Canopy Sight™ — Business Proposal

AI-powered situational awareness and safety monitoring · United Kingdom

Prepared for: Prospective clients and partners

Offered by: Northern Edge Software, Darius, CANOPY.

Implementation window: Full deployment and go-live within 6 months of contract.

Contents

1. Executive summary

Canopy Sight is an AI-powered platform that delivers **live situational awareness**, **automated detection and alerting**, and **time-based playback and analytics** for rail, infrastructure, and perimeter monitoring. It aligns with CANOPY.'s product vision: deployable sensing feeding synthetic models, with operational intelligence for decision-makers.

The system is **built and customised by our technical partner** using the proven Canopy Sight codebase. **Northern Edge Software**, **Darius**, and **CANOPY.** operate, support, and deliver the service to your organisation—no in-house dev team required. Implementation is targeted for **completion within 6 months** of engagement.

2. Partnership & team

The offering is delivered by a joint partnership:

- **Northern Edge Software** — Software delivery, integration, and operational support.

- **Darius** — Drone and UAV expertise, sensor deployment, and real-world operational guidance.
- **CANOPY.** — Product vision, synthetic models, and operational intelligence layer.

Darius — Drone & UAV expertise

Darius brings frontline, real-world expertise in drone and UAV operations. He served for **three years** in Ukraine with Ukrainian special forces, supporting operations where deployable sensing and aerial intelligence were critical. That experience directly informs how we design and deploy sensing layers—rapid deployment, geospatial tagging, and reliable data ingestion in demanding environments. His input ensures the system is practical for field use, not only in theory.

3. Product overview & selling points

What the software does

- **Dashboard** — Single view of sites, devices, and system health.
- **Sites & devices** — Manage locations and edge units (cameras, MeshConnect nodes); monitor status and heartbeats.
- **AI detection** — Object detection (person, vehicle, animal) with zone breach detection and risk scoring.
- **Alerts** — Severity-based alerts (advisory, warning, critical) with acknowledge/resolve workflow.
- **Playback** — Browse events and access time-limited signed links for relevant video clips.
- **Analytics & heatmaps** — Date-filtered analytics and spatial heatmaps.
- **Incidents** — Log and track manual incident reports with severity and resolution.
- **Multi-tenant & roles** — Organisation-scoped data; admin, supervisor, and viewer roles.

Why choose Canopy Sight

- **No black box** — Confidence and uncertainty are surfaced; you see what the system knows and how sure it is.
- **Built for operators** — Designed for people who need to act, not only for data scientists.
- **API-first & integrable** — Dashboards, alerts, and reports can feed existing GIS and ops tools.
- **Edge-ready** — Runs on edge hardware (e.g. Raspberry Pi); optional MeshConnect for low-latency wireless backhaul.
- **Offline resilience** — Edge agents queue events when connectivity is lost and sync when back online.

4. ROI and value

Canopy Sight reduces the cost of manual monitoring, speeds response to incidents, and supports compliance and auditability.

- **Fewer manual patrols** — Continuous AI-assisted monitoring can reduce reliance on 24/7 human patrols at key sites.
- **Faster response** — Alerts and playback help operators react quickly and verify events with clip evidence.
- **Evidence and audit** — Event metadata, clips (when stored), and audit logs support investigations and regulatory requirements.
- **Scalability** — Adding cameras scales with predictable per-camera costs; shared backend keeps unit cost down as you grow.

ROI will vary by site size, incident frequency, and labour costs. We can provide a tailored ROI worksheet based on your sites and use case.

5. Pricing (GBP / EUR)

All prices are in **British Pounds (GBP)**. Euro (EUR) equivalents are indicative and may be updated at contract. VAT is not included; applicable VAT will be added where required.

Subscription tiers (by camera count)

Tier	Cameras	Monthly (GBP)	Yearly (GBP)	Monthly (EUR approx.)
Starter	1–10	**£349**	**£3,490**	€410
Growth	11–50	**£699**	**£6,990**	€820
Scale	51–150	**£1,299**	**£12,990**	€1,520
Enterprise	151+	**Custom**	**Custom**	Custom

Yearly pricing gives approximately 2 months free (e.g. pay for 10 months, get 12).

What's included in subscription

- Web dashboard, sites, devices, alerts, playback, analytics, incidents.
- API access (tRPC); multi-tenant organisation; role-based access.
- Edge agent software for supported hardware (e.g. Raspberry Pi).
- Detection events, risk scoring, zone breach logic.
- Standard retention for event metadata and clip metadata (e.g. 90 days); clip storage volume as per tier.
- Email support; documentation and standard onboarding.

Per-camera and storage (add-on or included by tier)

Item	GBP	Notes
Extra cameras above tier limit	**£18/camera/month**	Billed in addition to tier
Clip storage (standard)	Included	Up to tier limit (e.g. 50 GB Starter, 200 GB Growth, 500 GB Scale)
Extended clip storage	**£0.08/GB/month**	Beyond included allowance
Extended retention (metadata)	**£49/month**	e.g. 12-month retention

6. Add-on options

Optional modules can be added if needed. Pricing is indicative; final quotes on request.

Add-on	Description	GBP (indicative)
AI reports & NL query	Automated incident analysis, natural-language questions over your data, report generation (Claude)	£79–149/month
MeshConnect integration	Mesh networking for edge devices; low-latency wireless backhaul; topology and status in dashboard	£99/month + per-node
Live video streams	WebRTC/HLS live view from cameras (when available in release)	£49/month
UAV / drone ingestion	Workflow and integration for UAV imagery and telemetry into the platform	Custom
Extra users / SSO	Additional user seats or SSO/SAML (e.g. Clerk Enterprise)	From £25/month
Dedicated support	Named contact, SLA, priority response	Custom
On-premise deployment	API and database hosted in your environment; we manage updates	Custom

7. Security & data protection

Security is built into the platform and into how we operate it.

Authentication & access

- **Authentication** — Production uses Clerk (or equivalent); all sensitive API routes require a valid user and organisation.
- **Organisation scoping** — Every query filters by organisation ID; tenants cannot access another tenant's data.
- **Roles** — Admin, supervisor, and viewer roles control what users can see and do.

API & infrastructure

- **Security headers** — Helmet-style headers (CSP, etc.) on the API.
- **CORS** — Allowed origins configured for your domains.
- **Rate limiting** — Per-client limits; production can use Redis for distributed limiting.
- **Secrets** — API keys, database URLs, and third-party keys stored in environment variables, not in code.

Data & recordings

- **Database** — PostgreSQL with Prisma; indexes and relations; optional encryption for sensitive config fields (e.g. MeshConnect keys).
- **Audit log** — Actions, resource type, resource ID, user, IP, and changes recorded for compliance.
- **Video** — Raw video is not stored in the database. Only metadata (path, duration, size, timestamps) is stored. Actual clips live in object storage (e.g. S3 or equivalent).
- **Clip access** — Access to clips is only via time-limited signed URLs. The server checks organisation ownership before issuing a link; URLs expire (e.g. 1–24 hours).

We can provide a more detailed security and data-processing annex on request (e.g. for GDPR or procurement).

8. Tech stack & how data and streaming are relayed

Technology stack

- **Frontend** — Next.js 14, React, TypeScript, Tailwind CSS, ShadCN.
- **Backend** — Node.js, Express, tRPC, Prisma, PostgreSQL (optional pgvector for vector search).
- **AI/ML** — Claude (Anthropic), LangChain, ONNX Runtime, YOLO for detection.

- **Auth** — Clerk (production).
- **Infrastructure** — Docker, TurboRepo; CI/CD (e.g. Bitbucket Pipelines); optional Sentry for monitoring.

Data and streaming flow

- **Edge** — Cameras and sensors feed an edge agent (e.g. on Raspberry Pi). The agent runs YOLO-based detection, zone checks, and risk scoring, then sends event payloads (and optionally clip metadata) to the API.
- **Upload** — Event data and clip metadata are sent over HTTPS to the central API. Video files can be uploaded to object storage (e.g. S3) from the edge or via a processing service; the database stores only paths and metadata.
- **Mesh (optional)** — MeshConnect provides mesh networking between edge nodes; config and topology are stored in the database; traffic can be encrypted (AES-256).
- **API** — The tRPC API serves the web app and any integrations. All procedures that touch data are organisation-scoped and, where appropriate, protected (auth required).
- **Playback** — When a user requests playback, the app calls the API with a clip ID; the API verifies organisation ownership and returns a short-lived signed URL to the object store; the browser or player uses that URL to stream the clip.