

Intelligence for ports, assets and critical infrastructure.

DIGITAL TWIN · GIS · COMPUTER VISION

PREDICTIVE AI · AGENTIC AI · DRONES

SUPPLY-CHAIN OPTIMISATION · SURVEILLANCE



ABOUT CLOUDHUB

Netherlands-headquartered AI engineering company with India delivery centres, building secure intelligence platforms for mobility, infrastructure, energy, agriculture and healthcare.

IMMERSIVE DIGITAL TWIN COMMAND CENTRE

A shared operating picture for planning, simulation and response.



SECURITY AND DATA PROTECTION BY DESIGN

DLP	ENC	EDR	SOC	SIEM	MFA	RBAC	PAM	IAM
Data loss	Encryption	Endpoint	24x7 defence	Logs & alerts	Strong access	Least privilege	Admin control	Identity

Computer Vision creates evidence. Agentic AI coordinates decisions.

A reusable port-intelligence portfolio spanning seaside, landside, assets, safety, environment and cargo.

Computer Vision creates evidence · Agentic AI coordinates decisions · Human teams approve action

01



Vessel & Berth Intelligence

Sees vessel position, berth readiness, crane availability and unsafe conflicts.

BUSINESS BENEFIT

Reduce waiting and demurrage; improve berth and crane utilisation.

WAITING TIME · BERTH OCCUPANCY · CRANE RATE

02



Gate, Yard & Rail Flow

Tracks truck queues, wagon flow, bottlenecks, dwell and route conflicts.

BUSINESS BENEFIT

Faster turnaround with smoother gate-to-yard-to-rail movement.

TRUCK TAT · QUEUE LENGTH · YARD DWELL

03



Predictive Asset Maintenance

Finds heat, vibration and visual anomalies across conveyors and equipment.

BUSINESS BENEFIT

Prevent unplanned downtime and prioritise the right maintenance work.

DOWNTIME · MTBF · WORK-ORDER LEAD TIME

04



Safety, PPE & Proximity

Detects missing PPE, restricted-zone entry and person-vehicle proximity.

BUSINESS BENEFIT

Intervene earlier, reduce exposure and retain auditable safety evidence.

HIGH-RISK EVENTS · RESPONSE TIME · PPE COMPLIANCE

05



Dust, Spill & Environment

Combines vision with PM, wind and weather sensors to locate incidents.

BUSINESS BENEFIT

Contain dust and spills faster; strengthen environmental compliance.

PM LEVEL · INCIDENT DURATION · RESPONSE SLA

06



Cargo Condition & Loss

Identifies damage, spillage, contamination and quantity anomalies.

BUSINESS BENEFIT

Reduce cargo loss and claims with trusted custody-transfer proof.

LOSS RATE · CLAIM VALUE · INSPECTION COVERAGE

OUR AI PORTFOLIO

Digital Twin & GIS

Live 2D/3D operational context

Computer Vision

Detection · tracking · thermal · OCR

Predictive AI

ETA · queue · failure · demand

Agentic AI

Reason · recommend · approve · act

Supply-chain AI

Berth · yard · rail · gate flow

Simulation

What-if · capacity · disruption

ONE PLATFORM ACROSS THE PORT

Capture → Connect → Digital Twin → Predict & Simulate → Agentic Coordination → Human-approved action

Integrates CCTV, thermal, AIS/VTMS, bathymetry, FOIS, TOS/POS, ERP, gate, weighbridge, CMMS and GIS through APIs and edge intelligence.

SECURITY CONTROL PLANE

DLP · encryption · EDR · SOC/SIEM · security monitoring · MFA · RBAC · PAM · IAM · immutable audit

Predictive maintenance, surveillance and geospatial truth

Continuous evidence above ground, on the ground and across every critical asset.



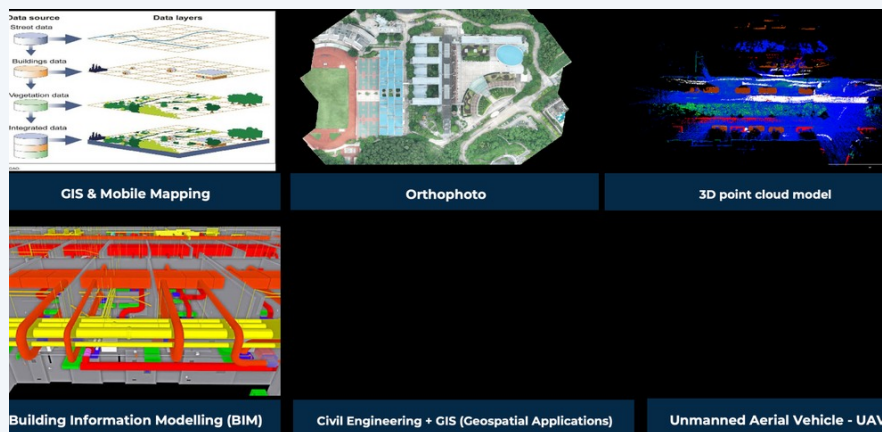
PREDICTIVE MAINTENANCE & SURVEILLANCE

AI detects risk before disruption

Thermal and visual anomalies · equipment condition · unsafe behaviour · restricted-zone entry · smoke/fire · vehicle proximity · maintenance prioritisation.

OUTPUT

Evidence · risk score · alert · recommended work order



GEOSPATIAL SOLUTIONS

Survey-grade Digital Twin foundation

GIS/mobile mapping · orthophoto · 3D point cloud · BIM-GIS integration · civil/utility mapping · change detection · terrain and elevation analysis.

QUAD-DRONE AND SURVEY SYSTEMS

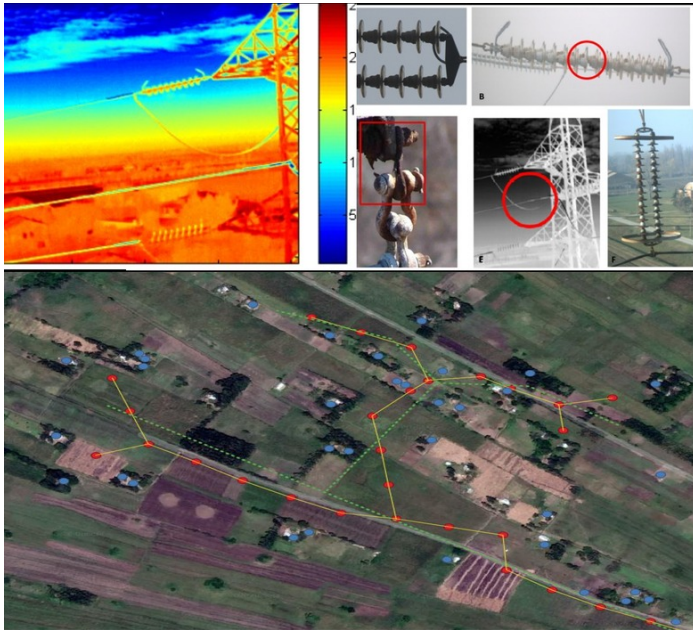
RGB · thermal · multispectral · LiDAR payloads | autonomous missions | geo-referenced inspection evidence

DELIVERABLES

GeoJSON · LAS/LAZ · orthomosaic · condition layer · 3D web viewer

Detect, locate and prioritise critical faults

Drone, thermal, LiDAR and AI combine to turn inspections into maintenance decisions.



POWER LINE & UTILITY INSPECTION

From corridor survey to fault action

Detect damaged insulators, corroded clamps, conductor sag, thermal hotspots and vegetation encroachment. Georeference every issue, rank severity and connect recommended action to GIS/EAM/CMMS.

WORKFLOW

Survey → Detect → Map → Prioritise → Maintain

Outputs: fault location · severity · evidence · inspection report

OFFERINGS

Strategy & architecture

Use cases · roadmap · governance

Digital Twin & GIS build

Ontology · 2D/3D · integrations

AI & CV engineering

Models · edge inference · ModelOps

Drone intelligence

Mission · payload · inspection analytics

Data & annotation

LiDAR · image · video · QA

Managed operations

Platform · edge · continuous improvement

PARTNERS & TECHNOLOGY ECOSYSTEM

Delivery: ParasSpace · ASPL Germany · OdiTek

Technology: AWS · Azure · NVIDIA · QGIS · Cesium · OpenUSD

CONTACT US

Build a focused lighthouse use case in 8-12 weeks.

Digital Twin · GIS · Computer Vision · Predictive AI · Drones · Agentic Operations

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