

News Release

World first as entire city's transport network is digitally connected with Hitachi's new Smart Mobility suite

- New mobile app allows passengers access to every mode of public transport in a city “hands-free”, using Bluetooth sensors to connect busses, trains and even funiculars. The [360Pass](#) app gives users the ability to hire e-vehicles, pay for parking and identify e-mopeds.
- The cheapest possible fare automatically calculated at the end of each day based on the passenger's actual usage – and without needing to purchase a ticket.
- For transport authorities, the new suite of smart mobility software empowers operators with a “digital twin” of the entire transportation network, giving real-time visibility of passenger & multi-modal transport flows around any city.
- Launching today, Hitachi's [Lumada Intelligent Mobility Management](#) suite, includes powerful tech for passengers and transport operators alike – connecting smart ticketing, traffic flow management and e-charging through a common analytics platform.

Wednesday, 20th July: In a move that is set to trigger a revolution in how people around the world will travel in towns and cities, Hitachi Rail has digitally connected public and private hire transport across an entire city. The milestone has been achieved using technology from Hitachi's new smart mobility suite called [Lumada Intelligent Mobility Management](#), launched today.

The technology can be used in towns and cities across the world. In the launch programme – in Genoa, Italy – Hitachi has connected 663 buses, 2500 bus stops, the metro line used by 15 million p.a., two funiculars, one historic hillside railway, 10 public lifts and two suburban bus routes that span 50km. Users also have the power – via the touch of a button on their mobile phones – to hire an electric car, pay for parking or find an e-moped.

Power to the passenger

As part of the world-first trial, [Hitachi's 360Pass smart ticketing app](#) has eradicated the need to purchase a traditional paper ticket ever again; or to ‘touch-in’ or download multiple apps for different transport services.

The 360Pass connects Bluetooth sensors that know when a passenger with the mobile app has boarded, how far they have travelled and when they disembarked. Users can take multi-modal journeys, but the 360Pass system will ensure they only pay the best possible fare at the end of each day.

The 360Pass app offers more personalised information about public transport journeys, including the fastest and most convenient multi-modal route options and real time journey updates.

It also allows passengers to check how busy bus services are through the app, enabling them to choose less crowded services. This feature can help allay the increased anxiety about crowding post-Covid19, which a recent independent study found to be the second biggest determinant passenger satisfaction.¹

360Pass is being delivered in partnership with the city's public transport operator, AMT, and the Municipality of Genoa, using the local brand name GoGoGe. The technology is part of the municipality's drive to boost the usage of both public and private e-hire services. The innovative project aims to provide more easily identifiable solutions to the ‘last mile’ problem faced by passengers and public transport authorities around the world.

Game-changer for transport authorities and operators

Genoa, home to two-thirds of a million people, faces similar transport challenges to cities around the world – congestion, emissions and delivering quality services. The ambition on behalf of the city's

leadership is to unlock a step change in the use of sustainable mass transport across the metropolitan area.

Technology offers a way to reduce the reliance on private vehicles – helping the municipality to meet its goals for congestion relief and reducing emissions – while optimising costs and the provision of transportation across the region. In cities such as Istanbul or London, drivers currently lose an average of 142 and 227 hours per year² in congestion respectively, and optimising multi-modal public and hire transport can slash these wasted hours.

In addition to the 360Pass mobile app for passengers, the Lumada Intelligent Mobility Management suite gives operators the ability to connect, scale and optimise their city's entire transportation network in real time.

The over 7,000 Bluetooth sensors installed in Genoa allow the creation of a “digital twin” of the region's transport and passengers' end-to-end multimodal journeys. This real-time electronic map of how the city is moving is a powerful tool to allow operators to optimise services, timetables and create a system that better accommodates the changing peaks and troughs in passenger demand. It can identify the issues that deter public transport usage, such as congestion, emissions, crowding or gaps in services.

In addition to smart ticketing, the suite can combine solutions to help operators control traffic flow and service patterns in real time, allow operators to react more effectively to disruption or large scale events (concerts or sporting) happening across the city. Further, by join up information about the level of emissions and congestion in different geographical area, it allows operators to make smart decision about where to target electrification of services first and prioritise locations for charging for e-bus and e-car fleets and infrastructure.

Alessandro de Grazia, Group Head of Smart Ticketing, Hitachi Rail, said: “Hitachi's Lumada Intelligent Mobility Management suite is a world first for smart mobility and can improve urban transport in cities around the world. For the first time, passengers can plan and access the most convenient multi-modal journey for the cheapest fare, without ever removing their phone from their pockets.

“Today, cities face the challenges of growing public transport use to reduce emissions, cut congestion and boost their recoveries. Our new solutions – proven in Genoa – provide a uniquely powerful platform for operators around the world. From Dusseldorf to Dubai, Istanbul to Toronto – we can help operations connect, scale and optimise their entire transportation network through a single platform.”

Marco Beltrami, President, AMT [Genoa's public transport operator] said: “GoGoGe, the name we chose in Genoa for Hitachi's 360Pass app, offers a unique travel experience to our customers with the game-changing hands-free technology. We can follow our customers throughout their journey, across all transport systems, getting a clear picture of their end-to-end journey.

“Deploying Hitachi's technology is a great opportunity for both AMT and the city of Genoa to be a leader in smart mobility and test innovative technologies that will make a big difference to travel in cities around the world.”

As a global leader in transport and technology, Hitachi's vision for smart mobility is to digitise and optimise every part of the journey across different types of public transport. The new suite embodies Hitachi Rail's holistic vision for smarter mobility, incorporating solutions across three key areas: smart ticketing, mobility management and electrified mobility solutions. While the firm is known for delivering trains and rail infrastructure around the world, including the iconic shinkansen bullet trains, the digitisation of transport systems is an important and growing area of focus.

ENDS

Note to the editors

About Hitachi's Lumada Intelligent Mobility Management suite

Lumada Intelligent Mobility Management is Hitachi's new suite of smart mobility solutions for cities, transport operators and passengers.

The suite represents Hitachi Rail's 360° vision for smarter mobility, incorporating solutions across three key areas:

- smart ticketing (including 360Pass)
- flow management for people and vehicles; and
- electrified mobility solutions

Using the suite's 360Motion platform, a real time analytics tool that creates a digital twin of a city's entire transportation network, operators can connect, scale and optimise any combination of these services. As a flexible platform, 360Motion can integrate technology from any existing provider, or draw from the range of solutions within the wider Hitachi group.

By offering 'as a service' business models to customers, Hitachi Rail aims to make it easier than ever for cities, operators and passengers to accelerate the transformation to more sustainable transportation.

For more information, please visit: [Smart Mobility | Hitachi Rail](#)

About 360Pass: "hands-free" Smart Ticketing technology

Part of Lumada Intelligent Mobility Management's smart ticketing offering, Hitachi Rail is also launching the new 360Pass mobile application for passengers, available on iOS and Android smart phones. The app, launched now available in Genoa, will be rolled out on a city-by-city basis in partnership with local transportation authorities and operators.

The connected Bluetooth sensors are easy to install and powered by batteries that last for around five years. The installation and set-up of light infrastructure in Genoa took less than six months to be fully-operationally ready. Having proved successful with city's complex mix of public transport modes and challenging geography (dense, hilly and built around successive bays and valleys), Hitachi Rail is confident the technology could be applied to any city around the world.

In addition to conventional mobile ticketing capabilities, such as e-ticketing and QR codes, 360Pass is offers innovative hands-free "BeIn BeOut" technology that provides ticketless transportation across multiple modes of transport.

The technology uses a network of sensor nodes, installed at strategic points across a transport network, including on trains, buses, parking lots at stops and stations, which connect with the user's 360Pass app via Bluetooth.

Once a passenger begins a journey, the app connects with each sensor it passes on the route, recording the full multi-modal journey; for example, different sensors will register a passenger moving between a bus and a metro service. The app then uses the recorded data to calculate the best-priced fare for the passenger at the end of the day, and sends a receipt for the final fare at 3am the next day.

The app also provides more personalised information to the passenger, based on the context of their journey – predicting crowding at future stops, and alerting passengers as they approach their destination.

Aside from providing a seamless experience for the passenger, the technology can deliver significant benefits for operators, including enhanced data on passengers' full multi-modal journeys, supporting the

optimisation of timetables. The technology also has the potential remove large queues and bottlenecks around ticket barriers by using the technology at the entrance to platforms or vehicles.

Hitachi Rail's new launch programmes, and decades of experience conventional ticketing, are proving the viability of technology that connects multiple modes of transport across an entire city or region.

1. Source: An [independent survey](#) of passengers completed by Transport Focus about views on travel.
2. Source: [INRIX congestion scorecard](#)

About Hitachi Rail

Hitachi Rail is a fully integrated, global provider of rail solutions across rolling stock, signalling, service & maintenance, digital technology and turnkey solutions. With a presence in 38 countries across six continents and over 14,000 employees, our mission is to contribute to society through the continuous development of superior rail transport solutions. We are proud of our global achievements, from our world famous 'bullet trains', to our signalling solutions and turnkey projects, state-of-the-art traffic management and digital solutions. Drawing on the wider Hitachi Group's market-leading technology and research-and-development capabilities, we strive for industry leading innovations and solutions that can deliver value for customers and sustainable railway systems that benefit wider society. For information about Hitachi Rail, visit www.hitachirail.com

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