

DIGITAL OPERATIONS INFRASTRUCTURE

Connected operations where connectivity has always been the constraint.

WinVibe designs, builds, and operates the connected infrastructure that heavy industrial operations depend on — Private 5G, edge computing, IoT sensing, autonomous systems, and command intelligence unified into one live operational picture.

OVERVIEW

When your most critical operations are your least connected.

Heavy industrial operations run where infrastructure is hardest to build. Pits, plants, remote sites, and mobile fleets spread across distances that defeat Wi-Fi and wired networks, in conditions that punish equipment and put people at risk.

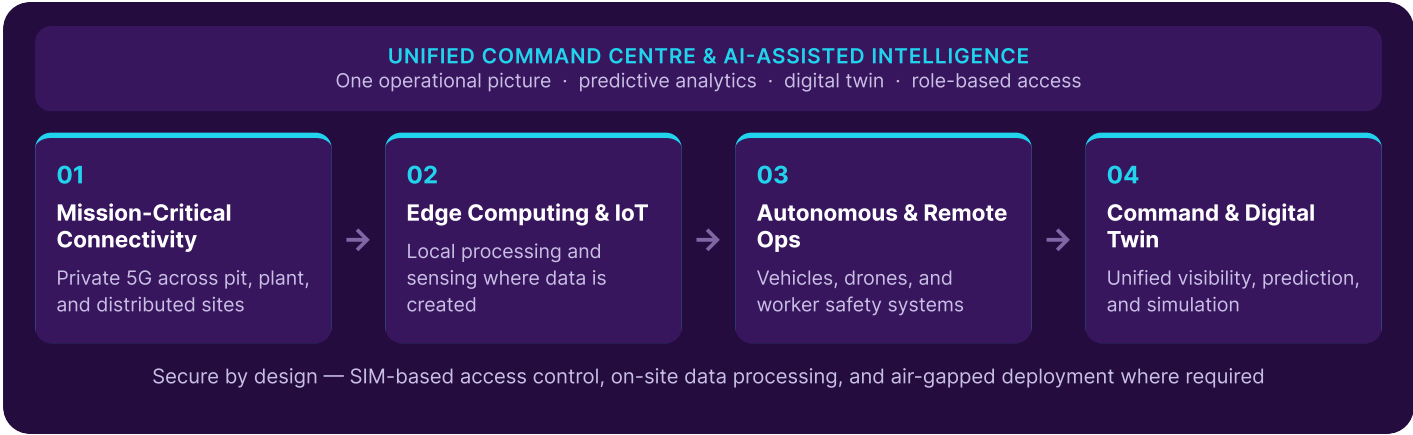
The consequence is operational blindness. Equipment health is checked on a schedule rather than continuously. Worker location and safety depend on radio and line of sight. Fixed plant, mobile fleet, and field teams each hold part of the operational picture, and nobody holds all of it.

Digital Operations Infrastructure removes the constraint — Private 5G, edge computing, IoT sensing, and AI-driven command intelligence unify the whole operation into one live picture.

Real-time visibility, remote and autonomous operation, and predictive maintenance — where none of it was previously possible.

SOLUTION ARCHITECTURE

Four capabilities, unified into one operational environment.



INDUSTRIES WE SERVE

Mining • Energy & Utilities • Manufacturing & Distribution • Defence • Telecom & Infrastructure

SOLUTION COMPONENTS

Four integrated pillars working as one.

Each capability is a full system in its own right — together they deliver connectivity, visibility, autonomy, and control across the entire operation.

01

Mission-Critical Connectivity

Coverage where conventional networks cannot reach.

- **Private 5G** — secure, low-latency coverage across open-cast, underground, and widely distributed environments.
- **Seamless mobility** — uninterrupted connectivity for vehicles, equipment, and personnel in motion.
- **Controlled access** — SIM-based authentication and policy control, with fully air-gapped deployment where required.

02

Edge Computing & IoT Sensing

Data captured and processed where it is generated.

- **Edge processing** — local compute and AI keeping latency low and operational data on site.
- **IoT instrumentation** — condition, environmental, and utilization sensing across fixed and mobile assets.
- **Vision systems** — edge-AI video analytics applied to safety, security, and process monitoring.

03

Autonomous & Remote Operations

Distance between the operator and the hazard.

- **Remote and autonomous vehicles** — control and coordination of vehicles, loaders, and equipment from a safe location.
- **Drone operations** — inspection, survey, and monitoring of areas that are dangerous or slow to reach on foot.
- **Worker safety systems** — wearables, digital PPE, collision avoidance, and real-time situational awareness.

04

Command Intelligence & Digital Twin

The operation understood as one system.

- **Unified command** — integrated visibility across fixed plant, mobile fleet, and field operations in a single view.
- **Predictive maintenance** — AI-driven condition analytics that surface failures before they stop production.
- **Digital twin** — simulation of assets and operations to test changes and optimize output before committing to them.

WHY WINVIBE

Operational infrastructure expertise that goes beyond the network.



Connectivity and Operations Together

We deliver the network and the operational systems that run on it, so coverage is engineered for the application.



Built for Hostile Environments

Designs account for dust, distance, vibration, power constraints, and the absence of local IT support.



Edge-First Architecture

Processing happens where data is generated, so automation works at the speed operations actually require.



AI-Driven Predictive Maintenance

Condition analytics across fixed and mobile assets convert unplanned downtime into planned intervention.



Safety as a Design Outcome

Worker protection is engineered into the connectivity, sensing, and autonomy layers rather than added afterward.



Solution Lifecycle Partnership

Survey, design, deployment, integration, and 24×7 managed operations from one accountable team.

Ready to connect the operations that have always been out of reach?

Whether you are extending coverage across a remote site, moving operators out of hazardous positions, or replacing scheduled servicing with predictive maintenance, our experts are ready to understand your requirements and recommend the right solution.

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