Unlocking a sustainable future:

Why digital solutions are the key to sustainable business transformation

CATALYST

Life Is On | Schneider Electric

#1 world's most sustainable corporation (Corporate Knights, 2021)

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Contents

Digitalization has revolutionized the way we work and live. At Schneider, we are humbled to be at the epicenter of the biggest energy transition and digital disruption of our generation. We are driven by a strong purpose of empowering all to make the most of our energy and resources, because we believe access to energy and digital is a basic human right. As both a sustainability practitioner and solution provider, we are proud to partner with our customers in their decarbonization journey and transition into Electricity 4.0, from design and build to operate and maintain, addressing their power, building and infrastructure needs."

Chris Leong, Chief Marketing Officer
Schneider Electric

The dangers posed by climate change are impossible to ignore. We no longer have a horizon of 20 or 30 years to solve this crisis—there is an urgency to move now. The era of promises, pledges and pronouncements is over; we are now in the age of action. As the global leader in digital transformation and sustainability, Schneider Electric is helping businesses rise to the moment to improve sustainability and efficiency through open, innovative digital solutions. With the help of our rich portfolio of partners, we empower our customers to develop efficiencies to become more sustainable and profitable. We can reduce both emissions and costs through existing technology driven by digitization and electrification at the core. We see our customers putting this technology in action to achieve positive returns for shareholders and the planet."

Jean-Pascal Tricoire, Chief Executive Officer
Schneider Electric

Introduction

Catalyst is privileged to have worked alongside Schneider Electric to deepen and broaden our knowledge of how digital efficiency unlocks gains in sustainability for the planet and businesses alike.

Talking to leading exponents of digital services, sustainability and academic thought leaders has uncovered the huge power that machine learning, artificial intelligence and data science brings to solving one of the greatest challenges of our times.

Global companies from such diverse sectors as data centers, real estate, mobility, computing, power distribution and engineering highlight how they have leveraged digital efficiency to make tangible progress towards their sustainability goals, reveal their ambitions for a brighter future, and show why partnerships and collaborations are so essential to business transformation in this area.

This whitepaper is part of a broad partnership with Schneider Electric that focuses upon how digitization and innovative design are helping to create a more sustainable future for us all. Please click here to visit the hub on CNBC.com where you can discover more and access each episode from the Building a Sustainable Future video series.

David Evans, Senior Director, Research,
NBCUniversal / Sky Global Partnerships

Key themes

Now more than ever, the world is focused on finding sustainable solutions for the planet to fend off the worst impacts of climate change. The final agreement from COP26, the UN's annual climate change conference, indicated some important progress in several key areas. Over 90% of nations are now committed to net-zero carbon; the phasing down of coal and fossil fuels was included in a COP agreement for the first time, and joint policy commitments were adopted on methane, deforestation and other critical areas.

COP26 revealed the scale of business's role in sorting out these sustainability challenges. More than 5,200 companies and 450 financial institutions have taken up to science-based, net-zero targets. Going forward, business faces ever-increasing stakeholder pressure from governments, investors, employees, customers, and beyond, not only to set these ambitious goals, but to show progress. The creation of the International Sustainability Standards Board (ISSB) will align disclosure and reporting by businesses, making adherence more transparent and accountability essential.

The enormity of our sustainability dilemma is daunting. Without innovative approaches to drive progress against their bold aspirations, while continuing to deliver for shareholders, business will suffer. Data science, Artificial Intelligence (AI), machine learning, and the digital efficiency they deliver will become vital tools for businesses to use if they are to achieve business transformation and sustainability outcomes together.

This report highlights companies in real estate, computing, hotels, engineering, power distribution, data centers and mobility. These firms are at the vanguard of digital efficiency and sustainability, acting as role models for this future. By bringing together human and machine intelligence, they have already capitalized on the power of algorithms and high-performance computing to communicate the information needed for evidence-based decision-making. Real-time performance monitoring of buildings, factories and processes, and infrastructure has become essential to facilitate change in impactful areas such as energy use, city design, resource consumption, supply chain efficiency, and power generation.

By empowering businesses through the supply of targeted information, digital efficiency will support the transformations needed to reach net-zero and build a more sustainable future.

“Innovation is one of the determining factors to help us reach our science-based targets. We are constantly in search of reliable digital solutions to help us to gauge performance as we embark on the journey of achieving our long term, decarbonization targets. Without digitization, or some form of extensive digital solution, in no way would be we able embark on this ambitious journey.”

Raymond Yau,
General Manager, Technical Services and Sustainable Development, Swire Properties

SWIRE

“We’re really a digital infrastructure provider leader. We think of sustainability as being really important to all of our stakeholders, especially our customers, because we’re in their supply chain. So everything we do to make our own footprint more sustainable really impacts our customers and their ability to reach their own climate and renewable energy goals. That’s a core part of how we’re thinking about sustainability.”

Jennifer Ruch,
Director, Sustainability & ESG, Equinix

EQUINIX

A sustainable future is both planet and business critical

As the world reckons with the challenge to decarbonize and limit the impacts of climate change, progressive corporations recognize that a sustainable future is critical not only to saving the planet but to ensuring the long-term viability of their business success.

Companies at the forefront of this approach have galvanized their sustainability efforts around publicly stated, science-based targets. The desire to achieve these goals is not driven simply by ambitious senior management teams; employees, investors and customers alike now insist that companies deliver tangible sustainability results.

Yet, how can companies make progress toward sustainability goals within current business models? How can well-meaning businesses avoid perceptions of green washing, or simply doing less harm, rather than becoming essential players in the race to net-zero emissions? Organizations in buildings, data centers, industrial operations, and infrastructure are seeking remedies for both economic and environmental disruption.

Technology’s role in delivering innovative solutions that achieve tangible sustainability gains while maximizing efficiency and business transformation is the force powering both these imperatives.

Mobility giant Volkswagen AG recognized the need to integrate its corporate and sustainability strategies into one over-arching imperative if genuine progress were to be made. This integrated strategy has enabled the company to think beyond traditional value chains and expand solutions to the whole energy ecosystem rather than focusing on automotive manufacturing alone. Only through the adoption of digital efficiency can businesses balance their environmental and societal responsibilities with shareholder expectations of enhanced value.

Swire Properties Case Study

With an investment asset portfolio totalling over 27 million square feet, primarily in Hong Kong and Chinese mainland, Swire Properties is a leader in real estate development, construction and management.

In 2019, the company became the first real estate developer in Hong Kong and Chinese mainland to commit to the Science Based Targets initiative. Its first set of Science Based Targets were approved in 2019, helping the company establish a long-term decarbonization trajectory focused on reducing the intensity of greenhouse gas (GHG) emissions within its portfolio. Swire Properties ramped up its science-based targets to align with their pledge to the Business Ambition for 1.5°C made in 2020 and the new set of 1.5°C aligned science-based targets were endorsed in 2021.

Yet signing up to ambitious and concrete sustainability targets meant the company needed to find a way to satisfy stakeholder expectations and show their progress. To achieve this, Swire Properties invested in digitally efficient measurement systems to model the energy efficiency of their buildings, predict outcomes and understand the performance of the portfolio.

One Taikoo Place in Hong Kong best exemplifies Swire Properties' use of digital efficiency in action. Through extensive 3-D modeling in the design stage, the development is highly energy efficient. One Taikoo Place features a smart lighting system that adjusts based on time of day, lighting levels and occupancy. Further innovative measures include use of a waste-to-energy tri-generation (electricity, heating and cooling) system—a first for commercial buildings in Hong Kong—that uses biodiesel from waste cooking oil collected from food and beverage tenants for fuel; a combined green roof and solar photovoltaic (PV) system and ample green space; and rainwater collection and grey water recycling. Swire's Smart Energy Management Platform, developed in partnership with Schneider Electric, connects the full property portfolio with senior management, providing energy consumption data that plots progress against the company's sustainability ambitions.

These digital innovations have enabled Swire Properties to reduce GHG emission intensity by 19% across their portfolio—facilitating measurable progress against the company's direct (Scope 1) and indirect (Scope 2) emission targets[1].

1 (2020, August 18). What Are the 3 Emissions Scopes and How Do You Manage Them? Retrieved from https://perspectives.se.com/blog-stream/what-are-the-3-emissions-scopes-and-how-do-you-manage-them

> A critical question for us is around new-build hotels. How do you get technologies to actually enable that? And how then do you get the financing set up? We've got 1,800 hotels that are going to be coming on in the next in the next three to five years. More beyond that. How do we move beyond our targets to embodied carbon? I think there's a huge role for digital innovation there in terms of how we actually construct those hotels."
>
> **Catherine Dolton,** Chief Sustainability Officer, IHG

> The big question with supply chain comes down to inventory visibility, optimization and provenance: where is your stuff coming from, and what does it consist of? And so being able to not just optimize between which warehouse do I deliver from my using my retail outlets as drop centers, but being able to factor into that environmental intelligence—that way, you can actually measure and address the carbon impact of those decisions."
>
> **Kareem Yusuf,** General Manager, AI Applications & Blockchain, IBM

Digital efficiency drives business transformation and sustainability in tandem

The starting point to adopt digital efficiency is to have a highly effective way of accessing data to apply intelligence, then drive insights that create positive business and sustainability outcomes.

The applications of digital efficiency are endless, stretching from homes and buildings to power and grid to utilities, mining operations and beyond. Regardless of sector, companies are invigorating their sustainability efforts through such initiatives.

At its most basic level, new technology can be applied to mundane yet essential analog business processes, such as automating paperwork in major construction projects and in the design, planning and monitoring of industrial operations. Applications can quickly grow more sophisticated with the use of Artificial Intelligence and connected systems. For example, when it comes to asset maintenance, companies are rapidly moving away from reactive repairs to more predictive assessments through AI modeling and the application of software in the enterprise.

Companies are rapidly moving away from standard patterns of equipment maintenance to more predictive assessments, through AI modelling and the application of software in the enterprise.

This enables more efficiency by automating inspection processes and ensuring field technicians optimize the levels of assistance they bring. Additionally, further predictive insights help companies like leading hotelier IHG Hotels & Resorts to better manage and improve their estate's environmental footprint across energy, carbon, water, and waste through automated data collection.

Within the power sector, Tata Power has established a command center for real-time monitoring of its renewable assets. This is particularly important to ensure smooth consumer access to sustainable solutions such as electric vehicle (EV) charging points. Through a mobile app, the health of each EV charging point is assessed in real time, with automatic alarms for any asset that needs maintenance. Connected systems like these are crucial to transform the way we drive.

IBM Case Study

Consumer scrutiny of supply chains has never been greater. End-users want to know where their coffee was sourced, which farmer produced the cotton for their T-shirt, and whether their packages were delivered in an electric van. Combine this pressure with investor expectations and government regulations you find the sustainability of supply chains as a focal point for businesses.

So how can supply chain leaders transform this essential process to deliver the sustainability and transparency stakeholders demand? With the rush to net-zero emissions, carbon neutrality and energy management are top-of-mind. However, opportunities exist all along the supply chain to embed best practices that drive sustainability and help enable circular economies that reduce waste and encourage re-use.

Through AI and blockchain-based solutions, IBM empowers companies to reach sustainable supply chain goals by providing a global, accurate, real-time view of inventory and the ability to securely share data across their ecosystem.

In asset-intensive markets such as oil and gas, mining and utilities, IBM helps companies optimize maintenance, repair and inventory through connected systems, subsequently reducing their carbon footprint by eliminating excess inventory and wasted warehouse space.
AI-based solutions help maximize order fulfilment processes for consumer brands. IBM's systems allow companies to source inventory that's closer to the customer, decreasing logistics-related emissions due to expensive and unnecessary shipments.

And through IBM's facilitated data sharing capabilities, businesses can transact with supply chain partners in a more trusted and efficient way to ensure provenance and quality, reduce product waste and increase profitability.

Providing end-to-end supply chain solutions, grounded in AI-driven data insight, provides transparency to today's purpose-led consumers. This transparency helps consumers make purchase decisions that align with their values and deepens engagement through direct involvement in sustainability initiatives.

AI and connected systems catalyze progress

One of the biggest challenges global companies must overcome to reach their sustainability goals is the sheer scale and complexity of the business transformations required. And while pilot programs can give a glimpse of the future, stakeholders expect genuine progress on environmental issues on ever-shrinking timelines.

That's where technology like Artificial Intelligence and the connectivity provided by the Internet of Things can catalyze advancements and yield major sustainability dividends.

Swire Properties has used digital twin modeling extensively to create supremely efficient and sustainable commercial real estate. By having an almost lifelike digital representation of a building, the company assesses the performance of the physical space and simulates various scenarios to maximize the efficiency of issues such as temperature distribution, which ultimately reduces energy consumption and carbon emissions.

IBM deploys AI capabilities through edge computing to deliver a seamless digital infrastructure that ensures these predictive technologies can run anywhere and are 'always on'. Ensuring sustainable supply chains is just one use-case of this technology: Not only does AI help fulfil orders in the most efficient way, it can also highlight provenance, inventory visibility and food safety issues that are sacrosanct to modern consumers. This environmental intelligence allows companies to go from simply accounting for their carbon footprints to optimizing them, bringing tangible sustainability results to an essential business process.

Academics from Singapore Management University highlight that AI's functionality stretches beyond business to benefit our planet's biodiversity. Through regular monitoring of methane gas emissions above pipelines or evolutionary changes of crops, better protection of the Earth's natural resources is attainable through digital tools. AI linked to satellite remote sensing and drones allows for rapid and highly targeted interventions to avoid environmental degradation. The technology also facilitates better evaluation of carbon sequestration in forests, which ultimately could enhance the accuracy of carbon credits, thereby encouraging companies to consider this tool as part of their sustainability strategy.

Across all major industries and beyond, AI-driven business transformations are helping to deliver potent sustainability gains for forward-thinking companies using this technology.

"If we look at infrastructure solutions for our clients, developments must harness the same digital tools. We need to develop an integrated transport system in the context of the UK's commitment to addressing the climate crisis. To decarbonize transport systems, we need to take a holistic, industry-wide approach. Achieving net-zero won't be easy, but this is a period of real opportunity for the sector to do things in a better, cleaner way."

Donald Morrison, Senior Vice President and General Manager for People & Places Solutions, Jacobs

Jacobs

"What we are seeing in AI and machine learning, especially in combination with satellite remote sensing and drones, is the ability to observe at a very large scale and high levels of accuracy, changes in things like methane emissions associated with pipelines, or changes in the evolution of forests, changes in the evolution of crops. This insight allows for very fast intervention, very fast deployment of teams to go to areas where you have issues and then address them in a timely manner."

Simon Schillebeeckx, Professor of Strategic Management, Singapore Management University

SMU SINGAPORE MANAGEMENT UNIVERSITY

Jacobs Case Study

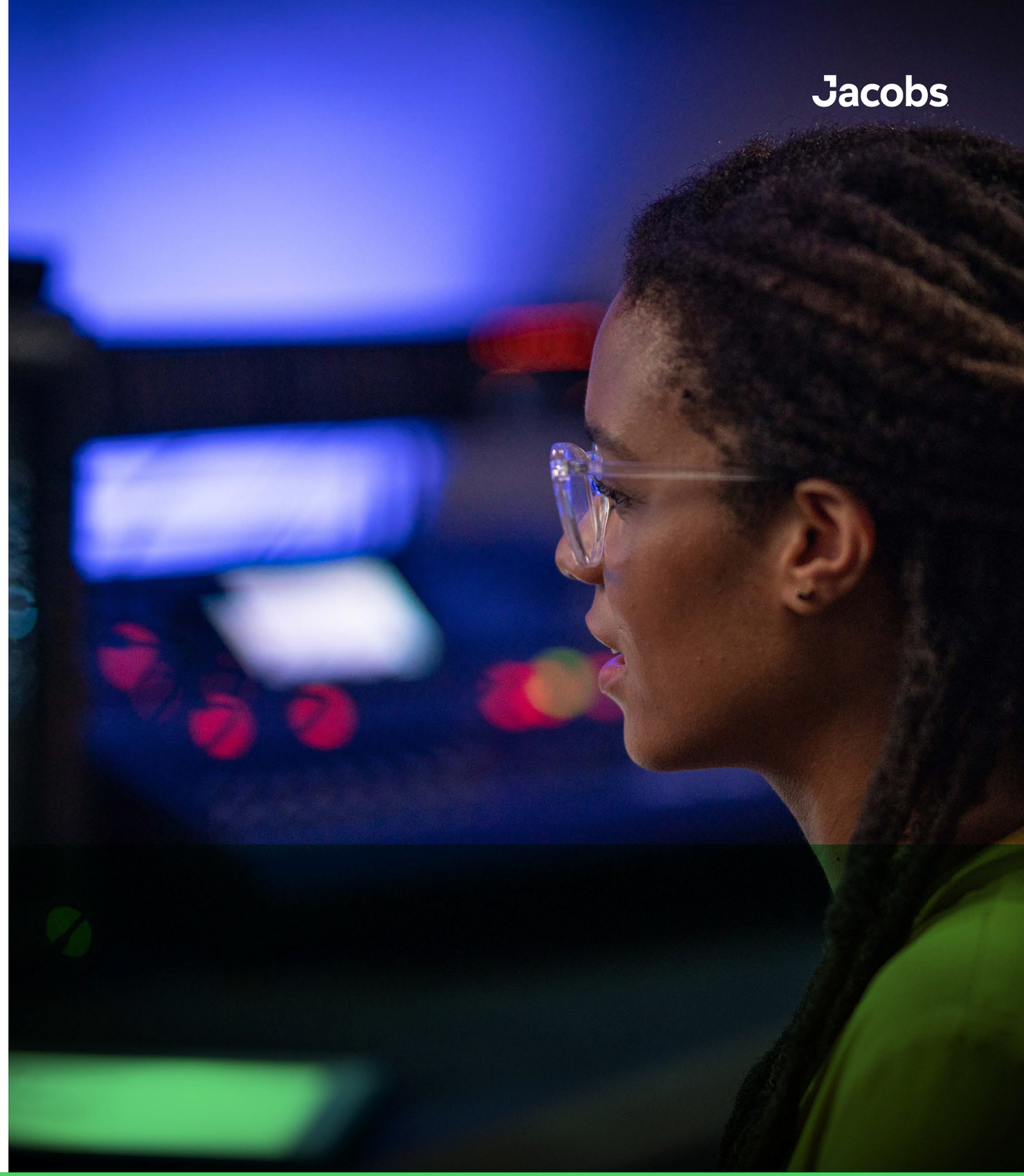
For global technical consulting firm Jacobs, digital efficiency is a must to achieve shared sustainability goals with their clients. Through the expanded use of data-driven intelligence and technology-enabled solutions, Jacobs is helping clients to deliver improved outcomes at a societal, environmental and economic level.

By embracing such technology as pooled digital data and AI analytics, Jacobs helps their clients make better and faster decisions, more heavily geared toward sustainability outcomes. For example, if major cities such as London are to decarbonize, understanding and modeling how society will move in the future is essential to maintaining an integrated, dynamic and sustainable transport system.

Working in partnership with Transport for London (TfL), Telefonica O2 and AECOM, Jacobs developed Project EDMOND (Estimating Demand using Mobile Network Data). The project updated TfL's models by fusing aggregated, anonymized mobile network data with a diverse range of complementary datasets to deepen the quality of demand data.

This gave them the ability to forecast more predictable movement patterns by analyzing over 250 billion anonymized and aggregated events from mobile phone data, providing details of 30 million journeys per day. Achieving progress at this scale would have been impossible through traditional data capture routes.

Following Project EDMOND, Jacobs then developed a new analytical framework, including the Model of Travel in London (MoTiON), to enhance forecasting using this big data approach. The outputs and modeling of both ground-breaking projects place London firmly on track to hit the mark of 80% of journeys made by sustainable modes by 2041.



Looking at energy, carbon, water and waste, we're actually working to upgrade that system at the moment because we believe that we could we have the ability to get predictive insights that help hotel owners actually think about what actions they could be taking to improve their environmental footprint. Rather than relying on individual hotels to actually input the data themselves, we're working with Schneider Electric to get that automated data directly from utility companies. For me, the digital side is so much about data for decision-making, and also to be able to then communicate our sustainability credentials to customers."

Catherine Dolton,
Chief Sustainability Officer, IHG

IHG HOTELS & RESORTS

If I look at each individual asset in different locations, we produce over 40,000 energy or operational data points in real time, collected every 15 minutes in a single day. That equates to over 4 million pieces of data being collected by the platform for analysis every day. I have to rely on very experienced and reputable technology partners to help us integrate this into a manageable solution."

Raymond Yau,
General Manager, Technical Services and Sustainable Development, Swire Properties

SWIRE

The transformation is obviously something which we can't do alone. We need technology partners and we need financing partners to secure Volkswagen's demand by 2030, of six giga factories in Europe alone, to have that 50% plus EVs on the market. So it doesn't work if you do it alone."

Ralf Pfitzner,
Global Head of Sustainability, Volkswagen AG

VOLKSWAGEN AKTIENGESELLSCHAFT

Collaboration achieves scalability

In-house technology and skill sets needed to turn data into insights and action are not always enough for companies to make material progress toward their sustainability goals. In these instances, collaborating with external specialists unlocks even greater innovation to bring digital solutions to life on a large scale.

Equinix has taken a highly collaborative approach to drive meaningful sustainability change. Not only does the company have grand ambitions to evolve the design and operations of its data centers, it now partners with its customers to create new services that help drive efficiency across the length of the value chain. These partnerships are fused with mutually agreed climate-neutral goals to chart a clear path to net-zero. This collaboration goes even further, with Equinix playing a leading role in the Renewable Energy Buyers' Alliance where over 200 like-minded companies can learn from each other to advance the use of renewables.

For Swire Properties, the magnitude of data capture required for effective building performance monitoring meant the company needed to work with the right technology partner. Collaboration is only possible through a genuine alliance with a partner who intimately understood not only the industry, but the individual company and its needs. Swire was generating over 40,000 data points captured in real time, every 15 minutes, resulting in a sea of over 4 million pieces of data to be analyzed each day. The partnership considers the limitations of traditional monitoring technology and condenses the solution into a cloud-based platform.

Controlling millions of data points, integrating them into clear and comprehensible data management systems, and fully embracing new technologies requires trusted partnerships with expert providers if we hope to solve our sustainability challenges.

IHG Case Study

With 6,000 hotels covering 100 countries, global hotelier IHG faced a major challenge to embed best practice sustainability management processes across their portfolio. Further, the franchise business model used by IHG meant those most critical to implementing energy efficiency often lacked the skill set necessary to prioritize sustainability within their properties.

IHG partnered with Schneider Electric to set up IHG Green EngageTM, an innovative online sustainability system that gives all hotels within the portfolio the tools to measure and manage their impact on the environment. The hotels can choose from over 200 "Green Solutions" designed to help them reduce their energy, water and waste to have a positive impact on the environment.

The IHG Green EngageTM system has four levels of certification that hotels can achieve, with Level 3 certification or above going to those reducing their energy use by up to 25%. The system is based on initiatives such as sustainable purchasing, installing energy-efficient appliances and sustainable site management.

Underpinning the success of IHG Green EngageTM is the automated data collection enabled by Schneider Electric. This helps reduce the need for individual hotels to input data and assists them in making accurate, data-based decisions to improve their environmental footprints.

And with the world focused on the UN COP26 conference, IHG went further. By collaborating with Schneider Electric and Arup, the company showcased two hotels on the path to net-zero in Glasgow where COP26 delegates were staying. The Kimpton Blythswood Square and Kimpton Charlotte Square have already taken strides towards decarbonizing—but now they have a roadmap help them navigate to net-zero, based on dynamic thermal digital modeling and an assessment of the carbon impact of interventions.

From using smart design and innovative systems, every single thing that IHG hotels does to be sustainable can make a big difference to our planet.

Digital innovation will unlock a brighter future

Although the scope of the planet's sustainability challenges is unprecedented, there is a clear sense of optimism that companies who embrace digital efficiency can rise to the task and create long-lasting sustainability dividends.

The speed of innovation in this area means we have only begun to realize digital efficiency's power to be a catalyst for change. For example, within the built environment, machine learning is becoming so powerful it can now untie the jumbled knot of building re-use and regeneration. This will have a major bearing on embodied carbon by ameliorating structural risks and ultimately extending the lifetime of key infrastructure.

Through high-level digital modelling, Jacobs is using data to assess climate risks and help the geographies likely to be hardest hit, providing solutions before climate change becomes too damaging. Through working with one of the most physically vulnerable countries in the world, Jacobs modeled a conceptual land use plan to address resilience issues and explore the option of raising the height of the land to much higher above sea level.

In New Delhi, Tata Power is experimenting with battery storage to streamline energy distribution, facilitate greater usage of renewable energy among consumers, and bring the ambition of microgrids at scale even closer.

For Volkswagen AG, the future is not so much about inventing new technologies, but more about scaling up pre-existing embedded innovations. If transport is to genuinely become decarbonized, digital and sustainable solutions are required beyond car manufacture alone. That means broader thinking throughout the value chain to deliver sustainable components: green steel, green aluminium, powered by renewable energy, with a circular economy mindset as consumables reach their end-of-life. Digital innovations are required to scale up mobility solutions and offer a seamless customer experience that combines the full range of possibilities.

As digital innovation moves us into an even more advanced future focused on regeneration, there is a note of caution: while the sustainability outcomes of advanced digital innovation remain positive, there are increasing calls for AI and machine learning to be used as ethically as possible.

Academics at Saïd Business School stress that the intersection of digital efficiency, AI and environmental sustainability must go further. Companies need to understand and address the likely effects AI will have on their employees and society. We must adopt a human-centric approach so all stakeholders have input into the ethical development of digital efficiency. Regulators also need to ensure a clear ethical framework is developed for this technology, so all of society continues to benefit.

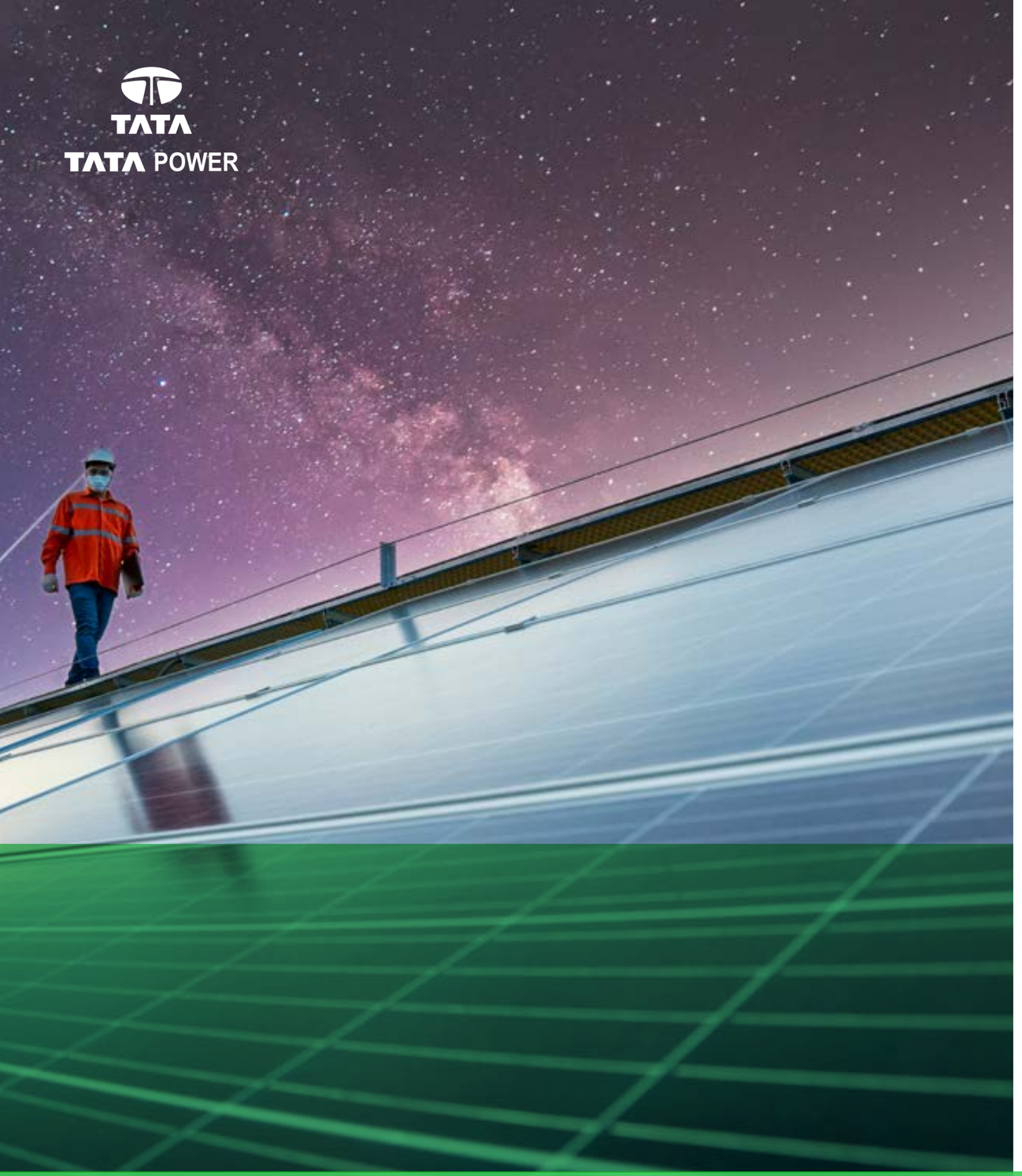
With demonstrable progress on such challenging sustainability issues, buttressed by ever-advancing technology, companies leading the way in digital efficiency are driving environmental change for the better.

"In order to make a business sustainable, we have to consider not only environmental sustainability, but also societal sustainability. We need to identify a way to provide a product or service efficiently from a business perspective, but in a way that is also human-centric. Businesses need to establish a democratic way to evaluate the outcomes they are producing and factor the opinions of people that are affected, including the supply chain."

Francesca Mazzi,
Postdoctoral Researcher, AI for Sustainable Development, Saïd Business School, Oxford University

"We're undergoing huge transformations. Bringing rooftop solar to people, even that is in India limited but that is a huge opportunity. And consumers will grab that opportunity, so that will be a huge transformation. Secondly is the EV charging – that's going to expand hugely. And the challenge is for us to really scale up and provide that charging of the electric vehicle. It's a long way to go, but it's a huge opportunity."

Jyoti Bansal,
Chief – Branding, Communications, CSR, Sustainability, Tata Power



Tata Power Case Study

India is on the cusp of a solar revolution. Tata Power Solar has been at the leading edge of this brighter future, leading the move toward sustainable energy solutions in one of the world's most populous countries.

By encouraging consumers to make use of their idle rooftop space, and integrating a powerful data monitoring system, Tata Power has convinced thousands of early adopters to generate renewable energy and benefit from cost savings while protecting the environment. The proposition has been so successful, Tata has rolled it out to 90 cities within India, generating over 421 MW of renewable energy.

Critical to consumer adoption has been the development of the first state-of-the-art NOC (Network Operating System) center in India to monitor and manage solar rooftop systems remotely. The system is highly configurable according to each individual site, tracking performance data in real time. Predictive intelligence allows for proactive maintenance and support, thereby ensuring maximum plant uptime, and users get live access to their installation's performance.

To further support progress toward clean energy and decarbonization, Tata Power has begun providing renewable microgrids to underserved communities. The program will provide clean power to nearly 5 million households, directly impacting the lives of 25 million people over the next decade. This venture will also lower elective electricity costs and reduce carbon emissions by 1 million tons per year.

Without such digital innovations to promote the mass adoption of renewable energy, progress toward satisfying the planet's need for clean energy would be severely constrained.

> We can also use the natural world to inform and inspire solutions that create benefits. By harnessing new, regenerative approaches like biomimicry that allow the genius of nature to help solve human problems, restore important habitats and re-think agricultural practices."
>
> **Donald Morrison,** Senior Vice President and General Manager for People & Places Solutions, Jacobs

> "I think we're just scratching the surface of innovation. There's a whole lot more we can do to bring together innovation and sustainability. There's a whole other ecosystem that we're trying to build up around innovation and enabling sustainability, move down the value chain for our customers and their customers and the products they're building."
>
> **Jennifer Ruch,** Director, Sustainability & ESG, Equinix

Summary and conclusions

If we hope to achieve the twin imperatives of producing serious progress on sustainability while increasing value, businesses need to greet these challenges with a mind-set open to innovative use of leading technology, a willingness to collaborate, and the power to steer others with them on the journey.

We are only just beginning to appreciate the power of AI and machine learning to transform business processes and create sustainability dividends. Faster, more powerful solutions are coming available each year. By continuing to spur innovation, businesses will set a clear course for achieving the progress stakeholders expect of them.

The skill sets, knowledge and creative sparks of digital efficiency are often found through collaboration with the right partners. Working together goes beyond end-to-end process experts; co-creation with policy makers, local authorities and the wider value chain of companies can yield genuine progress.

A whole-hearted embracing of sustainability by companies suggests a better route to success. A culture of sustainability needs to be ingrained throughout all levels of the business, exemplified through behavior, training, workforce planning, and incentives. Knowing the return on investment produced by digital efficiency helps confirm that sustainability is no longer a cost of doing business, it is a foundational building block for durable success.

The COP26 agreement struck in Glasgow drives home the message that we cannot tolerate global temperatures rising over 1.5 degrees. We need to act faster if we hope to restrain emissions by 2030 and reach net-zero by 2050. Policy changes are necessary, but we need individual commitments to sustainable business transformation. This dual-track approach, enabled by digital technology, supports the flourishing of human progress and the planet. There is no choice to be made between business and the environment, and no other option to overcome the inescapable crisis of climate change.

About Schneider Electric

Schneider's purpose is to empower all to make the most of our energy and resources, bridging progress and sustainability for all. We call this Life Is On.

Our mission is to be your digital partner for Sustainability and Efficiency.

We drive digital transformation by integrating world-leading process and energy technologies, end-point to cloud connecting products, controls, software and services, across the entire lifecycle, enabling integrated company management, for homes, buildings, data centers, infrastructure and industries.

We are the most local of global companies. We are advocates of open standards and partnership ecosystems that are passionate about our shared Meaningful Purpose, Inclusive and Empowered values.

Discover the newest perspectives shaping sustainability, electricity 4.0, and next generation automation on **Schneider Electric Insights**

Acknowledgements

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