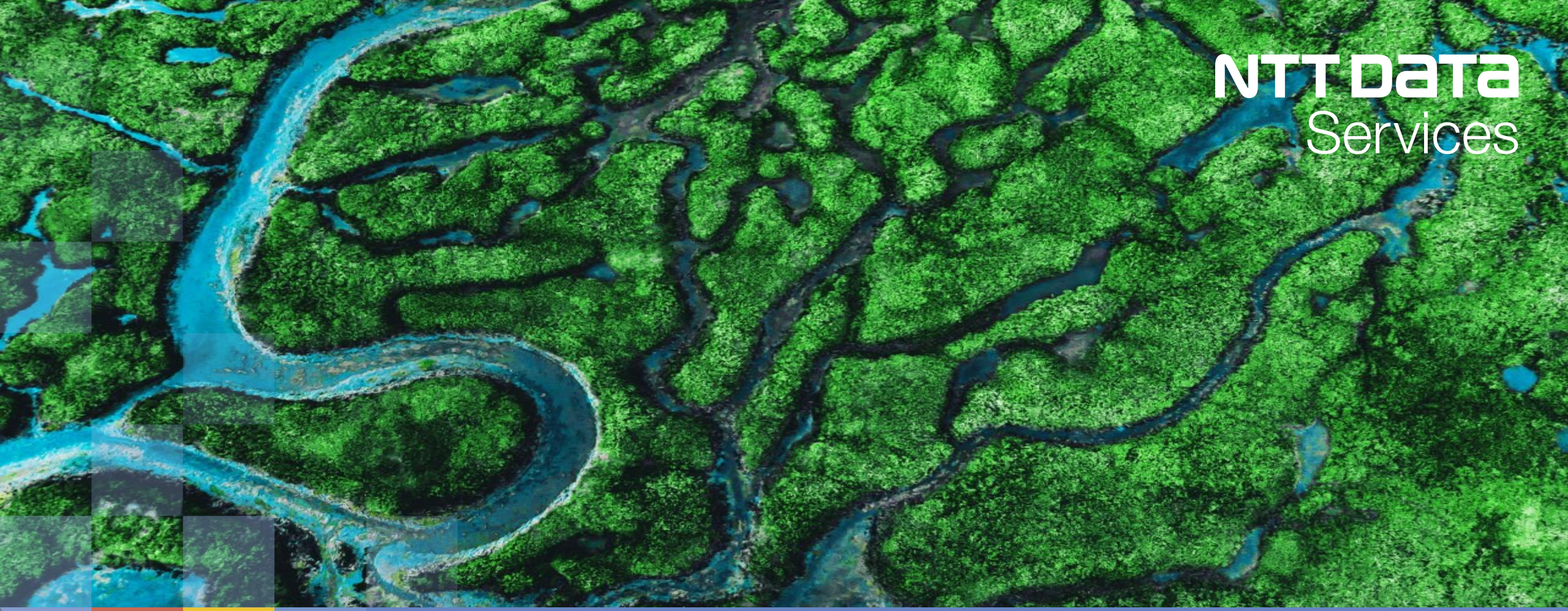

NTT DATA Services

Energy Efficiency and Sustainability

Driving sustainable value chains in collaboration with Microsoft and other ecosystem partners

March 2022

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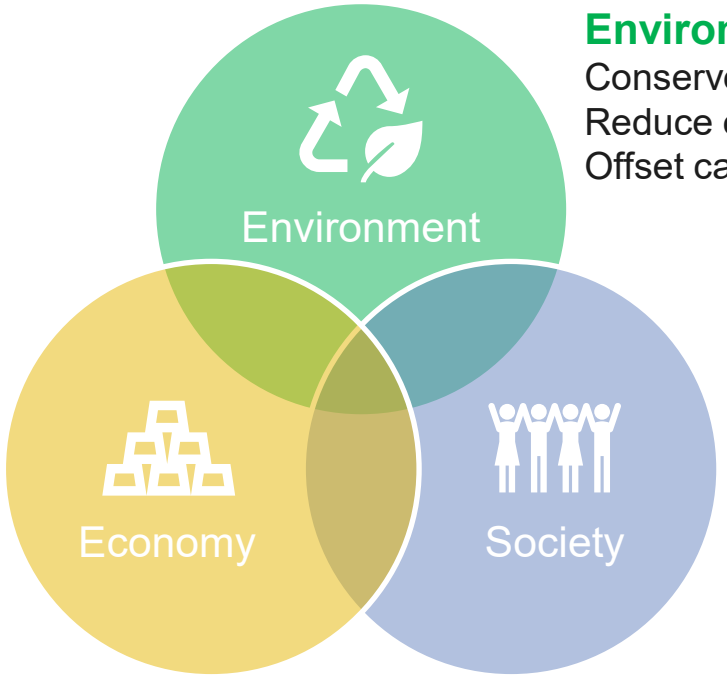
What is Sustainability?

A plan of action for people, planet and prosperity[1]



Environmental Sustainability
Conserve natural resources
Reduce environmental impact
Offset carbon emission

Economic Sustainability
Access to resources
Secure livelihood
Create sustainable products and solutions

Social Sustainability
Social equity
Eliminate poverty
Communities' health and security

Did you know?

If every office worker in the United Kingdom used one less staple a day by using a reusable paper clip, 120 tons of steel would be saved in one year.[2]

1 A/RES/70/1 - Transforming our world: the 2030 Agenda for Sustainable Development
2 Horton, Jocelyn ed. "Mad About ... Tropical Rainforests" Friends of the Earth, Jan 2003.

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Sustainability Market Opportunity

Large system integration play to positively impact the world

$60B Energy Optimization Opportunity[1]

90% Of new facilities deploy sustainability and smart workplace applications by 2025[2]

$26T Economic benefits[3]

$200B Carbon offsets market valuation[4]

- By 2023, 60% of Organizations will be implementing sustainability-related considerations into their business life cycle[5].
- By 2025, 75% of organizations will deploy technology to monitor utilization on premises, in the cloud, or at edge locations to improve utilization metrics that reduce energy costs and improve sustainability[6].

The sustainability performance of a company will be as important to its key stakeholders as its financial metrics.

1 Market Data: Global Energy Efficiency Spending by 2028, Guidehouse Insights, 2020
2 IDC FutureScape: Worldwide Future of Work 2022 Predictions
3 The Global Commission on the Economy and Climate, 2018
4 S&P Global Commodity Insights, 2020
5 IDC FutureScape: Worldwide Services 2022 Predictions
6 IDC Worldwide Sustainable Strategies and Technologies 2022 Predictions

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Energy Efficiency Solution

Digital Twin based MVP implementation for quick value

- Single pane of glass visualization
- Real-time and historical data
- Monitoring, contextualizing and alarming
- Fault detection & diagnosis
- ML and AI for Peak demand management and Insights for energy savings
- Financial analysis
- Workflows and business systems

Scalable, secure, high-availability platform.

Integrate and normalize all telemetry data

Why NTT Data?

Simplified comprehensive sustainability solution with industry leading ecosystem partners

Delivery Simplification

Consulting led delivery to align sustainability goals to business goals

- Proof of Value in 12 weeks
- Consulting led project execution for business outcomes
- Single point of contact by simplifying the large IoT ecosystem

Industry Leading Partnerships

Pre-integrated End-to-end Ecosystem

- Cloud platform and ML/AI for sustainability
- Digital Twins
- Sensors, devices, and edge solutions
- Niche solutions, algorithms, LPWAN, P5G and cloud for sustainability

Comprehensive Sustainability Roadmap

Roadmap for comprehensive suite of solutions for ESG and business innovation

- Getting to Net zero carbon emission across the supply chain
- Other utilities (water, gas), occupancy efficiency, air quality, safety and cleaning
- AI enabled digital twins for climate modeling and scenario planning
- Smart spaces and workplace applications

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Energy Efficiency and Sustainability Challenges

Lack of realtime visibility for utility consumption, lack of data insights for cost savings impede getting to carbon net-zero emission

Lack of Visibility	• Lack of realtime visibility into energy and outer utility consumption • Lack of alerts and insights for taking actions • Lack of Single pane of glass
Reduce Costs and Carbon Emission	• Reduce carbon footprint • Reduce utility consumption • Predict financial implications • Reduce peak demands
Improve Operational Efficiency	• Awareness of impending problems with major equipment • Improve operational efficiency • Adherence to govt regulations related to energy consumption
Getting to Net-zero Carbon Emission	• Understanding Carbon footprint across the supply chain • Aligning sustainability goals to business goals

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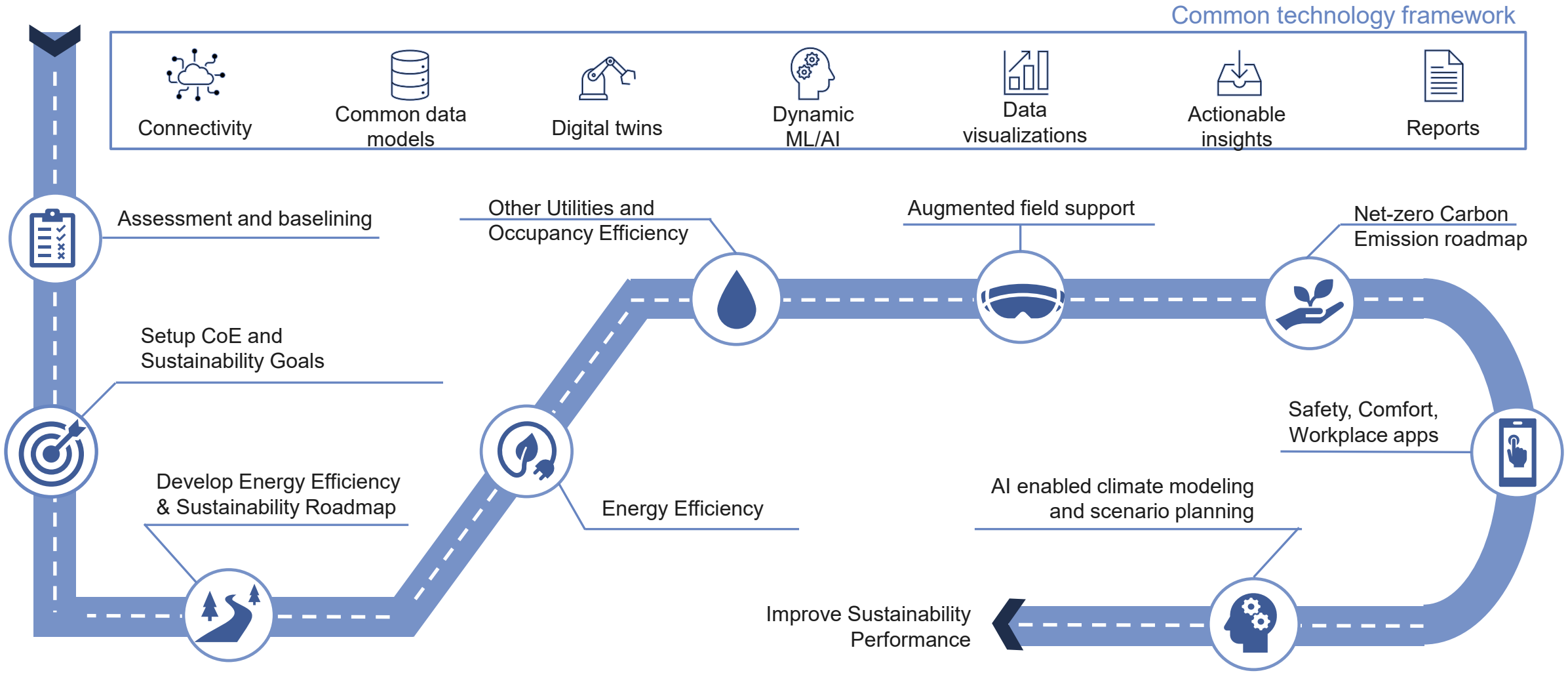
Sustainability Roadmap with Digital Foundation

Consulting-led transformation -- Technology-led implementation



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Multi-horizon Sustainability Transformation Journey

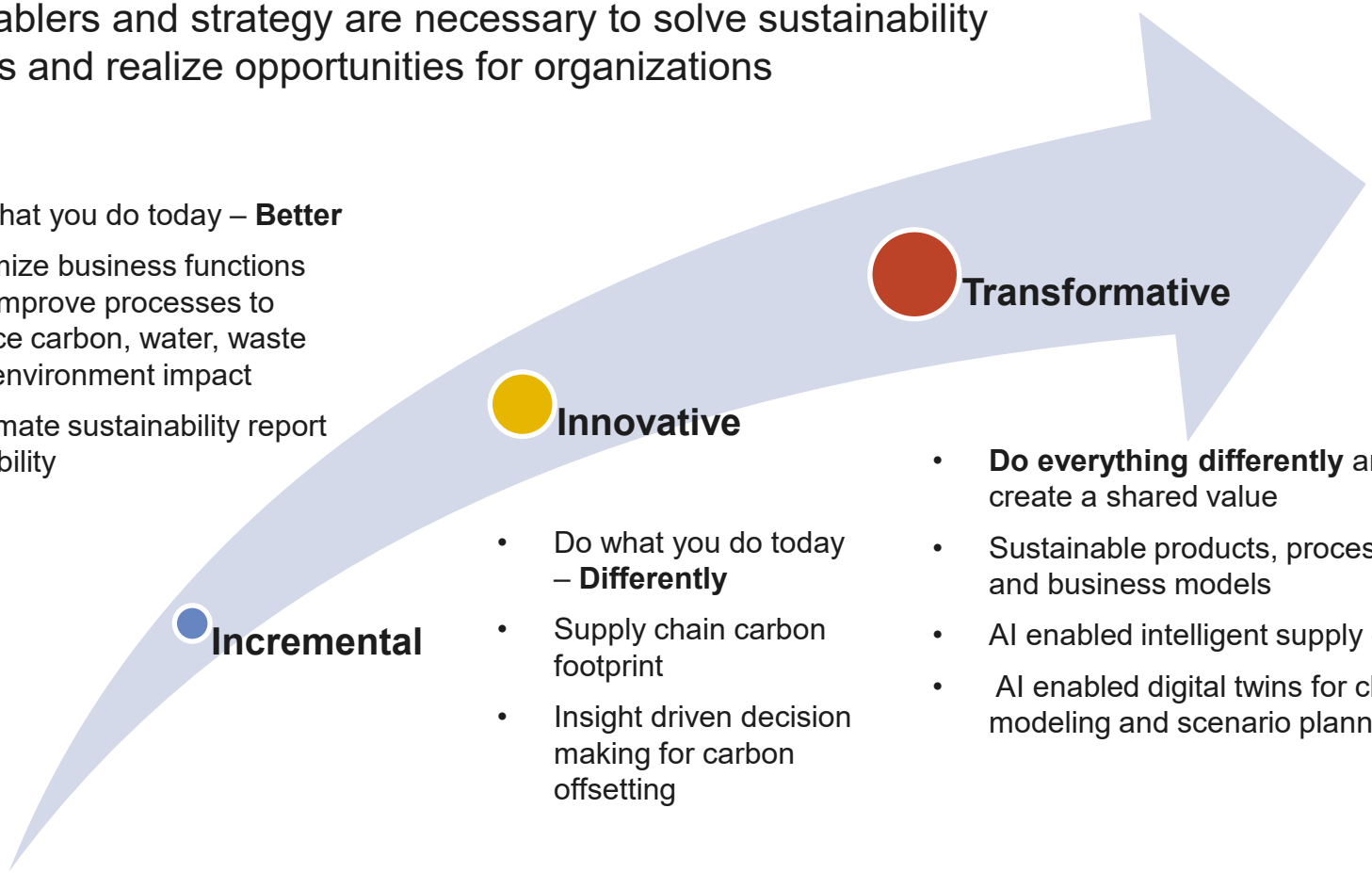
Advisory services coupled with robust digital foundation to drive sustainability transformation

Engage on all horizons simultaneously

Address immediate impacts and then leverage transformative capabilities to:

- Develop sustainable operations and products
- Create sustainable business models
- Reach Net-zero carbon emission
- Gain competitive advantage

Digital enablers and strategy are necessary to solve sustainability challenges and realize opportunities for organizations



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Return on Value

Aligning sustainability strategy with business strategy while reducing the costs and improving operational efficiency

- Reduce energy and utility costs
- Lower maintenance costs
- Reduce software licensing, development and maintenance costs
- Avoid upgrading legacy systems

- Improve equipment performance
- Reduce downtime
- Centralize and manage operations
- Streamline & automate processes and reduce paperwork

- Instrument culture of sustainability into core business
- Progress towards Net-zero carbon
- Reduce environmental impact of operations
- Create sustainable value chains and meet sustainability goals

- Build future proof AI enabled digital twin platform
- Integrate supply chain partners
- Unify data intelligence
- Build smart workplace apps

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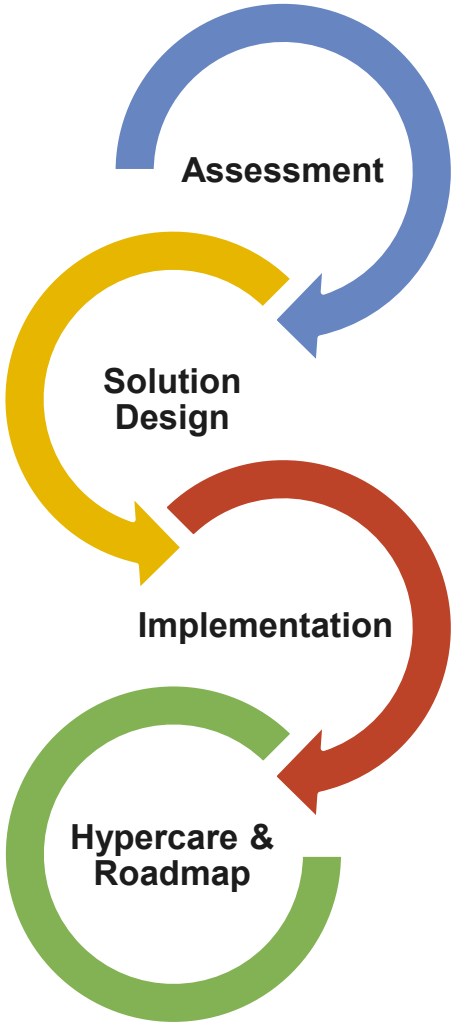
Energy Efficiency MVP Delivery

Prebuilt scalable solution for quick value with predictable schedules

Gather requirements
Site assessment
Define business goals
2- 3 weeks

Solution architecture development
Define business outcomes
UI/UX design
2 – 3 weeks



Energy optimization & reports
Power alerts management
Asset critical alerts management
Power and energy report
2 – 4 weeks

Change management and support
Workshops and roadmap development
2 – 4 weeks

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NTT DATA as a partner in the pursuit of Sustainable Innovation

We endeavor to fulfil sustainability mission by **creating new value that helps resolve social issues** through building long-term **relationships** with clients, providing **end-to-end support**, from **STRATEGIC** and **ORGANIZATIONAL** framing, workstyle innovation, business category-specific **SOLUTION DELIVERY**, support in the **IMPLEMENTATION** of said guidelines

STRATEGY

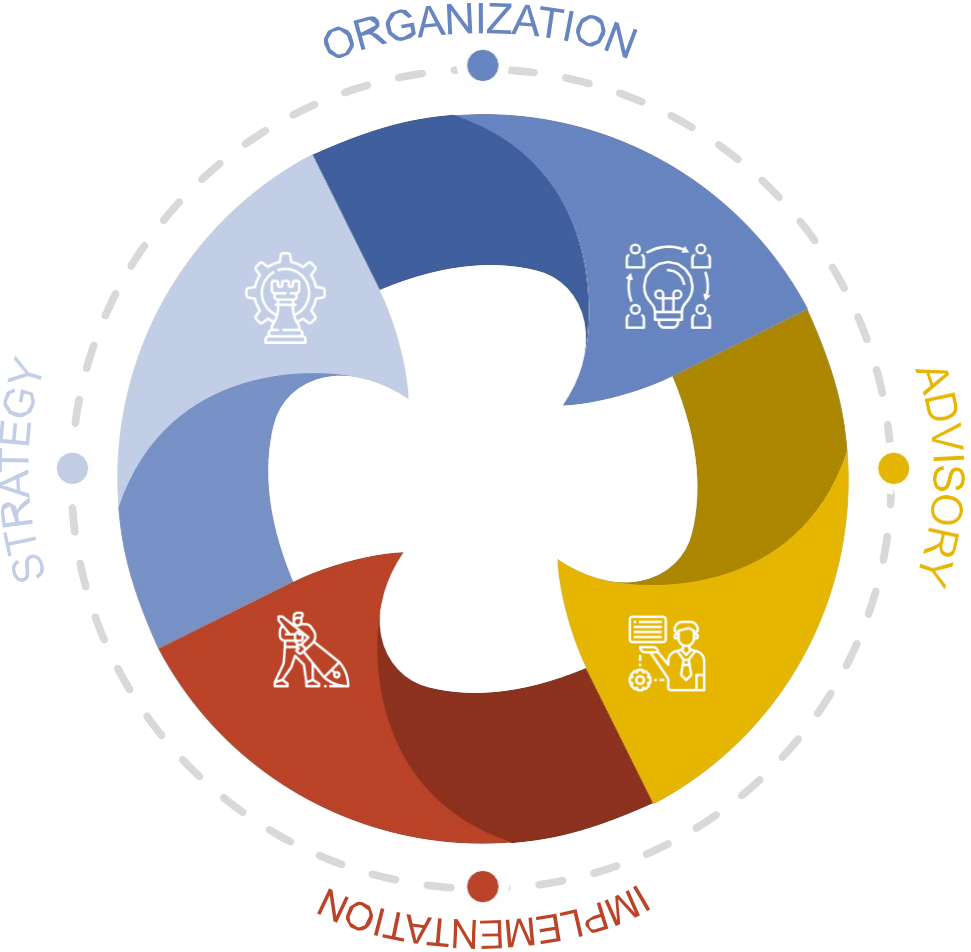
Aligning sustainability strategy with business strategy

will enable a company's sustainability efforts to deliver value to the business, especially when the sustainability strategy is translated into clearly articulated goals, metrics, and lines of accountability across the organization

IMPLEMENTATION

Adopt technologies to manage and support Sustainability Agenda

From energy-efficient solutions, to innovative systems and applications based on digital twins, AI, and Private 5G that guarantee organizations to capture, measure, and improve value from sustainability efforts



ORGANIZATION

Embed sustainability into business functions

An organization's setup should align with its overall sustainability approach and strategy, building cross-functional leadership teams to drive their programs: integrating sustainability into more of their core business functions, from finance to sales and marketing and HR, and for functional leaders to have their own sustainability action items

ADVISORY

Enhance governance for better results

Good governance structures allow to oversee and manage sustainability efforts in order to drive better results from it. In addition, integration with business processes allows the habilitation and monitoring of some key success factors, such executive-team oversight and clear lines of accountability.

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