

Service Definition - Predictive Decision Support Service

LONE
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1. About Lone Star Analysis

We provide Digital Transformation through Predictive and Prescriptive Analytics and Evolved Artificial Intelligence®.

Our service enhances decision superiority and helps you make smarter decisions faster. Our service improves confidence and reduces uncertainty in making critical decisions, enabling you to improve operational and financial performance.

2. Service Overview

The Predictive Decision Support Service uses our Evolved AI® to provide Buyers with cloud-based, analytical outputs including forecasting, simulation, optimisation, scenario analysis, and evidence-driven recommendations.

We ingest customer data into a secure cloud analytical environment, configure validated modelling workflows, use AI to run predictive and optimisation models, and produce clear outputs such as forecasts, bottleneck analysis, risk estimates, performance projections, and option comparisons. Customers receive results, insights, reporting, and decision-support guidance.

3. Service Scope

- AI-driven predictive and optimisation models to support better operational and strategic decision-making.
- Data ingestion into a secure cloud workspace.
- Data auditing, structuring, and validation.
- Construction and execution of predictive, simulation, and optimisation models.
- Scenario design and scenario comparison.
- Capacity / demand modelling.
- Sensitivity and uncertainty analysis.
- AI-derived insights provide actionable outputs — dashboards, charts, tables, and reports that drive faster decisions.
- Joint interpretation workshops with customer teams.

4. Deliverables

- Forecasts (e.g. demand, workload, outputs, backlogs).
- Simulation outputs (flows, queues, resource utilisation).
- Optimised scenarios (e.g. staffing mixes, pathway options, policy levers).
- Risk distributions and P10/P50/P90 uncertainty ranges.
- Scenario comparison packs.
- Executive summary and findings reports.
- Structured datasets prepared for modelling.
- Technical appendix describing assumptions, model behaviour, and validation.

5. Setup and Migration

We support buyers in preparing, organising, and migrating data into a secure cloud environment suitable for running predictive analysis. This includes preparing data, structuring information, and ensuring alignment with buyer governance and cloud strategies.

5.1 Data auditing and organising

We audit, organise, and prepare Buyer data so that it can be migrated into the secure analytical workspace used for predictive modelling. This ensures the modelling environment is populated with datasets, and allows appropriate selection and configuration of reference models.

Activities include:

- Data discovery, profiling, and mapping against analytical requirements.
- Identification of gaps, inconsistencies, or structural issues in Buyer data.
- Consolidation and organisation of datasets into a secure cloud workspace.
- Mapping Buyer data to the analytical schema used by the modelling engine.
- Assessment of which modelling templates, forecasting components, or simulation structures are appropriate given the Buyer's problem, decisions, and data maturity.
- Preparation of data extracts required to initialise model customisation.
- Documentation of all assumptions and decisions made during data preparation.

Outcome:

Buyer data is validated, structured, and ready for predictive analysis. A provisional model selection decision is recorded, based on the results of data auditing and alignment with the Buyer's objectives and decision needs.

5.2 Data/information structure design

We design the data structures necessary for forecasting, simulation, scenario analysis, and optimisation. The aim is to create a reliable and repeatable analytical base that supports clear and defensible predictive outputs.

Activities include:

- Designing logical and temporal structures required for modelling workflows.
- Defining metadata, hierarchies, relationships, and transformation logic.
- Structuring datasets so simulations and forecasts run consistently.
- Selection of modelling architectures (e.g., flow simulation, discrete-event, system dynamics, statistical forecasting, optimisation engines) appropriate to the Buyer's decisions.
- Customisation of the selected modelling templates to reflect Buyer-specific pathway structures, resource rules, policy levers, constraints, or operational behaviours.
- Aligning data structures with version control, auditability, and repeatable execution requirements.

Outcome:

A well-defined information architecture is established within the cloud analytical workspace, and a customised modelling configuration is created that reflects the Buyer's real-world system and decision space. This ensures subsequent model runs generate meaningful predictive outputs.

5.3 Engagement and Communication Planning

We initiate a structured discovery and engagement phase to confirm the decision context, clarify objectives, and build alignment across Buyer teams before the predictive modelling starts.

Activities include:

- Agreement of problem definition, success criteria, key decisions, and modelling questions.
- Communication planning for stakeholders, data owners, SMEs, and governance boards.
- Identification of decision owners, technical contacts, and operational stakeholders.
- Review of the Buyer's current decision-making process and information gaps.
- Agreement of modelling scope, KPIs, policy levers, and scenario parameter ranges.

- Integration planning for how predictive outputs feed into operational or strategic decisions.
- Supporting change-management messaging around analytical adoption.

Outcome:

The output is a clear and shared delivery plan, defining timelines, responsibilities, and modelling milestones.

5.4 Project Management and Governance

We provide governance oversight to ensure predictive modelling is delivered reliably, transparently, and in alignment with the Buyer’s programme requirements.

Activities include:

- Management of risks, issues, dependencies, and modelling assumptions.
- Progress tracking against the agreed delivery plan and governance rhythm.
- Documentation of data inputs, transformations, model runs, and analytical outputs.
- Ensuring auditability and repeatability of results throughout the engagement.

Outcome:

This governance structure ensures predictive outputs are delivered consistently, with clear traceability and control.

5.5 Service Optimisation and Right-Sizing

We optimise analytical workloads so predictive models are efficient, cost-effective, and aligned to Buyer needs.

Activities include:

- Calibrating modelling complexity based on data availability and decision requirements.
- Optimising data structures for efficient cloud processing of simulations and forecasts.
- Ensuring compute usage remains proportional and avoids unnecessary execution cost.
- Applying best practices for efficient analysis.
- Streamlining intermediate transformations to minimise technical overhead.

Outcome:

This ensures the modelling environment remains performant, efficient, and appropriately sized throughout delivery.

5.6 Other

We perform minor ancillary activities that fall within the scope of Cloud Support “Set Up and Migration” but are not captured in the preceding categories. These activities exist solely to unblock progress and ensure the analytical environment is ready for predictive modelling.

Activities include:

- Temporary data-handling arrangements required during transition.
- Coordination with external data or technology stakeholders.
- Resolving ad-hoc blockers during migration of analytical workloads.

Outcome:

These ancillary activities ensure complete readiness of the Buyer’s environment for the predictive analysis that follows.

6. Onboarding and Offboarding

Onboarding typically includes:

- Discovery phase that includes kick-off workshop to understand customer need and specific requirements.
- Assignment of project lead and agreement of success measures and scope
- Confirmation of data sources, structures, and ownership

Offboarding includes:

- Handover of all buyer data including scenario-based outputs
- Documentation of modelling assumptions and structures
- Secure deletion of buyer data from our environments (retention periods will be defined in the call-off contract)

7. Buyer Responsibilities

The buyer must provide:

- Access to relevant data sources
- Access to appropriate stakeholders

8. Staffing and Skills

Our team typically includes:

- Senior data scientists (SFIA 5–6)
- Simulation and optimisation specialists (SFIA 5–6)
- Data engineers (SFIA 4–5)
- Project manager (SFIA 5)
- Domain subject matter experts (SFIA 6)

All staff are UK-based and security-cleared.

9. Pricing

Please refer to the Rate Card for full pricing options related to service delivery. Volume-based discounts may be applied in accordance with CCS guidelines and rules, and will be agreed with the Buyer where applicable.

Travel and Subsistence (T&S) costs are not included in the rates provided within the rate card. Where applicable, T&S may be charged in addition to the standard daily rates and will be agreed in advance with the Buyer.

The standard day rate covers typical compute loads. In cases where exceptional compute resources or specialist third-party software are required, these costs will be charged as Buyer-approved pass-through expenses and will be documented in the call-off contract. No charges are incurred without explicit Buyer approval.

10. Security, Information Assurance and Standards

Lone Star Analysis hold Cyber Essentials Plus certification and are set to obtain ISO 27001:2022 accreditation. Our security practices align with the Government Functional Standard GovS 007 and adhere to the NCSC Cloud Security Principles.

We do not require personal data to generate predictive outputs unless explicitly required. Where it is necessary, we process data in compliance with UK GDPR.

All employees are cleared to minimum SC, with some analysts cleared to DV. All staff are required to complete annual security training including data handling.

Lone Star Analysis are an ISO 9001:2015 accredited company, currently set to obtain ISO 27001:2022. We regularly engage the buyer for feedback through reporting and meetings to ensure a high standard of output, that meets requirements and buyer expectations.