

Asset Degradation Optimisation (ADO) G-Cloud 15





Table of Contents

1	Service Overview	3
2	Business Need	3
3	Our Approach.....	3
4	Buyer Responsibilities	4
5	Service Management	5
6	Protection of Data	5
7	On-boarding and Off-boarding	5
8	Skills and Knowledge Transfer	5
9	Partnerships/Alliances.....	5
10	Vendor Accreditations/Awards	5
11	Sub-contractors	6
12	Business Continuity and Disaster Recovery	6
13	Pricing	7
14	Ordering and Invoicing	7
15	Termination Terms	7
16	Further Information	7



1 Service Overview

Capgemini's Asset Degradation Optimisation (ADO) process helps clients with asset-intensive operations (covering multiple and large assets) to model their asset degradation, using advanced machine learning and cloud computing capabilities, to identify the optimal maintenance schedules and interventions based on desired criteria such as cost, resource availability and asset life.

The ADO takes in the asset specific information key to predicting how the asset will degrade overtime and when the appropriate maintenance intervention is planned to be undertaken. This includes information such as cycle life considering loading and time under load, available maintenance interventions, the impact of these interventions on restoring the cycle life and the costs of each intervention. Multiple combinations of scenarios are then modelled using machine learning algorithms backed by cloud computing to identify the scenario that best optimises the desired criteria such as cost, type of intervention and remaining asset life.

2 Business Need

Clients in the heavy asset and asset-intensive industries operate complex maintenance plans at multiple levels, strategic, tactical, and operational. These plans are often generated using detailed models in tools such as excel which can often be difficult to maintain and run locally. In addition, scenario modelling is very limited through the current tools being used due to the scale and complexity of the asset information needed to be simultaneously compared over multiple horizons to allow for useful optimisation. This leaves room for error which can have potentially catastrophic consequences.

A common error in the modelling carried out currently is the incorrect assignment (or lack thereof) of the correct maintenance intervention across the modelling period which leads to an asset deteriorating past its notional/operational life limits. This can lead to the failure of an asset in-service which can be catastrophic. This is particularly important for safety critical assets which are known to fail once they reach the end of their notional life. The solution for this (when spotted early enough) is addition of an unplanned maintenance intervention which incurs an unbudgeted cost. However, if an in-service failure occurs, the remedial maintenance event (if possible) will incur an even greater cost or require that the asset system be replaced in its entirety.

Linked to the above is the impact of erroneous asset degradation and associated maintenance forecasting on budgets and funding. Unplanned maintenance events which have been erroneously missed through suboptimal modelling incur unbudgeted costs which require end up being more expensive than they would have been otherwise, particularly considering the opportunity cost of incurred in securing additional funding.

The ADO helps clients simplify and streamline their asset life optimisation, reducing errors, saving costs and decreasing the likelihood of catastrophic failure events occurring. The ADO also provides a cost saving opportunity for clients, capable of modelling billions of unique maintenance combination scenarios simultaneously and comparing these to identify the most cost-effective scenario.

3 Our Approach

Capgemini's ADO offer adopts an agile iterative approach across 5 key phases: Mobilise; Design; Develop and Build; Validate and Iterate; and Document. Figure 1 below summarises the activities under each phase split into 6 stages (S0 to S6)

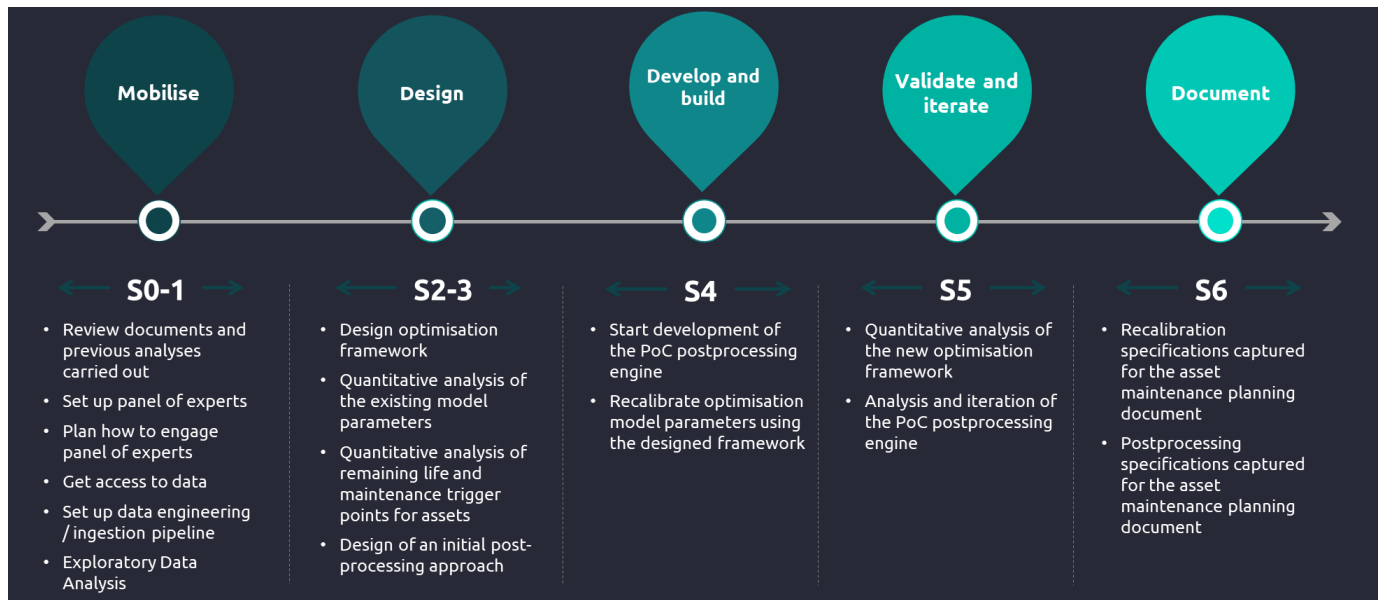


Figure 1: Our Approach phases and stages

1. **Mobilise:** Within this phase, our team will collate all relevant information across the assets being reviewed. This includes current maintenance plans, intervention types, asset types and classes, commercial agreements (maintenance, leasing and return conditions) and maintenance rules. The aim is to build the “complete picture” across the asset maintenance environment and identify any pain points and improvement opportunities that can be captured as “quick wins”.
2. The preliminary machine learning models and data ingestion pipelines are also created in this stage to align to the data structures held across the assets.
3. Information is gathered through workshops with maintenance teams and interviews with specified stakeholders with constant feedback sought across the data gathered to validate accuracy and the context.
4. **Design:** This phase focuses on iterating the optimisation framework. The existing model parameters built within the last phase and remaining life and maintenance trigger points for the assets are also analysed to include as criteria for the model. We also identify, document and design any post-processing activities that need to be created.
5. **Develop and Build:** This phase looks at running the model and Proof of Concept (PoC) postprocessing engine to produce the first optimisation solution. The post processing is then carried out to enrich the solution and apply the effects any “real world” implications that need to be documented. The outputs of this model are reviewed with the client to assess and validate the optimisation scenario. Focus groups are also held with select stakeholders to test the optimised solution and identify constraints which had not been originally captured.
6. **Validate and Iterate:** Subsequent runs of the model and PoC postprocessing engine are then undertaken to arrive at the best practical optimisation solution. The client team is constantly kept involved in the process to provide the assurance on the applicability of the optimisation.
7. **Document:** The detailed outputs of the optimisation are documented in detail in this phase. Review checkpoints are held with the client team to ensure accuracy and alignment of the information contained. Knowledge transfer is also carried out within this phase.

4 Buyer Responsibilities

Please refer to the Supplier Terms listed with this service on the Platform. These may contain additional Buyer obligations/costs the Buyer is subject to that are not identified anywhere else in the Supplier’s Application or on the Platform.



If these responsibilities do not match your expectations, then please contact us in order that we can explore options to vary our approach.

5 Service Management

This service can be delivered as part of a defined project.

6 Protection of Data

This service is based on a security classification of 'Official', however should you have a requirement for a different security classification that you would like us to consider, please contact us to discuss.

7 On-boarding and Off-boarding

Capgemini shall undertake on-boarding and off-boarding activities agreed within the Order Form (including as a minimum an exit plan in line with the Call-Off Contract terms) which will be charged for in accordance with the Pricing section for this service.

8 Skills and Knowledge Transfer

Capgemini recognises that skills and knowledge transfer is a critical element in the provision of G-Cloud services to public sector clients. Where possible and applicable, this forms part of the delivery plan for the service agreed at the start of the engagement. Our consultants and engineers are experienced in providing skills and knowledge transfer for major private and public sector clients.

Where appropriate, we may use a standard approach, tailored to topic, skills-gap and individual, to ensure consistency and effectiveness. The approach, Capgemini's Assess-Plan-Implement framework, has been used repeatedly by our teams to structure the work involved in transferring skills and creating new teams capable of driving and sustaining change long after the end of the formal programme. The framework can be applied throughout a project to understand knowledge transfer objectives, plan training delivery methods and materials, and deliver and evaluate success.

9 Partnerships/Alliances

There are no partnerships and/or alliances included as part of these services.

10 Vendor Accreditations/Awards



For the 13th year in a row, Capgemini has been recognised as one of the World's Most Ethical Companies® by the Ethisphere® Institute. This is an acknowledgement of our ethical culture that makes us an employer of choice and responsible player in the eyes of our clients, shareholders, and the wider community.



ISO 9001 Quality Management for Management Consultancy and IT Implementation and services to the Public Sector.



ISO 27001:2013 - Provision (Delivery) of IT services including business applications development, maintenance and Data, Digital and Cloud technologies.



NelsonHall has identified Capgemini as a Leader in its 2022 NEAT Vendor Evaluation for Learning Services due to its ability to meet future client requirements as well as its capability to deliver immediate learning benefits to them.



Capgemini is the first amongst consultancy and technology firms to be recognized six times in a row for its thought leadership reports.



2023 Ecovadis Platinum Rating: We maintained a platinum rating, recognising us as a responsible and sustainable business in the top 1% of companies assessed.



Better Society Awards: Our collaboration with Code Your Future to offer digital skills training won a Better Society Award in 2022. The awards celebrate efforts by commercial organisations to create a better society.



Inclusive Top 50 UK Employers List: We achieved second place in the Inclusive Top 50 UK Employers List 2022/23 – a list that assesses companies for best practice on diversity, equality and inclusion



UK Best Workplaces for Women: We were listed as a Best Workplace for Women by Great Place to Work®. This listing is based on responses from our team to an anonymous survey about their employee experience.



UK Best Workplaces for Wellbeing: We are listed by Great Place to Work® as a Best Workplace for Wellbeing.



Great Place to Work: We were certified as a Great Place to Work® in 2023, reflecting our employees' experience of working at Capgemini in the UK.

11 Sub-contractors

Capgemini UK may use the following subcontractors to deliver this service and this will be agreed with the client where needed:

- Capgemini Technology Services India Limited.

12 Business Continuity and Disaster Recovery

No disaster recovery plan is provided as part of these Services.



13 Pricing

This service is priced in accordance with the SFIA Rate Card attached. Capgemini can also provide offshore resources at reduced rates where appropriate. Projects can be priced either on a Time & Materials or Fixed Price basis.

14 Ordering and Invoicing

Please refer to the Supplier Terms for this service.

We would be pleased to arrange a call or meeting to discuss your requirements of our service in more detail.

15 Termination Terms

Please refer to the Supplier Terms for this service.

16 Further Information

For more information about this or any of our G-Cloud services, please contact our Public Sector Team.

Phone: 0370 904 4858

Email: publicsector.opps.uk@capgemini.com including the following information:

1. The name of this service.
2. The name of your organisation.
3. Your name and contact details.
4. A brief description of your business situation.
5. Your preferred timescales for starting the work.

About Capgemini

Capgemini is a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, generative AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2024 global revenues of €22.1 billion.

Make it real. | www.capgemini.com



This presentation contains information that may be privileged or confidential and is the property of the Capgemini Group.

Copyright © 2026 Capgemini. All rights reserved.