



PRESS RELEASE

Thales Alenia Space leads 5G direct-to-device demonstration for CNES with Capgemini and Thales

Paris, September 8, 2025 – Capgemini, a global leader in business and technology transformation, Thales, a global leader in advanced technologies for the Defense, Aerospace and Cyber & Digital sectors, and Thales Alenia Space, a joint company between Thales (67%) and Leonardo (33%), have been selected by the French Space Agency (CNES) as part of a government-backed call for projects under the France 2030 program to lead an innovative demonstration of 5G direct-to-device (D2D) connectivity.

The project named U DESERVE 5G will demonstrate the feasibility of direct communications between satellites and mobile devices or fixed terminals (5G direct to device, or D2D). A demonstrator satellite will be placed in low-Earth orbit to test interoperability between terrestrial and nonterrestrial 5G networks. The project will use a set of scenarios to evaluate how smoothly devices can switch between satellite and terrestrial 5G coverage, which is a crucial step toward truly global, seamless and uninterrupted connectivity.

At a time when anytime, anywhere connectivity has become a strategic priority — both to meet market demand and ensure infrastructure resilience in crisis situations — satellite technology is emerging as a crucial and complementary solution alongside terrestrial networks.

At the heart of the project is an innovative 5G satellite payload with an active antenna. It will enable voice calls and data transmission directly between the satellite and a test mobile device, without routing via a ground station. The demonstrator will include all components of the chain: test satellite, payload, NTN* ground segment and test mobile devices. It will be compatible with Release 17 of the 3GPP 5G standard and will provide an end-to-end test platform to evaluate the performance of the 5G NTN/TN system and trial use cases, especially involving the Internet of Things (IoT).

Drawing on its expertise in telecommunications and its successful efforts to promote satellite 5G standardization, Thales Alenia Space will lead the consortium, which brings together:

- Capgemini, responsible for radio access solutions and 4G/5G core networks.
- Thales, which will assess the feasibility of a 5G D2D terminal with a directional antenna operating in the future C band.
- Orange, which will contribute its operator expertise and host the demonstration at its Bercenay facility in France.
- SES, in charge of studying the implementation of D2D services.
- Qualcomm, which will supply a 5G NTN-compatible test mobile terminal.
- Loft Orbital, responsible for the platform, AIT (assembly, integration, testing), launch reservation and satellite operations for the demonstration phase.



"This new 5G D2D project paves the way for Thales Alenia Space to provide high-speed coverage in areas not served by terrestrial networks, as well as emergency or continuity services in crisis situations," said Stéphane Anjuère, 5G Venture Leader for Thales Alenia Space. "By leveraging its expertise in geostationary telecommunications and medium- and low-Earth orbit constellations, our company has played a key role in the standardization of 5G by satellite and is ideally positioned to support future large-scale 5G D2D projects."

"This pioneering 5G-by-satellite project represents a major breakthrough for Thales and the telecommunications industry," said Alexandre Bottero, VP Networks and Infrastructure Systems for Thales. "By developing 5G NTN D2D modem solutions enabling high-speed connectivity, even in the most remote areas, we're laying the groundwork for the future of global communications and stepping up our commitment to a more connected and resilient world."

"This project perfectly emphasizes Capgemini's commitment to pushing the boundaries of connectivity. Thanks to our unique expertise in integrating terrestrial and non-terrestrial networks, in addition to our mastery of radio access solutions and 4G/5G core networks, Capgemini is playing a key role in demonstrating 5G via satellite," said Angélique Lallouet, Executive Director of Capgemini Engineering in France. "We are particularly proud to be contributing to this strategic initiative alongside Thales Alenia Space, Thales, and all of our partners, and to be collaborating once again with CNES to advance French and European technological sovereignty."

**The NTN (nonterrestrial network) ground segment includes all the ground-based infrastructure needed to enable communication with nonterrestrial networks, such as satellites, high-altitude platform stations (HAPS) and stratospheric balloons.*

About France 2030

Devised in consultation with local and European business and academic partners, France 2030 offers the country exceptional resources to meet the ecological, demographic, economic, industrial and social challenges of today's changing world. This unprecedented plan for innovation and industry reflects a dual ambition. First, sustainably transform key sectors of our economy — such as energy, automotive, aerospace and digital — through innovation and industrial investment. And second, position France not just as a player, but as a leader in the economy of the future.

About Thales Alenia Space

Drawing on over 40 years of experience and a unique combination of skills, expertise and cultures, Thales Alenia Space delivers cost-effective solutions for telecommunications, navigation, Earth observation, environmental monitoring, exploration, science and orbital infrastructures. Governments and private industry alike count on Thales Alenia Space to design satellite-based systems that provide anytime, anywhere connections and positioning, monitor our planet, enhance management of its resources and explore our Solar System and beyond. Thales Alenia Space sees space as a new horizon, helping build a better, more sustainable life on Earth. A joint venture between Thales (67%) and Leonardo (33%), Thales Alenia Space also teams up with Telespazio to form the Space Alliance, which offers a complete range of solutions including services. Thales Alenia Space posted consolidated revenues of €2.23 billion in 2024 and has more than 8,100 employees in 7 countries with 14 sites in Europe. www.thalesaleniaspace.com



Thales Alenia Space – Press contacts

Tarik Lahlou	Tel: +33 (0)6 87 95 89 56	tarik.lahlou@thalesaleniaspace.com
Catherine des Arcis	Tel: +33 (0)6 78 64 63 97	catherine.des-arcis@thalesaleniaspace.com
Cinzia Marcanio	Tel: +39 (0)6 415 126 85	cinzia.marcanio@thalesaleniaspace.com



About Thales

Thales (Euronext Paris: HO) is a global leader in advanced technologies for the Defence, Aerospace and Cyber & Digital sectors. Its portfolio of innovative products and services addresses several major challenges: sovereignty, security, sustainability and inclusion.

The Group invests more than €4 billion per year in Research & Development in key areas, particularly for critical environments, such as artificial intelligence, cybersecurity, quantum and cloud technologies. Thales has more than 83,000 employees in 68 countries. In 2024, the Group generated sales of €20.6 billion.

Thales – Press contact

pressroom@thalesgroup.com

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 350,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, generative AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2024 global revenues of €22.1 billion. Get The Future You Want | www.capgemini.com

Capgemini – Press contact

Magali Rouault – Tel: +33 (0)1 70 48 11 67 – Email: magali.rouault@capgemini.com