Syntphony Smart Sustainability
Value Chain Traceability

Value Chain Traceability

End-to-End Traceability for Modern Supply Chains

With Syntphony Value Chain Traceability, your supply chain gains transparency, trust, and efficiency. A cloud-based platform, powered by blockchain and built on the GS1 international standard, enabling all stakeholders to share and consult reliable information in a single secure repository.

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

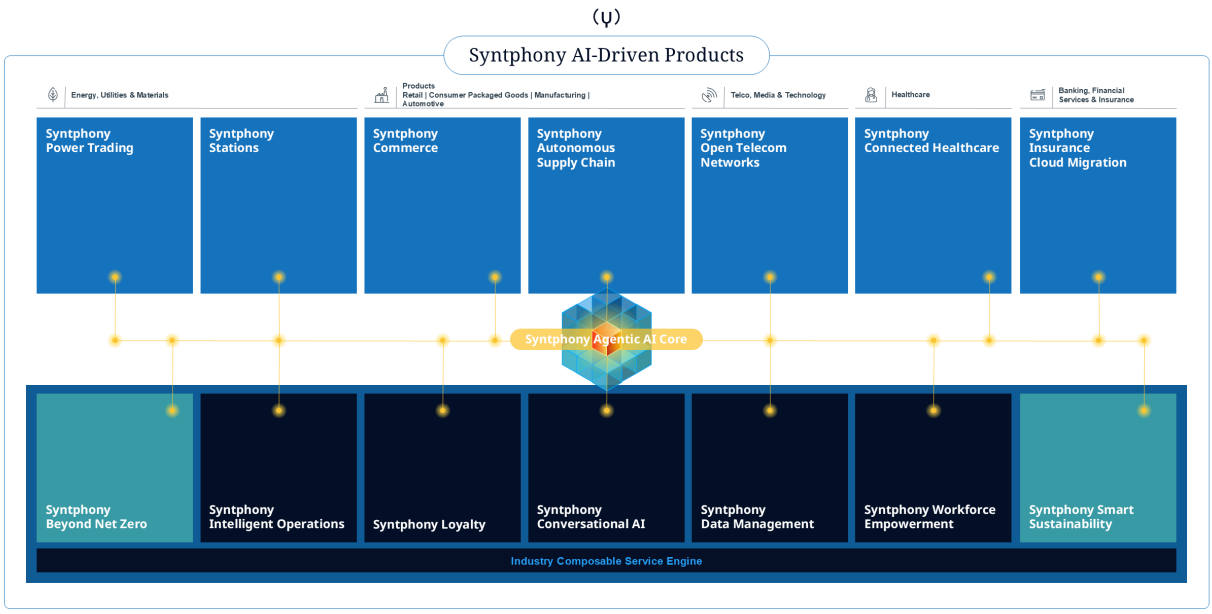
Why syntphony ?

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

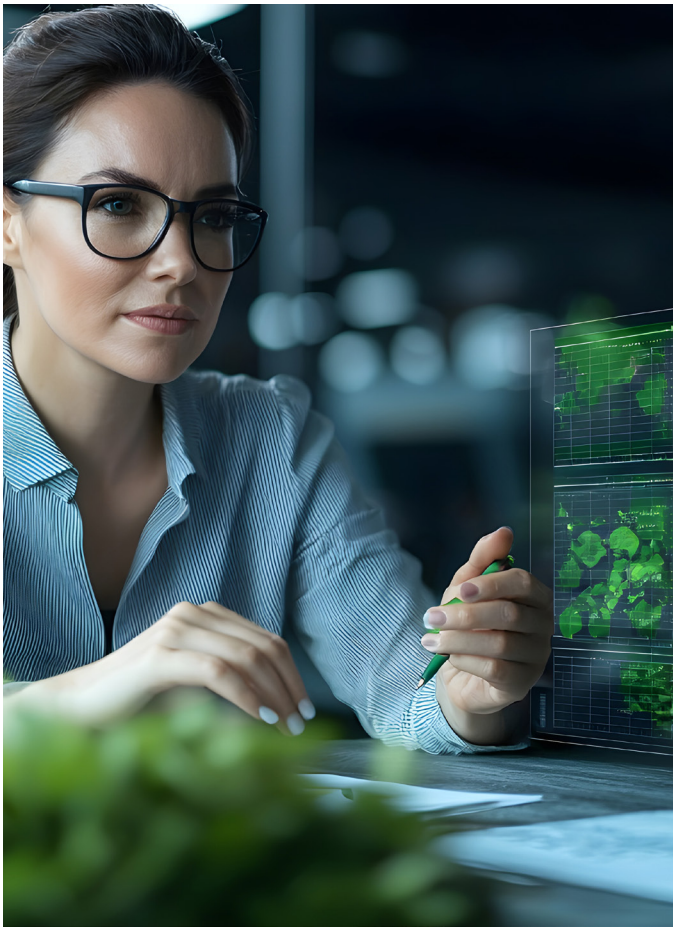
Smarter electric vehicle charging for a sustainable future.

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

Traceability as a Business Imperative in a Changing World

In today's globalized world, supply chains have become extremely complex ecosystems, involving hundreds or even thousands of actors scattered across geographies. Producers, suppliers, certifiers, distributors, and end customers depend on critical data to ensure that products meet quality, sustainability, and regulatory standards. Yet, this information is often fragmented across siloed systems, with heterogeneous data models and no reliable mechanism to guarantee authenticity.

The result is a lack of transparency. For many companies, gathering the documentation required for an audit is a long, costly, and error-prone process. Access to the full product lifecycle depends on the cooperation of multiple stakeholders, each relying on different IT systems, driving up integration costs and slowing decision-making. Meanwhile, the absence of visibility undermines trust across the value chain and exposes companies to regulatory and reputational risks.



Numbers confirm this reality: **68% of companies see traceability as a critical factor for future operations**, yet 58% admit to having no traceability system at all. Worse still, **only 15% have achieved full traceability across their value chains.** In practice, the majority of businesses cannot provide a complete picture of their products' origins, transformations, or certifications.

Regulatory pressure is also intensifying. From the European Union to Latin America, governments are enforcing requirements that demand companies demonstrate the origin, sustainability, and environmental footprint of their products. Carbon footprint reporting, waste management, and tracking of critical raw materials are no longer optional — they are prerequisites for market access.

At the same time, **consumers are more informed than ever.** They expect transparency and want to know the story behind the products they buy. **Was this product sourced sustainably? What certifications back it up? Were quality and social responsibility standards upheld at every step?** Without a robust traceability system, these questions are nearly impossible to answer.

This creates an urgent need for a single, secure, and trusted system that centralizes information, breaks down data silos, and guarantees that every step of the product lifecycle is documented and certified.

Traceability is no longer just a compliance requirement: it is a strategic enabler to build trust, differentiate in the market, and unlock new business opportunities.

Syntphony Value Chain Traceability is a cloud-based platform, powered by blockchain and anchored in the global GS1 standard, that delivers full, end-to-end product traceability across the supply chain. Its purpose is simple yet powerful: to provide a single shared and immutable repository where every stakeholder can contribute and consult reliable information — regardless of their size, location, or level of digital maturity.

At its core, the solution integrates data and documentation at every stage of the product lifecycle. From raw material reception to final distribution, each critical tracking event is transparently recorded, accompanied by the supporting certificates, reports, or inspection results. This ensures that information is never lost or tampered with.

Unlike traditional ERP systems, our solution leverages the decentralized and secure nature of blockchain. **Every record is verifiable, incorruptible, and accessible only by authorized participants**, using digital certificates for secure identity management.

The platform is built on the GS1 standard, the globally recognized framework for product identification and information structuring. This ensures that all data captured is uniform, interoperable, and compliant with international regulations. At the same time, it offers flexibility to customize data models, process stages, and user interfaces to meet industry- or client-specific requirements.

Access is seamless and inclusive:

1. **API integration with stakeholders' IT systems** (ERP, MES, WMS, etc.).
2. **User-friendly web interface**, enabling participation even for smaller suppliers or certifiers without advanced systems.

Advanced features such as carbon footprint (LCA) calculation, certification management, and Digital Product Passports are embedded into the platform. Customers can scan a QR code to instantly access a product's lifecycle story.

In short, Value Chain Traceability is more than just a technology: it is a trust ecosystem that connects stakeholders, ensures regulatory compliance, drives sustainability, and transforms the way businesses engage with their partners and customers.

A Unified Platform for End-to-End Product Transparency

Most existing solutions — particularly ERPs — were never designed to solve today's traceability challenges. They work well for internal process management, but they fall short in enabling cross-company transparency, guaranteeing immutability, or integrating third-party certifications.

Syntphony Value Chain Traceability breaks this paradigm with an innovative approach that combines four key differentiators:

1. **Blockchain as a trust backbone**
   Every recorded event is stored in a distributed, immutable ledger. No participant can alter information once entered, ensuring a robust foundation of trust across the network.
2. **GS1 standard as a common language**
   By building on a globally recognized framework, information is uniform, interoperable, and ready for regulatory compliance. This simplifies integration and future-proofs investments against evolving requirements.
3. **Flexibility and customization**
   The platform adapts to each client's needs — tailoring data models, process flows, and user interfaces. From SMEs to multinationals, every business can achieve seamless adoption.
4. **Proven expertise**
   With multiple active deployments, our team has acquired deep hands-on experience. This ensures faster rollouts, anticipation of potential challenges, and delivery of effective solutions.

The value for companies is clear: greater trust among stakeholders, lower audit costs, faster regulatory compliance, transparency for end customers, and new business models built on reliable data.

In a marketplace where transparency is fast becoming a competitive advantage, **Syntphony Value Chain Traceability positions itself as the only solution that combines security, adaptability, and future vision.**

The Impact of Blockchain Traceability on Your Bottom Line

Centralized Information

All product traceability data consolidated in one shared repository, accessible to every authorized actor. Eliminates data silos, reduces integration costs, and delivers real-time visibility into the complete lifecycle.

Guaranteed Confidentiality

Participants access the platform with digital certificates that control visibility and editing rights. Sensitive information remains protected while enabling secure collaboration across diverse organizations.

Reinforced Trust

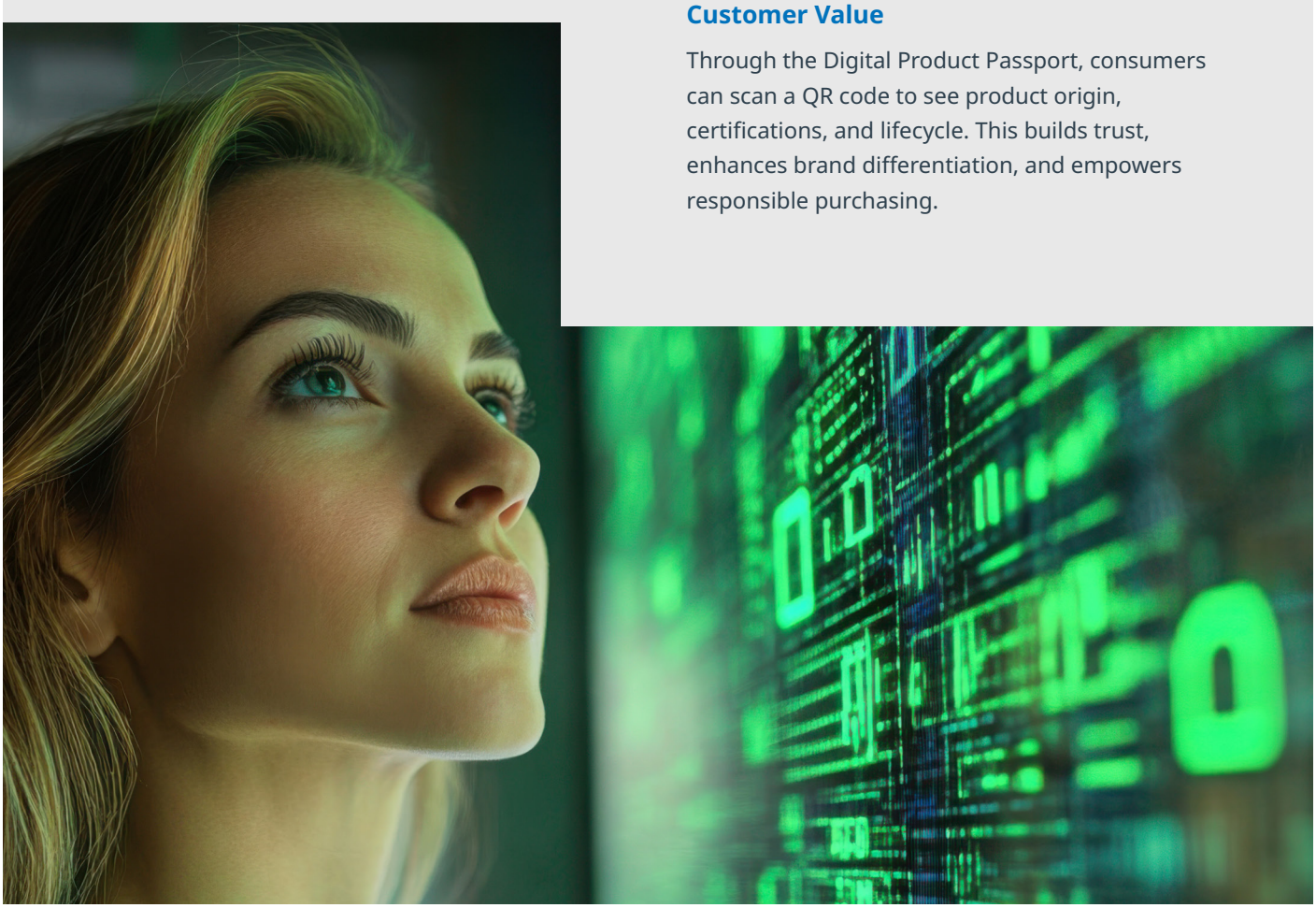
Blockchain and Smart Contracts ensure that every record is verified and validated. Errors and manipulations are minimized, and all participants collaborate on a foundation of trusted, incorruptible information.

Simplified Audits

Centralized, immutable records make inspections and audits dramatically faster. Auditors access the full product history instantly, reducing costs and operational disruptions while ensuring compliance.

Customer Value

Through the Digital Product Passport, consumers can scan a QR code to see product origin, certifications, and lifecycle. This builds trust, enhances brand differentiation, and empowers responsible purchasing.



Essential Capabilities for End-to-End Trust

Document Association

Attach certificates, reports, and documents to every traceability event. Links persist throughout transformations or aggregations, ensuring products can always be tracked with original documentation intact.

Scalability

Built to scale from small value chains to global ecosystems. Handles millions of transactions and participants seamlessly thanks to its cloud-based architecture and API-first design.

QR Code Labels

Generate unique QR codes at any traceability event, bridging the physical and digital worlds. Stakeholders and consumers alike gain instant, secure access to product history.

Certification Management

Implement and manage sustainability, quality, or safety certification schemes directly within the platform. Certifications become part of the traceability record, visible to auditors, regulators, or end users.

Total Interoperability

Connect through open APIs or via a simple GUI. Large enterprises and small suppliers alike can participate, ensuring inclusivity and end-to-end visibility across the entire value chain.

AI-powered supply chain intelligence and trusted traceability

Syntphony Value Chain Traceability transforms traditional traceability systems into an intelligent, AI-driven ecosystem where specialized agents continuously validate data, optimize operations and support informed decision-making across the entire value chain.

Sustainability Copilot

An embedded AI assistant helps users understand and use the platform, accelerating adoption and simplifying day-to-day interactions.

RouteWise Agent

AI agent that dynamically optimizes inventory levels and transport routes, improving logistics efficiency while reducing costs and emissions.

TraceGuard Agent

Blockchain-integrated anti-fraud agent that validates the reliability of data stored across the value chain, increasing transparency, auditability and data trust.

AI-enhanced product engineering

AI tools such as Codex already support development and review tasks, while additional ML / GenAI product features remain part of the evolving roadmap.

From Complexity to Autonomy: How Agentic AI Transforms Value Chains

From complex platform interactions to conversational experiences

Sustainability Copilot provides natural-language access to traceability information, compliance records and sustainability insights.

From fragmented visibility to end-to-end transparency

Organizations gain a trusted and unified view of products, certifications, sustainability attributes and supply chain events.

From manual validation to AI-powered trust verification

TraceGuard Agent continuously validates records, detects inconsistencies and strengthens compliance processes

From traceability compliance to strategic supplychain intelligence

Organizations move beyond compliance to unlock operational efficiency, sustainability performance and supply chain resilience.

From reactive logistics management to autonomous optimization

RouteWise Agent identifies opportunities to optimize transportation, inventory allocation and operational efficiency.

Value Chain Traceability combines Sustainability Copilot, TraceGuard Agent and RouteWise Agent to create an intelligent supply chain ecosystem that increases trust, improves efficiency, reduces risk and strengthens sustainability performance.

Carbon and Sustainability

AI-powered satellite imagery integrated with blockchain validates carbon credit projects, forestry monitoring, and regenerative agriculture. Data is immutable and auditable, ensuring credibility in sustainability reporting.

Green Energy for EVs

Guarantees the renewable origin of electricity in EV charging networks. Operators, manufacturers, and consumers gain assurance that mobility is truly powered by clean energy.

Auditing and Certification

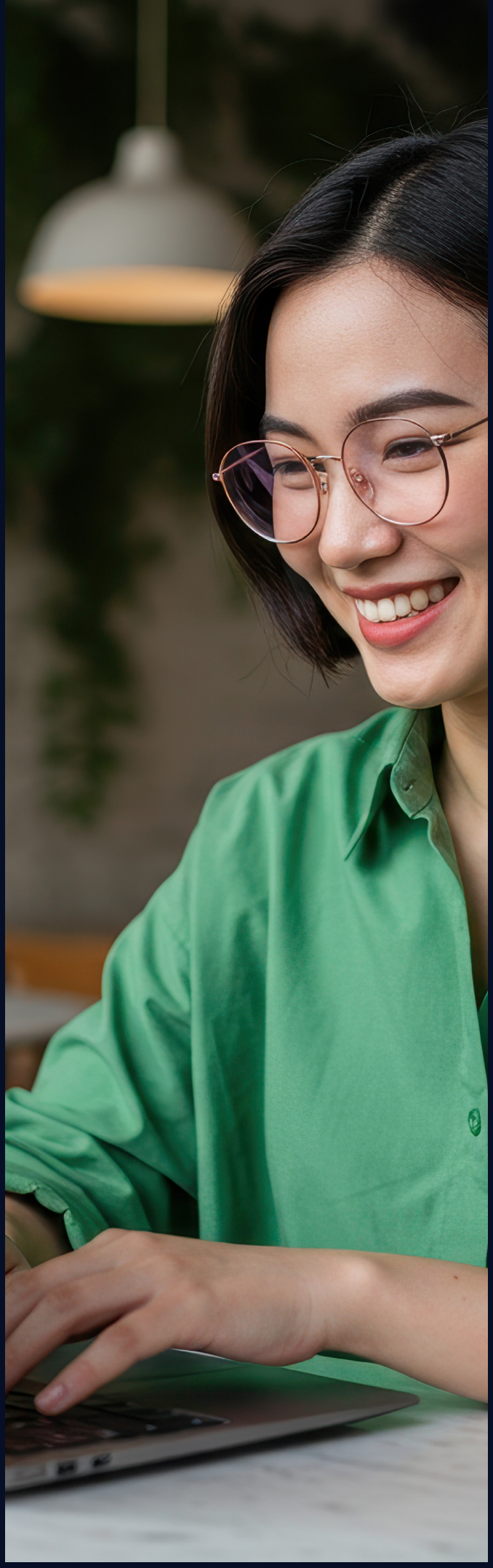
Authorities and certification bodies access real-time supply chain data, reviewing documentation and compliance without manual reporting. Reduces inspection times while strengthening regulatory confidence.

Supply Chain Financing

Banks and financial institutions verify orders, shipments, and documents directly in the platform. Facilitates factoring and trade finance with blockchain-backed trust, lowering risk and accelerating

Digital Product Passport

Consumers scan a QR code to access the complete product story — origin, certifications, processes, and environmental impact. This transparency fosters trust, strengthens customer relationships, and supports conscious purchasing.



NTT DATA | syntphony

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.