

Opportunities for the Transportation Industry in a Rapidly Changing World

A Holistic Approach to
Smarter, More Profitable
Outcomes

OVERVIEW

In urban mobility, fleet management, airports and rail, organizations are seeking to adapt to disruptions, innovate faster, serve customers better and monetize more effectively. Hitachi's transportation practice is a strategic partner that helps solve problems and achieve outcomes by combining IT and operational technology (OT) expertise from the Hitachi Group companies and our ecosystem to benefit passengers, operators and society.





Historic Change Underscores the Need for New Approaches

73% of US transit agencies report severe decreases in ridership and associated revenues, while cancellations of passenger flights, for example, which carry 48% of air cargo, have impacted capacity. Public transit has seen decreased ridership, motor carriers are struggling, and cities are under more pressure to ensure health, safety and predictability as citizens move about the community. However, plenty of new solutions are hiding in plain sight. Consumer demands for quick e-commerce deliveries, and shipper demands for more flexible, resilient supply chains hold massive potential. With the right strategy, it's possible to transform today's significant transportation challenges into opportunities for innovation and improvement.

Seize New Opportunities With New Solutions

The Hitachi transportation practice brings together technology innovation, software and deep industry expertise to deliver the capabilities and insights you need to capture today's opportunities. It enables you to enhance the experience of every customer and passenger, improving trust and reducing risk to strengthen loyalty and ridership. It helps you reduce costs and waste with improved sustainability through stronger operations and performance, while enhancing current profitability and opening up new streams of revenue. Perhaps most importantly, Hitachi helps you ensure the health, safety and security of your passengers and customers.

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89% of mayors believe that smart technologies can help employees return to work with confidence.

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Source:
Harris Poll of US
Conference of Mayors

Benefits of Smart Transportation Across Domains

From transit and airports to fleet managers and cities, today's organizations are increasingly complex, collecting data from sensors, the internet of things (IoT), video and more. Although this data holds vast potential, organizations need better approaches to unify and enrich it with analytics to drive outcomes.

Protect Health and Safety of Workers and Passengers

Reducing risks and maximizing passenger confidence are top of mind for many industries, especially transportation.

Digital Health and Safety Solutions address these needs with new tools that automate detection of PPE, elevated temperature, social distancing, slips and falls, or collisions, while providing the tools to ensure and report on compliance.

Building Holistic Insights for Transit and Traffic

As urban centers grow and become more connected, leaders can use smart technology to harness a flood of new data from IoT devices, video systems and more for a unified view of the big picture.

Urban transportation can be greener, more responsive, reliable and automated with end-to-end intelligence and analytics to optimize operations, reduce costs, and maximize citizen safety and services.

Enhancing Airport Operations and Experience

Although air travel has slowed, airports are still critical to our economy. By deploying video intelligence and 3D Lidar, and unifying disparate systems to reduce risks, they are improving on-time performance and enhancing the passenger experience.

An end-to-end solution can help airport managers apply analytics to data to respond to security threats, serve passengers better and drive terminal revenue.

Empowering Fleets to Meet Growing Demands

Fleet managers must meet unprecedented expectations by driving efficiency and profitability. Smart fleet solutions that put real-time, data-based insights into the hands of decision-makers can help them work smarter, cut costs and unlock new revenues.

With comprehensive solutions, fleet managers gain visibility and efficiency across distributed systems to quickly respond to changes, increase utilization, automate and work dynamically with third parties.

Optimizing Asset Performance and Maintenance

Keeping costs down and ensuring reliability are key concerns for anyone managing vehicles, fleets, or machinery. Data-driven asset health and performance insights help to optimize asset lifecycle performance and costs.

Asset managers can leverage data to keep assets delivering optimum performance - safely, reliably and economically.

Choose the Right Partner to Transform Your Transportation Operations

Transportation organizations have more choices of point solutions than ever, but any single technology simply can't address today's complex challenges. To get out in front of today's imperatives, you need a strategic approach that applies innovative technologies, software and proven consulting services, working seamlessly together.

Work With a Strategic Partner

Addressing today's challenges requires the expertise of a partner well-versed in strategic solutions that leverage many different technologies. Find a partner that's focused on solving problems and delivering outcomes — not simply selling you a product.

Take Advantage of Holistic Solutions

Transportation is complex and multifaceted, its challenges always evolving. Your partner should offer domain expertise and holistic solutions that address multiple issues now and deliver a technology and strategic foundation to build upon in the future.

Look for an Open Approach

A strategic partner with an open approach to the ecosystem can help you take advantage of best-in-class technologies, and make use of your existing or past investments, without locking you into their proprietary solutions.

Choose Proven Technology to Reduce Risk

Look for a partner with solutions that have been successful in multiple customer environments. Their solutions have been tested and proven in the real world, and they have the results to back them up.



"Hitachi has delivered a mobile-based web application that provides Shift Station Supervisors and Managers with a steady flow of data which is detailed enough to complement operational decision-making whilst retaining a simple interface suitable for use in a fast-paced, pressured environment. This is backed up by a dashboard for use at a strategic and planning level, providing a richer data interface suitable for post-incident debriefs, event planning, and understanding longer term trends. The system has received excellent feedback from the station team during its trial period."

- James Metcalfe, Station Shift Manager at Manchester Piccadilly

Enhancing Outcomes Across Transportation Domains

Domain	Customer	Challenge	Solution	Outcome
City Transit	MetroTransit: Minnesota Light Rail is the primary public transportation operator in the Minneapolis-Saint Paul area of the U.S. state of Minnesota and the largest operator in the state.	Several public sector organizations needed an intelligent solution for public safety, transportation and operations, but did not want to purchase and operate separate systems.	After the Minnesota Light Rail transit authority deployed Hitachi Visualization Suite (HVS), the police and Coast Guard added data from security cameras to the solution and are now using HVS across departments and agencies to improve operations and public safety.	Cross-organizational sharing of resources reduces waste and improves efficiency, while providing an innovative IoT solution for a variety of public sector agencies.
City Traffic and Parking	Tequila Inteligente is a small town in the Jalisco region of Mexico which is the source of the agave and drink it is distilled into that bears its name.	Manage traffic, parking, and pedestrian flows to adapt to a rapidly growing tourist influx in the town.	Smart Spaces and Lumada Video Insights provide video analytics to automatically measure traffic, parking and pedestrians.	Improved information for the city and local merchants to better manage city traffic, parking, and services.
City Transit	Porto Metro carries over 150,000 passengers daily throughout this beautiful Portuguese city.	Contactless fare payment allows for high rates of passenger flow, but also fare evasion.	Hitachi 3D Lidar Sensors were deployed as part of a Smart Spaces solution to detect fare evasion and passenger volumes.	Insights to prevent fare evasion, reduce losses, and better manage operations to match customer demand.
Rail	CSX Railroad is a Class I freight railroad operating in the eastern US and Canadian provinces of Ontario and Quebec, covering approximately 21,000 route miles of track.	The company needed to consolidate data from OT and IT systems to provide notifications on positive train control (PTC) system outages.	CSX Railroad implemented an open-source big data platform using an Agile methodology.	The platform enabled specific recommendations and notifications that are actionable by the appropriate users.
Rail	Dutch Railways Provides rail services on the Dutch main rail network, running 4,800 scheduled domestic trains a day, serving 1.1 million passengers.	Attract new customers and become competitive by improving punctuality and reliability of service.	The company implemented a Management Control Reporting System (MCRS) and co-created a change management program.	Program changes resulted in a 24% reduction in service failures, saving over €40m

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Airports	Brussels Airport , an international airport in Brussels, Belgium, houses 260 companies and employs 6,000 workers.	The airport wanted to upgrade its business intelligence (BI) solution to a more cost-efficient, single information-delivery platform for decision-makers, replacing its aging database and reporting tools to gain better insights into operations.	Data integration and business analytics from Hitachi Vantara replaced the airport's Oracle reporting and an IBM extraction, transformation and load (ETL) tool.	The airport's finance, commercial, operations and information communication technologies departments gain agile BI capabilities, enhancing innovation by allowing greater iterative development between business users and developers. Streamlined reporting and other capabilities will save the airport more than 350,000 euros annually.
Airports	Jakarta Airport , working with PT. Angkasa Pura II (Persero), one of the State-Owned Enterprises engaged in the airport services and airport-related services in the Western part of Indonesia.	The airport wanted new insights to improve management of safety, operations and customer experience.	Video analytics to measure activity on the curbside, passenger flows, and unify disparate data types and systems across the airport.	Improve operational management, increase awareness and provide an excellent customer experience for over 100 million passengers annually.
Fleets	Teletrac Navman is a leading software-as-a-service (SaaS) provider leveraging location-based technology and services for managing mobile assets, tracking and managing more than 500,000 vehicles and assets for 40,000 companies worldwide.	The firm's existing static reports provided limited value and scalability. Teletrac lacked a holistic view of its segmented data, and capturing, aggregating and processing daily event data on driver performance, safety, fuel usage, diagnostics and other criteria was challenging.	The Pentaho platform from Hitachi Vantara enabled Teletrac to provide customers with self-service reporting tools, benchmark data and access to third-party data, for a 360-degree view of its business.	Teletrac now provides its fleet management customers with key insights to drive behavior changes, improve efficiency, and expand margins. The enhanced visibility has improved customer retention, revenue growth and customer satisfaction.
Fleets	Caterpillar Marine Asset Intelligence is vessel monitoring and analytics subdivision of manufacturing leader Caterpillar Inc.	With trillions of sensors creating massive data sets, Caterpillar required a solution that could streamline their complex data integration and transformation process.	Data integration of IoT sensors, enabling predictive maintenance and business analytics.	Improved efficiencies, minimized downtime and dramatically reduced maintenance costs for their customer base of industrial fleet owners.

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Hitachi Vantara's Transportation Practice

Transportation organizations need to look beyond tools and technology alone and concentrate on addressing today's core challenges by enhancing their performance, reducing costs and tapping into new revenue streams. Hitachi Vantara's transportation practice is unique in its ability to deliver:

Key Data Points

- A strategic partnership focused on understanding your organization and its distinct challenges, and positioning you to realize the outcomes you envision
- An open, flexible ecosystem approach that brings together the best of Hitachi and its partners, perfectly aligned to your organization's unique imperatives
- Proven solutions that have been shown to deliver measurable results for global customers across transportation domains
- A holistic approach to transportation, encompassing leading-edge technology, software and consulting services based on decades of OT and IT experience in the transportation industry.

Hitachi builds its own trains, operates transit systems, and serves transportation customers across the globe. We're taking the lead in helping rail, airports, and fleets become smarter and safer, enhancing revenues and boosting efficiency. Hitachi solutions unlock the potential of data, IoT and analytics to improve how people work and live.

For more information on how Hitachi can help you address today's transportation challenges, visit <https://www.hitachivantara.com/en-us/solutions/industry-solutions/transportation.html> or contact your Hitachi representative.



We Are Hitachi Vantara

We guide our customers from what's now to what's next by solving their digital challenges. Working alongside each customer, we apply our unmatched industrial and digital capabilities to their data and applications to benefit both business and society.

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