ECIA — Edgegenix Connectivity Intelligence Agent

Keep every vehicle connected. See the outage before it happens.

An Edgegenix Platform Solution · Edgegenix Pty Ltd · info@edgegenix.com

THE PROBLEM WE SOLVE

Mission-critical work now depends on the vehicle staying online. But connectivity in the field is invisible until it fails — a dish loses the sky behind a ridgeline, a cellular modem quietly degrades, an antenna drifts out of alignment, a SIM burns through its data. By the time the crew notices, the video feed is frozen and the operations picture is gone.

ECIA closes that gap. It watches every link on every vehicle, learns what "healthy" looks like, and warns you **before** the connection is lost — so the crew and the control room stay ahead of the problem instead of reacting to it.

Live fleet operations dashboard

≥5 min	100%	5 agents	No new HW
advance warning before comms loss	data preserved during outages via store-and-forward	autonomous AI sub-agents per vehicle, offline-capable	deploys on existing connectivity gear

WHAT ECIA DELIVERS

1. **Predictive link degradation** — forecasts comms loss minutes ahead, per vehicle. Operators get lead time to switch paths, reposition, or fall back — instead of a dead screen with no warning.
2. **Live fleet coverage map** — a real-time picture of where your fleet has strong connectivity and where the dead zones are, built from the fleet's own movement. Plan routes around the coverage you actually have, not a generic carrier map.
3. **Anomaly & predictive maintenance** — flags a failing antenna, a misaligned dish, a bad SIM, or runaway data use early — while it's still a maintenance ticket, not a mission failure.
4. **Connectivity-as-a-sensor resilience** — when the link weakens, the vehicle adapts automatically — live, then adaptive, then store-and-forward — so nothing is lost. Data catches up the moment the connection returns.

WHAT MAKES IT DIFFERENT

Predicts, doesn't just alarm. Most tools tell you a link is already down. ECIA tells you it's about to go, with enough lead time to do something about it.

Sees the terrain, not just the signal. ECIA understands why coverage is about to fail — including line-of-sight to LEO satellites blocked by the landscape ahead — grounded in the real world, not a guess.

Built for the edge. The intelligence runs on the vehicle, offline and deterministic. No cloud dependency for the decision that keeps you connected.

Multi-path aware. Satellite, cellular, and bonded links are treated as one resilient system, not separate dashboards. ECIA reasons across all of them simultaneously.

Ask it in plain language. An operator copilot answers "what's happening with this vehicle?" in seconds — status, cause, and recommended action, grounded in live fleet state.

3D terrain & coverage view

BUILT FOR DEMANDING OPERATORS

- Emergency Services & Public Safety
- Remote Industry
- Mining & Utilities
- Logistics & Long-haul
- Agriculture & Construction
- Defence & Government
- Any fleet on satellite + cellular

Any fleet where a comms outage costs time, safety, or operational continuity.

HOW IT FITS

ECIA sits on top of the connectivity hardware you already run — no rip-and-replace. It ingests the telemetry your vehicles already produce, and delivers:

→ A **live operations dashboard** — 2D map, 3D terrain, and 3D globe views.

→ **Predictive alerts** and a **fleet coverage map**, updated continuously.

→ An **operator copilot** for natural-language answers.

→ **Data sovereignty by design** — in-region or air-gapped build available.

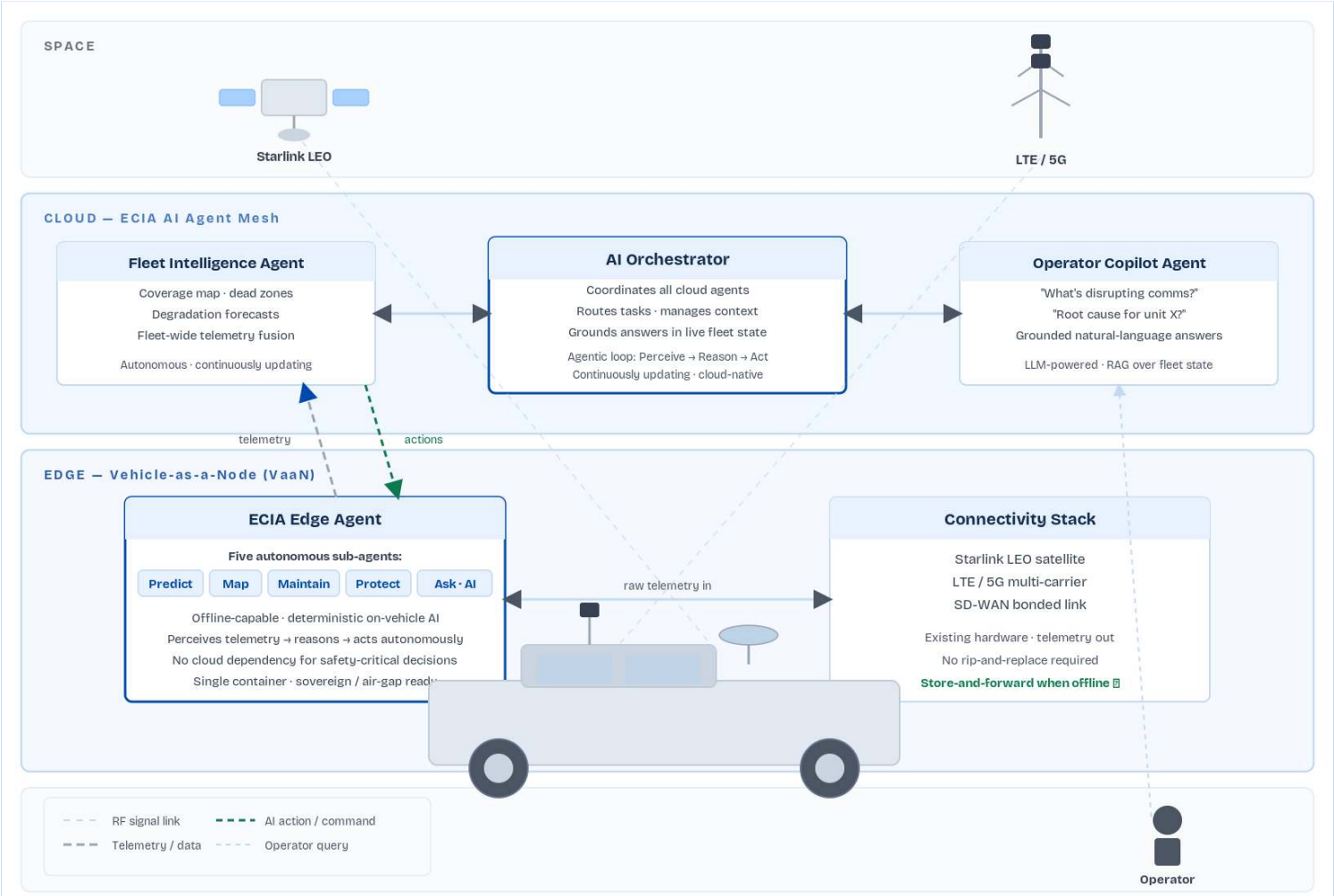
PROOF, NOT PROMISES

We start with a **paid Proof of Concept** on your own fleet and your own routes — your telemetry, your coverage, your dead zones — so you see ECIA predict *your* outages before you commit to a rollout. **The PoC fee is fully creditable against deployment.**

ECIA — System Architecture

Vehicle-as-a-Node · AI Agent Mesh · Edge + Cloud

ECIA operates as a two-tier AI system: autonomous sub-agents run on each vehicle at the edge, while cloud-hosted agents provide fleet-wide intelligence and a natural-language operator copilot. All tiers communicate over the bonded connectivity stack — and the edge continues to reason and act independently when the cloud link is unavailable.



ECIA agent architecture — Vehicle-as-a-Node (VaaN) · Edge AI + Cloud Agent Mesh · Agentic loop: Perceive → Reason → Act

Edge Agent (on-vehicle)

Five autonomous sub-agents — Predict, Map, Maintain, Protect, Ask — run in a single container on existing hardware. Offline-capable and deterministic. No cloud dependency for safety-critical decisions.

Cloud Agent Mesh

An AI Orchestrator coordinates the Fleet Intelligence Agent (coverage maps, fleet-wide analytics) and the Operator Copilot Agent (plain-language Q&A grounded in live fleet state). Continuously reasoning across the whole fleet.

Connectivity Stack

Starlink LEO, LTE/5G multi-carrier, and SD-WAN bonded link — all treated as one resilient system. Store-and-forward when offline; data catches up automatically on reconnection. No new hardware required.