

Alstom delivers Next Generation Driving Simulator to Metrorex for the practical training of the drivers for new metro trains on Line 5

- **Metrorex signed Acceptance Certificate for Alstom's training simulator to accelerate driver training for Metropolis metro trains**
- **The driving simulator is designed for Line 5, Romania's first metro line with a CBTC system, enabling safe train operation at 90-second intervals**
- **Four Metropolis metro trains are already in Bucharest in Berceni Customer Depot, in testing and validation procedures before revenue service authorisation**

23 October 2024 – Alstom, global leader in smart and sustainable mobility, has delivered to Metrorex, the operator of Bucharest metro system, a Next Generation driving simulator for Metropolis metro trains dedicated to Line 5, as part of the rolling stock contract. The simulator integrates the latest functionalities and capabilities in virtual reality technologies to train metro drivers and operation technicians on how to operate the metro trains safely and efficiently. It is installed at Metrorex's premises, specifically at the Valea Ialomitei station on Line 5 with the customer having signed the Site Acceptance Test.

The simulator reproduces real elements like tracks, stations, depots and signalling equipment, creating realistic scenarios using Virtual Reality technology effectively creating a "Digital Twin" for training of the infrastructure and rolling stock as a system. It also includes a full-scale replica of the driver's cabin found in the Alstom Metropolis metro trains slated to operate on Line 5. Notably, Line 5 is the first metro line in Bucharest and Romania to be equipped with the CBTC (Communication-Based Train Control) traffic control system, featuring a 90-second headway.

"At Alstom, safety is our utmost concern, and it's integrated into every stage of our design process to enhance passenger experience. With the technological advancements available today, we're able to create a secure learning environment for future drivers and technicians, ensuring they possess the necessary skills to operate the latest generation of rolling stock responsibly." says Gabriel Stanciu, Alstom Managing Director for Romania, Bulgaria and Moldova.

With this cutting-edge technology, Metrorex will train its instructors, who will subsequently train the drivers and technicians prior to passenger operations commencing. During the training module, instructors can simulate traffic conditions and anticipate potential issues that may arise during operations. Six instructors will soon finalise a rigorous training program with Alstom experts to qualify for training future drivers. The system meticulously replicates the precise characteristics of Line 5, featuring digital replicas of stations, platforms, signals, and other equipment such as beacons and radio access points.

Alstom offers the broadest portfolio of driving simulators and has installed more than 125 simulators at customers' facilities around the world. Alstom's simulators are the only ones on the market offering a fully immersive experience with an avatar, providing a 'first person' perspective training experience,

not only for driving, but for everything the driver does, including leaving the cabin, walking through the train and outside the train.

Line 5 is currently in service with passengers, having been launched in September 2020, using a conventional signalling system also provided by Alstom. With the full implementation of the CBTC system, compatible with the new Alstom trains equipped with onboard CBTC signalling units, Line 5 will offer a more efficient and safer metro transport experience. Alstom is the world leader in the CBTC market, with its advanced and high-performance urban signalling solutions in service on 180 lines worldwide.

The first four Metropolis metro trains for Line 5 are already in Romania and go through the mandatory tests for obtaining the Technical Agreement issued by railway authorities, before starting passenger service on the most modern metro line in Bucharest.

Serving different needs of customers worldwide, Alstom's market-leading Metropolis metro solutions are designed to keep cities breathing for over 60 years. More than 80 customers operate metros made by Alstom. Over 35,000 metro cars have been ordered or are in operation in more than 70 cities in 40 countries. For more information on Metropolis metros, please visit:

<https://www.alstom.com/solutions/rolling-stock/metropolis-metros-keeping-your-city-breathing>

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Alstom commits to contribute to a low carbon future by developing and promoting innovative and sustainable transportation solutions that people enjoy riding. From high-speed trains, metros, monorails, trams, to turnkey systems, services, infrastructure, signalling and digital mobility, Alstom offers its diverse customers the broadest portfolio in the industry. With its presence in 64 countries and a talent base of over 84,700 people from 184 nationalities, the company focuses its design, innovation, and project management skills to where mobility solutions are needed most. Listed in France, Alstom generated revenues of €17.6 billion for the fiscal year ending on 31 March 2024.

For more information, please visit www.alstom.com.

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