Syntphony Smart Sustainability
Water Management



Water Management

Syntphony Water Management is our omnilabel solution for the Water Management System, designed to digitalize and optimize water network management, providing a data-driven approach for more effective and sustainable decision-making.

- Insurance
- Telco, Media & Technology
- Energy & Utilities
- Retail
- Manufacturing & Consumer Packaging Goods
- Automotive
- Healthcare, Life Sciences & Pharma

Why syntphony ?

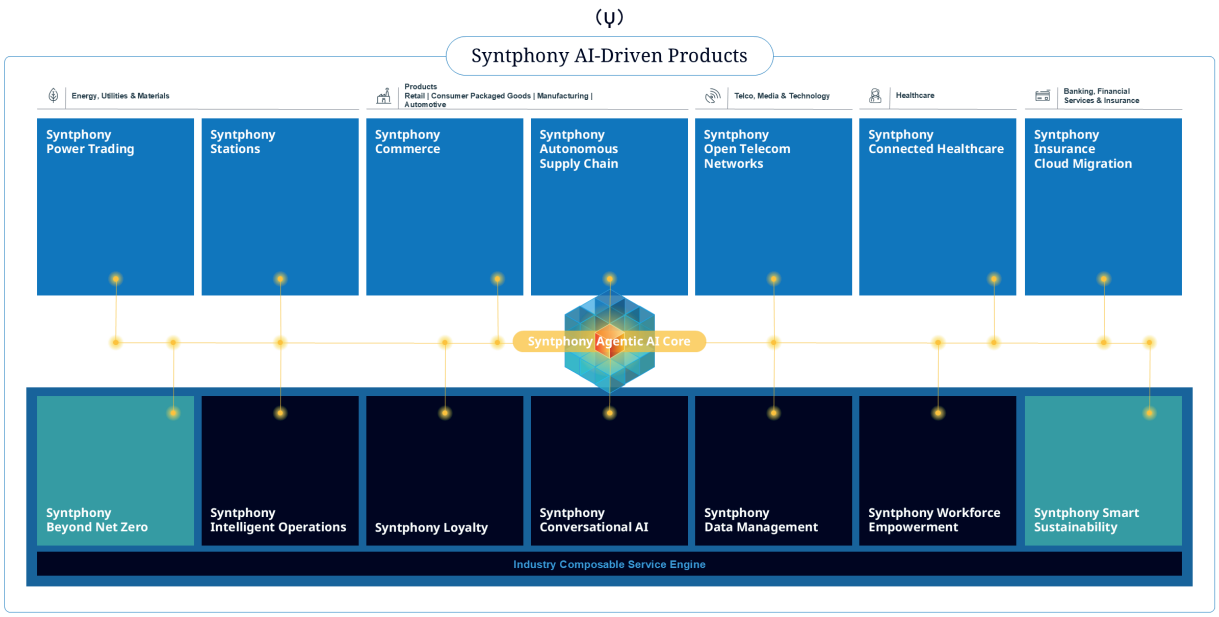
We develop products and solutions that are in tune with businesses



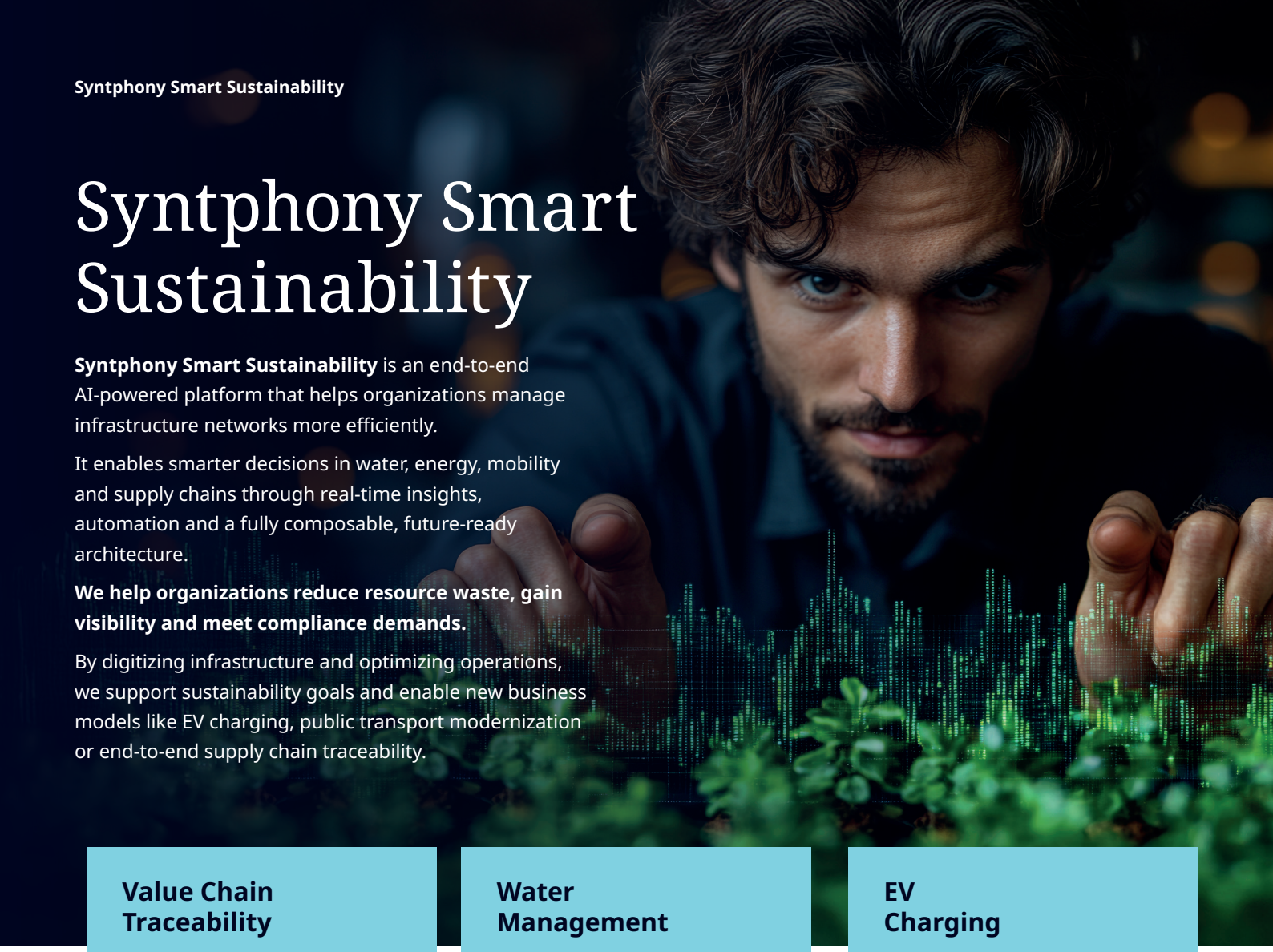
Syntphony is the composable platform of digital products and solutions from NTT DATA, created to help global organizations accelerate innovation, align business strategy with technology, and scale transformation initiatives with speed and efficiency.

Designed for enterprises that demand flexibility, modularity and integration, Syntphony offers a portfolio of ready-to-deploy, enterprise-grade digital products developed by NTT DATA's global talent network. By combining business consulting expertise, proprietary technologies and industry knowledge, the Syntphony ecosystem multiplies the value for clients, reducing time to market and unlocking synergies across multiple domains.

Syntphony is the AI-driven composable platform of NTT DATA, enabling clients to orchestrate scalable, resilient, and future-ready business solutions.



Syntphony Smart Sustainability



Syntphony Smart Sustainability is an end-to-end AI-powered platform that helps organizations manage infrastructure networks more efficiently.

It enables smarter decisions in water, energy, mobility and supply chains through real-time insights, automation and a fully composable, future-ready architecture.

We help organizations reduce resource waste, gain visibility and meet compliance demands.

By digitizing infrastructure and optimizing operations, we support sustainability goals and enable new business models like EV charging, public transport modernization or end-to-end supply chain traceability.

Value Chain Traceability

Blockchain-based traceability to improve transparency, verification, interoperability, and green accountability of the end-to-end supply chain. Sourcing traceability Mgmt. using blockchain technology.

Water Management

Digitalization of drinking water distribution infrastructures:

- Water networks and digital twins' management.
- Water network reporting, alerts and simulation.

EV Charging

Smarter electric vehicle charging for a sustainable future.

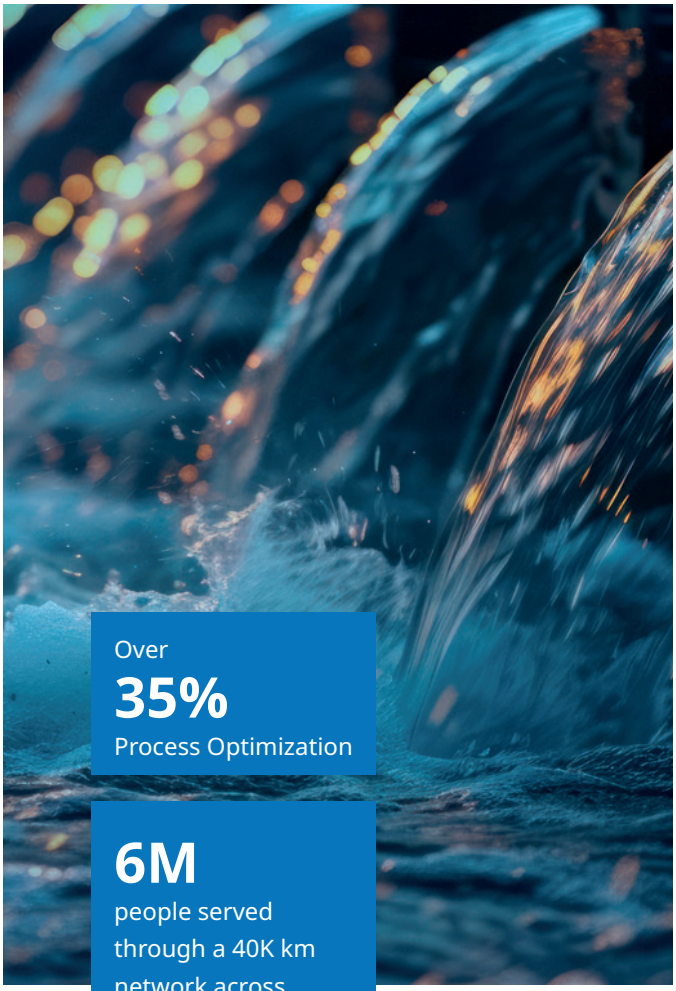
- Charging Point network management.
- Optimized charging management.
- Mobility Services app Rate configuration; CSP - MSP settlement.

Where water & technology flow together

In 2023, the global Smart Water Management market was valued at **USD 17.8 billion**, with a projected compound annual growth rate (CAGR) of **16.8%** through 2028, reaching **USD 38.8 billion.**

Within this market, Smart Water Solutions accounted for **USD 6.9 billion (39% of the total)**, while services generated **USD 4.8 billion (27%)**. By region, North America led with **37.3%** of the market, followed by Europe with **32.6%** and APAC with **21.9%**. In terms of end-users, the Commercial & Industrial segment reached **USD 12.3 billion**, while the Residential segment accounted for **USD 5.6 billion.***





Traditional water network management requires high effort due to a lack of real-time situational awareness, frequent consumption data monitoring, and revenue loss from non-revenue water, compounded by multiple user interfaces for workforce, customer, asset, and system management.

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Industry Cloud Platform with a Composable Platform approach and provide real-time monitoring, efficient resource management, and regulatory compliance using IoT, AI, and cloud technologies. Integrate digital twins for predictive infrastructure management and seamlessly connects with company systems.

Improves water network situational awareness through geolocated, layered map information, near real-time device data monitoring and alerts.

*Global Smart Water Management Market 2024- 2028. Technavio, 2024. Report provided by EMIS

Limitless Water Management: All in One Platform



Syntphony Water Management stands out for its flexible architecture, predictive analytics capabilities, and advanced integration with existing enterprise systems.

The platform is scalable, modular, and designed to adapt to the specific needs of each water utility operator.

Water Under Control: Faster and More Sustainable Decision

A customizable solution for Water Management

- **Omnilabel Solution:** A system built with core functionalities for managing water distribution networks.
- **Custom Solution:** An advanced and scalable solution designed to meet customer needs.

Continuous monitoring of the water network status

- Always up-to-date network characteristics
- Concise and geolocated visualization
- Filters and insights by date or asset type

Reduce water losses and enhance operational efficiency

- District visualization
- Automatic KPI calculation
- Qualitative and quantitative area comparison

Detect anomalies and support maintenance

- Continuous monitoring of the network's hydraulic behavior
- Notification and alert system
- Detailed information on each component

Integrate multiple data streams (IoT, SCADA, GIS) into a single platform

- Integrated visualization of all data sources
- Customizable dashboards and charts for timeframes and aggregations
- Hydraulic simulations based on measured data.



More Control, Less Loss

Network Management

- Digital Twin for meters and network management.
- Network districting for targeted management.
- Management of end-users and their consumption.

Monitoring and Notification

- Automatic notifications on anomalies detected in field measurements.
- Interactive dashboards for continuous monitoring.
- Water consumption estimation at different hierarchical levels.

Analysis and Optimization

- Hydraulic simulations to optimize consumption and prevent losses.
- Pre-allocation of water losses with pressure management strategies.
- KPIs and reporting to measure performance.



AI Agents Powering Predictive and Efficient Water Management

Syntphony Water Management transforms traditional water network monitoring into an intelligent operational ecosystem. Through Sustainability Copilot and WaterGuard Agent, utilities gain continuous operational intelligence, anomaly detection, hydraulic simulation support and proactive decision-making capabilities that improve performance.

Sustainability Copilot

Embedded AI assistant that helps users understand and use the platform, while supporting workflows such as simulation execution and Hydraulic Balance Computing.

AI-enhanced engineering

Kiro and recommended development tools accelerate product engineering, delivery quality and continuous platform improvement.

WaterGuard Agent

An AI-powered operational intelligence agent that continuously monitors water infrastructure, analyzes network behavior and detects anomalies.

Scalable Automation

The platform is designed to evolve toward AI-assisted process automation, enabling data retrieval, usage support and future autonomous workflows.



Transforming water networks into autonomous sustainability execution

From reactive monitoring to AI-powered anomaly detection

WaterGuard Agent continuously analyzes network behavior to identify risks, anomalies and potential failures before they become operational incidents.

From complex system interactions to conversational operations

Sustainability Copilot allows operators to access information, reports and recommendations using natural-language interactions.

From manual leak investigation to intelligent water loss management

AI-powered monitoring and hydraulic analysis accelerate leak identification and intervention planning.

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From isolated operational data to unified network intelligence

IoT, GIS, SCADA and operational data are combined into a single intelligent decision-making environment.

From infrastructure monitoring to autonomous water operations

AI agents support monitoring, analysis, simulations and operational optimization across the entire water network.

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Syntphony Water Management combines Sustainability Copilot and WaterGuard Agent to create an intelligent water operations ecosystem that improves network visibility, reduces water losses, accelerates decision-making and strengthens infrastructure resilience.



Night Flow Monitoring for Early Leak Detection:

Scenario
A water network manager wants to continuously monitor the network to detect leaks as early as possible.

Action
The Syntphony Water Management platform collects near-real-time data from flow and pressure meters. The KPI calculation system constantly monitors minimum night flows (MNF) and compares current values with predefined thresholds.

Result
If the readings exceed the threshold, Syntphony Water Management generates an automatic alarm, indicating a potential leak. The manager can view the affected area of the suspected leak and the involved meters on the network map, speeding up the intervention.

Hydraulic Simulation for Pressure Optimization:

Scenario
A manager wants to reduce leaks in the network through pressure management.

Action
Using nighttime consumption analysis modeling, the manager simulates different pressure scenarios, such as reducing pressure in certain areas during nighttime hours.

Result
The simulation shows the impact of pressure reduction on estimated leaks and water availability, allowing the manager to identify the optimal pressure strategy that minimizes leaks without compromising service.



KPI Calculation and Monitoring for Performance Improvement

1° Scenario
Management wants to monitor the performance of the water network and compare it with industry benchmarks.

Action
Syntphony Water Management automatically calculates a series of standard KPIs at the meter, zone, and entire network levels.

Result
The KPIs are displayed in intuitive dashboards, allowing management to identify problem areas, monitor the effectiveness of corrective actions, and compare performance with other managers.

Leak Preallocation for Intervention Planning

2° Scenario
A manager has a limited budget for leak detection and repair and wants to focus on the most critical areas.

Action
Syntphony Water Management uses measurement data and the digital model to preallocate leaks in different areas of the network.

Result
The manager obtains an estimate of leaks for each area, allowing them to prioritize leak detection activities in areas with the highest leaks and maximize the effectiveness of interventions.

Information Unification for Informed Decisions

3° Scenario
Different departments within the company (technical, commercial, administrative) have difficulty sharing information and making coordinated decisions.

Action
Syntphony Water Management integrates data from various company systems (e.g., GIS, SCADA, SAP) into a single platform.

Result
Departments share updated data, aiding collaboration and helping detect issues like fraud or billing errors.



About NTT DATA

NTT DATA - a part of NTT Group - is a trusted global innovator of IT and business services headquartered in Tokyo. We help clients transform through consulting, industry solutions, business process services, IT modernization and managed services. NTT DATA enables clients, as well as society, to move confidently into the digital future. We are committed to our clients' long-term success and combine global reach with local client attention to serve them in over 50 countries.