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Toward a Progressive Future:
Unleashing the Power of Sustainability

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Executive Summary

Sustainability has become essential for ensuring the well-being of future generations, preserving our planet's resources, and fostering a balanced relationship between economic growth, environmental protection, and social equity. By integrating sustainability, enterprises not only contribute to a healthier planet but also position themselves for long-term success by reducing operational costs, enhancing reputation, fostering loyalty among environmentally conscious customers and encouraging innovation. Additionally, governments can guide societies toward a sustainable future by taking a proactive and collaborative approach.

Enterprises can scale sustainability by embedding it into their core business strategies and operations while leveraging innovation, collaboration, and leadership. This InfoBrief offers an overview of sustainability, focusing on the following key areas:

- **Overview of Sustainability**
  The Imperative for Taking Action

- **Sustainability Frameworks**
  Structured approaches to help organisations and communities achieve sustainable development.

- **Sustainability Frameworks & Standards**
  Navigating the Sustainability Reporting

- **Sustainability Maturity**
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- **Platforms for ESG and GHG Reporting**
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- **Technologies for Sustainability**
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- **Implementing Sustainability in Business**
  The Journey to Transform into a Sustainable Enterprise

- **The Future of Sustainability**
  Emerging Trends/Technologies and Future Challenges/Opportunities

By tackling these crucial areas, organisations may successfully navigate the journey to Transform into a sustainable enterprise.

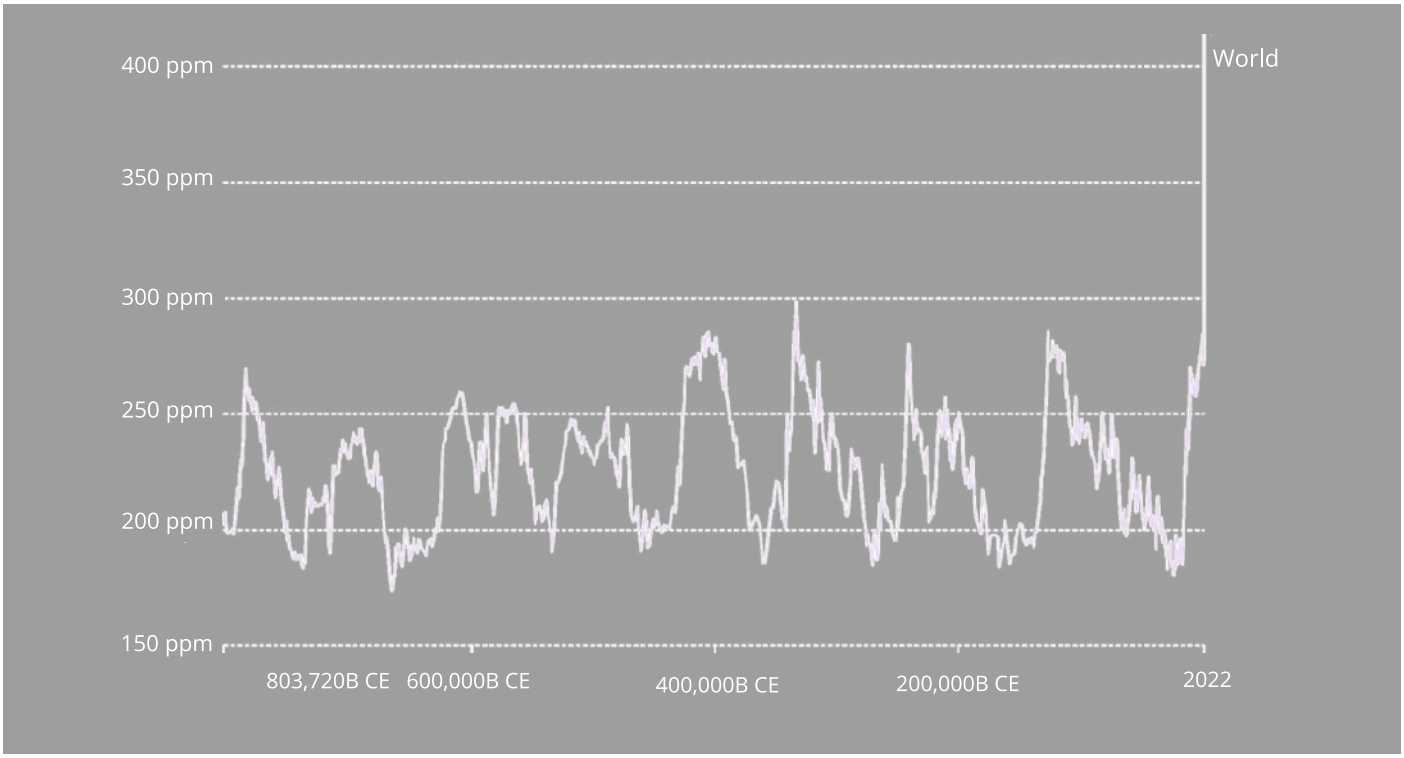
Overview of Sustainability

The Imperative for Taking Action

Given the strong reliance on fossil fuels like coal, oil, and gas, the growth of the global economy has led to increased greenhouse gas emissions, particularly of carbon dioxide (CO_2). The concentration of carbon dioxide in the atmosphere is now more than 50% higher than pre-industrial levels and is increasing at record speeds. As a result, the world is increasingly encountering intense droughts, water scarcity, destructive fires, rising sea levels, flooding, melting polar ice, catastrophic storms, and declining biodiversity.

Against this backdrop, determining how to balance economic growth, energy security, and environmental protection has become a worldwide problem. In the meantime, sustainability challenges have significant social impacts, including forced migration, unequal distribution of essential resources, widening inequality, and growing public health issues. Addressing sustainability challenges requires a holistic approach that considers not just environmental and economic factors but also the social implications and needs of diverse populations.

Global Atmospheric CO_2 Concentration



Source: National Oceanic and Atmospheric Administration (NOAA)

Catastrophic Impacts of Global Warming

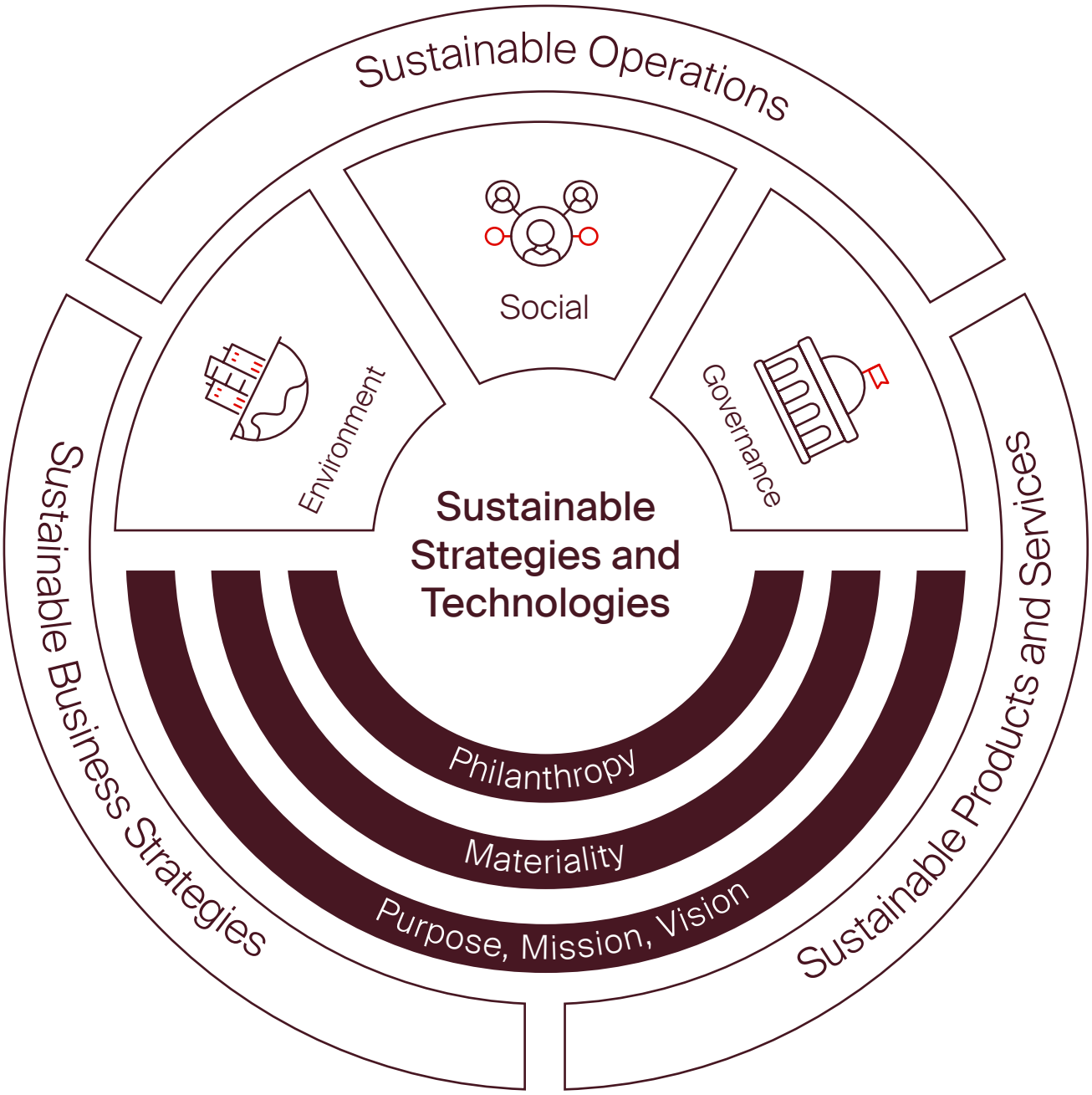
Droughts	Water Scarcity	Destructive Fires
Floods	Rising Sea Levels	Catastrophic Storms
Melting Polar Ice	Declining Biodiversity	Heatwaves

Understanding Sustainability

Primed to Perform for Sustainability Transformation

Definition: The Three Pillars of Sustainability

Sustainability refers to the capacity to meet current needs without endangering the capacity of future generations to meet their own. Environmental protection, social justice, and economic viability are the three main pillars of sustainability. By emphasizing responsible resource management, waste reduction, and the development of social and economic structures that benefit both people and the environment, this idea promotes actions that advance the planet's and its inhabitants' long-term health.

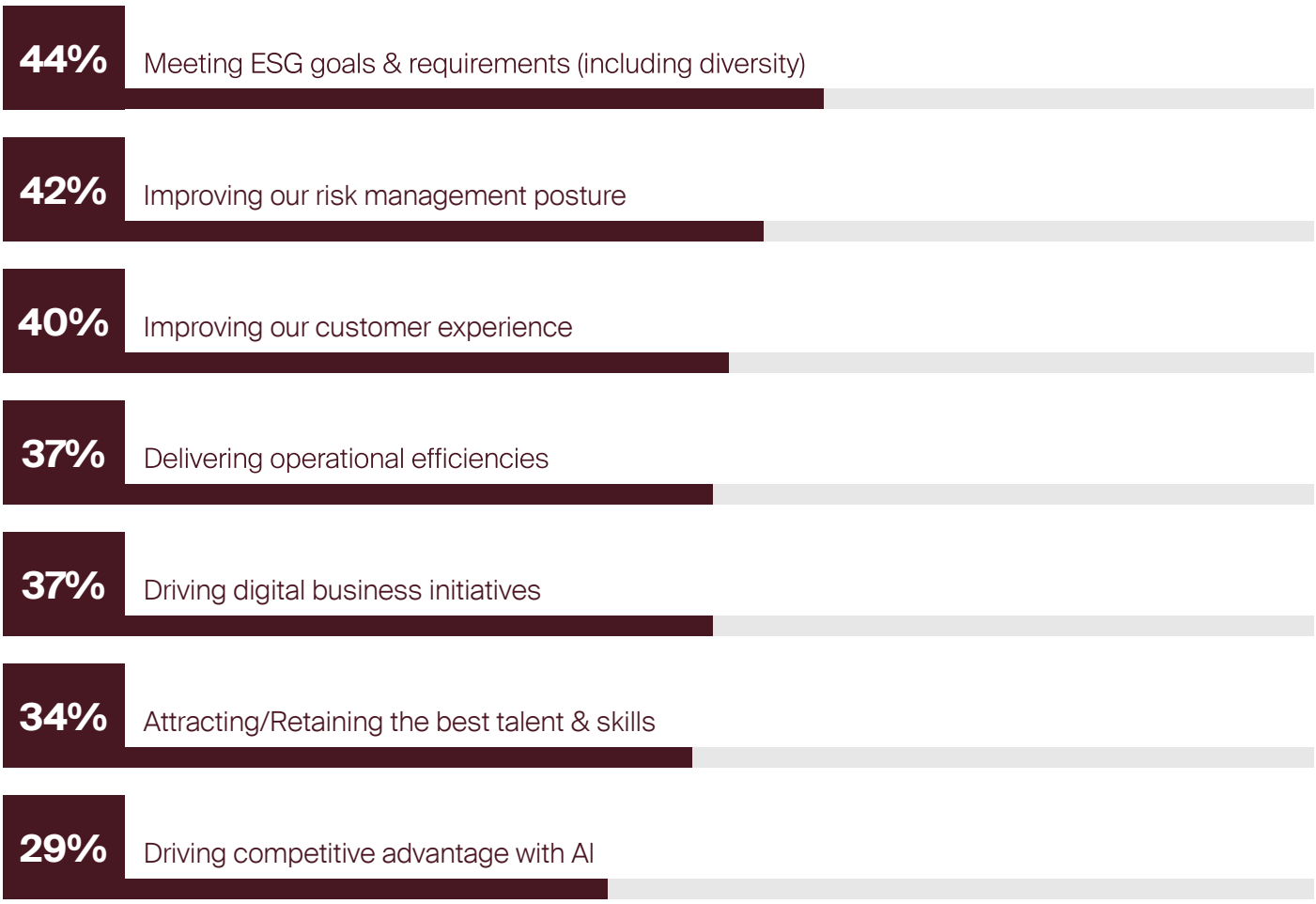


Source: IDC Sustainable Strategies and Technologies Framework, 2024

Developing a green, low-carbon, sustainable society is an obligation that all governments and industry leaders must shoulder, and green transformation provides an opportunity that must be seized without delay. In parallel with this imperative, the corporate sustainability landscape is evolving: targets that were set over the past years need to be tied to feasible strategies; environmental, social, and governance (ESG) materiality remains dynamic and requires organizations to consider new topic areas; and the regulatory landscape is tightening.

Top Business Priorities for CEOs in 2024

Meeting ESG goals/requirements has emerged as the top business priority for CEOs in 2024. Interestingly, changing ESG targets and regulations was cited as a key business risk by 38% of CEOs in 2023.



Source: IDC's Worldwide CEO Survey, Feb 2024; Base: 354

"By 2026, 60% of large organizations will require a carbon neutrality strategy as a standard part of enterprise technology procurements and RFPs as compared with 40% today."

Source: IDC FutureScape: Worldwide Sustainability/ESG 2024 Predictions

Sustainability Approach

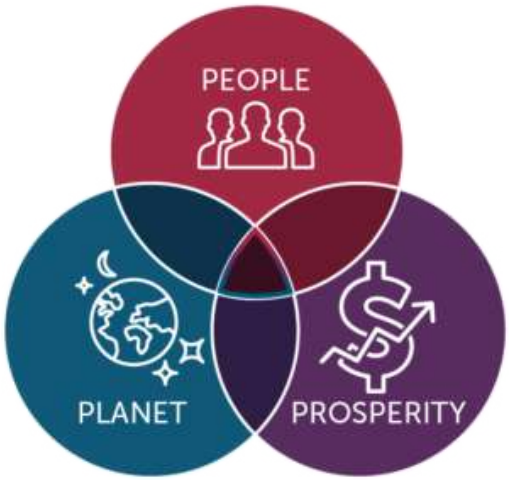
Measuring Progress Toward Sustainability Goals

Sustainability frameworks provide structured approaches to help organizations and communities achieve sustainable development.

Sustainability Frameworks

United Nations Sustainable Development Goals (SDGs)

Adopted in 2015, the 17 SDGs provide a global blueprint for addressing pressing challenges like poverty, inequality, climate change, and environmental degradation.

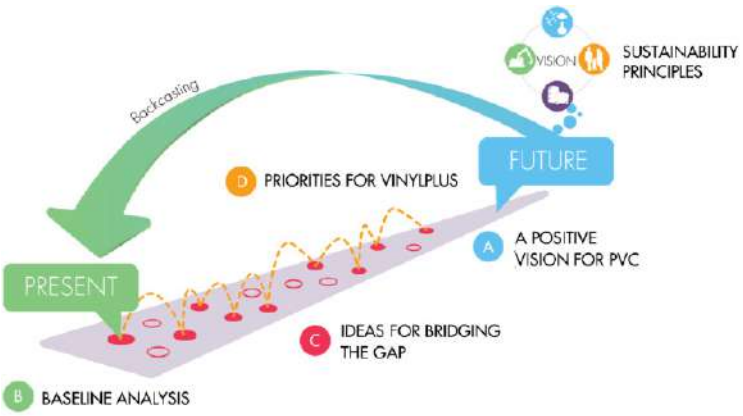


Triple Bottom Line (TPL)

This framework evaluates a company's commitment to social, environmental, and economic responsibilities. It emphasizes that success should be measured not just by profit, but also by impact on people and the planet.

Circular Economy

This model focuses on minimizing waste and making the most of resources. It encourages practices like recycling, reusing, and designing products for longevity.

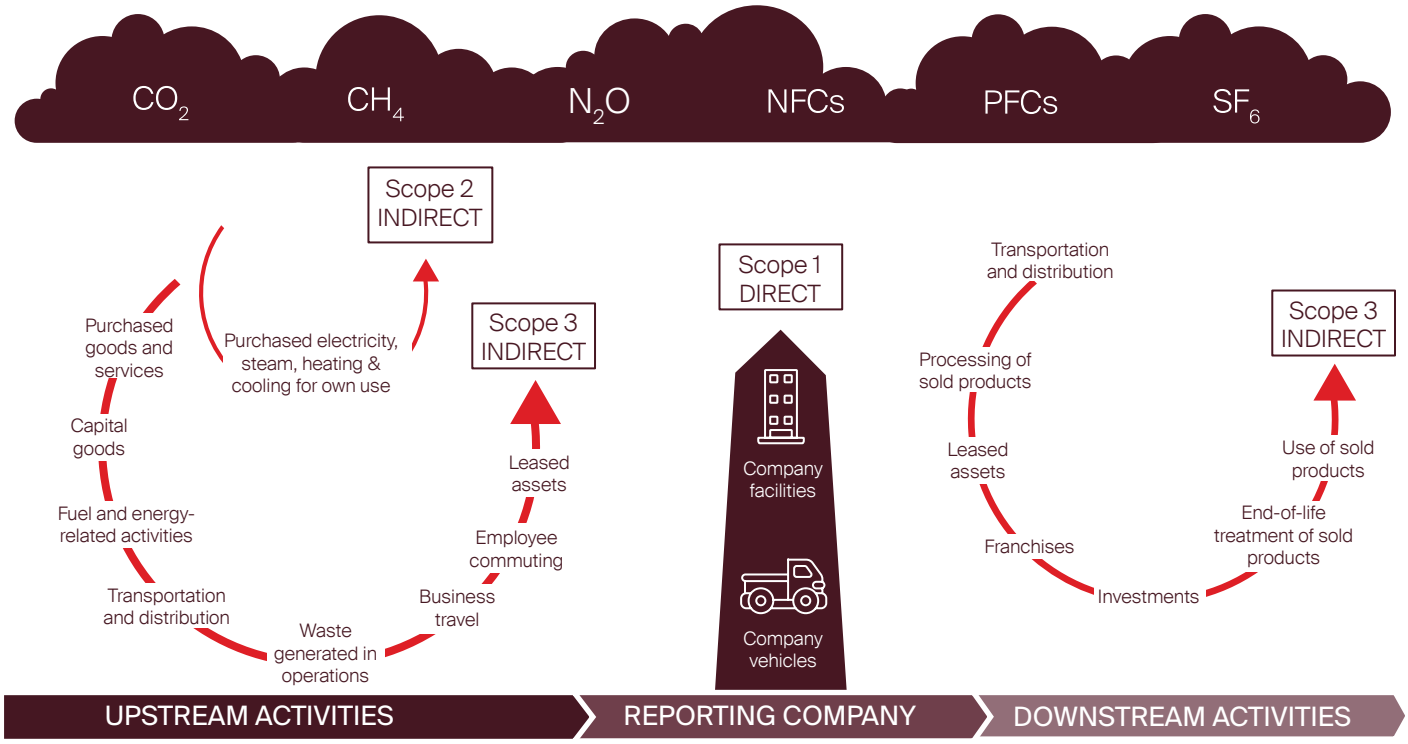


Natural Step Framework

This approach helps organizations integrate sustainability into their decision-making processes by focusing on ecological principles and social equity.

Scopes and emissions across the value chain refer to the classification of greenhouse gas (GHG) emissions based on their source and where they occur in the lifecycle of a product or service. This classification helps organizations understand and manage their carbon footprint more effectively.

Scopes and Emissions Across the Value Chain



Source: GHG Corporate Protocol, 2022

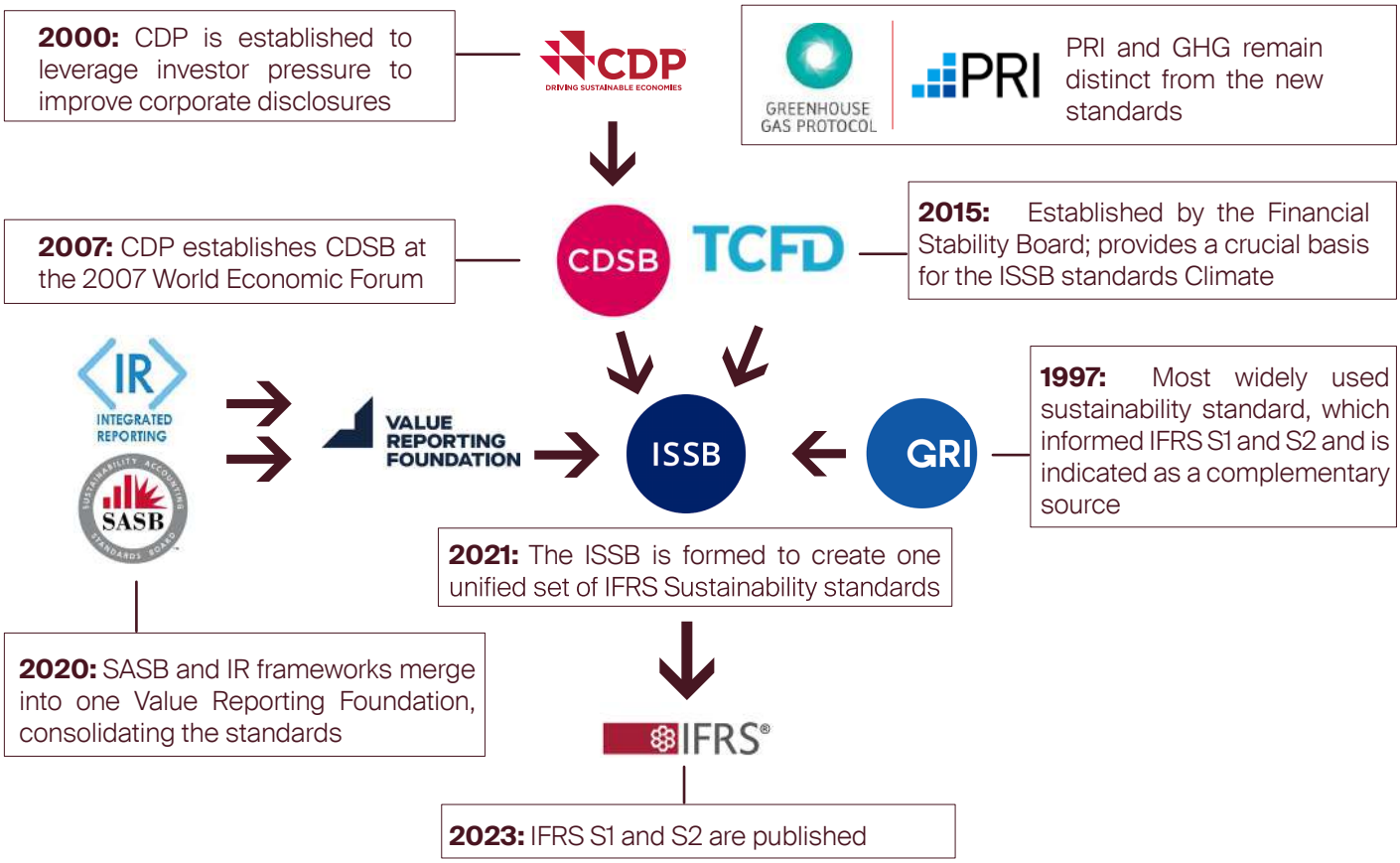
Sustainability Frameworks & Standards

Navigating the Sustainability Reporting

To measure and disclose their exposure to climate-related risks, many organisations 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).

The global economy needs common reporting standards to reduce fragmentation and drive comparability in climate-related financial data. However, existing sustainability standards have overlapping core properties, leading to redundancy. 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.

Evolution of Sustainability Reporting Standards



Source: BloombergNEF

IFRS Sustainability Disclosure Standards aim to provide a globally consistent framework for companies to report on their sustainability impacts and performance across these and other ESG dimensions. The goal is to give investors and stakeholders more transparent and comparable sustainability data.

The key sustainability metrics tracked under IFRS (International Financial Reporting Standards) include: GHG emissions, energy usage and energy efficiency, water withdrawal and consumption, waste generation and disposal, employee health and safety, diversity and inclusion, anti-corruption and anti-bribery measures, and supplier environmental and social assessments.

Sustainability Maturity

Sustainability transformation is a marathon rather than a sprint

Sustainability is not a choice; it is a mandate. On the other hand, being more complex than initially anticipated, sustainability transformation is a marathon rather than a sprint. While there is strong traction in the sustainability transformation among META organizations, many of the organizations are still at the initial stages of sustainability maturity.

Sustainability Maturity of META Organizations

Source: IDC Sustainability Software Survey 2024, META base: 227, July 2024

Forward-looking organizations see an opportunity to leverage their sustainability initiatives as a way to create business value. To do this requires embedding sustainability data into existing operations so that it becomes a factor in business decisions, much like cost considerations are today. As this becomes more common in organizations, functional leads will take on greater responsibility for meeting sustainability objectives in their respective areas, and the CSO role will become more of an orchestrator of sustainability activities across the organization.

> **By 2027** Companies most advanced with sustainable business transformation (~10–20%) will have sustainability embedded across the organization, and CSOs will have only coordination role.
>
> *Source: IDC FutureScape: Worldwide Sustainability/ESG 2024 Predictions*

Platforms for ESG and GHG Reporting

Measure and Report to Reduce, Replace, and Remove

The current state of ESG reporting is characterised by a dynamic and evolving landscape shaped by increasing regulatory scrutiny. Several software platforms have emerged for ESG reporting, helping companies streamline their sustainability data management, enhance transparency, and comply with regulatory requirements.

These platforms offer features like data collection, analysis, reporting, and benchmarking to help organisations meet ESG disclosure requirements and track their sustainability progress. The choice of platform often depends on the size, industry, and specific ESG reporting needs of the organisation.

Purpose-built sustainability platforms (like WWG) and sustainability "add-ons" (like SAP) represent two distinct approaches to managing sustainability initiatives within organizations. Purpose-built platforms are ideal for organizations with advanced sustainability goals, complex reporting needs, or regulatory pressure to manage ESG comprehensively. Add-Ons are suitable for businesses seeking to incorporate sustainability into their existing workflows without investing in a separate platform.

Software Platforms for ESG Reporting

Worldwide Generation (WWG)

Overview: : WWG is a sustainability-focused fintech organization, best known for its G17Eco platform, which helps organizations, governments, and individuals align their activities with the United Nations Sustainable Development Goals (SDGs). WWG's G17Eco platform has gained significant traction as a transparent, scalable solution for addressing complex sustainability challenges and advancing SDG implementation globally.

Strengths: Holistic design, interoperability, integration of advanced technologies, global reach, scalability, and support for SDGs positions it as a standout example of sustainability-driven innovation for enterprises.

Microsoft Cloud for Sustainability

Overview: This software suite leverages Microsoft's cloud capabilities to help organisations track and report their ESG data. It integrates with existing enterprise software and offers tools for carbon accounting, emissions tracking, and sustainability reporting.

Strengths: Scalability, data security, and extensive integration options with Microsoft's suite of products make it ideal for large organisations.

SAP Sustainability Control Tower

Overview: This platform helps organisations track, analyse, and report ESG data, integrating it seamlessly with financial and operational data. It offers advanced analytics, visualisation tools, and alignment with common reporting frameworks like GRI, SASB, and TCFD.

Strengths: Real-time data integration, strong analytics capabilities, and support for regulatory compliance make it a preferred choice for large enterprises.

Salesforce Net Zero Cloud

Overview: Part of Salesforce's suite of products, Net Zero Cloud is designed to help companies manage carbon emissions and other sustainability data. It allows for the real-time tracking of emissions, energy use, and other key metrics.

Strengths: Built on Salesforce's powerful platform, it offers strong integration capabilities and user-friendly dashboards for detailed sustainability reporting.

Technologies for Sustainability

Architecting the Future with Green Technology Innovations

Technologies for sustainability, often integrated with smart systems and innovative practices, play a crucial role in addressing global environmental challenges

Renewable Energy Technologies

Renewable energy technologies harness energy from natural processes that are continually replenished. These technologies aim to reduce reliance on fossil fuels, decrease greenhouse gas emissions, and promote sustainable energy use.

Solar Power:
Photovoltaic cells convert sunlight into electricity.

Geothermal Energy:
Utilizes heat from the Earth's interior.

Wind Energy:
Wina turbines harness wind to generate power.

Hydropower:
Uses flowing water to produce electricity.

Biomass:
Involves the use of organic materials (like plant and animal waste) to produce energy through combustion or conversion into biofuels.

Tidal and Wave Energy:
Captures energy from ocean tides and waves to produce electricity.

Energy Efficiency Technologies

Energy efficiency technologies are designed to use less energy while delivering the same or improved level of service. These technologies not only lower energy consumption but also reduce costs and greenhouse gas emissions, contributing to sustainability.

Energy Management Systems:
Software and hardware that monitor and control energy consumption in buildings and industrial processes for optimal efficiency.

Smart Grids:
Advanced electrical grid systems that use digital technology to enhance the reliability, efficiency, and sustainability of electricity distribution and consumption.

Building Automation Systems:
Integrate various technologies to control lighting, HVAC, and other systems automatically based on occupancy and time of day.

20% - 40%

Modern solar panels achieve efficiencies of 20–23%, with advanced technologies like perovskite and tandem cells potentially reaching up to 30-40% in the future.

5% - 15%

By optimising demand response and reducing energy losses, the efficiency of the entire network can be improved by 5–15% through smart grids and storage.

35% - 50%

Wind turbines can convert 35–50% of the wind's kinetic energy into electricity.

15% - 30%

The use of building automation systems can lead to energy savings of 15–30%, depending on the complexity of the system and the type of building.

80%

Efficiency in pumped storage systems, used for energy storage, can reach up to 80%, making it a key technology for balancing supply and demand.

35% - 45%

Automated lighting systems, such as motion sensors and daylight harvesting, can achieve up to 35–45% energy savings in lighting costs.

Sustainable Transportation Technologies

Sustainable transportation technologies aim to reduce environmental impact and enhance efficiency in the movement of people and goods. These technologies collectively contribute to reducing greenhouse gas emissions, enhancing energy efficiency, and promoting a more sustainable transportation ecosystem.sustainable energy use.

Electric Vehicles:
Cars, buses, and trucks powered by electricity, reducing reliance on fossil fuels and lowering emissions.

Public Transportation Systems:
Enhanced buses, trams, and trains designed to reduce individual car use, thereby lowering traffic congestion and emissions.

Smart Transportation Systems:
Utilize data and technology to optimize traffic flow, improve public transit efficiency, and enhance user experiences through real-time information.

30% - 50%

Electrifying buses and trains can increase energy efficiency by 30–50% compared to diesel-powered options.

Waste Management and Recycling Technologies

Waste management and recycling technologies focus on minimizing waste, maximizing resource recovery, and reducing environmental impact. These technologies are integral to creating more sustainable waste management practices, reducing landfill use, and promoting a circular economy.

Efficient Waste Management:
Systematic process of handling waste materials in a way that minimizes environmental impact, conserves resources, and promotes public health.

Waste-to-Energy Technologies:
Convert waste materials into usable energy, primarily in the form of electricity, heat, or fuel.

Advanced Recycling Methods:
Encompass a range of innovative technologies designed to improve the recycling process, particularly for materials that are difficult to recycle through traditional methods.

90%

Advanced recycling technologies, such as chemical recycling and closed-loop systems, can achieve recovery rates of up to 90% for certain materials like metals and glass.

Water Conservation and Management Technologies

Water conservation and management technologies are designed to improve the efficiency of water use, reduce waste, and enhance the sustainability of water resources. These technologies contribute to sustainable water management practices, helping to conserve water resources, enhance efficiency, and protect ecosystems.

Smart Water Management Systems:
Advanced technologies designed to optimize the management of water resources. They leverage data, automation, and digital communication to improve the efficiency, sustainability, and reliability of water supply and distribution.

Innovations in Water Treatment:
Focus on improving the efficiency, effectiveness, and sustainability of processes used to purify water for various purposes, including drinking, irrigation, and industrial use.

30% - 50%

Electrifying buses and trains can increase energy efficiency by 30–50% compared to diesel-powered options.

Implementing Sustainability in Business

The Journey to Transform into a Sustainable Enterprise

Implementing sustainability in business is not just an ethical choice; it is a strategic approach that aligns with market trends, regulatory demands, and consumer expectations, ultimately leading to long-term success and resilience. It involves integrating environmentally and socially responsible practices into operations, culture, and strategy.

By embedding sustainability into the core of business, organizations can create long-term value, reduce environmental impact, and improve community relations while meeting the growing expectations of customers and investors. Here are some key steps to achieve this:

1 Developing a Sustainability Strategy

Organizations need a comprehensive sustainability strategy that outlines how an organization will integrate sustainable practices into its operations, culture, and decision-making processes. According to the IDC worldwide sustainability readiness survey, almost all of the organizations have recognized sustainability as a strategic priority. The strategy should balance environmental, social, and economic goals, ensuring long-term viability while addressing the needs of stakeholders and the planet. Developing a sustainability strategy involves a structured approach that aligns with an organization's values and goals.

Organizations should establish leadership commitment to ensure the strategy is prioritized and integrated into the overall business plan. Additionally, creating a sustainability vision that reflects the organization's commitment to environmental, social, and economic responsibility is critical. Organizations should set SMART (Specific, Measurable, Achievable, Relevant, Time-bound) goals that align with this vision. Current practices should be evaluated to identify strengths, weaknesses, and areas for improvement at the organization

Stage of Sustainability Strategy Planning at Organizations

2% Not considered sustainability as a strategic priority	**32%** Created strategic roadmap, identified pain points, defined ESG goals, set up time frames
12% Recognized sustainability as important factor yet we are only at the nascent stage of preparation	**26%** Started to embed sustainability into our operations
8% Conducted initial sustainability assessments (e.g., of ESG materiality) of organization operations	**20%** Sustainability has become a new normal, continuously monitored, reviewed and continuously improved

Source: IDC Worldwide Sustainability Readiness Survey 2024, base: 1,091

Reshaping the Enterprise for Sustainability Transformation

2 Creating a Sustainability Roadmap

Sustainability roadmap outlines the steps an organization will take to integrate sustainability into its operations, culture, and decision-making processes over a specified timeframe. It provides a clear framework for achieving sustainability goals and ensuring continuous improvement. By following this roadmap, organizations can systematically and effectively integrate sustainability into their operations, leading to long-term benefits for the environment, society, and the business itself.

Steps of Sustainability Roadmap

3 Employee Engagement and Training

Employee engagement and training ensure that employees understand, embrace, and actively contribute to sustainability initiatives. Employees should be encouraged to participate in sustainability discussions and decision-making processes. This fosters a sense of ownership and responsibility. Organizations should promote collaboration across different departments to share insights and develop comprehensive sustainability initiatives. This helps break down silos and encourages a unified approach. Training sessions should be provided that raise awareness about sustainability issues, and the organization's goals. Workshops and seminars should be organized featuring sustainability experts or thought leaders to provide insights and best practices.

4 Stakeholder Engagement and Communication

Stakeholder engagement and communication are vital for sustainability transformation within companies for building trust and transparency, gathering diverse perspectives, enhancing collaboration, increasing accountability, facilitating change management, and supporting compliance and reporting. By actively involving stakeholders in the process, companies can enhance their sustainability initiatives, build stronger relationships, and achieve long-lasting positive impacts.

Measuring and Reporting Sustainability Performance

Effectively Measure Performance for Continuous Improvement

Measuring sustainability performance involves assessing various aspects of an organization's environmental, social, and economic impacts. Here's a structured approach to effectively measure sustainability performance:

1 Define Key Performance Indicators (KPIs)

2 Establish Baselines

3 Implement Data Collection Systems

4 Regular Monitoring and Reporting

5 Use Sustainability Reporting Standards

6 Engage Stakeholders in the Process

7 Benchmark Against Industry Standards

8 Analyze and Interpret Data

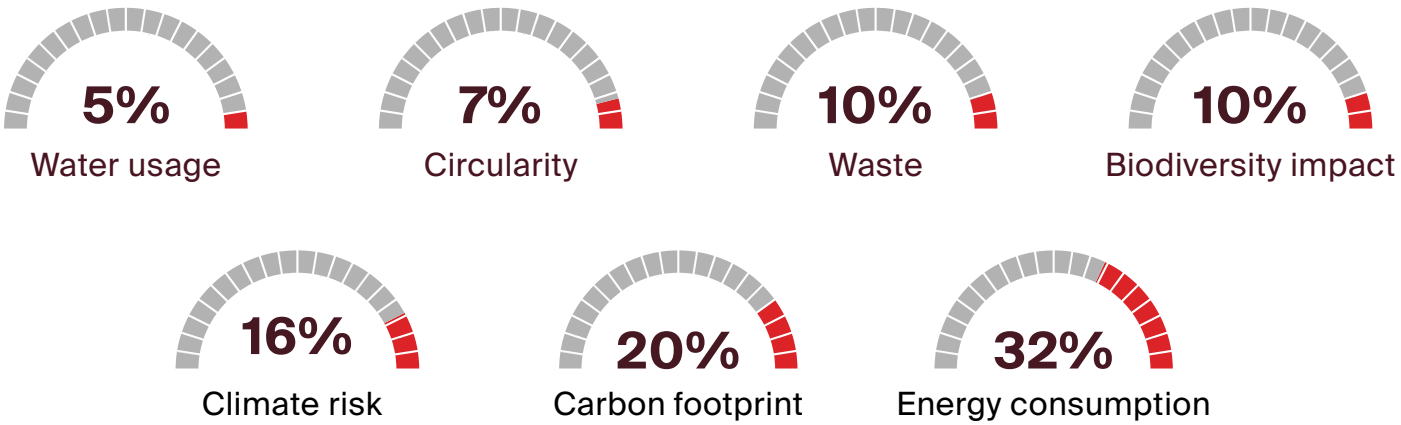
9 Adjust Strategies Based on Findings

10 Communicate Results Transparently

11 Continuous Improvement

Most organizations are still at the early stages of implementing ESG metrics and identifying and collecting the relevant data. According to IDC's survey, energy consumption, carbon footprint, and climate risk are the top metrics organizations in META are seeking to monitor.

Top Metrics Organizations in META are Seeking to Monitor



Source: IDC Sustainability Software Survey 2024, META base: 227, July 2024

Case Studies of Successful Sustainability Performance

Stay Informed on Best Practices

HMG (Dr. Sulaiman Al Habib Medical Group)

Overview: HMG is a healthcare organisation that emphasises sustainable practices in its operations, aligning with global and regional efforts to promote environmental responsibility, social equity, and long-term economic viability in healthcare.

Vertical: Medical Industry

Solution:
HMG's sustainability framework is built around three core pillars:
1. Environmental sustainability
2. Social responsibility
3. Economic sustainability

e& enterprise supported HMG in its GHG accounting and carbon reduction journey by:
1. Setting up a baseline year for the carbon reduction journey.
2. Providing comprehensive coverage of Scopes 1, 2, and 3.
3. Setting up improvement pathways, establishing targets and ambitions, and helping in making public commitments.
4. Developing comprehensive plans aligned with company strategy and wider group objectives, including best-practice recommendations and initiatives.

Impact:
HMG's sustainability efforts demonstrate a comprehensive approach to improving healthcare delivery while minimising its environmental footprint and contributing to social wellbeing. By focusing on energy efficiency, waste reduction, community health, and economic growth, HMG sets an example for sustainable healthcare practices in the region.

Green Leaf Airconditioning (HVAC operations & maintenance)

Overview: Green Leaf Air Conditioning Services envisions the modernisation of HVAC services and energy solutions. The company possesses HVAC service engineering expertise and strong last-mile infrastructure. Its main objective is to optimise HVAC chilled water systems for higher machine uptime and lower life-cycle energy costs.

Vertical: HVAC operations & maintenance

Challenges:
- Manual inspection visits.
- Limited visibility of HVAC and chiller equipment.
- Decentralised and distributed service operations.
- Regular complaints from facility owners.
- Lack of historical data for analytics and optimisations.

Solution:
- e& enterprise's Smart IOT HVAC (Chiller) Management Platform
- Integration of chilled water HVAC system across 77 sites.
- Energy consumption analytics to enable administration of energy conservation measures.

Benefits:
- Centralised operations providing optimisation of resources.
- Utilities (i.e., optimisation of chilled water consumption).
- Simplified governance and centralised maintenance.
- Improved end-user and facility owner satisfaction.

DMCC

Overview: DMCC is the world's fastest growing free-zone area and a leading centre for trading international commodities. In partnership with e& enterprise, DMCC is rolling out smart solutions that will make JLT the first smart and sustainable district of its kind in the region.

Vertical: Government

Challenges:
- Limited monitoring of stand-alone systems and infrastructure.
- Limited visibility of MEP equipment.
- Decentralised and distributed FM operations.
- Regular complaints from occupants.
- Lack of historical data for analytics and optimisations.

Solution:
- Deployment of e& enterprise's IoT cloud-based Smart District Platform, which incorporates smart building, street lighting, smart parking, lake monitoring, and environmental sensing solutions as part of a multi-building, multi-system, and community infrastructure integration project.

Benefits:
- Centralised operations providing optimisation of resources.
- Utilities (i.e., optimisation of energy and chilled water consumption)
- Simplified governance and smart initiative.
- Improved end-user/community-occupant satisfaction.

FAB (First Abu Dhabi Bank)

Overview: FAB is the UAE's largest bank and one of the country's safest institutions. It is a leader in adopting strategic technology initiatives and has a multi-sector presence in banking and property.

Vertical: Banking

Challenges:
- Limited visibility of MEP equipment.
- Decentralised and distributed facility management (FM) operations.
- Regular complaints from occupants.
- Lack of historical data for analytics and optimisations.

Solution:
- Deployment of e& enterprise's IoT cloud-based Smart Facilities Platform, which includes Smart Building HVAC Automation for 10 bank buildings and 1 datacentre. The project also includes the integration of power monitoring units for electricity consumption measurement and the provision of continuous support for operations, health, and availability from e& enterprise's IoT command centre.

Benefits:
- Centralised operations providing optimisation of resources.
- Utilities (i.e., optimisation of energy and chilled water consumption)
- Simplified governance and incident management.
- Improved end-user/customer satisfaction.

Rawabi Group

Overview: Rawabi Group is a diversified conglomerate based in Saudi Arabia, operating across a range of industries, including energy, petrochemicals, manufacturing, logistics. Rawabi Group's commitment to sustainable practices is aligned with Saudi Arabia's Vision 2030, which diversification of the economy, environmental stewardship, and social wellbeing.

Solution:
e& enterprise supported Rawabi Group in its sustainability journey. Rawabi's sustainability strategy focuses on three main pillars:

- Environmental sustainability
- Social responsibility
- Economic growth and viability

Rawabi wanted to transform its sustainability insights and performance across a diverse range of business units and regions with the goal of unifying data streams into one cohesive platform, aligning both financial and sustainability objectives.
e& enterprise supported Rawabi in its sustainability journey by providing:

- Sustainability education, training, and consultancy.
- GHG inventory calculation (Scopes 1, 2, and 3).
- Digital platform for GHG/ESG/SDG reporting.
- Road map and recommendations for solutions to decrease carbon footprint.

Benefits/Impact:
The implementation of sustainability services at Rawabi Group would lead to significant benefits across environmental, economic, operational, and social dimensions.

Key impact by implementing sustainability services:

- Energy Efficiency and Reduced Carbon Footprint
- Waste Reduction
- Leadership in Sustainability
- Sustainable Supply Chain
- Aligning with Vision 2030 and Regulatory Compliance

Bloom

Overview: Bloom is the UAE's foremost premium real estate company, with operations in both Dubai and Abu Dhabi. It has a multi-sector presence in property, education, hospitality, and FM services.

Vertical: Real Estate

Challenges:

- Limited visibility of MEP equipment.
- Decentralised and distributed FM operations.
- Regular complaints from building tenants.
- Lack of historical data for analytics and optimisations.

Solution:

- Deployment of e& enterprise's IoT cloud-based Smart Building Platform, which includes Smart Building HVAC Automation for 6 buildings. The project also includes the integration of power monitoring units for electricity consumption measurement and the implementation of ANPR-based smart access for vehicles.

Benefits:

- Centralised operations providing optimisation of resources.
- Utilities (i.e., optimisation of energy and chilled water consumption).
- Simplified governance and incident management.
- Improved end-user/customer satisfaction.

The Future of Sustainability

Emerging Trends/Technologies and Future Challenges/Opportunities

Emerging Trends and Technologies

Emerging trends in sustainability, such as circular economy models, carbon management and net-zero commitments, green finance, and digitalisation, reflect an evolving focus on innovative technologies, collaborative approaches, and comprehensive strategies to address environmental, social, and economic challenges.

These trends indicate a broad shift toward systemic changes, where sustainability is not just a set of isolated actions but a comprehensive approach embedded in business strategy, policy frameworks, and individual behaviour.

Artificial intelligence has transformative potential in sustainability, but it requires careful integration and governance to maximise positive impacts while mitigating unintended consequences. AI can help accelerate the transition to a sustainable future by enabling smarter decision-making, more efficient resource use, and deeper insights into complex environmental challenges.

of decision-makers say AI is "critical" or "very important" for their organisation's sustainable transformation journey.

Source: IDC's AI and Sustainability Survey, 2024; Base: 1,390

Challenges

Below are the top structural barriers to achieving sustainability goals. These barriers often interact, creating a complex web of challenges that organisations and governments must address to meet sustainability goals effectively.

Top Structural Barriers to Achieving Sustainability Goals

Return on Investment	Lack of Standards	Investment Support	Collaboration	Resistance to Change
Sustainability-related results are often visible in the very long term, so proving their ROI is difficult	Lack of unified standards for reporting on sustainability metrics	Lack of investment support	Lack of cross-organisational collaboration to plan, manage, and report on initiatives	Structural resistance to large-scale change

Future Opportunities

The future of sustainability is full of opportunities for innovation, economic growth, and societal transformation. Organisations that invest in green technology, promote resource efficiency, and develop solutions for climate resilience will be well positioned to thrive in a sustainability-focused world. As consumers, investors, and regulators increasingly prioritise sustainability, these opportunities represent not only growth potential but also a pathway to a more sustainable and equitable global economy.

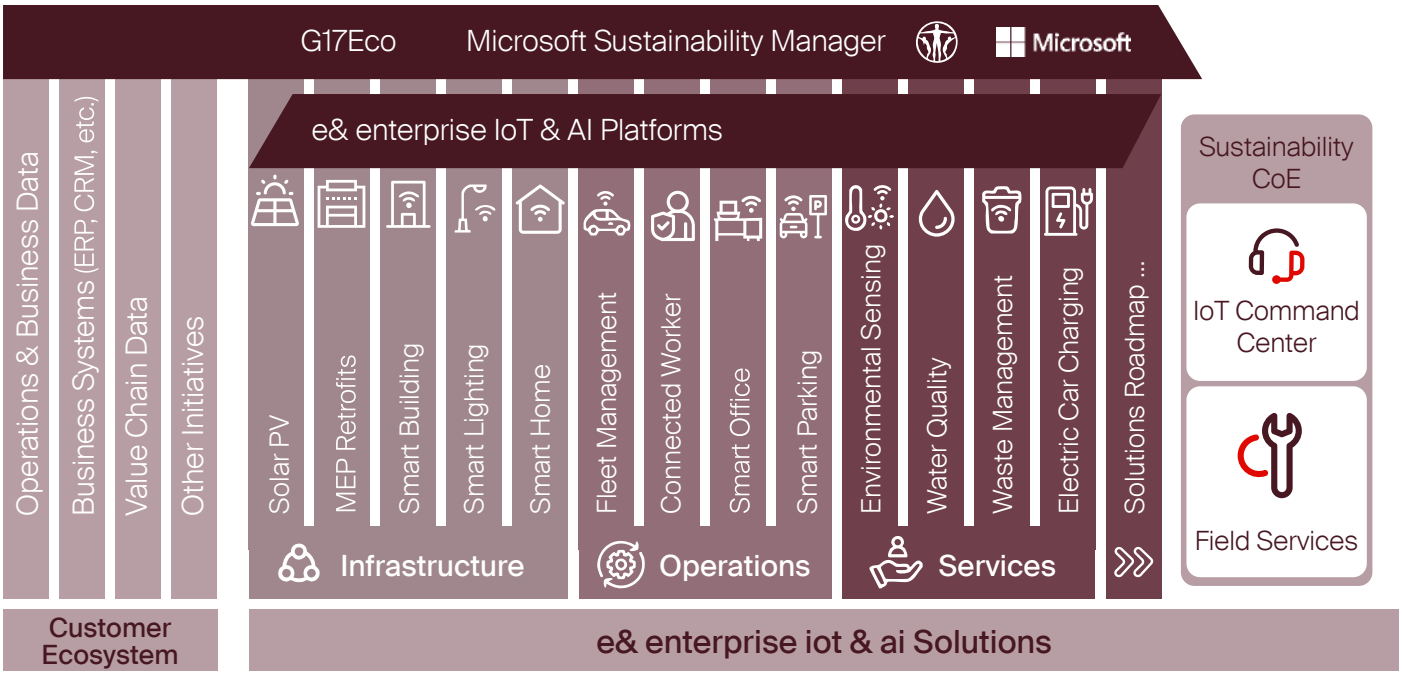
The social aspect of ESG frameworks is often overshadowed by environmental and governance concerns, despite its critical importance. A stronger focus on the "S" in ESG is urgently needed from businesses, investors, and policymakers alike, as addressing social concerns directly contributes to long-term value creation, community resilience, and overall societal wellbeing.

Sustainability as a service at e& enterprise

Consultancy | **Solutions & Services** | **Center of Excellence**

1	2	3	4
Analyze	Record & Report	Reduce, Replace & Remove	Govern & Sustain
Consultancy	Platforms	Solutions	Center of Excellence
• Assessment • Analysis • Planning	• Reporting • Measurement & Verification • Standards Compliance	• Solar Energy • Energy Management • Smart IoT Solutions	• SMEs • Energy Analysis • Performance Tracking
√ ESG & Scope 1, 2, 3 Assessment √ Target Setting √ Sustainability Plan	√ Records & Reports √ Evidence & Audit √ Insights	√ Sustainability Objectives Fulfilled √ Reduce Energy √ Reduce Operations	√ Continuous Improvement √ Maintain Sustainability Performance

e& enterprise Cloud



About e& enterprise

e& enterprise is a digital transformation leader supporting governments and large-scale organisations in building and scaling their digital core.

Through optimising operations, enhancing customer engagement, and data-driven decision-making, we enable seamless, sustainable, and secure transitions into the evolving digital world.

Currently operating in the UAE, KSA, Egypt, Turkey and Oman, e& enterprise brings cutting-edge digital scalable solutions designed to deliver tangible business value and address the unique challenges faced by organisations and executives across industries.

With a proven track record as a trusted digital transformation partner, technical expertise, and the ability to deploy and manage complex solutions, e& enterprise provides collaborative tailored solutions that empower customers to navigate their end-to-end digital transformation journey.

To learn more about e& enterprise, visit our site or reach out:

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