

Use Case: Manufacturing & Industrial Operations

Local-first. Always on. GDPR by design.

What TreeTalk Node Does

TreeTalk Node is a serverless, local-first business communication and collaboration platform. Teams share files up to 55GB, send encrypted text and voice messages, and coordinate work directly over office WiFi, LAN, or VPN. No cloud. No internet dependency. No servers to maintain. One small executable file — just run and go.

Think of it as "WhatsApp meets Dropbox" — but built entirely for on-premises, offline-first environments.

The Problem TreeTalk Node Solves for Manufacturing Organizations

Distributed manufacturing operations — spanning multiple plants across different locations and regions — face a specific set of collaboration challenges that cloud tools cannot solve:

- Engineers share large CAD files, production specs, and technical documentation across sites. Cloud uploads are slow, bandwidth-heavy, and often impractical on factory floor networks.
- Sensitive IP and operational data should not transit external servers. Cloud exposure creates compliance risk and potential industrial espionage vulnerability.
- Internet connectivity is unreliable in some plant locations and in emergencies. When the connection drops, cloud-dependent teams go dark.
- EU NIS2 regulation now requires critical infrastructure operators to maintain operational resilience during network failures — cloud tools cannot meet this requirement by design.
- Every terabyte routed through cloud data centers generates approximately 25kg of CO₂. For a multi-site operation, this creates measurable ESG liability and Green Deal reporting gaps.



Proposed Proof of Concept

We propose a focused 60-90 day POC at one or two production sites, covering the following workflow:

- Engineers share large technical files (CAD drawings, production data, quality reports) directly between workstations over the local plant network — without cloud upload.
- Plant managers send encrypted text and voice updates to team members during shifts — no external messaging apps, no data leaving the premises.
- The POC includes a simulated internet outage scenario to demonstrate uninterrupted operations under NIS2 resilience conditions.
- CO2 reduction is measured and documented against the baseline cloud collaboration volume — providing concrete Green Deal reporting data.

TreeTalk Node runs as a single executable file. No installation, no registration, no IT infrastructure changes required. Deployment at a new site takes minutes.

Three Compliance Pillars — Solved in One Tool

Privacy GDPR by Design	Resilience NIS2-Ready	Sustainability Green Deal-Ready
Data never leaves your network. No cloud exposure. Audits become trivial.	Operations continue during internet outages, ransomware attacks, and cloud failures.	75% less CO2 vs. cloud collaboration. Supports your ESG and Green Deal reporting.

How TreeTalk Node Compares

	TreeTalk Node	Cloud Tools	On-Premise Server
Works offline	Yes	No	Yes
GDPR-safe	Yes	No	Yes
Zero infrastructure	Yes	Yes	No
Simple setup	Yes	Yes	No
Large files (55GB+)	Yes	Slow	Yes
No cloud exposure	Yes	No	Yes

Expected POC Outcomes

- 30+ minutes saved per large file transfer vs. cloud upload workflows
- Zero data sovereignty incidents — all data remains on your own infrastructure
- Full operational continuity demonstrated during simulated network failure
- Measurable CO2 reduction documented for ESG and Green Deal reporting
- Technical validation of deployment simplicity across multi-site environments

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