Ken N

Enterprise Data Architect

Data platforms | Governance | Integration | Digital products

Corby, UK | +44 7912 357151 | kenesk44@gmail.com
kencv.com/projects/ | shipsdnaportal.com | github.com/Kenesk44
British citizen | Available immediately | Open to relocation

Executive profile

Enterprise Data Architect with 17 years across maritime intelligence, enterprise systems and commercial analytics. Connects business strategy, information models, integration, governance and customer experience to deliver usable data products. Founder and architecture lead for ShipsDNA, combining a maritime data estate of more than 123,000 vessel records with a subscriber portal, self-service APIs, governed data operations and recovery controls.

Owns the product journey from discovery and onboarding through data exploration, subscription access, developer integration and ongoing service. Leads eight remote data processing analysts working through UI Bakery and directs AI-assisted engineering from requirements and architecture decisions to technical review, testing and release acceptance.

Commercial scale and delivery evidence

- Commercial platform: 237 portal subscribers and seven business API clients; over GBP71,000 revenue in 2025. The Supabase XL database holds more than four million records, with continuous historical record compilation.
- Completed and live portfolio: CostLens, Enterprise Data Platform and Real-Time Operations Hub demonstrate financial controls, governed migration and event-driven recovery through protected exhibits on kencv.com.
- Validated cloud delivery: reconciled 10,000 synthetic orders from Azure Databricks / Delta into Snowflake with zero count, revenue or cost variance; one native dbt model and 11 tests passed.
- Resilient event processing: Azure-hosted PostgreSQL, Debezium and Kafka lab processed 3,000 business effects for 1,000 synthetic orders; a consumer restart redelivered one message without duplicating its business effect.

Architecture and leadership strengths

Enterprise data strategy and modernisation; domain and reference-data modelling; data contracts and lineage; data quality and reconciliation; batch and event-driven integration; analytics and decision support; API product design; access and entitlement controls; operational observability; recovery and change governance; stakeholder adoption and analyst leadership.

Current appointment

GDNA Group Ltd | Director and Founder

July 2026 - Present | Full-time from 14 July 2026

Accountable for ShipsDNA product direction, architecture and delivery. Translates maritime and commercial needs into data models, workflows, service boundaries and acceptance criteria; coordinates analysts and AI-assisted implementation, reviews evidence and prioritises improvements across the platform and customer experience.

ShipsDNA architecture and user experience

shipsdnaportal.com | Maritime intelligence platform | Architecture and product ownership

Architecture summary

A layered data product connects governed maritime records to subscriber intelligence and developer services. The design separates data preparation and human review, trusted storage, service authorisation, commercial entitlements and the browser experience. The same information supports analyst operations, customer exploration and external integrations without exposing privileged processing credentials.

Data acquisition and governance

Python and SQL workers ingest and enrich maritime information using canonical vessel, company, port and cargo references. Matching, deduplication, validation and source evidence determine whether a record can be committed or requires analyst review. UI Bakery provides the operational review surface for eight remote data processing analysts. Exception queues preserve unresolved references and provenance rather than silently manufacturing trusted values.

Data storage and services

PostgreSQL / Supabase stores maritime data and supporting access, billing and operational records. The XL-capacity database holds more than four million records, including continuously compiled historical information. SQL models and client-facing views support defined products; authentication, row-level security and server-side permission checks separate customer access from privileged operations. Node.js / TypeScript services, tRPC procedures and REST endpoints apply policy before serving protected data. GitHub Actions supports controlled workers, tests and operational evidence.

Customer application and commercial controls

React / TypeScript, Vite and Tailwind CSS provide the portal interface, with Vercel hosting and server-side services. Vessel search and cockpit views connect to fixtures, companies, inspections, casualties, sales, sanctions and market dashboards. The developer journey covers endpoint selection, documentation, API keys, usage and quotas. Keys are hashed for storage and have lifecycle controls; subscription and API entitlements are checked beyond the visible interface.

Stripe checkout and signed webhooks connect payment state to access. Idempotent event handling prevents repeated billing events from duplicating effects. Versioned terms acceptance and sanitised service-delivery evidence support traceability. Resend supports activation and service communications; consent-aware events distinguish navigation from validated commercial conversions.

Ownership of the complete user journey

- Discovery and onboarding: defines the value proposition, plan comparison, registration, sign-in and password recovery; makes the route from initial interest to useful intelligence clear.
- Activation and use: shapes dashboard navigation, vessel search, filters, drill-through, plan restrictions, useful empty/error states and relevant next actions across maritime workflows.
- Purchase and account lifecycle: connects terms acceptance, hosted checkout, payment confirmation, access activation, account management, plan changes and cancellation with consistent entitlement rules.
- Developer adoption and service: aligns API documentation, credentials, subscriptions, quota feedback and integration support; uses service evidence and operational exceptions to prioritise improvements.

Operational resilience

Encrypted PostgreSQL recovery packs, off-site Google Cloud Storage retention, archive checks and disposable restore drills protect recoverability. User-event tracking, API usage meters, real-time error reporting, worker lifecycle KPIs and review queues expose service behaviour, failures, stale work and quality exceptions. Customer delivery stays separate from controlled data maintenance and recovery execution.

Selected GitHub engineering work

github.com/Kenesk44 | Selected codebases and repository-backed solutions

Architecture ownership spans requirements, data and API contracts, implementation direction, review criteria and operational acceptance. Uses AI-assisted engineering while retaining responsibility for design decisions, validation and controlled release.

ShipsDNA portal codebase

TypeScript | JavaScript | SQL | React | Node.js | tRPC | Vite | Tailwind CSS

Designed a customer application and service layer around shared access policies, typed contracts and reusable UI components. Separates presentation, authentication, entitlement checks, billing events and data access. Defined developer-facing API products, endpoint bundles, quotas, hashed key management and documentation. A TypeScript SDK and bounded MCP integration extend the service architecture to programmatic and AI-assisted consumers.

Solution focus: a coherent route from maritime data to paid and developer services. Regression tests cover authorisation, billing webhooks, API policy, sessions, exports, legal acceptance and service-delivery behaviour. Server-held credentials and policy checks protect privileged operations from the browser.

UI Bakery CRUD and analyst operations

UI_Bakery_CRUD | TypeScript | React | JavaScript | SQL | UI Bakery

Provides an internal workbench for maintaining and reviewing maritime data. Analyst workflows connect source information, reference matching, validation and exception handling rather than treating data entry as an isolated screen. The React / TypeScript component layer and UI Bakery data bindings support reusable operational interfaces and consistent review behaviour.

Leadership: manages eight remote data processing analysts using UI Bakery for ShipsDNA. Aligns the analyst review surface with the wider ingestion architecture, so uncertain or conflicting candidates can be examined before becoming trusted platform records.

ShipsDNA disaster recovery and governed workers

shipsdna-disaster-recovery | Python | SQL | Shell | GitHub Actions YAML

Repository contains encrypted backup workflows, schema and policy inventories, off-site storage, archive verification and isolated PostgreSQL restore drills. Supports repeatable recovery evidence rather than relying on the presence of a backup file alone. Operational documentation distinguishes business-schema restoration from full platform recovery.

The same engineering estate includes maritime enrichment and fixture-import workers. Controlled PDF intake feeds deterministic parsing, canonical matching, duplicate checks and a human review queue. Dry-run, queue and guarded-commit modes separate inspection from mutation; transaction boundaries and run telemetry support traceable, recoverable operation.

kencv.com and private portfolio engines

HTML | CSS | JavaScript / Node.js | Python | SQL | dbt SQL / YAML | Docker Compose

The kencv.com site presents executive project summaries and controlled access to three live exhibits. Private Python / SQL reference engines generate reconciled evidence; Node.js authorisation and curated browser packages make results reviewable without exposing pipeline source or credentials. Enterprise cloud adapters and the PostgreSQL / Debezium / Kafka lab provide separate execution evidence.

Three completed and live portfolio projects

kencv.com/projects/ | Completed October 2026 | Protected review access on request

CostLens

FinOps and AI cost intelligence

Python | SQL / SQLite | Node.js | JavaScript | Vercel

Architecture: provider-agnostic usage and invoice inputs feed append-only ingestion, validation, economic-record selection, cost allocation and reconciliation. The executive experience connects invoice bridges, AI token categories, Snowflake query/idle scenarios, unit economics and bounded planning controls to drill-through evidence.

- Processed 641 synthetic deliveries into 630 economic records, including seven revisions, two duplicates and two quarantines. Replay introduced no additional records.
- Reconciled GBP71,403 of synthetic usage to GBP71,301 of invoices through explicit adjustments and an exposed GBP185 unresolved variance; allocated 97.4% of usage cost.
- Validated 17 automated tests across ingestion, financial conservation, access, expiry and navigation. Kept potential optimisation opportunities separate from realised savings.

Live synthetic-data exhibit. Cloud-provider billing and AI usage scenarios use fixtures; live billing connectors and Power BI integration are extensions, not completed capabilities.

Enterprise Data Platform

Governed migration and trusted revenue reporting

Python | SQL | Azure ADLS | Azure Databricks / Spark / Delta | Snowflake | dbt

Architecture: synthetic ERP deliveries become immutable order revisions, latest-valid records and a tenant revenue product. Data contracts, customer history, quality checks, lineage and independent financial totals govern promotion. Versioned report snapshots and a release pointer support rollback without deleting history; reconciliation mismatches block release.

- Executed an Azure Spark / Delta run and transferred 10,000 orders into Snowflake. Order count, GBP5,501,159.15 revenue and GBP2,201,079.40 cost reconciled with zero transfer variance.
- Built one native dbt view and passed 11 tests, including full-row equivalence against an independently generated Snowflake fixture. A separate local reference run validated 100,000 orders and replay behaviour.

Completed cloud validation and live hosted exhibit. The browser presents recorded evidence and bounded scenarios; it does not keep temporary cloud validation infrastructure running.

Real-Time Operations Hub

Event-driven processing with replay and recovery

PostgreSQL | Debezium | Kafka | Python | SQL | Docker Compose | Azure

Architecture: a transactional outbox feeds Debezium change capture and keyed Kafka events. A transactional inbox applies ordered state changes and audit effects before acknowledging delivery. Duplicate detection prevents repeated business effects; version gaps buffer until predecessors arrive and conflicting events enter quarantine. Tenant-scoped serving checks and independent monetary controls validate results.

- Azure lab delivered 1,000 orders and 3,000 business effects with zero pending events. A post-commit consumer restart caused one duplicate delivery with no duplicate effect; financial controls reconciled.
- A separate local 100,000-order reference run retained 300,000 business effects unchanged after replay and tested injected failure, out-of-order arrivals and quarantine paths.

Live synthetic-data exhibit with a completed single-node cloud lab. Demonstrates tested recovery semantics, not a highly available production Kafka service or universal exactly-once delivery.

Professional experience and technical breadth

GDNA Group Ltd | Director and Founder

July 2026 - Present

- Owns enterprise data and product architecture for ShipsDNA, its subscriber portal and API services; leads eight remote data processing analysts and directs AI-assisted engineering, technical review and acceptance.
- Delivered the three live portfolio projects described on page four, linking architecture decisions to executable controls, cloud validation and recruiter-facing demonstrations.

E.A. Gibson Shipbrokers | Data Manager

August 2016 - July 2026

- Owned data strategy and requirements translation across vessel, port, fixture, sale-and-purchase and market-rate workflows; aligned brokers, analysts, management and technical suppliers.
- Led migration from spreadsheets and local databases to Azure and SQL Server. Designed data models, Power BI dashboards, automated reporting and bespoke commercial outputs.
- Architected PROPEL for vessel, port and sale-and-purchase intelligence, alongside CRM and events-management platforms; connected data quality, usability and stakeholder adoption.

Subsea 7 UK Service Company Ltd | Group Engineering PMO Coordinator

November 2013 - October 2015

- Systems lead for Microsoft Project Server, enterprise templates and portfolio reporting. Delivered resource KPIs and engineering dashboards; maintained SharePoint risk, progress and performance systems.
- Trained more than 100 stakeholders in project and reporting tools supporting global engineering teams and energy programmes.

S&P Global / IHS Markit | Senior Analyst

January 2009 - November 2013

- Analysed fleet, port and AIS movement data and maintained IACS-classed vessel datasets. Published weekly Fairplay Markets ship sale-and-purchase intelligence and developed Excel/VBA and Access analytical tools.

Technology and methods

Languages and delivery: Python, SQL, TypeScript, JavaScript, HTML/CSS, Shell, YAML, Excel/VBA; React, Node.js, REST, tRPC, GitHub Actions, automated tests and AI-assisted engineering with OpenAI Codex.

Data and cloud: PostgreSQL, SQL Server, SQLite, Supabase, Azure, Databricks / Spark / Delta, Snowflake, dbt, Debezium, Kafka, Docker, Google Cloud Storage and Vercel. Recent cloud and streaming capabilities are evidenced through bounded portfolio labs.

Business systems and analytics: Power BI, SSRS, UI Bakery, Oracle NetSuite, Microsoft Project Server and SharePoint. Methods include reference-data governance, source evidence, reconciliation, release gates, operational KPIs and recovery validation.

Education and professional development

City University London | Postgraduate Degree, Maritime Operations & Management | 2007-2008

Federal University of Technology Owerri | BSc, Maritime Management Technology | 2001-2005

Professional development: Microsoft Power BI and Advanced SQL; IBM Blockchain Essentials and Blockchain Developer; Coracle Tanker Chartering.