

NTT DATA

HOSPITALITY, TRAVEL, LEISURE— TRANSPORTATION & LOGISTICS

WHITE PAPER

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A MORE CONNECTED WORLD

The impact of change

The world has always been in a state of change: stability is not a normal condition of life. Yet it is probably true to say that change is happening faster right now than at any time in the past hundred years. We all know the key factors driving these developments:

- Growing fear of irreversible climate change is transforming the way we generate power, manage our businesses and live our lives.
- Changes in technology, enabling us to buy and sell online, communicate with each other through real-time video and experience the world in different ways.
- Changes in the global economic model, with a rethinking of supply chains and manufacturing bases, together with a wider spread of economic activity and potentially of prosperity, as well.
- The permanent impact of the Covid pandemic on how we travel, consume entertainment and hospitality, and spend our time.

Some changes will prove to be temporary, when others may lead to new realities that affect our way of life permanently. One thing we can say for certain is this: the interconnected group of industries related to everything from tourism to hotels, logistics to travel have been more heavily impacted by these changes than most.

So how will they evolve into a constantly changing future? And how can we help them maximize the potential of emerging technologies, and by doing so, benefit from change?



A broad and interconnected landscape

NTT DATA has brought together six closely related industry segments into a single sector, based on the relationship all these segments have to commercial activities focused around travel and transport. We call this sector: **Hospitality, Travel, Leisure- Transportation & Logistics** (abbreviated to **HTL-TL**).

The six main components in this sector are highlighted in figure 1 below. This shows not only the connections between segments but also the technologies and services each of them uses to support their use cases and provide quality experiences to their different audiences and customers.

The first three components focus on the world of logistics and supply chains. They include **Post & Parcels, Ports & Shipping**, and **Transportation**, which covers integrated supply chain management across every form of transport option (including rail, road, sea and air), together with last mile delivery.

INDUSTRY

TRAVEL & TRANSPORTATION | VALUE OFFERING

Pillars value offering

Throughout different meetings, the following value offering has been identified, which will extensively be applied towards our current and target clients as a lever to obtain our goals.



Figure 1: the HTL-TL industry landscape, showing key related technology concepts.

The other three components focus on people, their leisure choices and their own travel options. This covers Airlines as a specialized segment on its own, then Hospitality & Travel, covering everything from hotels to restaurants, and from business travel to holidays. Finally, we have Sports & Leisure, focusing on key areas of entertainment and recreation. Around these six topics we see the technologies and services of most relevance to each of them.

These components are separate but closely related through use and reuse of data in novel and sophisticated ways. Every part of this landscape connects and interacts in a global environment for the movement of people, products, goods, materials and concepts. Right across this complex environment we see both virtual and physical connections working together and serving each other. This is the heart of our emerging future economy, with very different industries built on the same enabling framework. Now let's take a closer look at how this framework operates.

ENABLING TECHNOLOGIES AND INDUSTRY OVERVIEW

The growing importance of cloud

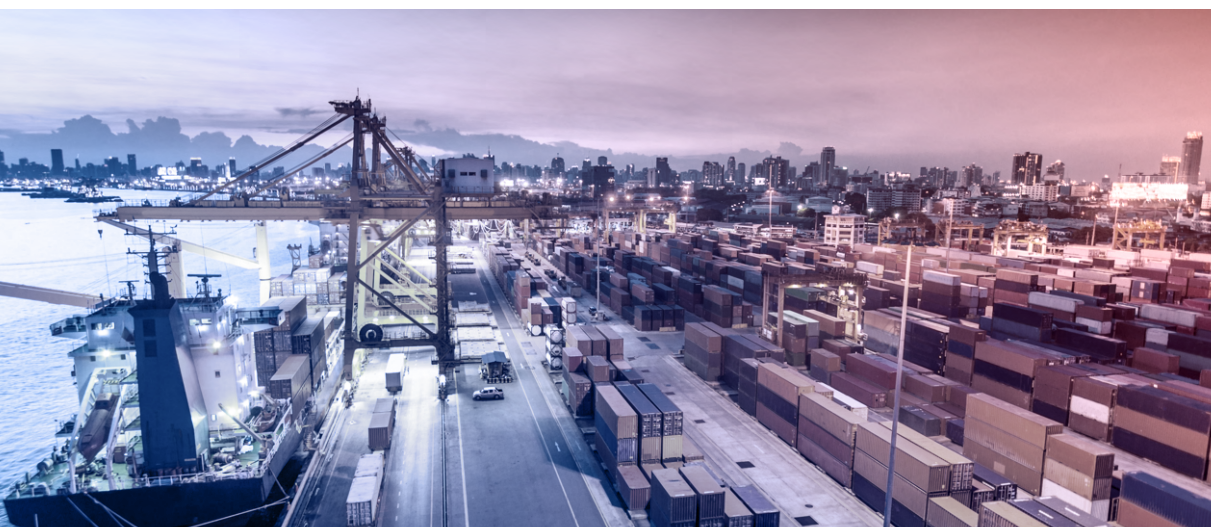
The most important transformational influence on this more open, integrated world of rapid transportation (physical and virtual) is the continued evolution of Cloud. Today, the cloud is not so much comprised of datacenters connected in networks: instead, cloud and network are essentially one and the same. Intelligence is now distributed throughout the network, with Multi-Access Edge (MEC) devices enabling new levels of automation (even “hyperautomation”) as a standard functionality. Not only does this approach have major consequences for cost and speed, it affects how services are built, developed and operate.

The most important characteristic of networked (or distributed) cloud is that it fosters every form of collaborative working, making it easier to create “composable” services and use cases and to collaborate with partners on shared development platforms.

This is especially important for industries related to supply chains and transport because they are, by their nature, distributed and collaborative. In a single major supply chain there may be thousands of players, located around the world, each contributing to a single outcome. In travel and transport, movement takes place across international boundaries, through multiple cities, negotiating different conditions by sea and air, or through complex road and rail networks.

The need for distributed intelligence right across these integrated “webs” of connectivity should be clear. In the past, before real-time data and locally-based decision-making intelligence, these connections had to be made through pre-planned routes, with checks at designated points along the way, leading to delays and errors, and forcing every player in the system to take on a considerable burden of risk.

That is changing now, thanks to the evolution of a global network that incorporates intelligence into its fabric and operates on real-time data flows as a matter of course. Life for many industries in this field may have become more complex in recent years, but the growth of an enabling communication fabric makes it easier for us to face these challenges and make sense of them.



Services and Experiences

Networked cloud is the key enabler of new services in this field, but growing speed and ease of use is also fostered by four other developments, which come together to create a more user friendly, efficient working environment. Figure 2 below shows the services that are most relevant to this sector.

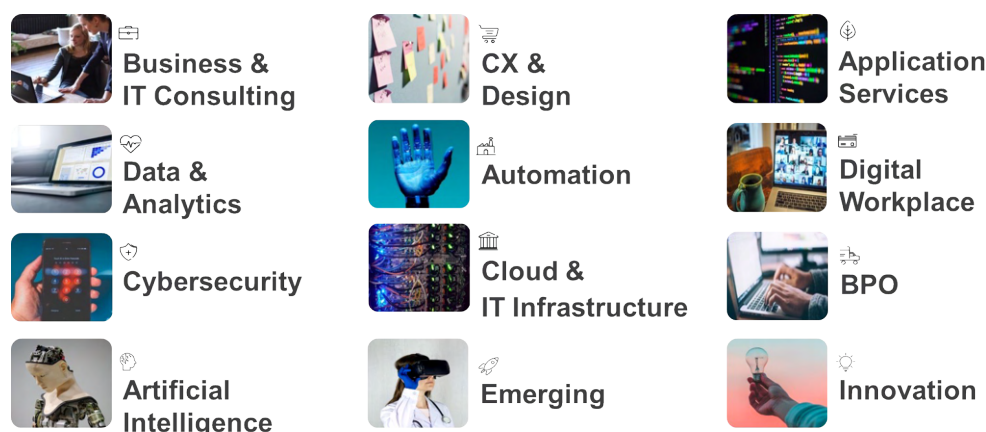


Figure 2: the 12 service building blocks that support and enable the HTL-TL concept.

Mobility as a Service. Countries and regions are facing many challenges in regard to mobility. Traffic, congestion and pollution have increased considerably. Traffic accidents and fatalities occur at high rates. Cities will grow even more. Travelers' needs and habits have evolved, and more flexible mobility options are demanded. Public and private must work to together to solve these issues and deliver to citizens more sustainable, safe, smarter and connected mobility services, such as Mobility as a Service (MaaS), which will be described in more detail later in this paper. Multi-modal services can be used, not just in MaaS for people, but with movement of goods, to ensure secure, efficient travel of people, physical items and information across all media, boundaries and obstacles.

On-demand services. This is no longer simply a matter of "self-service" or SaaS based methods. Users now have unprecedented access to all the options the market can legally and operationally offer. Highly intuitive interfaces enable those purchasing and managing services to select the different elements they require, while being supported by greatly enhanced user experiences.

Assured compliance. As services cover multiple jurisdictions (and the spaces between) it is essential for services and the businesses associated with them to be compliant with all regulations encountered along the way. As the world struggles to achieve higher standards of environmental responsibility, this need is becoming more urgent than ever. The operational platforms created to enable both supply chains and movement of people must- and will- incorporate automated methods for understanding legal and security requirements at every step, and ensure these are met.

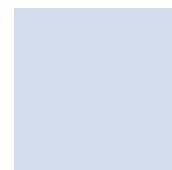
Experiences. The role of Extended Reality, or even of the emerging Metaverse, is highly relevant to this set of industries. In fact, it is a common thread that unites activities as apparently different as sports-related services and remote management of complex operational assets, like cranes and handling systems, at ports. In each case, rich user experiences, enabled by Augmented and Virtual Reality, or by Metaverse-friendly headsets, offers an immersive experience that enables operators to manage assets from a thousand kilometers away or provides sports fans with a sense of being present at a match, or blends real action with instant access to data analytics, and many other use cases besides.

Synergies between Verticals

Finally, we need to be clear about how other forms of synergy affect the business landscape across this complex set of industries, sometimes in very positive ways. That offers new opportunities to businesses able to develop the integrated services made possible by these synergies. Factors of special importance include:

Critical Infrastructure. Connections and data links are being provided as a matter of course between major pieces of infrastructure in cities and countries worldwide. It is now normal to expect robust, high bandwidth connections between, for example, railway stations, airports, sea ports, logistics hubs, large warehousing Centres and transport management locations. In the same way, hotels, sports stadiums, entertainment Centres and travel providers will also expect to be interconnected for ease of service management.

Public-Private Partnerships. Right across the world, and now especially within the European Union, we are seeing close working relationships between public bodies (municipalities, regional governments...) and major private sector providers (construction businesses, specialists in everything from healthcare to transportation) to create jointly developed and managed services, fast and with shared risk.



Environment Social Governance (ESG). The new emphasis on ESG requires connectivity between every responsible body. These include energy and water utilities, waste and recycling companies, travel providers and systems/solutions for monitoring CO2, water quality and other factors that relate to compliance and environmental responsibility.

Smart Mobility. This multi-modal approach is enabled by interconnections between the complex solutions we find inside “smart cities”, different forms of transport and the onboard systems within each method of transport, from private cars to trains to aircraft. The seamless links that deliver multi-modal outcomes are only possible because governments and businesses have invested in very large-scale infrastructure projects. This is now a key enabler for the industries we serve.

The Business Landscape

We have noted six different industry segments in the HTL-TL space, all built on the same basic communication and connectivity framework. We want to look at each of these to highlight both the common ground and the key differences between them, providing a complete overview of trends and priorities in the entire environment, while highlighting components of special significance to each segment.

Post & Parcel. This sector is about the entire lifecycle of moving packages from origin to recipient and sometimes back again. Postal management has transformed the retail sector, in particular, by creating a new business model that combines eCommerce, online retail, tracking and monitoring, last mile delivery and transport management. These composable elements are brought together to deliver integrated solutions that can be tailored to the precise needs of each operator.

Ports & Shipping. The world’s supply chains depend to an exceptional degree on management of sea-based transport, together with handling of goods at ports worldwide.

This presents challenges that range from the purely logistical (handling systems at ports, secure storage, management of dangerous goods and compliance with legislative requirements...) to multi-modal tracking across what can be thousands of kilometers of ocean via, multiple jurisdictions.

Port management requires efficient scheduling of ship movements, the ability to identify and manage all items of cargo on all vessels, security in waters around each port and the land entrances, as well. At a time of severe supply chain constraints, ports and shipping businesses are working together to accelerate movements of goods, minimize time spent in handling, while cutting risks and costs. Data analytics is the key to effective port and shipping management, with real time data the foundation for the entire system.

Transportation. This is one of the largest and most complex sectors of all. Change to an all-electric model is happening faster than expected, while moving to autonomous vehicles is slightly behind projected schedule. Key components include:

- Infrastructure, with new electric charging points, public and private, input to grid capacity management, with digitization of public spaces and management systems.
- Services, with Mobility as a Service (MaaS) likely to grow dramatically, potentially leading to a fast downturn in private car ownership, and account-based solutions to provide a rounded experience for transport users.
- Integrated management, including multi-modal freight and private travel, potentially connected to related solutions in the leisure and supply chain spaces.

Transportation is a complex and strategically essential area of activity. Building targeted solutions in this sector is challenging and requires both great agility and a deep knowledge of the core infrastructures (physical and virtual) supporting all aspects of transport.

Airlines. The airline industry was hit harder by the Covid pandemic than most other sectors. Air movements dropped dramatically over a two-year period and have not yet fully recovered, while growing awareness of the need for reduced environmental impact have put pressure on air travel to become more sustainable and reduce its carbon footprint in every possible way.

Solutions in this sector require a unique blend of components, from security (for passengers, aircraft, freight and airports), to commercial services (how to develop airports as attractive hospitality, business and purchasing hubs), to logistics (managing rapid and often unpredictable flows of people, handling baggage fast and securely).



Air travel is closely supervised by governments and intelligence agencies. Not only are there international regulations to be managed, each jurisdiction has its own requirements that impact on everything from who is entitled to travel at all to how long they spend on the ground, negotiating security and customs. Solutions require components from a wide range of technologies and capabilities to meet these complex needs.

Hospitality & Travel. Hospitality has not yet recovered from the Covid pandemic. As hotels, restaurants and entertainment venues (cinemas, concert halls, cinemas, clubs...) depend on face-to-face interaction, the enforced closure of almost all these Centres caused a crisis for the entire sector, in almost every country.

Businesses and their customers have developed new methods, habits, offers and relationships. Perhaps the most long-lasting impact of all, however, lies in the growing talent crisis caused by shortage of staff, and addressing this issue has been a major challenge. Solutions in this space range from:

- Talent management, locating, attracting and engaging with suitable workers.
- Customer engagement, using travel-related applications and services to connect entertainment and hospitality venues with visitors, or link attractions to people with related interests.
- Improved experiences, using technology potential to add value to a service through ease of use, higher quality or new dimensions to the basic service.
- Operational efficiency, enabling businesses to thrive on lower turnover of visitors through simplifying processes, cutting costs (energy wastage, for example) and enhancing competitiveness.

In every developed economy, this sector accounts for a very high proportion of jobs, tax income and revenue. It is normally vital to the health of the economy in general.

Sports & Leisure. This sector brings together some of the most basic of attractions (going to a sporting occasion, for example) to services and experiences at far leading-edge of emerging technology (Metaverse-enabled activities). Solutions need to include components as diverse as:

- Venue and people management in the physical world.
- Sports technology and physical wellbeing.
- Brand building, extension, development and safeguarding.



- Real time data, with access to XR infrastructures and a point of view on Metaverse.
- Commercial tools, including managing a digital marketplace, retail and financial services, customer profile management and security compliance.

The key requirement is integrating multiple technology and service components to create agile, customizable and constantly updated solutions for a growing number of customers.

The complete landscape. The HTL-TL sector covers a variety of different industries and has extremely diverse solution requirements, as shown in figure 3 below. To operate with confidence in this environment requires a broad range of capabilities, deep industry knowledge and the ability to understand constantly changing requirements in depth.

Capabilities can be divided into “families” or groupings.

- **Commerce & Retail.** Enabling efficient commercialization is a basic requirement.
- **Data flows & analytics.** Providing an accurate, current view of movements and issues.
- **Physical environments.** Managing the real movement of people, vehicles and goods is a common theme in all sectors.
- **Multi-modal.** The ability to manage seamlessly across different networks and jurisdictions is essential.
- **Security & compliance.** Solutions need to be built on a strong foundation of secure data management to meet pedigree and privacy needs.
- **Targeted solution development.** Speed and composability are fundamental to success in this industry.
- **People movement & security.** All solutions impact either on the wellbeing and safety of people, so we construct our approach with this in mind.
- **XR & emerging concepts.** Some of the most advanced uses of technology in the world are happening in this business area.



INDUSTRY

TRAVEL & TRANSPORTATION | VALUE OFFERING

Pillars value offering

Throughout different meetings, the following value offering has been identified, which will extensively be applied towards our current and target clients as a lever to obtain our goals.



Figure 3: the end-to-end technology and service landscape

Finally, in this diagram we can see how closely related and deeply interconnected the technologies that support all these segments truly are. MaaS applies to Airlines, Travel and Hospitality or even Sport. The core technology, however, is multimodal data, which also supports Postal & Parcel, Ports & Shipping and Transportation (Freight distribution).

Different forms of tracking technology, accounts management and even physical security apply across virtually all these segments, applied with variations to deliver the precise outcomes required for each. In the end, these capabilities come together at the Enterprise Core, interfacing with the key systems of record. For many if not most enterprises, all roads lead to SAP- so let's take a closer look at how the Core operates and is developing.

PART THREE: THE SAP VIEW

The SAP market view

Right across the HTL-TL group of industry segments, there is a common technology thread: the role of SAP as the core system of record for the majority of players in this field. Despite the obvious differences between them, they all share a dependence on having a Transactional and Master Data set, a single view of the truth for Finance and Operations that provides a clear, unambiguous center for the business. We find that, as enterprises become more complex, collaborative and distributed in nature, the Core becomes even more important than before, because this is the key to avoiding fragmentation and loss of strategic control.

NTT DATA is one of a small number of Global Business Partners to SAP, and we have a deep understanding of how the Business Core is delivering for each segment today and is evolving into the future. The business Core is the system (or set of systems) that process operational transactions each day, permitting Transactional and Master Data to be accessed by users in every key area, from accounting to supply chain to sales and customer experience or beyond. The architectural vision we apply to SAP within specific industries can be seen below in Figure 4:

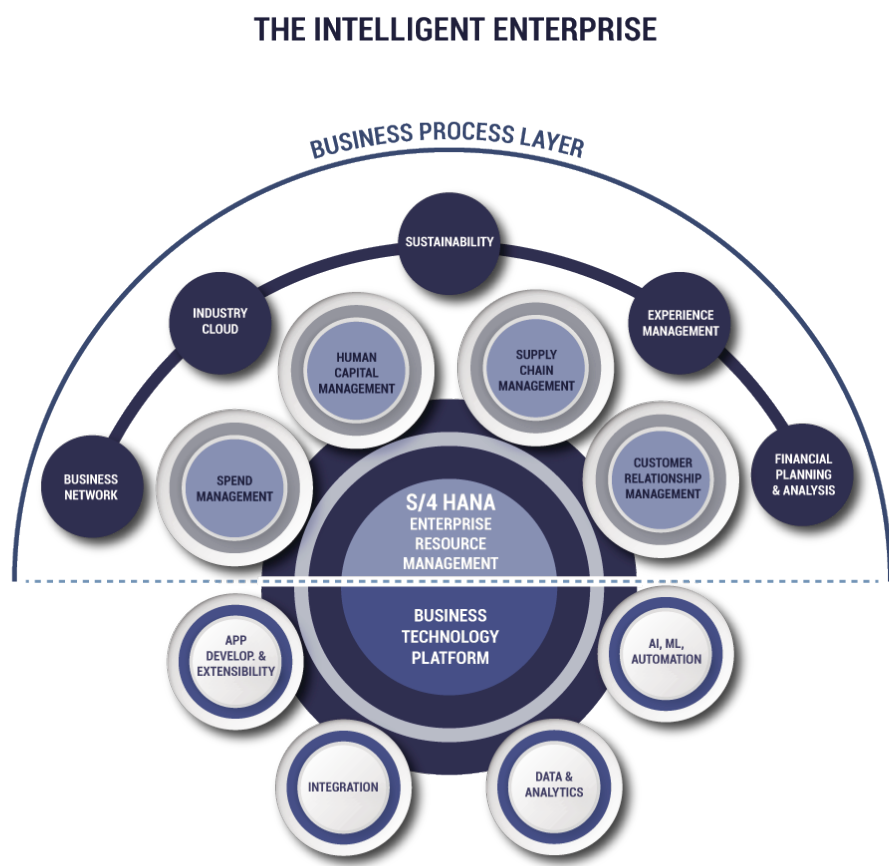


Figure 4: top level architectural view.

In this structure we use what is known as the “orbital approach”, with S/4 HANA at the center. This forms the finance and operational core, with some industry tools built in. Orbiting the center is a layer that includes process or industry-specific standard SAP applications, which carry out highly specialized activities.

We see four key developments in the market that are impacting the IT infrastructures supporting businesses right across the HTL-TL sector.

Customer intimacy. We talk more and more about the need for enhanced customer experiences as the key to understanding, targeting, building better and more individual relationships with all the different customers who will or may use your services. In this broad and complex sector, the experience is critically important to everything we do- and that remains true of everything from consumer-based services to the largest and most economically critical, industrialized processes.

New and more immersive customer experiences are the key to added value and better outcomes. NTT DATA works with SAP to integrate such techniques as XR (Extended Reality) to provide more intuitive interfaces, advanced data analytics and ML (Machine Learning) to provide better insights at decision points, and a continuous stream of new service options to enhance individual use cases.

In this area of the business we are seeing customer experience applications and services becoming more important all the time. Qualtrics, which is part-owned by SAP, is now a major part of this operational landscape, capturing customer sentiment and opinion that can be fed back into the classic CRM capabilities to enrich understanding, drive greater personalization and ultimately make the “market of one” concept a reality.

Rethinking your business. One continuous theme for SAP and its partners is the need, not just to do the same things better and faster, but to do different things. In other words, we need collaboratively to be highly imaginative in developing new services, new methods, new experiences and new business lines for every individual enterprise. The HTL-TL sector offers many examples of imaginative change, some of which we have already highlighted (MaaS is a particularly good example).

SAP helps customers develop and operate new business models through prepackaged solutions, many of them accessed via the SAP Industry Cloud program. One example is the SAP Digital Vehicle Hub, which enables customers and their ecosystem partners to manage vehicle fleets in a highly controlled and efficient manner, enabling easy launch of new use cases and offers, delivering differentiated positioning the market and rapid monetization. In addition, SAP BTP cloud enhancement allows customers to extend their operational Core into new business areas with great flexibility and ease of use. Partners, such as NTT DATA, work with these application and platform “packages” to deliver added value services at speed, redefining the Core from being a passive recipient of data into a driver for growth.

NTT DATA also helps extend customer businesses by connecting emerging technologies to the Core. Examples include using XR and Metaverse-related techniques to enhance sports-fan engagement; using XR and 5G to improve remote management and operation of production assets, such as cranes and

handling systems at ports; deploying smart city systems for improved traffic flows and better use of parking to enhance hospitality and travel businesses; and better tracking options to improve logistics flows and security.

Digital everything. We agree with the long-standing SAP judgement that every system that can be digitized in the end will be. We are moving into a digital native reality, in which operations take place in the cloud, intelligent networks ensure that systems can be virtualized for distributed management and easy collaboration. In the end, all services depend on data. In a digitized world, data flows allow easy connectivity between core systems (internal and those provided by partners), so that customer, financial, performance and logistics data can be shared (in line with regulatory compliance) for much more agile and responsive operation.

By using digitization to create virtualized business models, we can move enterprises towards more intelligent forms of operation. This will involve embedding core SAP capabilities, through S/4 HANA, into business operations, enabling advanced reporting, richer use of Machine Learning and RPA, driving higher levels of automation across the enterprise landscape as it becomes better connected, with greater intelligence distributed across the entire environment.

Fully digital enterprises that live, work and operate in the cloud will be intelligent in the way that was not possible in the past. Access to Core transactional data and applications is the key to reducing process stages and human touchpoints, leading to greater agility, speed and cost competitiveness. That is the key to new business models and higher levels of competitiveness.

Asset enhancement. In a digitized marketplace, every aspect of asset management will be transformed and we can already see this process happening now. Because transport and logistics related assets are connected at every stage, it is now possible to apply active management of assets. Operators can see exactly how each asset is performing and be highly proactive in acting to optimize or intervene with updates and maintenance actions.

In the same way, assets can change routes fast to ensure they take the fastest and most economical available options, while use of remote monitoring and growing potential for automation means they can be managed in fleets from remote Centres. The goal is to increase asset life, keep them performing at best practice levels and improve operational efficiency at all times.

We recognize that HTL-TL enterprises are heavily reliant on assets, from vehicle fleets to handling systems in warehouses to infrastructure networks of every kind. In this sector the same Industry 4.0 principles that are becoming normal in Manufacturing also apply here. We expect to see close connectivity between the Core systems and real-time data gathered from IoT devices, integrated with SAP Intelligent Asset Management as key to enhanced performance in the future.

Managing rapid change

The world is changing fast, and all the interconnected industry sectors related to travel and supply chains are being more rapidly and severely impacted than most. We can see a future economy now in development that is based around these key characteristics:

- Rapid movement of real time data collected from connected arrays of IoT devices, with intelligent networks enabling detailed monitoring of both virtual and physical assets.
- Fast automated decision-making through Edge devices, with a growing role for smart algorithms, Machine Learning and Artificial Intelligence (AI), as it grows and become more mature.
- Transformational user experiences, with a growing role for Extended Reality and even Metaverse concepts.

As we have seen, although the different sectors in this group of industries have different characteristics, ranging from heavily industrial (management of physical goods movements in supply chains) to the leisure focused (hospitality and sports), the technology convergence between them is already close and becoming closer still.

Applications and use cases can be diverse in the extreme and appear to have little in common, but they have common foundations and are based on a similar vision: user-centric, experience-driven, real-time, with deep analytical insights. They also need to be managed globally, through environments that ensure full compliance, strong security management and clear oversight, end to end of the value chains.



PART FOUR: FACING THE FUTURE, NTT DATA AND SAP

Unifying vision and capability

NTT DATA provides sector-specific business and technology advisory services right across this interconnected family of industries, which are all founded on the same basic technologies and use similar platforms for development and growth. Strong Data Management solutions; Distributed Networks, with automation and intelligence devolved throughout the environment; high levels of Collaborative Working; and even a similar group of core applications, centered around a major system of record, such as SAP S/4 HANA, interfacing seamlessly with a huge range of specialized software solutions for individual use cases.

Right across this environment, we priorities Security, rich User Experience, Multi-Modal management of virtual and physical assets, with Real-Time Data at the heart of everything. By pooling our resources to manage end to end across this complex landscape, we achieve economies of scale, are able to repurpose knowledge and experience gained in one sector to benefit others, while building critical mass in terms of expertise, skills and know-how.

The nexus of industries around HTL-TL is where many of the most important technology advances are taking place, right here and now. Combining leadership in Intelligent Networks, AI, XR and Metaverse, NTT DATA is a natural strategic partner in this fast-moving business area.

We saw earlier in this paper how Mobility as a Service is becoming more important to the personal transport sector. NTT DATA has launched its dōcō solution, based on the MaaS concept, where all forms of transportation are integrated into a single platform, allowing users to easily plan, book and pay for their trips using a single app in Spain. MaaS aims to make it easier for people to use public and private transportation options, such as trains, buses, metro, car-sharing, bikes, mopeds, scooters and ride-sharing services, in order to optimize traffic, reduce the need for personal vehicle ownership and improve access to transportation.

From Enterprise Core to Enterprise Extensibility

We have highlighted the major trends that we believe are transforming this sector, now and at a higher speed in the next few years. NTT DATA is working as a strategic partner with SAP to develop ways of building on the existing SAP core applications within most enterprises to deliver added value to customers across the sector.

Our goal is to extend and enhance the efficiency of SAP's core systems by using our collaborative relationships with specialist application, service and system vendors to deliver transformational performance improvements to customers. We do this by focusing on four key change opportunities:

Customers and billing. Combining SAP Core with Qualtrics customer experience management (XM) and CRM (or other applications from software vendors) to ensure smooth integration between experience and financial management. This enables companies across the HTL-TL sector to deliver better levels of satisfaction, targeting customer needs with more precision, while managing all aspects of billing and finances efficiently. Customers receive the right level of service at the right price, vendor companies improve cashflow and do it in a way that also improves customer loyalty.

New business models. NTT DATA is actively working with SAP to build new business models that will enhance competitiveness and drive margins higher for the companies we work with. Many examples of strategically important new models are in development, in which NTT DATA works as a development partner from the very outset with SAP. The Connected Product solution, highlighted below, was described by SAP's CEO as a key partner innovation.

One key example, developed for the Logistics industry, with special application for Life Sciences, is the Connected Product solution. This enables companies to track the precise condition of sensitive products, such as vaccines or solar panels, throughout the value chain. This provides not only a clear ePedigree and Serialization (proof that the product received is the product shipped), but also ensures that conditions such as temperature are maintained at all time, and this can be proven through accurate tracking. Also, it allows for a smoother and more accurate treatment of shipping insurance. Connected Product operates by bringing together the Enterprise Core, data gathered from a global IoT network and input from Core Insurers to deliver a new kind of advanced supply chain solution.



Intelligent operations. By enabling client companies to adopt SAP S/4 HANA, the digital native, cloud-based form of the SAP Core, we simplify their move to more open data flows, greater agility and responsiveness, and a more intelligent approach to every aspect of their core business. For every company that has a major investment in ERP, and that is almost all of them, their requirement is to gain the benefits of cloud (speed, cost efficiency, collaborative working, decentralization and virtualization) without putting their core applications and processes at risk. NTT DATA's industrialized approach to HANA adoption delivers exactly that.

Intelligent asset management. By integrating corporate assets right across extended value chains into the same management environment, it is possible to monitor assets in real time and manage them for optimal performance.

For Correos, the Spanish postal service, NTT DATA is applying SAP's Fiori toolset to manage mailboxes across the country, ensuring that the current status of them all is identified, analyzed and monitored at all times. This is leading to more efficient maintenance activity, higher levels of reliability and improved satisfaction for the public.



The HTL-TL sector is characterized by mobility and rapid change. It is about people and their experiences: how they travel, their leisure activities, the goods they purchase and receive. It brings together everything from logistics to sports, personal travel to connected global supply chains, so it is always going to be in a state of rapid change.

Yet it also requires the most detailed and reliable record keeping (to comply with changing regulations, to enable accurate billing, to manage public safety and the integrity of goods). This combination of a completely accurate and highly efficient Core with a periphery of constantly changing external services is what makes the sector special. SAP is central to it but only when managed by experts in the growing range of services that bring the individual segments to life.

NTT DATA as a Key SAP partner

NTT DATA is not only an SAP Platinum partner but also one of a small number of Global Service Partners, defined by leading analysts as a global leader in the field. In the world of SAP and its extended ecosystem, we have special strengths in:

- Qualtrics, for customer experience, and wider CRM, both within SAP and in connecting the Core to external market-leading application and solution providers. Our combination of consulting and technology leadership delivers integrated, trusted solutions
- Extensibility platform, enabling the Core to be easily interconnected out to all other enterprise functions and capabilities. Our strength in this area is based on large in-house SAP BTP capabilities, our own IP in SAP Marketplace and proven co-innovation with SAP on Supply Chain Management.
- Transformation, based on our unique combination of S4 HANA accelerators, special factories for both greenfield and brownfield projects, with major transformation center in India and our proven change methodology.

Thanks to our industrial heritage, as part of the wider NTT Group, we are also a major researcher and innovator in our own right. In particular, we have exceptional capabilities in managing both IT and OT (Operational Technology) systems, enabling us to provide integrated solutions across what has always been a major divide, and one that still presents challenges to more narrowly focused systems integrators.

Our role as business experts and technology innovators in our own right enables us to enhance and expand the continuing importance of the SAP core to enterprises of every kind within the HTL-TL sector. By using our expertise in Experience Management (through our Qualtrics relationship), CRM, Supply Chain systems, Extended Reality and Metaverse, together with innovations around port management and smart city systems, NTT DATA is expanding the role and scope of the SAP core into the digital native world.

The NTT DATA Transport & Logistics subsector has created a new division that specializes in the explosive growth area of UAVs (Unmanned Aerial Vehicles- or Drones).

We have already launched two new services:

Unmanned Traffic Management (UTM) which provides information management for flight planning, authorization to meet regulatory requirements, tracking traffic information, conflict detection and resolution, with generation of KPIs for operations and simulations.

Unmanned Aerial Systems (UAS), providing intelligent onboard systems that allow clients to improve operational efficiency, minimize risks and provide broader, more detailed insights than before.



HANS JØRGEN JUSTESEN

Director and Product Owner Nordic Region, SCE LoB



PEDRO MUR

NTT DATA SAP global offering lead for Travel and Transportation



TOSHIRO SHIGENAGA

Posicion: Manager, ERP Unit, Global & SAP Business Section

A high-angle photograph of a container ship's deck. The deck is filled with numerous stacks of shipping containers in various colors, including dark blue, light blue, and brown. In the background, several large gantry cranes are visible against a hazy sky. The image has a blue color cast and is decorated with semi-transparent yellow and grey squares in the corners. A dark blue horizontal band across the middle contains the text "JOIN US!" in white.

JOIN US!