

G-Cloud 15

Service Definition

Sandpiper Network Intelligence Platform

Avenga Ltd

Lot 2b Software as a Service (SaaS)

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1. Introduction

Avenga is a UK-based intelligence technology company specialising in network analytics for mission-critical environments. Founded by practitioners with deep experience in building first-of-type intelligence platforms for UK Government agencies, Avenga brings together expertise in supply chain resilience, network intelligence, and adversarial threat modelling.

Our leadership team has extensive experience developing intelligence platforms for organisations including the National Crime Agency, UK law enforcement agencies, and the Department for Work and Pensions, delivering solutions that map complex networks, identify hidden dependencies, and enable rapid decision-making in high-stakes environments.

Value Proposition

UK Government organisations face unprecedented challenges in understanding and securing complex, interconnected networks. Whether tracking adversarial threats to critical national infrastructure, mapping organised crime networks, or ensuring the resilience of defence supply chains, analysts and decision-makers are overwhelmed by data volume, network complexity, and the speed at which situations evolve.

Current approaches rely on manual analysis that takes weeks to produce insights that are often obsolete on delivery. Existing tools were designed for static, hierarchical problems—not the dynamic, adversarial, and interconnected challenges facing government today. The result is delayed decisions, missed connections, and reactive rather than proactive responses to threats.

Sandpiper addresses this gap by compressing decision cycles from weeks to seconds, enabling government organisations to observe, orient, decide, and act at the speed required for modern challenges.

What the Service Provides

Sandpiper is an AI-augmented network intelligence platform that creates 'Living Digital Twins' of mission-critical networks.

The platform enables government, defence and health organisations to map complex entity relationships, identify hidden vulnerabilities, model disruption scenarios, and generate evidence-based courses of action—all through an intuitive interface designed for operational users rather than data scientists.

Core Capabilities

- **Graph-Native Network Analytics.** Purpose-built knowledge graph architecture that models entities (people, objects, locations, events) and their relationships across multiple data sources.
- **Multi-Source Data Integration.** Automated ingestion and harmonisation of structured and unstructured data from open source intelligence (OSINT), proprietary feeds, and client systems.
- **AI-Augmented Entity Resolution.** Machine Learning algorithms that identify matching entities across disparate sources, discovering hidden connections that manual analysis would miss.
- **Scenario Simulation Engine.** 'What-if' modelling that quantifies the impact of disruptions, ranks courses of action, and enables evidence-based decision-making.
- **Geospatial Intelligence.** Integrated mapping and location analytics including maritime tracking, transport route analysis, and infrastructure dependency mapping.
- **Natural Language Querying.** Conversational interface enabling users to interrogate complex networks without requiring technical query languages.

- **Audit Trail & Evidence Management.** Comprehensive logging of all queries and analytical outputs to support legal proceedings, regulatory compliance, and ministerial accountability.

Social Value

Avenga is committed to delivering social value aligned with the Government's PPN 002 Social Value Model. Our commitments are proportionate to contract value and focus on the following priority areas:

Kickstart Economic Growth

- **UK SME Supply Chain.** Minimum 60% of subcontracted value to UK-based SMEs, with preference for companies outside London and the South East.
- **Skills Development.** For contracts exceeding £500K, we will offer at least one paid internship or apprenticeship position in data engineering, intelligence analysis, or software development.
- **Knowledge Transfer.** All engagements include capability transfer to client personnel, reducing long-term dependency on external suppliers.

Break Down Barriers to Opportunity

- **Diverse Recruitment.** Active recruitment from underrepresented groups in technology, including partnerships with organisations supporting veterans, career-changers, and returners to work.
- **Flexible Working.** All roles support remote and flexible working arrangements to enable participation from those with caring responsibilities or accessibility needs.
- **Social Mobility.** Our operations teams are anchored in the North of England, primarily in the North East. We create careers of choice for technologists and are building the tech cluster around the National Innovation Centre for Data.

Make Britain a Clean Energy Superpower

- **Cloud-First Architecture.** Sandpiper is deployed on AWS, which has committed to powering operations with 100% renewable energy by 2025 and achieving net-zero carbon by 2040.
- **Remote Delivery.** Default delivery model minimises travel-related carbon emissions through remote working, virtual collaboration, and digital-first engagement.

Monitoring & Reporting

Social value commitments will be tracked through quarterly reporting, with metrics including: SME spend percentage; apprenticeship/internship positions created; training hours delivered to client personnel; and, carbon footprint per engagement. Reports will be provided to contracting authorities on request.

Overview of the G-Cloud Service

Sandpiper Network Intelligence Platform is offered through G-Cloud 15 as a Software as a Service (SaaS) solution, deployed on UK-based AWS infrastructure (London region, eu-west-2) to ensure data sovereignty compliance for UK Government clients.

Supported Use Cases

Sandpiper is configured to address five primary use cases relevant to UK Government buyers:

1. Military Supply Chain Resilience (MSCR)

Creates living digital twins of defence supply chains, from raw material extraction through manufacturing to frontline delivery. Enables defence planners to identify bottlenecks, model disruption scenarios (export controls, sabotage, supplier failure), and generate quantified courses of

action. Compresses analysis cycles from 6-8 weeks to minutes, enabling decision-making at the speed required for dynamic geopolitical conditions.

2. Law Enforcement Network Analytics

Maps organised crime networks including serious and organised crime groups, smuggling operations, financial crime networks, and human trafficking organisations. Automatically discovers hidden connections across disparate intelligence sources (telecommunications, financial, OSINT), identifies high-value targets for disruption, and quantifies the impact of enforcement actions. Supports evidence management with audit trails meeting Criminal Procedure Rules requirements.

3. Critical National Infrastructure Protection

Models interdependencies across CNI sectors (energy, telecommunications, transport, water) and their connections to defence and commercial supply chains. Enables identification of cascading failure risks from grey zone threats, cyber-attacks, and physical sabotage. Provides pre-emptive threat alerting based on geopolitical signals and adversary pattern-of-life analysis.

4. Commodities Supply Chain Security

Tracks critical commodities from source to consumption, including strategic materials (rare earths, pharmaceuticals, food supplies) and energy resources. Relevant for NHS supply chain resilience, Great British Energy operations, and strategic stockpile management. Models theft, diversion, and supply disruption scenarios with predictive alerting.

5. Counter-Disinformation Operations

Maps hostile information operations as networks, identifying actors, amplification channels, funding flows, and coordination patterns. Enables counter-narrative planning through scenario simulation, measuring potential reach and impact of interventions. Supports democratic resilience programmes and election integrity operations.

Platform Architecture

Sandpiper is built on AWS managed services including Amazon Neptune (graph database), Amazon SageMaker and Bedrock (AI/ML), Amazon Kinesis (real-time data streaming), and comprehensive security services. The platform is designed for UK data sovereignty with all data processing and storage within AWS London region. Encryption keys are managed via AWS KMS with customer-managed keys retained under Avenga control.

Deployment Model

Sandpiper is available as a fully-managed SaaS deployment or can be deployed within client AWS tenancies for organisations requiring additional isolation. Both models maintain identical functionality and security controls.

Associated Services

Included in Platform Subscription

- Core platform access for agreed number of concurrent users
- Standard data storage allocation
- Platform updates and security patches
- UK business hours support (09:00-17:30 Monday-Friday)
- Standard API access for system integration
- User documentation and online help resources

Available at Additional Cost

- Professional services for implementation, data integration, and custom configuration
- Domain subject matter expert consultancy

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- Training and capability transfer programmes
- Third-party data feed integration (data fees charged at cost plus administration)
- 24/7 enhanced support
- Additional storage and compute capacity
- Custom reporting and analytics development

Please refer to the Avenga G-Cloud 15 Rate Card and Pricing Document for detailed pricing information.

2. Data Protection

Information Assurance

Current Certifications

Avenga is committed to achieving industry-standard security certifications. Our certification roadmap is:

- **Cyber Essentials Plus.** Targeted within 12 months of G-Cloud framework award.
- **ISO 27001:2022.** Targeted within 18 months of framework award.
- **SOC 2 Type II.** Targeted within 24 months of framework award.

Security Architecture

Sandpiper is deployed on AWS infrastructure designed to meet or exceed UK Government security requirements:

- **Data Sovereignty.** All data processing and storage within AWS London region (eu-west-2). No data leaves UK jurisdiction without explicit client authorisation.
- **Encryption at Rest.** AES-256 encryption using customer-managed KMS keys retained under Avenga's control.
- **Encryption in Transit.** TLS 1.3 for all data transmission.
- **Access Control.** Role-based access control (RBAC) at entity-level granularity. Multi-factor authentication enforced for all access.
- **Audit Logging.** All queries, data access, and administrative actions logged via AWS CloudTrail with tamper-evident storage.

AWS Infrastructure Security

AWS (Amazon Web Services) data centres are designed to meet or exceed Tier 3 concurrent maintainability standards. AWS holds ISO 27001, SOC 1/2/3 certifications, and is certified for UK government use via G-Cloud. While AWS does not hold formal Uptime Institute Tier certification, their infrastructure ensures the highest level of performance and availability for customers.

Data Back-Up & Restoration

Avenga maintains comprehensive data backup procedures designed to ensure business continuity, data integrity, and compliance with regulatory requirements.

Backup Architecture (3-2-1-1-0 Rule)

We implement the enhanced 3-2-1-1-0 backup strategy:

- **3** copies of all data (1 production + 2 backup).
- **2** different storage media types (S3 Standard + S3 Glacier).
- **1** copy stored offsite (different AWS Availability Zone, minimum 10km separation).
- **1** copy immutable (S3 Object Lock with Governance mode, minimum 30-day retention).
- **0** errors (verified through automated restoration testing).

Recovery Objectives

Scenario	RTO Target	RPO Target
Single file/record recovery	< 1 hour	24 hours
Database restoration	< 4 hours	1 hour
Full platform recovery	< 8 hours	1 hour

Testing & Verification

- **Automated integrity checks:** Daily.
- **Partial restoration tests:** Weekly.
- **Full DR restoration tests:** Quarterly.
- **Tabletop DR exercises:** Annually.

Client-specific backup requirements can be discussed prior to an order being placed and documented in the Order Form as agreed between both parties.

Business Continuity Statement/Plan

Avenga maintains a Business Continuity Plan (BCP) aligned with ISO 22301 principles. The plan covers:

- **Scope.** All Sandpiper platform services and supporting business functions.
- **Critical Functions.** Platform availability, data integrity, customer support, security monitoring.
- **Dependencies.** AWS infrastructure, third-party data feeds, key personnel.
- **Acceptable Downtime.** Defined by service level tier (Standard: 99.5%, Enhanced: 99.9%).
- **Recovery Strategy.** Multi-AZ deployment with automated failover, cross-region backup capability

A more detailed Business Continuity Plan can be provided to the buyer on request.

Privacy by Design

Sandpiper is architected with Privacy by Design principles embedded from initial conception, in compliance with UK GDPR requirements:

- **Data Minimisation.** Platform collects and processes only data required for specified analytical purposes.
- **Purpose Limitation.** Data processing strictly limited to purposes defined in data sharing agreements.
- **Access Controls.** Entity-level RBAC ensures users access only data authorised for their role.
- **Audit Trails.** All data access logged for accountability and breach investigation capability.
- **Data Subject Rights.** Technical capabilities support exercise of data subject rights where applicable to analytical use cases.
- **Retention Controls.** Configurable data retention periods with automated deletion capabilities.

For use cases involving Personally Identifiable Information (such as law enforcement or investigations), data classification controls and handling procedures are configured to meet the sensitivity requirements of the specific deployment.

3. Using the Service

Ordering and Invoicing

To order Sandpiper services via G-Cloud 15:

1. **Initial Contact.** Email juan.villamil@avenga.com with an outline of your requirements, including intended use case, estimated user numbers, and any specific data integration needs.
2. **Requirements Discussion.** We will arrange a discovery call to understand your specific needs and recommend appropriate service configuration.
3. **Proposal & Pricing.** Based on the discovery discussion, we will provide a detailed proposal with pricing based on the G-Cloud 15 Rate Card.
4. **Order Form.** Upon agreement, we will assist in completing the G-Cloud Call-off Contract Order Form, documenting agreed scope, service levels, and pricing.
5. **Invoicing.** Invoices are issued in accordance with the payment terms specified in the Order Form. Standard terms are 30 days from invoice date.

Availability of Trial Service

Avenga does not currently offer free trial services for Sandpiper. However, we offer the following alternatives:

- **Demonstrations.** We provide comprehensive demonstrations of the platform using anonymised or synthetic data relevant to your use case.
- **Proof of Concept.** For substantial opportunities, we can discuss paid Proof-of-Concept engagements with defined success criteria. Please refer to our Rate Card for professional services pricing.
- **Reference Sites.** We can arrange reference calls with existing clients (subject to their agreement) to discuss their experience with the platform.

On-Boarding, Off-Boarding, Service Migration

On-Boarding Process

Upon contract signature, the following on-boarding process is initiated:

- **Kick-off Meeting.** Initial meeting with key stakeholders to confirm scope, timelines, and governance arrangements.
- **Dedicated Support.** Assignment of a Customer Success Manager and Technical Lead for the implementation period.
- **Environment Provisioning.** Configuration of client-specific platform instance including security controls, user roles, and initial data schema.
- **Data Integration.** Ingestion and harmonisation of client data sources as defined in the Order Form.
- **User Training.** Delivery of training programme for operational users and administrators.
- **Acceptance Testing.** Structured testing against agreed acceptance criteria prior to go-live.

Off-Boarding Process

Clients wishing to terminate or migrate away from Sandpiper will receive the following support:

- **Notice Period.** As specified in the Order Form (standard 30 days).
- **Data Export.** Full export of client data in standard formats (CSV, JSON, or agreed alternatives).
- **Transition Support.** Assistance with knowledge transfer to replacement service provider.
- **Data Destruction.** Certified deletion of client data upon written confirmation, with certificate of destruction provided.

Additional professional services for bespoke exit planning are available at rates specified in the Rate Card.

Training

Avenga provides comprehensive training to ensure client personnel can effectively operate the Sandpiper platform:

Standard Training (included in implementation)

- **Platform Familiarisation.** Introduction to platform navigation, core features, and standard workflows (4 hours).
- **Administrator Training.** User management, security configuration, and system administration (4 hours).
- **User Documentation.** Comprehensive online help, user guides, and video tutorials.

Extended Training (additional cost)

- **Advanced Analytics.** Graph querying, scenario modelling, and custom analysis techniques.
- **Domain-Specific Training.** Use-case specific training tailored to client operational context.
- **Train-the-Trainer.** Enabling client personnel to deliver internal training programmes.

Please refer to our Rate Card for detailed pricing on extended training options.

Implementation Plan

Implementation timelines are tailored to the complexity of each deployment. Typical implementations follow a phased approach:

- **Phase 1 – Discovery & Design** (2-4 weeks). Requirements refinement, data source assessment, architecture design.
- **Phase 2 – Build & Configure** (4-8 weeks). Environment provisioning, data integration, initial knowledge graph build.
- **Phase 3 – Test & Validate** (2-4 weeks). User acceptance testing, performance validation, security review.
- **Phase 4 – Go-Live & Stabilise** (2-4 weeks). Phased rollout, hyper care support, knowledge transfer.

A detailed implementation plan will be provided to the buyer following the discovery phase.

Service Management

Sandpiper services are managed in accordance with ITIL best practice principles:

- **Incident Management.** Defined processes for incident logging, categorisation, prioritisation, and resolution with escalation paths.
- **Problem Management.** Root cause analysis for recurring issues with permanent resolution focus.
- **Change Management.** Controlled change processes for platform updates, with client notification and testing windows.
- **Service Reporting.** Monthly service reports covering availability, incidents, and key performance metrics.

Service Constraints

- **Maintenance Windows.** Scheduled maintenance typically performed Sunday 0200-0600 UK time, with 72 hours advance notice for planned maintenance affecting availability.
- **Support Hours.** Standard support: 0900-1730 Monday-Friday UK time (excluding bank holidays). 24/7 support available at additional cost.

- **Customisation.** Platform configuration within defined parameters. Bespoke development available via professional services at additional cost.
- **Data Volumes.** Entity and relationship limits as specified in service tier. Additional capacity available at published rates.

Service Levels

Sandpiper is offered with the following service level tiers:

Metric	Standard Tier	Enhanced Tier
Platform Availability	99.5%	99.9%
Support Hours	UK Business Hours	24/7
P1 Response Time	4 hours	1 hour
P2 Response Time	8 hours	4 hours

Specific service levels can be discussed and agreed prior to order placement, with agreed terms documented in the Order Form.

Outage & Maintenance Management

- **Planned Maintenance.** Minimum 72 hours advance notice via email to nominated client contacts. Maintenance scheduled outside UK business hours where possible.
- **Emergency Maintenance.** Notification as soon as reasonably practicable. Best efforts to minimise disruption during UK business hours.
- **Status Page.** Real-time service status available via dedicated status page with subscription for notifications.
- **Post-Incident Review.** Root cause analysis provided for all P1 incidents within 5 business days.

Financial Recompense Model for Not Meeting Service Levels

Avenga offers service credits for sustained failures to meet agreed availability targets. The service credit structure is documented in the Order Form and typically operates as follows:

- Credit calculated as percentage of monthly subscription fee proportionate to availability shortfall.
- Credits applied against future invoices rather than cash refund.
- Exclusions for scheduled maintenance, force majeure, and client-caused outages.

Specific service credit terms will be agreed during contract negotiation.

Commented [PL1]: @tamara - we will need a full team agreement on what we are prepared to offer here.

4. Provision of the Service

Customer Responsibilities

To ensure successful service delivery, the Customer agrees to:

- **Nominated Contacts.** Provide named contacts for operational, technical, product and commercial matters with authority to make decisions on behalf of the organisation.
- **Agile Ways of Working.** Work in a standard Agile delivery manner with full participation in the required Sprint Ceremonies.
- **Data Provision.** Provide access to agreed data sources in formats and timescales agreed during implementation planning.
- **User Management.** Maintain accurate records of authorised users and notify Avenga promptly of user changes (Joiners/Movers/Leavers).
- **Security Compliance.** Ensure users comply with acceptable use policies and security requirements.
- **Timely Responses.** Respond to queries and requests for information within reasonable timescales to avoid implementation delays.
- **Environment Access.** Provide necessary access and permissions for integration with client systems where required.

Technical Requirements & Client-Side Requirements

Minimum Requirements for Platform Access

- **Web Browser.** Modern browser (Chrome, Edge, Firefox, Safari - latest two major versions).
- **Internet Connectivity.** Stable broadband connection (minimum 10 Mbps recommended for optimal visualisation performance).
- **Display.** Minimum 1920x1080 resolution recommended for network visualisation.
- **Authentication.** Compatible MFA device (authenticator app or hardware key).

For API Integration

- Network connectivity to Sandpiper API endpoints (via internet or VPN as agreed).
- Technical capability to implement REST API calls.
- Certificate management for mutual TLS where required.

Detailed technical requirements will be confirmed during the discovery phase and documented in the Order Form.

Outcomes/Deliverables

Clients using Sandpiper can expect the following outcomes:

- **Decision Cycle Compression.** Analysis that previously took 6-8 weeks delivered in minutes to hours.
- **Hidden Connection Discovery.** Identification of non-obvious relationships across complex networks that manual analysis would miss.
- **Quantified Decision Support.** Evidence-based courses of action with confidence levels and impact assessments.
- **Single Pane of Glass.** Unified view across disparate data sources eliminating manual correlation.
- **Audit-Ready Intelligence.** Complete audit trails supporting legal proceedings, regulatory compliance, and ministerial accountability.
- **Capability Transfer.** Trained client personnel able to operate and extend the platform independently.

Commented [PL2]: @charlie - do we want to list any additional outcomes?

Development Life Cycle of the Solution

Sandpiper is developed using Agile methodology with the following practices:

- **Sprint Cycles.** Two-week development sprints with defined deliverables.
- **Continuous Integration.** Automated build and test pipelines ensuring code quality.
- **Security by Design.** Security review integrated into development process, not bolted on afterwards.
- **Client Input.** Regular product advisory sessions with key clients to inform roadmap priorities. Client input is necessary through the Agile ceremonies and through a named Product Owner.
- **Release Management.** Quarterly feature releases with advance notification and release notes. Critical security patches deployed as required. Potentially Shippable Increments released every two-weeks.

After-sales Account Management

Avenga is committed to long-term partnership with our clients:

- **Customer Success Manager.** Dedicated CSM assigned to each client to ensure value realisation and address emerging needs.
- **Quarterly Business Reviews.** Structured reviews covering service performance, usage analytics, and strategic alignment.
- **Product Roadmap Updates.** Regular briefings on upcoming features and opportunity for client input.
- **User Community.** Access to user community for best practice sharing (subject to security classification).

Termination Process

Either party may terminate the service agreement in accordance with the terms specified in the G-Cloud Call-off Contract and Order Form.

- **Notice Period.** Standard 30 days written notice for termination without cause.
- **Early Termination.** The Customer acknowledges that where services are purchased for a minimum term, early termination may incur charges as specified in the Order Form.
- **Transition Assistance.** Avenga will provide reasonable assistance with transition to alternative services during the notice period.
- **Data Return.** Client data exported in standard formats within 30 days of termination effective date.
- **Data Destruction.** Certified destruction of client data within 30 days of termination, or as otherwise agreed.

5. Our Experience

Case Studies

Detailed case studies demonstrating successful delivery of network intelligence solutions for government and commercial clients are available on request. Case studies cover deployment of advanced and predictive analytics, data integration and intelligence, AI implementation, Robotic Process Automation, Software Delivery Lifecycle, Product, Project and Programme Management.

Clients

Avenga and our delivery partners have experience working with organisations including:

- UK Government departments and agencies
- Law enforcement organisations
- Defence contractors
- Critical national infrastructure operators
- Global logistics and port operators

References available on request, subject to client agreement.

Contact Details

For enquiries regarding Sandpiper or G-Cloud 15 orders, please contact:

G-Cloud Contact: Juan Villamil

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Website: www.avenga.com

— End of Service Definition —