SMA-RTY tested five private 5G use cases at NATO DiBaX 2026

Milan, Italy – November 9, 2026 – SMA-RTY took part in NATO's Digital Backbone Experimentation 2026 (DiBaX 2026), held in Latvia from 19 to 30 October under the leadership of NATO Allied Command Transformation (ACT).

The event brought together 22 Allied nations and more than 60 technology partners to test emerging technologies against operational challenges. It was supported by the Latvian Ministry of Defence and National Armed Forces, with LMT Defence serving as technical integrator.

Working with the **NATO Communications and Information Agency (NCIA)**, SMA-RTY contributed five use cases based on its private standalone 5G network. The collaboration involved engagement with SHAPE J6 and NATO cyber security teams. SMA-RTY also participates in the **Multinational Collaboration on 5G (MN5G)**, an NCIA-supported initiative promoting the development and interoperability of 5G technologies for military applications.

DiBaX 2026 focused on three main areas: rapid deployment through 5G network slicing, resilient communications through alternative paths and failover mechanisms, and passive object detection using 5G infrastructure. These capabilities address challenges associated with grey-zone scenarios, including drone intrusions and damage to undersea infrastructure.

NGCI® (Next-Generation Communication Infrastructure) is a compact, standalone and rapidly deployable private 5G network. Its architecture can be configured to meet different operational requirements and integrated with other communication systems.

At DiBaX 2026, SMA-RTY explored five operational scenarios using different technologies:

- **Mission-critical team communications (MCX / Push-to-Talk):** supporting reliable group voice communications and team coordination over a private 5G network.
- **Fixed Wireless Access (FWA):** providing high-capacity wireless links between fixed locations.

- **Extended coverage (IAB – Integrated Access and Backhaul):** using a relay to extend 5G connectivity beyond the original cell, including areas where direct line of sight is obstructed.
- **Spectrum management (DSS)**: dynamically managing spectrum resources to support communication continuity and limit interference.
- **Satellite connectivity (NTN):** integrating satellite and terrestrial 5G networks to reach areas beyond local ground infrastructure.

"Five different needs were met with the same network, configured each time around the use case. In an exercise built on interoperability, being able to adapt quickly matters as much as the technology itself."
– Federico Civerchia, Technical Director at SMA-RTY

The capabilities explored during DiBaX 2026 also have potential applications beyond defence, including civil protection, port operations and industrial environments, where reliable and adaptable connectivity is essential.

Through its participation in DiBaX 2026, SMA-RTY had the opportunity to test its technology in a multinational experimentation environment and further explore how private 5G networks can contribute to interoperable and resilient communication infrastructures.

About DiBaX
The Digital Backbone eXperimentation (DiBaX) is a NATO experiment aimed at improving interoperability across domains through 5G and satellite communication technologies. The 2026 edition took place in Latvia and ended with NATO FUSE on 29 and 30 October, with plenaries, industry engagement and live field demonstrations.

About SMA-RTY
SMA-RTY is an Italian emerging leader in the private standalone network market, offering cutting-edge O-RAN CU/DU and expertise in tailoring the application to the final user requirements. With a resilient and flexible network infrastructure, SMA-RTY's Private 5G solution, called "Next Generation Communication Infrastructure" (NGCI), ensures reliable connectivity for mission-critical small cells in the industrial and defense sectors. Collaboration is at the heart of SMA-RTY's approach, valuing partnerships that spark innovation and help us create cutting-edge solutions.