

For immediate release

HSL Helsinki relies on container-based on-board computer technology from INIT

Modern on-board solution for all modes of public transport in the Helsinki region

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The Helsinki Regional Transport Authority (HSL) has commissioned INIT to deliver a state-of-the-art on-board system for its entire vehicle fleet. The project includes container-based software, vehicle hardware, and services and will be rolled out across approximately 1,700 buses, trams, metro cars, trains, and ferries. The new system will create a uniform, future-proof platform for vehicle operations across all modes of transport.

At the heart of the solution is the COPILOTcontainer, a Docker-based on-board software platform that delivers all operational, driver, and communication functions of the on-board computer. By consistently leveraging container technology, INIT is advancing the technological evolution of modular open technology platforms while enabling flexible, scalable, and long-term maintainable vehicle IT.

Future-proof vehicle platform based on open standards

HSL will receive a fully integrated, standards-based, and highly scalable system built on ITxPT services and open APIs. The containerized solution will be deployed across all vehicles. Thanks to container technology, individual software components can be operated, updated, and extended independently of one another.

The system supports both existing hardware interfaces for vehicle peripherals and HTML5-based applications for state-of-the-art passenger information displays. It is also consistently designed for offline operation, ensuring continuous system operation even in tunnels, on ferries, or under conditions of reduced bandwidth. The result is a future-proof on-board architecture that supports technological innovation and allows new applications and services to be easily integrated.

Seamless integration into HSL's existing ecosystem

A central element of the project is the comprehensive integration of the new on-board system into HSL's existing IT and system environment. To achieve this, INIT is developing a wide range of interfaces, including connections to passenger information displays, traffic signal priority modems, ticket validators, passenger counting sensors, and existing on-board computer control panels used in trains and metro vehicles.

We chose a container-based solution because we want a unified, flexible, and future-proof platform for our entire fleet across different modes of transport. Container technology allows us to update and expand functionalities quickly without disrupting services for our passengers. INIT stood out by offering a technically advanced, standards-based, and seamlessly integrated solution that supports both our current operational needs and our long-term development vision.”

— Tuomas Savikangas, Director HSL Technology

In addition, INIT is providing vehicle data middleware as a central integration layer between vehicles and backend systems. This middleware initially supports real-time communication based on the Nordic NOPTIS standard and may transition to SIRI in a later phase if opted.

Standardized driver workstations for bus operations

As part of the project, the 1,350 buses operated on behalf of HSL will be equipped with INIT's proven TOUCHmdt driver console. The device will be enhanced with an NFC reader for contactless driver log-in and provides an ergonomic, clearly structured user interface for daily operations.

Flexible on-board computer strategy for long-term efficiency

The COPILOTcontainer software is a key element of INIT's new on-board computer strategy based on container technology. Multiple containers with different functions can now run simultaneously on a single platform. This reduces the number of devices required in the vehicle while allowing updates, enhancements, and new functions to be implemented flexibly.

COPILOTcontainer runs on the latest generation of the INIT on-board computer COPILOTpc as well as on high-performance third-party vehicle platforms supporting ITxPT and open APIs.

Image 1: The new container-based software will be rolled out across approximately 1,700 buses, trams, metro cars, trains, and ferries. (© INIT)

Image 2: HSL will receive a fully integrated, standards-based, and highly scalable system built on ITxPT services and open APIs. The containerized solution will be deployed across all vehicles. (© INIT)

About INIT

As a worldwide leading supplier of integrated planning, dispatching, telematics and ticketing systems for buses and trains, INIT has been assisting transport companies in making public transport more attractive, reliable and more efficient for more than 40 years. Today, more than 1,400 transport providers rely on INIT's innovative hard- and software solutions.

The unique selling proposition of INIT's integrated telematics system MOBILE is that it comprises all of the daily tasks of public transport providers:

- Planning & Dispatching
- Ticketing & Fare Management
- Operations Control & Real-Time Passenger Information
- Analysing & Optimising

With INIT's integrated solutions, transport companies can master all requirements of electromobility and strengthen their role as mobility broker of their region by establishing a mobility platform. An excellent package of operational services completes the INIT offering.

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We look forward to the publication of this release and request a sample copy.