

## Unleashing additional digitally enabled rail capacity

- **Siemens Mobility's digital ecosystem approach, allowing data from different sources to be integrated via APIs, leads to more capacity and energy reduction**
- **Innovation within train procurement: Mireo Smart and Smart Train Lease**
- **Presenting the high-speed train Velaro for Egypt**
- **Siemens Mobility is showcasing its innovations and solutions in hub27 at booth 230 and in the outdoor exhibition area**

Siemens Xcelerator's unveiling at InnoTrans 2022 signaled the advent of a truly open ecosystem for seamless digital collaboration. At InnoTrans 2024, Siemens Mobility will showcase the rail industry's huge potential to reduce society's overall carbon footprint, with digitalization as a key enabler. This includes optimizing maintenance, maximizing the use of existing infrastructure, and providing solutions for seamless travel. One of the biggest barriers to a full-hearted adoption of digitalization, however, is vast quantities of data locked in closed systems. The answer lies in accessing these data via standardized application programming interfaces (APIs) and connecting them with AI-driven analysis and evaluation tools. As a leading provider of technology, Siemens Mobility has identified around 100 APIs within the rail ecosystem and has already fully developed a dozen of them.

**Michael Peter, CEO of Siemens Mobility:** "InnoTrans 2024 is the next chapter in our digitalization journey that began in 2018. We will demonstrate the latest innovations that deliver 100% availability of trains, maximized network capacity, and improvements to the customer experience to reach up to 100% occupancy. We will bring connectivity to the next level by making software more modular, using standardized APIs, and move software modules into the cloud for digital solutions that deliver for our customers, passengers and our planet."

One of the most comprehensive examples at InnoTrans 2024, which forms the centerpiece of Siemens Mobility's presence at InnoTrans, is a new, highly collaborative project with Munich's regional train operator, S-Bahn Munich. Functions like fleet control, on-train applications, remote train wake-up & software updates, AI-based maintenance systems with Railigent X, and many other features are made possible thanks to Siemens Mobility's standardized ecosystem approach, which allows data from different sources to be integrated via APIs. As a result, some of the technologies on the new Munich S-Bahn are provided by Siemens Mobility directly, while others developed by the operator themselves or even competitors. That's collaborative innovation towards a shared goal: to promote rail as the best and most sustainable mode of travel for everyone.

### **Maximized network capacity**

At InnoTrans 2024, Siemens Mobility will present a world premiere in signaling technology. The company will showcase how operators can further optimize both network capacities and energy efficiency with the help of digital signaling and electrification solutions. The cloud infrastructure, with its possibility of virtualization and georedundancy of various hardware components such as interlocking and ETCS systems, significantly contributes to reducing maintenance and operating costs.

Furthermore, digital train control systems, combined with Automatic Train Operation (ATO) over ETCS, not only increase capacity by up to 30 percent but also reduce power consumption in the network by up to 30 percent, while punctuality is improved by up to 15 percent.

**Train2Cloud** – Siemens Mobility's digital urban signaling system will showcase latest innovations, such as 5G connectivity, as well as the world's first refurbishment of an existing GoA4 metro system to a new GoA4 CBTC automation system. This significantly enhances the capacity of metro systems.

Furthermore, Siemens Mobility demonstrates how the newest electrification innovations, such as Static Frequency Converters, will bring even more energy-saving possibilities to operators. **Rail Services:** Siemens Mobility will present new Rail Service technologies and products at InnoTrans 2024.

**Railigent X:** This cloud-based application suite combines IoT and AI to optimize rail assets. Railigent X seamlessly integrates with other systems or partner applications through APIs, providing end-to-end process optimization. It can reduce costs due to service delays by up to 40%, minimize unscheduled depot stops by up to 30%, and

lower maintenance costs by up to 15%. One new application within Railigent X is "Health states", a comprehensive decision support model for fleet maintenance coordinators/ECM3. It utilizes traffic light indicators (red, yellow, green) to assess the condition of components.

At **MoBase**, the e-commerce platform for professional railway products and solutions, we offer customers a convenient one-stop procurement experience. With over 350,000 spare parts available, customers can easily find what they need. With the new MoBase repair services, customers are enabled to sell excess inventory to other buyers in the railway industry, reducing waste and optimizing the supply chain. In addition, we present two more innovations for the future of maintenance outside of the depot at InnoTrans to ensure efficient and reliable operations for our customers, accompanied by optimized use of depot capacities.

### **Turnkey**

An interactive table displays our global Turnkey references and how Siemens Mobility realizes the most ambitious transportation projects for customers worldwide. The exhibit demonstrates how the transformation is accelerated by digitalization (e.g. digital twin) and how Siemens Mobility is enabling sustainable mobility with end-to-end solutions.

Siemens Mobility is delivering a Turnkey contract that includes full service for a new 23 km metro railway system with six stations and 12 driverless 3-car metro trains that will serve the **Sydney Metro Western Sydney Airport project**. Siemens Mobility is delivering the turnkey project as a member of the Parklife Metro consortium, along with its partners Webuild, RATP Dev, Siemens Financial Services and Plenary Group. At InnoTrans, we will show a unique 3D virtual experience, which will display all features of the Sydney Metro Western Airport train and is operated by gesture control.

### **Software**

Visitors will have the opportunity to learn more about Mobility Software Suite X and beyond, how Siemens Mobility's proven software solutions optimize their operations and enhance passengers' travel experiences.

**Our TPS.suite** (Train Planning System) supports infrastructure operators and rail companies in optimizing their operational processes. An interactive exhibit explains how **TPS.plan** creates highly accurate and reliable timetables, how **TPS.live**

supports dispatchers through automation and optimization, and how

**TPS.trackworks** enables efficient construction planning.

**S3 Passenger**, our inventory management, pricing, and seat reservation platform for mainline rail and bus operators, will also be presented at InnoTrans. The SaaS solution helps operators manage their inventory and maximize seat utilization for greater capacity and yields. The open architecture of S3 Passenger allows it to integrate with a tremendous range of APIs from external operating systems, third-party inventory systems, distribution partners, and any other integration.

The **HAFAS NextGen** app services showcase a holistic and completely newly designed passenger experience. Whether it is door-to-door trip planning, real-time information, ticketing or even demand-responsive transportation, all relevant mobility services are seamlessly integrated and empowered by a comprehensive suite of data management tools.

### **Railway Components**

Siemens Mobility will present its tailored component portfolio for train manufacturers at InnoTrans 2024, showcasing the latest developments at a separate booth in Hall 27, Stand 220.

Exhibition highlights include:

- Bogie Components and Associated Service Models
- MoComp's Core Innovations: Air-free brake system, SiC Technology in Traction & Auxiliary converter, highly integrated Permanently Excited Synchronous Motor gear unit
- Modular and Scalable Onboard and Communication Equipment

Siemens Mobility addresses vehicle manufacturers worldwide with these innovations, reinforcing its role as a leading provider in the rail industry.

### **The Siemens Mobility's outdoor exhibition area:**

Siemens Mobility will also be showcasing the following vehicles in the outdoor area:

- In Egypt, a 2,000 km long high-speed rail network will be built, making Egypt the top 6th country for high-speed rail in the world in just few years. With this, 90% of Egyptians get access to safe, clean, and affordable transportation.

The **Velaro high-speed train for Egypt** is built to withstand extreme temperatures, includes desert-proof elements, while ensuring highest levels of passenger comfort.

- The **Mireo Smart** is the response to the challenges of a constantly changing transportation landscape and the growing popularity of rail mobility. Siemens Mobility offers rail operators a highly standardized regional train that can be delivered within very short time and that guarantees high reliability and availability.
- **Smart Train Lease:** Siemens Mobility has founded the subsidiary Smart Train Lease GmbH to enable customers to flexibly supplement their fleets with rented state-of-the-art battery, hydrogen, and electric multiple-unit trains. The Mireo Smart trains from Siemens Mobility are available at short notice, approved for operation, and meet all required standards for modern regional passenger transport.
- The **Vectrain** is the flexible cross-border solution for intercity travel. It consists of a flexible vehicle configuration, such as Vectron locomotives and Vectrain Cab Car with standardized Vectouro Coach that offers flexibility for operators and cross-border travel for passengers. The train and locomotive have already achieved authorization in several European countries.
- **The Vectron** is Siemens Mobility's locomotive platform available as AC and MS variants for different voltage systems. It can travel at a maximum speed of 230 km/h is also a part of the Vectrain. This locomotive is suitable for use on both conventional and high-speed lines in fast cross-border passenger transport.

/Ends

**Save the date:** Siemens Mobility will make further groundbreaking announcements during our InnoTrans **press conference** on Monday, 23<sup>rd</sup> September at 14.30 pm CET. Please get in touch with the Siemens Mobility Media relations team [press.mobility@siemens.com](mailto:press.mobility@siemens.com) if you like to register your attendance.

This press release and press pictures are available at <https://sie.ag/69e7tm>

For further information about InnoTrans 2024, please see <https://sie.ag/2auZuh>

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For further information about Siemens Mobility, please see:

[www.siemens.com/mobility](http://www.siemens.com/mobility)

**Siemens Mobility** is a separately managed company of Siemens AG. As a leader in intelligent transport solutions for more than 175 years, Siemens Mobility is constantly innovating its portfolio. Its core areas include rolling stock, rail automation and electrification, a comprehensive software portfolio, turnkey systems as well as related services. With digital products and solutions, Siemens Mobility is enabling mobility operators worldwide to make infrastructure intelligent, increase value sustainably over the entire lifecycle, enhance passenger experience and guarantee availability. In fiscal year 2023, which ended on September 30, 2023, Siemens Mobility posted revenue of €10.5 billion and employed around 39,800 people worldwide. Further information is available at: [www.siemens.com/mobility](http://www.siemens.com/mobility)