

Valcon G-Cloud Lot 3 Service Definition

Predictive Maintenance

[Set Up and Migration | Service optimisation/right sizing, Other]

Version 1.0

1. About Us

Valcon is a leading European consultancy specialising in AI and data-driven business transformation, with a growing and established presence in the UK. A trusted partner to major organisations including multiple UK Government departments and public sector agencies. Valcon connects strategy and operations, helping organisations create value in their transformation programmes.

With over 1,750 consultants across Europe, Valcon brings deep expertise across data, AI, technology and consulting. In the UK, Valcon works with clients across financial services, public sector, retail, industrials and infrastructure. Valcon is backed by private equity firm Rivean Capital.

2. Service Description

A service that applies AI, advanced analytics and machine learning to predict when assets require maintenance. By analysing sensor, image or operational data, organisations can reduce unplanned downtime, optimise maintenance schedules, increase safety and improve asset reliability. The service delivers actionable insights, quantified value and repeatable models deployable across operations.

Features

- CRISP-DM aligned methodology for predictive maintenance delivery
- Data-driven identification of failure patterns and maintenance triggers
- Machine learning models with validation and explainability controls
- Quality assurance through model testing, monitoring and performance benchmarks
- Quantified savings tracking for downtime, maintenance cost and asset availability
- Reporting dashboards for operational performance and realised benefits
- Secure, scalable deployment across cloud, edge or hybrid environments
- Integration with existing asset management and maintenance systems
- Flexible delivery using agile or stage-gated project approaches
- Optional managed service for monitoring, retraining and continuous improvement

Benefits

- Faster time to value using proven methodologies
- Accurate and quantifiable identification of assets requiring maintenance
- End-to-end delivery from business need to deployment
- Transparent and explainable machine learning models
- Reduced downtime and improved operational continuity
- Access to highly qualified data scientists and engineers
- Scalable and repeatable predictive maintenance capability
- Optional managed service for ongoing optimisation
- Robust monitoring and alerting mechanisms
- Increased return on asset investments

3. Approach

Delivery Overview

- Predictive Maintenance solutions follow a structured, iterative approach based on CRISP-DM principles. We analyse business needs, understand available data, design the solution architecture and develop predictive models that assess asset failure risk. The service can be delivered as a project or supported continuously through a managed service.
- Predictive models are developed using sensor readings, operational logs, images or video, depending on the asset type. Results are validated, operationalised and deployed into secure cloud environments to ensure reliability, performance and scalability. The approach focuses on delivering measurable operational and financial outcomes.

Governance, Collaboration and Quality Assurance

- We collaborate closely with operational teams, engineering, data owners and IT functions to ensure all requirements are aligned to organisational standards. Model development includes validation, performance testing, explainability and risk checks. Deployment adheres to secure engineering practices and includes full documentation to support audit and assurance needs.
- Governance milestones ensure transparency across the lifecycle, including discovery findings, architecture reviews, model evaluation sessions, deployment sign-off and production readiness checks.

Change Management, Stakeholder Engagement and Methodology

- Stakeholders are engaged throughout discovery, design, modelling and deployment through structured workshops, playback sessions and testing cycles. Change considerations include operational impacts, training, data quality improvements and adoption activities required to operationalise insights. The methodology supports both agile sprints and traditional delivery models.
- Where required, Valcon provides a managed service to ensure continuous operation, monitoring, retraining and refinement of predictive models, ensuring long-term reliability and business value.

4. Effort and Cost

Effort will be determined collaboratively between the Valcon and the client based on the skills mix and scope required.

Please refer to the Pricing Document for current rates.

- Rate card prices are exclusive of VAT.
- Expenses are recharged at cost and supported by receipts.
- Expenses may include reasonable travel, accommodation, and subsistence costs.
- The payment schedule will follow milestone completions as agreed in the Statement of Work.

5. Assumptions

The successful delivery of the engagement depends on assumptions and dependencies jointly agreed between the Valcon and the client.

These may include (but are not limited to):

- Access to required stakeholders, systems, or information
- Timely decisions and approvals
- Availability of resources and infrastructure

- Defined governance and communication processes

All assumptions and dependencies will be recorded and validated as part of the Statement of Work (SoW).