data architectures and modern data management platforms to achieve sustainability success. Such efforts are lacking at present.

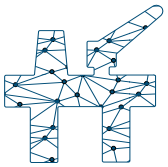
Figure 14. Investment in Software Tools for Environmental Sustainability Intelligence

What are the key areas that you are currently using or planning to use software tools for as a part of your environmental sustainability intelligence strategy over the next 12 – 18 months?

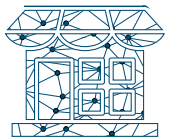
THERE IS NOTABLE PROGRESS ACROSS WASTE, ENERGY, CARBON EMISSION, AND HAZARDOUS MATERIAL MANAGEMENT EFFORTS.



Source: IDC Environmental Sustainability Survey, January 2023

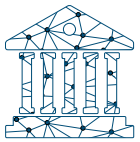


Sustainability focus areas change from industry to industry. For example, 83% of surveyed **oil and gas** companies have a software solution in place for energy management, and an additional 14% are looking to invest in such software solutions. Carbon emission and waste management solutions have also gained traction in the oil and gas industry, with 60% of companies having already invested in these solutions. On the other hand, 57% of the surveyed oil and gas companies plan to invest in water management solutions and 40% plan to invest in climate oversight solutions. Some 34% of oil and gas companies also plan to invest in deforestation monitoring solutions — which represents the biggest opportunity across industries covered in this study. Another 34% plan to invest in waste and hazardous material management over the next couple of years.

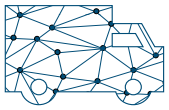


Conversely, **retail** companies have understandably prioritized waste management solutions, especially food retailers. In fact, 75% of surveyed retail companies have already implemented such software solutions. An additional 63% have similarly invested in energy management solutions. Water management and carbon emission management are among the key future investment areas in the retail industry , with 43% and 33% of retail organizations are planning to invest in these areas within the next two years.

With respect to **manufacturing**, 84% of companies have prioritized investments in waste management solutions, chiefly because the handling and recycling of manufacturing waste is a serious efficiency and environmental challenge in the industry. Moreover, 63% of surveyed manufacturing organizations have invested in energy management solutions. Going forward, 61% plan to invest in carbon emission management solutions, 42% plan to invest in water management solutions, and 32% plan to invest in hazardous material management solutions.



Over two thirds of surveyed **government** organizations have invested in energy, carbon emission, and hazardous material management solutions. Government-related facilities are often the largest energy users in a country and one of the most important consumers of energy-intensive products and services. As such, it is quite fortunate that governments have embarked on sustainability journeys. With respect to their future investment plans, 56% of surveyed government organizations plan to invest in water management solutions, 33% plan to invest in hazardous material management solutions, and 31% plan to invest in deforestation monitoring solutions. Following the COP27 and COP28 events, government entities are increasingly aware that they need to invest in such solutions and become role models and enablers of sustainability initiatives.



In the **transportation** industry, energy management has already been prioritized by 71% of organizations. Some 66% of transport organizations have already invested in hazardous material management solutions, 53% have invested in carbon emission management solutions, and another 32% are planning to invest in both these solutions. Climate oversight and risk mitigation solutions are also an important focus area of 45% of transport organizations, with another 37% are planning to invest in this domain to avoid disruptions to their logistical processes.

Finally, the **healthcare** industry has strong focus on energy management, with 82% of surveyed healthcare organizations having invested in this area. Understandably, healthcare facilities have to optimize their energy consumption as they are relatively large energy users. Some 74% of the surveyed healthcare organizations have also invested in waste management and hazardous material management solutions, which are integral parts of their daily operations. Waste management and carbon emission management solutions are future investment areas, with 50% and 29% of organizations, respectively, planning to invest in these domains going forward.

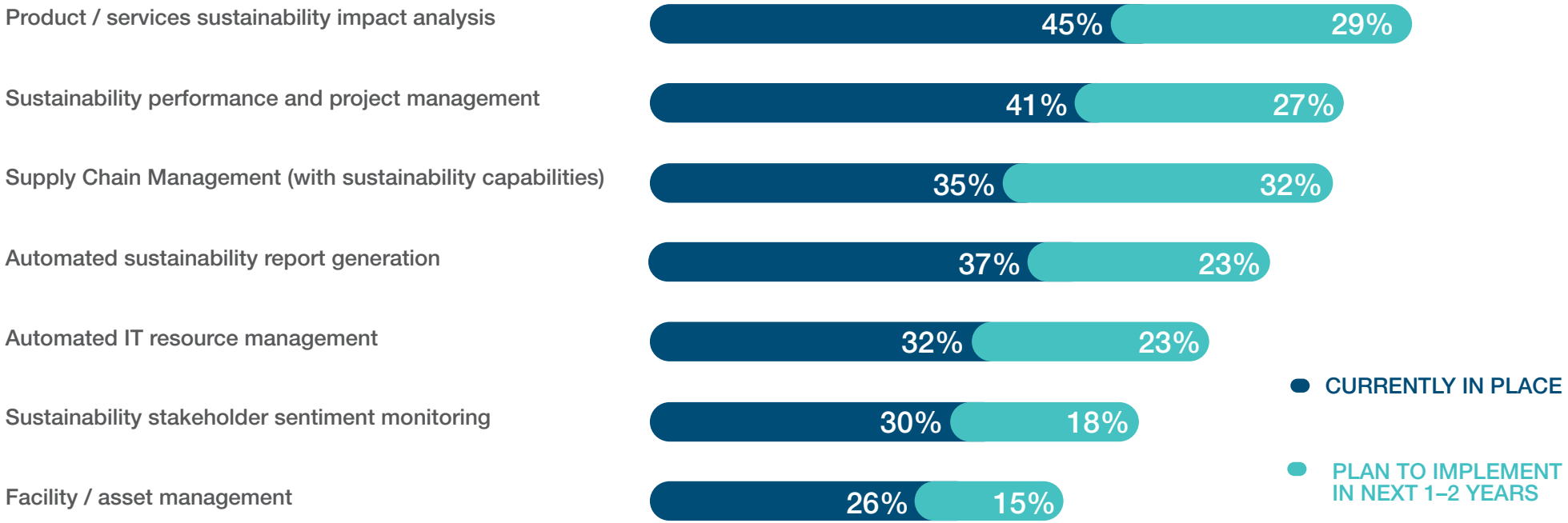
Figure 15 below provides a good view of the adoption trends of different types of software solutions in sustainability journeys. Product and services sustainability impact solutions have seen the greatest level of adoption — 45% of surveyed organizations have already invested in these solutions, with another 29% planning to do so in future months. Broken down by industry, 65% of government organizations, 55% of healthcare firms, 43% of oil and gas companies, and 42% of manufacturing businesses have already implemented such software solutions. Moving forward, 43% of oil and gas companies, 35% of retail companies, and 29% of manufacturing and transportation companies will make additional investments in these solutions.

Sustainability performance management and project management solutions have also seen notable adoption across the manufacturing, oil and gas, government, and retail industries, with an additional 40% of oil and gas organizations planning to further invest in these solutions. Similarly, 29% of healthcare organizations and 28% of government organizations are planning to invest more in sustainability performance management and project management solutions.

Figure 15. Investment in Software Solutions for Environmental Sustainability Intelligence

What kind of software solutions are you currently using or planning to use as a part of your environmental sustainability intelligence strategy over the next 12 – 18 months?

SUSTAINABILITY PERFORMANCE MANAGEMENT AND PROJECT MANAGEMENT SOLUTIONS HAVE SEEN NOTABLE ADOPTION ACROSS THE MANUFACTURING, OIL AND GAS, GOVERNMENT, AND RETAIL INDUSTRIES; MORE COMPANIES TO INVEST IN THESE SOLUTIONS.



Source: IDC Environmental Sustainability Survey, January 2023

Supply chain management solutions with sustainability capabilities will see strong adoption across the oil and gas, retail, and manufacturing verticals. Automated sustainability report generation solutions are also going to gain traction, especially among organizations with sustainability performance reporting requirements. According to the survey, one of every three manufacturing organizations will invest in automated sustainability report generation and automated IT resource management solutions. Last but not least, financial institutions will also heavily leverage such solutions as they have to be compliant with multiple standards and have ESG reporting disclosure requirements.

Approximately one quarter of surveyed healthcare organizations will invest in a diverse set of solutions, including sustainability performance management and project management, supply chain management, product and services sustainability impact analysis, automated sustainability report generation, and automated IT resource management solutions.

LEVERAGING AI TO ACCELERATE YOUR SUSTAINABILITY JOURNEY

A robust data architecture and data management system is very important for any organization. Indeed, it would not be possible for organizations to leverage AI without full control over their data. AI will certainly augment the impact of sustainability use cases and deliver greater value and business outcomes to stakeholders.

Figure 16. Adoption of AI-Enabled Environmental Sustainability Software Solutions

How would you describe your organization's approach to the adoption of AI-enabled environmental sustainability software solutions?

86% OF THE SURVEYED ORGANIZATIONS PLAN TO LEVERAGE AI IN THEIR SUSTAINABILITY INITIATIVES.

37%

Use of commercially available sustainability solutions without embedded AI capabilities, customizing them using AI frameworks and platforms

28%

Inhouse development of AI enabled sustainability software solutions

21%

Use of commercially available AI embedded sustainability software solutions

14%

Use of commercially available sustainability solutions without embedded AI (without customizing and adding AI capabilities)

Source: IDC Environmental Sustainability Survey, January 2023

Some 37% of surveyed organizations would like to customize commercially available sustainability solutions by leveraging AI frameworks. The need to build solutions that meet these organizations' unique sustainability requirements is the key driver of this trend. On the other hand, 21% of organizations prefer to leverage readily available AI-embedded solutions that are quick to implement and can rapidly deliver value.

Some 28% of surveyed organizations prefer to develop in-house sustainability solutions. Since this is a longer term and resource intensive approach, these organizations should have the capabilities, talent, and tools to develop, fine tune, and maintain AI models. Conversely, only 14% of organizations are not considering the use of AI solutions. This may prove to be a beneficial decision because many organizations across the region first need to improve their data maturity before trying to capitalize on AI-driven sustainability opportunities.

GBM'S VALUE PROPOSITION FOR ENABLING SUSTAINABLE BUSINESSES: TURNING AMBITION INTO ENTERPRISE-WIDE ACTION

The results of the survey demonstrate a clear association between evolving the digital transformation strategy and accelerating the ESG agenda of any organization. By implementing sustainable and innovative technology solutions, organizations can reduce their carbon footprint, improve resource efficiency, enhance operational resilience, and create value for all stakeholders. Through a comprehensive analysis of the environmental, social, and governance factors, GBM has demonstrated its commitment to driving positive change in the region and beyond. As we continue to navigate a complex and rapidly evolving business landscape, it is imperative that we prioritize ESG considerations and leverage technology as a key enabler for sustainable growth. By doing so, we can create a more resilient, equitable, and prosperous future for all.

To help our clients achieve their ESG goals, we follow a three-step process.

1
DISCOVER

The first step is to understand the customer's current ESG landscape and requirements. Where they are in their ESG journey and where they want to go. This includes a comprehensive analysis of the stakeholder map and desired outcomes and metrics

2
DEFINE

Once we have understood the customer's requirements, we move into reporting, which includes a comprehensive approach to tracking their Non-financial disclosures, IT and OT and reporting on the desired metrics

3
DRIVE

We deliver the technology needed to help improve their current landscape with their ESG ratings through our IT, and OT decoupled ESG Management Platform

INTRODUCING GBM ISTIDAMA

GBM ISTIDAMA is comprehensive methodology that can help organizations throughout their sustainable journey, covering important aspects such as culture, data, and automation. The methodology is designed to support organizations in setting their ESG strategy and goals, with a country/sector perspective that involves dynamic materiality assessments to prioritize multi-year goals and actions. The establishment of program governance is critical to curate and harmonize reporting requirements. Once measurements have been taken, GBM ISTIDAMA can suggest and implement various sustainability improvement solutions. Finally, GBM can help organizations with the last mile problem of disclosures for ESG reports and assurance, ensuring that organizations can accurately communicate their sustainable journey to stakeholders. Overall, GBM ISTIDAMA is a cohesive and comprehensive approach to sustainability that can help organizations achieve their ESG goals effectively.

GBM'S ESG MANAGEMENT PLATFORM

Suatainability Strategy and Roadmap

Non-Financial Reporting & Disclosures

Governance & Risk Management

AI Infused Scenario Simulation

GBM ISTIDAMA

Responsible computing & Green IT

Intelligent Asset & Process Management

Sustainability Strategy & Roadmap

Sustainability Goals Assurance

IBM SUSTAINABILITY SOLUTIONS

turbonomic an IBM Company

IBM LinuxONE

IBM Cloud

enVizi an IBM Company

IBM MAXIMO

Red Hat OpenShift

IBM Cloud Pak for Data

GBM ISTIDAMA - UNDER THE HOOD

We realise, depending on the Sustainability appetite, ESG management Platform adoption can vary from one organization to another. We support you wherever you are in this Sustainability maturity spectrum. Through Istidama, we cater to all.

Integrated governance, risk, and compliance

links ESG objectives to existing GRC content, captures ESG-related performance indicators and metrics, and visualizes the organization's ESG position through predefined reports and dashboards. Additionally, it addresses third-party due diligence through automated continuous risk monitoring and ongoing risk intelligence.

Non-Financial Reporting & Disclosures

extends the current IFRS reporting to include general requirements for the disclosure of sustainability-related financial information and climate-related disclosures. It also integrates sustainability data planning as part of overall planning, allowing for emission and category reporting, target setting, and performance simulation.

AI Infused Scenario Simulation

accelerates decarbonization through automated data capture, of over 500 data types ERP, plant/property management databases, supplier data files and other business platforms, data normalization and harmonization, and tracking progress at every stage of the journey. This helps identify energy and emissions savings opportunities and their ESG impact.

Responsible Computing and Green IT

solutions that verifiably improve infrastructure sustainability for both compute and storage. Cloud adoption and optimizing application resource consumption are proven sustainable practices.

Intelligent Asset and Process Management solutions

for sustainable asset management and reliability optimization, along with optimized real estate and facilities management. Environmental Intelligence for Climate Change Impact allows for planning and response to disruptive events like weather to ensure business continuity.

Sustainability Strategy & Roadmap

along with Sustainable Goals Assurance, is delivered through consultative partnerships for leading companies across sectors, including financial, telecom, energy, social enterprises, government, group companies, healthcare, transportation and logistics, construction, manufacturing, retail, and agriculture.

ESSENTIAL GUIDANCE

There are several interconnected considerations that are equally important to the success of any sustainability journey. The success of a given sustainability initiative may be undermined if any one of these considerations is not taken into account:

Assigning a senior sustainability lead is very important to the success of the broad sustainability journey of any organization. According to the IDC survey, only 22% of organizations have assigned a chief sustainability officer, and just 11% have assigned a lead for driving sustainability initiatives. In many other cases, line-of-business managers have taken over this responsibility. Organizations must assign a senior person, ideally a chief sustainability officer, who is not only well versed in operational needs of their organization but also has a solid understanding of the scientific and operationalization aspects of all sustainability initiatives.

Integrating sustainability into the broader DX (digital transformation) strategy is highly important. Sustainability should not be an isolated initiative but an integral part of the overall DX strategy. Embedding sustainability into DX initiatives will certainly have a great impact on the overall sustainability performance of organizations, particularly as IT efficiency is one of the most critical aspects within broader sustainability initiatives.

Alignment of sustainability strategy with national sustainability goals and regulatory requirements is highly important as any gaps may cause inefficiencies and have legal implications. Strong internal collaborations between the sustainability lead and line-of-business leads will ensure that strategies comply with regulatory requirements and align with national goals. In turn, such harmonization with national goals will increase the visibility and brand value of the organization.

Implementing a modern data architecture is necessary for a solid sustainability strategy. Organizations that lack such architecture will not be able to establish advanced analytics capabilities and capitalize on the AI opportunity. Creation of a centralized data platform that not only brings structured and unstructured data together from internal and external sources but also provides self service capabilities should be the goal of organizations that want to achieve sustainability success. Once such a platform has been established, more value-added AI use cases can be implemented.

Working with trusted technology solution provider(s) that can support the business and technology-related aspects of sustainability will be crucial for success. Technology providers with broad consulting, integration, and custom software development capabilities will be essential for the operationalization of sustainability initiatives.

ABOUT GBM

At GBM Qatar, we provide world-class digital solutions, tailored to your unique needs. Over three decades of extensive knowledge and an exceptional depth of experience in managing Enterprise and Mission Critical systems, we have nurtured partnerships with the world's leading technology innovators and have empowered more than 250 entities across different sectors on their unique digital transformation journeys.

As a 100% Qatari-owned company that was originally formed with a team of 6 – today we have grown to more than 250 highly skilled professionals, from 24 countries, offering Qatar's broadest portfolio of solutions, including industry-leading infrastructure, digital business solutions, security solutions and an extensive portfolio of services and 24/7 support.

Authors:
Raid Shahin, Director - Digital Business Solutions, GBM Qatar

For more information please reach out to:
Marwa Ghodhbani
Marketing & Communications Specialist
contact@gbmqatar.com

To find out more, visit:
https://gbmqatar.com

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This research was done by:
Eren Eser, Associate Research Director
Melih Murat, Associate Research Director
Katharina Grimme, Associate Vice president, Research

IDC MIDDLE EAST/AFRICA

Level 15, Thuraya Tower 1 Dubai Media City
P.O. Box 500615
Dubai, United Arab Emirates
+971.4.3912741

Twitter: @IDC
idc-community.com
www.idc.com

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