



CELTIC-NEXT

Proposers Brokerage Day

30th January 2026, Vienna

6G VERTICAL

Decentralized Applications For Next- Generation Networks



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Main Benefit	Added Value	Why Participate?
<p>Ability to deploy mission-critical, high-performance 6G applications in environments where traditional mobile operators cannot reach or are not trusted.</p> <ul style="list-style-type: none">● Operational Continuity: Guaranteed connectivity in mines, underwater, or disaster zones.● Infrastructure Independence: Zero reliance on public cellular backbones for local authentication and security.	<p>Unlike current systems that require a central and limited authority (and the exchange of PII), our solution provides:</p> <ul style="list-style-type: none">● Privacy-by-Design: Device-level authentication with zero identity tracking.● Quantum-Resilient Security: Advanced encryption for long-term critical infrastructure protection.● Vertical Versatility: A unified software for diverse hardware—from SatCom to acoustic sensors.	<p>Joining this project is an opportunity to co-define the standards of the Next-Generation Internet.</p> <ul style="list-style-type: none">● Market Leadership: Secure a lead in the multi-billion dollar 6G Non-Public Network (NPN) sector.● Strategic Synergy: Help bridge core decentralized protocols with high-impact vertical hardware (Mines, Energy, Disaster Response).● Strategic Autonomy: Reduce dependency on global hyperscalers and centralized telecom giants.

Organisation Profile



Founded in 2022 and headquartered in Prague, **i46** is an agile, multidisciplinary team of engineers and researchers dedicated to securing the connected world. We move beyond traditional service provision to act as a strategic partner. Our goal is to empower organizations to navigate the complexities of 100% autonomous, secure, and compliant decentralized networks through lean, high-impact technical solutions.

Core Expertise 1

Next-Gen Security

Specialists in Quantum-Resistant Encryption, AI-driven defense, and IoT protection.

Core Expertise 2

Infrastructure Testing

Deep experience in 5G resilience testing and EU Cyber Resilience Act (CRA) compliance.

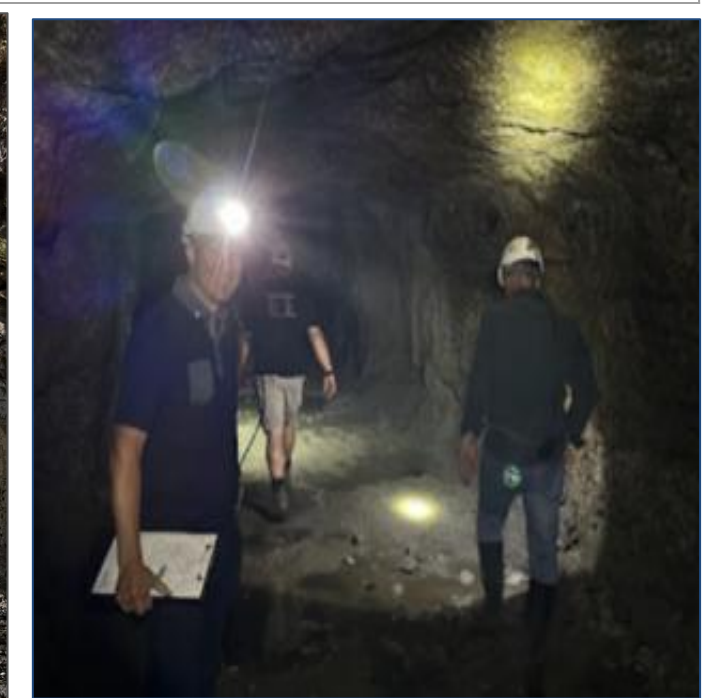
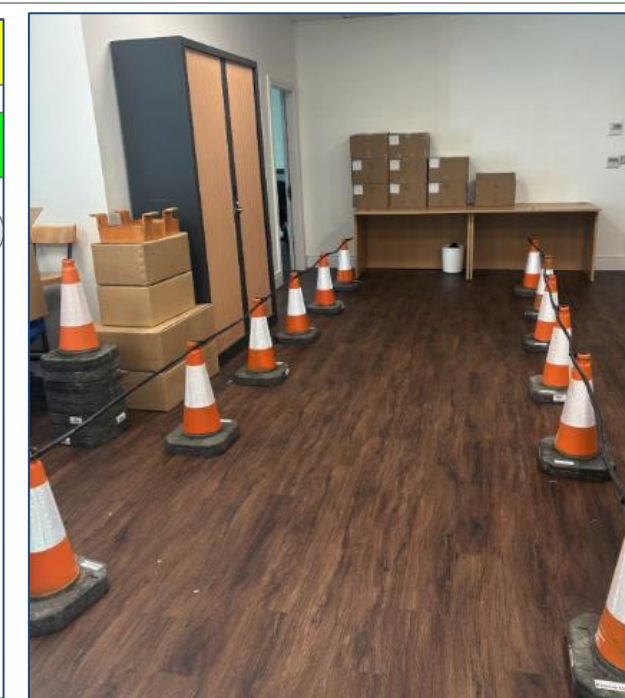
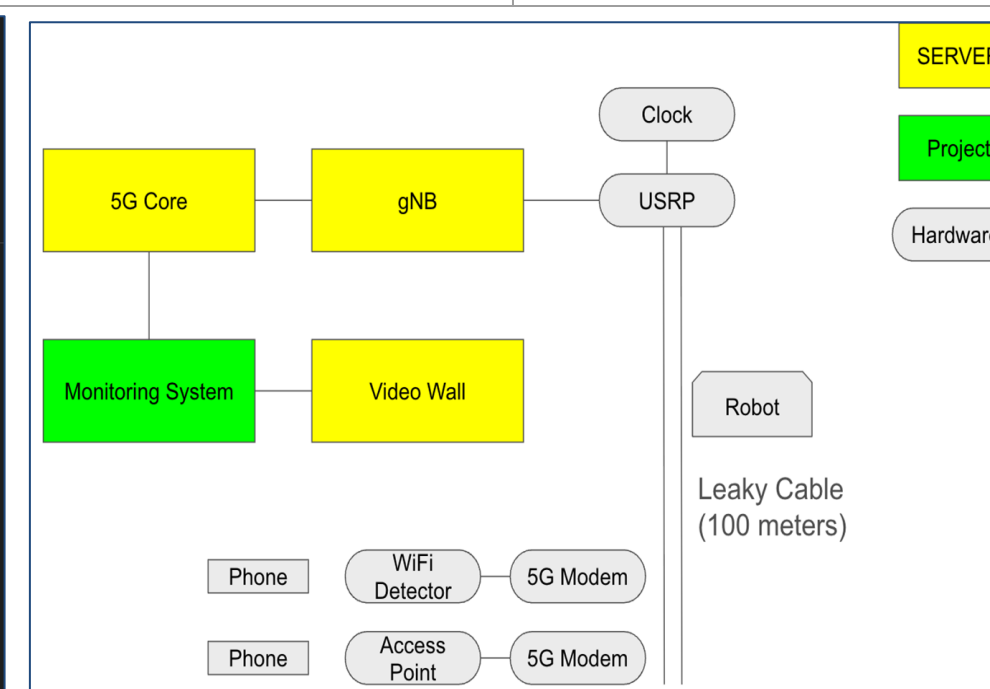
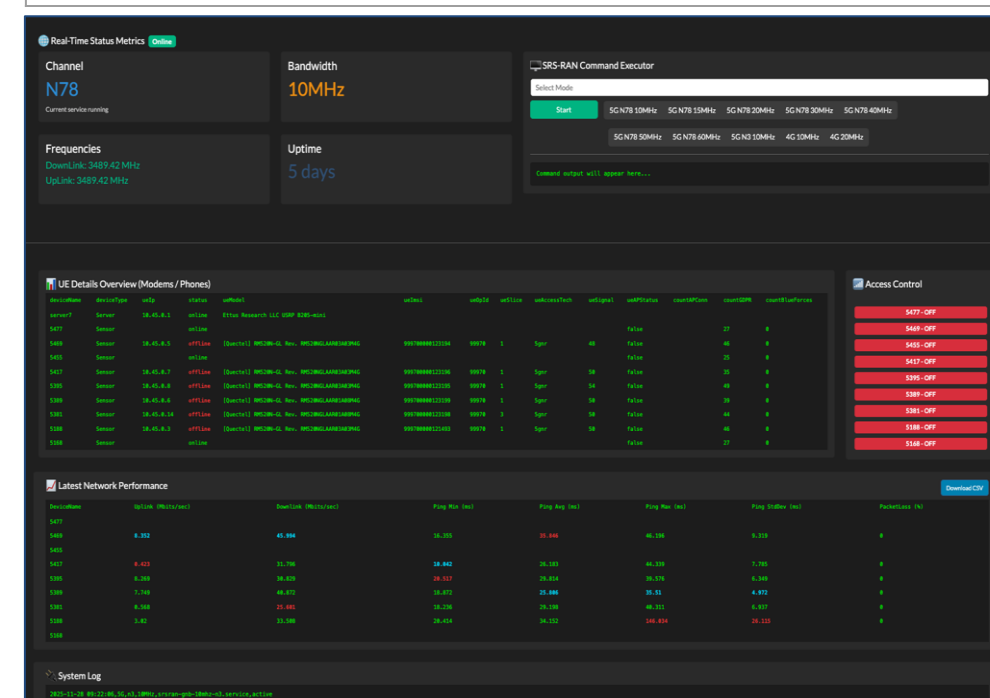
Core Expertise 3

Decentralized Management

Bridging the gap between complex regulatory demands and practical, scalable code.

Proposal Introduction (1)

Vision	Motivation	Core Content
<p>“The Autonomous 6G Vertical”</p> <p>We envision a future where critical industries operate with total network autonomy, free from the vulnerabilities and limitations of public cellular infrastructure even in challenging or critical environments.</p>	<p>“Bridging the Unconnected Gap”</p> <p>Our motivation stems from the need to provide uninterrupted, secure connectivity for industries operating where infrastructure is non-existent, unreliable, or simply undesirable from a security perspective (mining, underwater operations, remote manufacturing, and disaster relief).</p>	<p>“Decentralized Applications”</p> <p>We develop a suite of vertical applications for 5G/6G networks designed to operate independently of traditional cellular operators. This will bring a robust, adaptable system that works across diverse environments and hardware, from sensor networks to satellite-linked hubs.</p>



Proposal Introduction (2)

Expected Outcomes
<ul style="list-style-type: none">✓ LTE/5G/6G stand alone system✓ Multiple vertical applications including Underground and mines, first responders (forest area), ports

Project Impacts
<ul style="list-style-type: none">✓ Operational Resilience: Ensures zero-downtime communication for Mining, Rescue, and Energy, even during total infrastructure failure.✓ Strategic Autonomy: Reduces European dependence on foreign hyperscalers via a localized, sovereign tech stack.✓ Privacy-by-Engineering: Sets a new global benchmark by eliminating centralized identity tracking and PII.

Project Schedule (36 months)		
Phase	Timeline	Key Milestone
1	M12	Initial version based on 5G / LTE
2	M24	6G Version / Verticals ready for testing
3	M36	Field tests and experiments

Partners

Current Partners



i46 s.r.o. (Czech Republic) – Project coordination 5G / 6G core + base stations



Rinicom (United Kingdom) – Underground Use Case



KTH Royal Institute of Technology (Sweden) – Disaster Recovery



Fraunhofer-Institut für Arbeitswirtschaft und Organisation IAO (Germany) – Cyber Security

Looking for Partners in...

- **Vertical Solution providers** with expertise in Mining, Maritime, Manufacturing, or Energy.
- **Independent Technology providers** capable of delivering solutions and products for systems that operate independently of cellular operators.

Contact Info

For more information and for interest to participate please contact:

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Presentation is available via



Join the Consortium Building Sessions

**2nd February
from 13:00-14:00 CET**

Connection details:

Via

www.celticnext.eu/new-ideas

