Thales introduces new digital rail solutions improving Operations Efficiency and Passenger Experience for a Greener Mobility

Thales presents the future of rail transport during its "Smart Mobility Experience" digital event, taking place on March 24th.

- Faster technology insertion to expand rail system lifespan is essential in dense urban areas. Thales new digital age Metro signaling system offers seamless upgrade capabilities and is "autonomy ready".
- Thales is developing an eco-responsible Artificial Intelligence (AI) based systems to help operators monitor social distancing and reduce density of passengers in stations and on-board trains.
- In Europe, operators spend between 15 and 25 billion euros each year on maintenance and renewal. Thanks to predictive maintenance, the rail market should potentially save of up to 30% of these maintenance costs.
- Thales digital solutions contribute to green mobility by reducing by up to 15% CO_2 emissions from metro and stations.

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Thales presents its first ever digital event dedicated to rail transport, the "Smart Mobilty Experience" which will take place on March 24th. This event will be the occasion for clients and partners of the rail ecosystem, to discover new products and major innovations, as well as to exchange about the digitalization and the future of rail.

Rail transport operators are looking to innovative digital solutions and services for improved service performance and energy efficiency, and to boost the attractiveness for users. Thales helps transporting passengers safely, and with best possible experience, supervises operations with accurate situation awareness, and optimizes transport service efficiency. Using digital technologies such as IoT, 5G, cloud and web IT, data analytics and AI, Thales designs innovative solutions such as digital signalling, train autonomy, mobile ticketing, passenger flow analytics, data driven operation control, smart maintenance, which will drastically impact the way we all travel.

Facilitate new technology insertion in long lifespan metro systems

With the **digital architecture of Thales' latest metro signalling system SelTrac™ G8**, software functionalities are permanently upgradable with no traffic disruption, a modular and resilient equipment platform approach allows for future technology insertion such as train autonomy, and health monitoring facilitates data driven operations and maintenance. **SelTrac™ G8** helps operators reduce installation and maintenance costs while upgrading system functionalities to meet passenger demand, preserving safety and service reliability.

Provide real-time passenger density insights to public transport operators

Important innovation is are the AI and data analytics driven applications that Thales introduces for either task automation or decision support. **Distributed Intelligent Video Analytics – DIVA** - is the new Thales solution to monitor social distancing, and to guide passengers in the station and on the platform. The solution helps alleviate crowding by reducing busy times, and consequently enhances overall passenger safety, comfort, and travel experience.

Based on Artificial Intelligence video analytics, DIVA leverages the existing CCTV (closed circuit TV) network on stations and on-board trains to provide real-time information on passenger density. The targeted performances of density accuracy are above 90%.

Contribute to a more sustainable mobility

Sustainable mobility is another driving force that pushes Thales to innovate. Thanks to the capability of a number of complex algorithms, **Thales' driver advisory system, GreenSpeed,** can optimize the speed for energy saving. This will reduce emissions for up to 15% that is the equivalent to the consumption of a city of some 2 000 inhabitants per year.

For metros, Thales latest signalling system SelTrac™ G8 will enable to reduce traction energy consumption by 15% when compared to traditional CBTC by loading efficient speed profiles into the train's on-board system.

Develop innovative collaborations

Co-innovation is also essential as it bridges the gap between a new concept or technology in the lab and an actual working solution solving a real operational problem. This accelerates market entry for new solutions, and is a sign of trust between customers and Thales. For instance Thales works with New York Metro and France National Railways for autonomous metros and trains, German national Railways for advanced signaling concepts, or Singapore Metro for passenger guidance systems and hands-free ticketing.

"In a competitive market, it is absolutely vital that industrials find ways to make railway more attractive. And this is where innovation helps. One of the biggest challenges today is that you can't just close down a railway network while you upgrade them. People still need to go to work and to travel. That's why we're putting so much effort into the solutions that can be deployed whilst having minimal disruption." – **Millar Crawford, Executive Vice President - Thales's Ground Transportation Systems**

About Thales

Thales (Euronext Paris: HO) is a global leader in advanced technologies, investing in digital and "deep tech" innovations – connectivity, big data, artificial intelligence, cybersecurity and quantum computing – to build a confident future crucial for the development of our societies. The Group provides its customers – businesses, organisations and governments – in the defense, aeronautics, space, transport, and digital identity and security domains with solutions, services and products that help them fulfil their critical role, consideration for the individual being the driving force behind all decisions.

Thales has 81,000 employees in 68 countries. In 2020 the Group generated sales of €17 billion.

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