



Trust. Value. Velocity

G-Cloud 15

Architecture as a Service (AaaS)

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1. About Mastek

Mastek has been delivering Critical National Infrastructure programmes in the UK Public Sector for over a decade now. We are trusted with multiple contracts for the UK Government across Central Government, Health, Local Government, Policing, Public Protection and Defence. The majority of our national services are delivered in a context of high uncertainty and complexity while collaborating in multi-supplier environments.

While working for these large and complex public sector organisations, we have continuously refined our management, delivery and underlying processes to reflect key learnings from the sector:

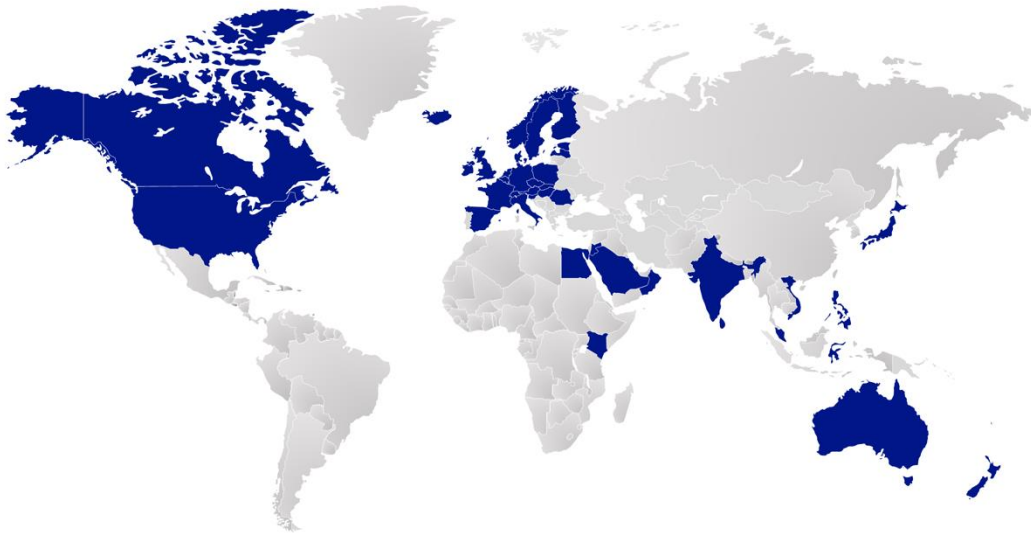
Working through a complex stakeholder landscape: We understand the importance of establishing effective communication channels, building trust and fostering a collaborative working environment that empowers stakeholders to contribute meaningfully to the project's success. Our approach is based on a deep understanding of stakeholder needs and requirements. We leverage our experience and expertise to design governance structures that promote transparency and accountability and use data-driven reporting mechanisms to ensure stakeholders have real-time visibility into project status and progress. At the Home Office, GDS, Ministry of Defence and NHS, we have a proven track record of working seamlessly with large stakeholder groups, including civil servants.

Standards, compliances: We comply with >20 policies and standards, including Government Digital Standards and Government CDDO Service Toolkit covering service standards, service manuals, TCoP, API technical and data standards. Our stringent governance, methods, playbooks and processes (manual and automated) span across service delivery phases, ensuring continuous compliance.

Policy-driven: Policies and procedures largely drive Public Sector organisations. We need to be Agile and flexible to meet demands for policy/regulatory changes, geopolitical events and ministerial commitments.

Culture: We adhere to the Civil Service core values of integrity, honesty, objectivity and impartiality. Key behaviours we promote stem from a combination of Civil Service and Mastek values. These include being passionate, accountable, sustaining predictable and repeatable outcomes, not transferring risk, transparent, leading to enable, acting with transparency, practising a no-blame culture and being flexible.

Mastek's global presence



Australia

Austria

Bahrain

Belgium

Brunei

Canada

Denmark

Egypt

Estonia

Finland

France

Germany

Hungary

Iceland

India

Indonesia

Ireland

Italy

Japan

Jordan

Kenya

Kingdom of Saudi Arabia
(KSA)

Kuwait

Latvia

Luxembourg

Malaysia

Netherlands

New Zealand

Norway

Oman

Philippines

Poland

Romania

Singapore

Slovakia

Spain

Sri Lanka

Sweden

Switzerland

United Arab Emirates (UAE)

United Kingdom

USA

Did you know?

75%

Around three quarters of Local Authorities in the UK who run Oracle have worked with Mastek on their digital transformation journey.

300,000 Users

Supported managing up to 750,000 logins per month to MOD through Identity and Access Management

Crime reduction

We designed, built and manage the UK's Strategic National DNA Database that helps Forensics and Law Enforcement Authorities investigate and stop crime

90% faster

We enabled the National Health Service (NHS) to drive 90% faster response times with a billion pharmacy prescriptions a year.

Technical Service Desk

We provide level 2 and ITSM support for the One Login service at Government Digital Service

22k

Our systems enable 22,000 schools to function efficiently every day of the year.

Healthcare and manufacturing

We delivered Finance, HCM and Supply Chain transformations for clients across health and manufacturing globally powered by Oracle Cloud

Transformation of trade

Transforming UK's trade with the EU and rest of the World by supporting Customs Declarations Services and its trade users.

99.99% Availability

We support the Home Office Biometrics (HOB) Platform, Having migrated it to an AWS platform.

Our digital and cloud services portfolio

Powered by Glide 4.0 and value-based delivery

Industry-aligned approach with business outcomes

Digital engineering and experience	• Cloud engineering and migration • Legacy modernisation • Low code / no code App Dev • DevSecOps • Enterprise integration	• MACH • Digital commerce • UX and CX • Platform engineering • Gen AI software development.
Oracle Cloud and enterprise apps	• Oracle Cloud applications • Oracle consulting • Oracle Cloud infrastructure	• Value-based delivery • Glide 4.0.
Data, automation and AI	• Cloud data modernisation • Business Intelligence and Analytics	• Data management • Intelligent automation • Data Governance.
Salesforce	• Sales Cloud • Service Cloud • Marketing Cloud • Industry Cloud	• Experience Cloud • Mulesoft.
Innovation labs and platforms	• Enterprise workforce scheduler • Connected enterprise • icx-Pro – intelligent part assistant	• iLeaseFinPro.
Cloud enhancement managed services	• Oracle managed services • Digital managed services • Commerce managed services	• Salesforce managed services.

Home Office Biometrics (HOB)

Public sector platform modelled 24x7 with 99.99% availability

Problem

- Transition business-critical Platform services from incumbent supplier with minimal risk
- Migration from private cloud to AWS Cloud.

Solution

- Migrated the infrastructure from private cloud to AWS
- Embedding Kubernetes Containerisation
- Introduced Docker and fully-baked AMIs
- Supporting the platform's self-service functionality using Jenkins Jobs
- Applying security updates to the OS base images through pipelines
- Instituting automated patching and testing for infrastructure images
- Support of configuration, test and releasable artefacts through the pipeline.

Outcome

- **Zero impact** on live service
- **80% automation** of SIT
- Environment Provision **2 days to 1 hour**
- **5x scalability** in handling student BRPs
- Cost saving the authority circa **£9.5m/year.**
- Won the '**Best Use of Cloud Services**' award
- **35%** Incident Volume Reduction.



Government Digital Service

Problem

GDS initiated the One Login programme to create a single front door for identity verification and authentication, which could be adopted and scaled across all government departments. This would improve the user experience by providing the public with a single identification and verification service for the government, reduce costs as each department no longer required its own identity service and reduce identity fraud and identity-enabled crime.

GDS released a tender in June 2023 to provide a Technical Service Desk (TSD) managed service for the One Login service. This service would provide a single point of contact for level 1 and 2 service support as part of the wider support ecosystem. It would be provided in the UK and replace the incumbent's scaled-down non-ITIL-aligned break-fix service.

Solution

In September 2023, Mastek were successfully awarded the TSD contract to deliver TSD on behalf of GDS. GDS had an extremely aggressive programme driven by the onboarding of HMRC as a user, which was a major milestone planned for February 2024, migrating new and existing HMRC users to the One Login platform. The TSD service was expected to go live in November 2023. This was an extremely complex programme which, within this timescale, would deliver:

- The contact centre provider for level 0 directly facing the public
- The TSD supplier in place directly facing all government departments
- The TSD supplier in place providing L1 and L2 engineering support and monitoring
- Continued delivery on the One Login backlog of features
- Continued migration of smaller government departments to the platform.
- Delivery of a new ITSM toolset to be configured for use by GDS and the One Login programme, integrating level 0 to level 3 support
- Working as one team, Mastek quickly integrated into the programme, appointing the leadership team early in the engagement. We collaborated with GDS from the outset, ensuring we tailored the service to their expectations rather than delivering what was written in the contract.

Our leadership team consisted of:

- Service Management Vice President
- Programme Director
- Chief Technology Officer
- Programme Management office lead.

Outcome

At its height, the programme team was circa 15 strong, covering programme/project delivery, PMO, architecture, fraud, security, support, omni-channel and quality assurance. The service team is currently in place providing circa 21 resources now covering end-to-end service management, service delivery and L1 and 2 engineering roles.

As the One Login migrations continue, Mastek is supporting Government departments onboarding to the platform as they transition into the new service and provide One Login a secure Technical Service Desk managed service with:

- Omni channel access for other government departments via telephony, email and web form
- Provision of L1 and L2 engineering support
- 24x7, 365 days a week cover
- 24x7x365 eyes on monitoring service
- Fraud detection and security, GDPR compliant
- End-to-end (L0-3) incident and problem management
- End-to-end 24x7 Major incident management (MIM)
- On-call/call-out engineering support, incident and MI management
- Adherence to stringent SLAs on incident response, call handling and fix times
- End-to-end monthly service reporting alongside TSD KPI and SLA reporting.
- A shift left culture and mindset, reducing the impact of service on product teams (L3)
- Support with service maturity in the programme, preparing GDS to run critical national infrastructure.



Internet-facing platform and applications for Army Digital Services

Developed mobile app and web app with 24*7 high availability

Problem

- New Defence Gateway Portal
- Combine all internet-facing applications into one
- Easy to use
- Enable easier access to the MySeries portfolio of products.

Solution

Designed and developed the following easy-use Progressive Web Apps:

- Defence Gateway Landing Page
- My Leave App
- My Expenses App
- My Health App
- My Details App
- My Appraisal App
- My Admin App
- COVID-19 Reporting Tool
- Commanders' COVID-19 Tool.

Outcome

- Delivered 20+ successful projects
- Deployment Automation
- £7.5m in savings annually
- Zero Downtime
- Environment creation in hours.



Delivered a platform for the Department for Health and Social Care

Delivered capability supporting 200k+ tests in a day,
traced millions of COVID-19 infections

Problem

- Leveraging DevOps platform based on reusable GitHub, AWS and Azure DevOps Pipelines
- Introduce more flexible, scalable and reusable IaC capabilities
- Implement CI/CD pipelines.

Solution

- Uplifted from Cloud Formation into Terraform (IaC)
- Pre-built the AMIs using Packer, with automated security checks
- Immutable infrastructure, thus eliminating the risks of partial upgrades and patches
- Continual Cost Optimisation processes and other service functions, such as Change and Risk management
- Migrated into an organisation-wide collaboration toolset. This included Jira, Confluence, Trello, Miro, Teams, SharePoint, O365, Slack, etc.

Outcome

- 75% reduction in lead time due to pre-built AMIs
- Zero Downtime Deployments
- Delivered a Platform - Secured, multi-tenanted hosted on Azure and AWS in 5 weeks
- Cost reduction achieved through close monitoring of resource utilisation.



Mastek and Technology in the Public Sector

Technical Capabilities	Relevant Technology Capability	Mastek Scale
Software Development Continuous Integration, Platform - Other Products, Cloud Collaboration Tools		Software Engineering 2354 FTE
QA and Test: API, Automated Functional and Compatibility, Accessibility & Performance		QA and Testing 774 FTE
Cloud Platforms Amazon Web Services AWS Microsoft Azure		Cloud Platforms 1046 FTE
Data BI/MI Components, Integration		BI and Visualisation 725 FTE
User-Centered Design		UCD 25 FTE
Office Automation Tools		Collaboration 4565 FTE

2. Summary

Architecture as a Service (AaaS) provides organisations with ongoing, on-demand architecture capability delivered as a managed service. It enables public sector organisations to either augment existing in-house architecture teams or fully provision architecture capability where none exists, without the need for recruitment.

The service delivers the full range of architecture capabilities; enterprise; solution; data; cloud and AI; through a flexible, scalable engagement model aligned to organisational priorities, delivery cadence and governance arrangements.

3. Masteks Service

Architecture as a Service encompasses the capabilities defined within the Architecture Service, delivered on a continuous or retained basis, aligned with required industry standards such as TOGAF, NAF (NATO Architecture Framework) and Oracle Enterprise Architecture Framework.

3.1 Embedded and Virtual Architecture Capability

- Provision of named or pooled architects operating as part of the client organisation.
- Embedded roles within programmes, portfolios or delivery teams.
- Virtual architecture support for smaller organisations or distributed teams.
- Coverage across enterprise, service, solution, data, integration, cloud and AI architecture.

3.2 Ongoing Architecture Strategy and Planning

- Continuous maintenance of enterprise architecture artefacts, including capability models and roadmaps.
- Evolution of target and transition architectures in response to policy, funding and delivery changes.
- Alignment of architecture outputs with organisational strategy and outcomes.
- Support for investment planning and prioritisation.

3.3 Architectural Assessment and Assurance as a Service

- Regular assessment of existing and proposed technology solutions.
- Architecture assurance for programmes, projects and supplier deliveries.
- Establishment or support of Architecture Review Boards (ARBs) or Technical Design Authorities (TDAs).
- Independent review of supplier designs and solution proposals
- Maintenance of architecture decision records and technical debt registers.

3.4 Business Architecture and Technology Alignment

- Ongoing development and refinement of business and technology capability models.
- Mapping of initiatives, programmes and solutions to agreed capabilities.
- Continuous alignment of technology solutions to target architectures and standards.
- Identification of capability gaps, duplication and rationalisation opportunities.
- Operating model review and target operating model design.

3.5 Platform, Cloud, Data, Service and AI Architecture Support

- Architecture support for enterprise platforms, including Oracle and Salesforce.
- Cloud architecture across AWS, Microsoft Azure and other cloud providers, including hybrid environments.
- Data and AI architecture to support analytics, automation and decision-making.
- Alignment with data governance, responsible AI and information assurance requirements.

- Service architecture to align operational requirements to new and evolving services.

3.6 Delivery, Transition and Operational Support

- Architecture support integrated into agile, waterfall or hybrid delivery models.
- Ongoing collaboration with delivery teams, suppliers and operations.
- Support for transition to live, service acceptance and operational readiness.
- Design and alignment with service management and support models.

4. Key Features

Architecture as a Service provides continuous, assured architecture capability, covering strategy, assessment, enterprise and business architecture, platform and data design, and delivery support. This enables organisations to operate, evolve, and transform their technology landscapes with confidence. Our approach is technology agnostic and includes the features defined below.

4.1 Architecture Strategy and Planning

- Provision of ongoing enterprise and solution architecture strategy aligned to organisational objectives and government policy.
- Development and maintenance of as-is, transition and target architectures.
- Definition and management of architecture principles, standards and reference architectures.
- Technology roadmaps supporting investment planning and prioritisation.
- Alignment of architecture activity with portfolio, programme and delivery planning.
- Continuous review and evolution of architecture to reflect policy, funding and delivery change.

4.2 Architecture Assessment and Assurance

- Ongoing architectural assessment of existing and proposed technology solutions.
- Independent assurance of programmes, projects and supplier designs.
- Establishment or support in Architecture Review Boards (ARBs) or Technical Design Authorities (TDAs).
- Review of solution designs for compliance with agreed standards and target architectures.
- Identification and management of architectural risk and technical debt.
- Maintenance of architecture decision records and assurance artefacts.

4.3 Enterprise Business Architecture and Technology Alignment

- Development and maintenance of enterprise architecture models, including business, data, application and technology views.
- Definition and modelling of business and technology capabilities.
- Review of operating models, including people, process, technology and supplier considerations.
- Design of target operating models (TOMs) aligned to strategic and transformation objectives.
- Mapping of capabilities to services, processes, data and enabling technologies.
- Alignment of technology investments to agreed capability models and enterprise architecture.
- Identification of duplication, gaps and rationalisation opportunities across the estate.

4.4 Platform, Cloud, Data, Service and AI Architecture

- Architecture support for enterprise platforms, including Oracle and Salesforce.
- Cloud architecture across AWS, Microsoft Azure and other cloud platforms, including hybrid and multi-cloud environments.
- Data architecture covering ingestion, storage, analytics, governance and lifecycle management

- AI architecture supporting analytics, automation and decision-support use cases.
- Alignment with data protection, security, ethical AI and responsible use policies.
- Service architecture to support end-to-end digital services, user journeys and operational needs.
- Integration and interoperability design across legacy and modern platforms.

4.5 Architecture as a Service Operating Model

Architecture as a Service can be delivered through flexible commercial and delivery models, including:

- Retained monthly service.
- Capacity-based or outcome-based provision.
- Scalable models that flex with demand and delivery peaks.
- Clear service governance, reporting and performance measures.

The service operates in accordance with agreed-upon architecture frameworks, standards and client governance arrangements.

5. Business Benefits

Mastek's Architecture as a Service delivers sustained strategic alignment, reduced risk, improved value for money and stronger delivery outcomes by providing assured, continuous architecture capability aligned to organisational goals, operating models and technology landscapes.

5.1 Strategic Alignment and Informed Decision-Making

- Ensures technology investment is directly aligned to organisational strategy, policy and outcomes.
- Provides clear, evidence-based architecture advice to support investment, funding and prioritisation decisions.
- Enables consistent long-term planning through maintained target architectures and roadmaps.

5.2 Reduced Risk and Improved Assurance

- Reduces delivery and operational risk through independent, ongoing architectural assessment and assurance.
- Improves confidence in supplier proposals and designs through structured review and governance.
- Identifies and manages architectural risk and technical debt early, avoiding costly remediation later.
- Improves business continuity through assurance and alignment to business criticality.

5.3 Improved Organisational Effectiveness and Operating Model Alignment

- Creates a shared understanding of enterprise and business architecture, reducing fragmentation and duplication.
- Aligns technology solutions to capability models and target operating models, improving organisational effectiveness.
- Ensures technology supports how the organisation operates today and how it intends to operate in the future.

5.4 Cost Efficiency and Better Value for Money

- Avoids unnecessary spend by identifying overlap, duplication and under-utilised technologies.
- Enables informed rationalisation of applications, platforms and tooling.
- Provides access to senior architecture capability without the cost and risk of permanent recruitment.

5.5 Improved Delivery Outcomes and Pace of Change

- Enables delivery teams to move faster with clear, assured architectural direction.
- Reduces rework and delays caused by unclear or inconsistent architectural decisions.
- Supports sustained transformation by embedding architecture capability alongside delivery.

5.6 Stronger Platform, Cloud, Data and AI Foundations

- Ensures enterprise platforms, cloud services and data solutions are secure, scalable and fit for purpose.
- Improves readiness for data-driven and AI-enabled services through robust architectural foundations.
- Aligns technology choices with government standards for security, data protection and responsible AI.

5.7 Operational Stability and Sustainability

- Improves service resilience, supportability, scalability and operational readiness through integrated architecture support.
- Ensures smooth transition from delivery into live service and operations.
- Reduces long-term operational cost and complexity by addressing architectural issues at source.

5.8 Flexibility and Resilience of Architecture Capability

- Provides scalable architecture capability that can flex with organisational demand and delivery peaks.
- Reduces dependency on individuals by providing a managed, sustainable architecture service.
- Supports organisations with limited or no in-house architecture capability to operate and transform with confidence.

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