



Trust. Value. Velocity

G-Cloud 15

AI-Led Product Testing (Microsoft Dynamics,
Salesforce, Oracle Fusion) Service

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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 & 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 & 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 & migration • Legacy modernisation • Low code / no code App Dev • DevSecOps • Enterprise integration	• MACH • Digital commerce • UX & 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 & 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 & applications for Army Digital Services

Developed mobile app & 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

Mastek's AI-led Product Testing Service delivers next-generation quality assurance for enterprise platforms, including Microsoft Dynamics, Salesforce and Oracle Fusion. This service combines AI-powered automation, GenAI-driven test design and reusable test assets with deep domain expertise to address the complexity of ERP and CRM ecosystems. Our approach ensures end-to-end coverage across Finance, HCM, CRM and Supply Chain processes, leveraging AI differentiators like self-healing scripts, NLP-based test generation and synthetic data creation.

Efficiency Gains: Achieve up to 40-50% reduction in testing effort, 70% automation of regression scenarios and 25-35% faster release cycles through reusable scripts, AI accelerators and continuous optimisation.

Innovation Roadmap: Mastek continuously invests in AI advancements, including predictive analytics for defect prevention, autonomous test orchestration and integration with emerging ERP/CRM features to keep testing future-ready.

Aspect	Traditional Testing	AI-Led Testing
Script Creation	Manual, time-intensive	GenAI-driven, Automated
Maintenance	High effort	Self-healing scripts
Data Generation	Manual, error-prone	Synthetic, privacy-compliant
Coverage	Limited	95%+ across modules
Optimisation	Periodic, manual	Continuous, AI-guided



Industry Trends

- AI (Generative & Agentic) Driven Testing
- Shift-Left and Continuous Testing
- Low-Code/No-Code Testing Platforms
- Shift-Right Testing to Extend QA Into Production
- Scaling Testing with Cloud Infra
- Hyper automation



Customer Pain Points

- Mounting Complexity of Software Solutions
- Test Automation - a costly bottleneck needing efficiencies.
- Delayed Test Cycles with high cost of Quality
- Constant upskilling - a struggle



Why use AI in Testing?

- Self-Healing Test Automation
- Intelligent Test Case Optimization and Generation
- Enhanced Accuracy and Reduced Human Error
- Accelerated Test Execution
- Enables Focus on other aspects of Testing

Figure 1: AI in Testing – A Game Changer

3. Mastek's Service

This service focuses exclusively on **AI-led testing for enterprise products**, addressing the unique challenges of ERP and CRM platforms:

- **End-to-End AI-Driven Testing:** Functional, integration, regression and performance testing tailored for Dynamics, Salesforce and Oracle Fusion.
- **Reusable AI-Generated Test Scripts:** Pre-built libraries for common business processes (Finance, HCM, CRM, Supply Chain) developed using Mastek's in-house AI-powered automation solution.
- **GenAI-Powered Test Design:** Automated creation of test cases and scripts using NLP and model-based approaches.
- **Self-Healing Automation:** Intelligent adaptation to frequent UI and configuration changes in ERP/CRM environments.
- **Synthetic Test Data Generation:** Privacy-compliant data for complex scenarios like multi-org setups and cross-module workflows.
- **Seamless CI/CD Integration:** Continuous testing aligned with agile and DevOps pipelines.
- **Cross-Platform Coverage:** Testing for integrations between Dynamics, Salesforce, Oracle Fusion and third-party systems.

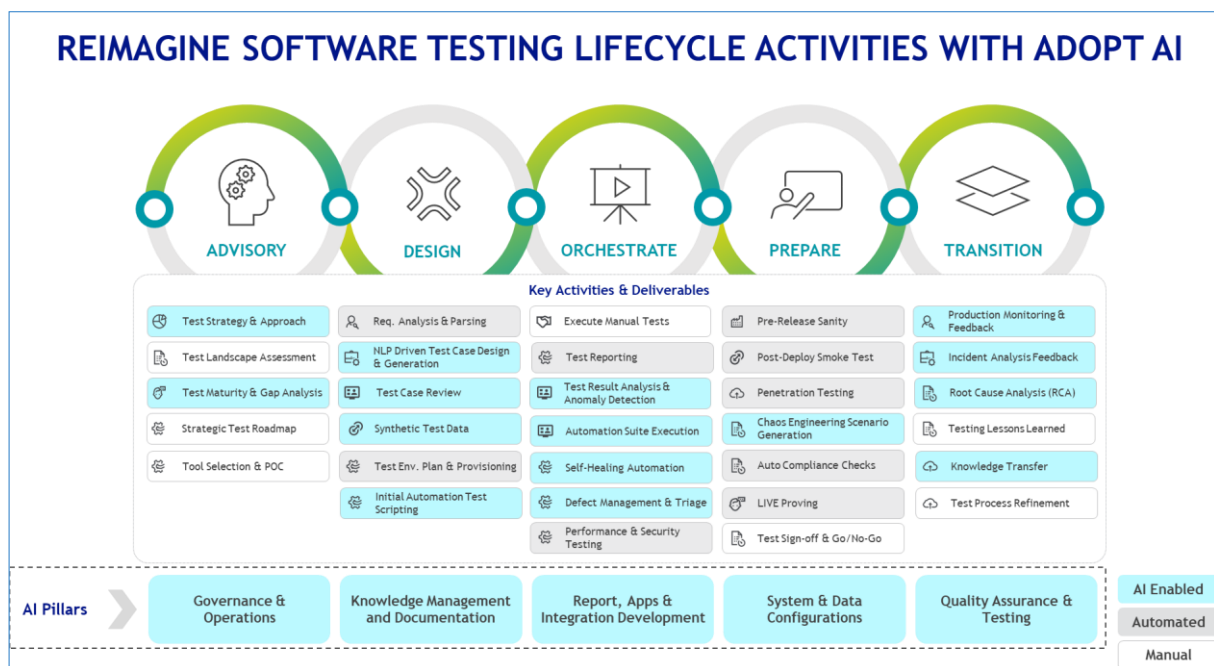
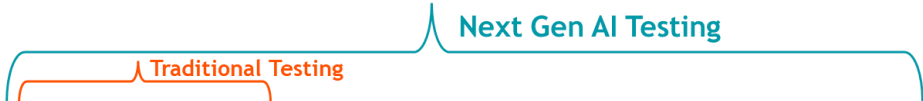


Figure 2: AI-Augmented Software Test Lifecycle

4. Key Features

Mastek offers a comprehensive range of features to ensure successful and efficient functional testing services:

- **Pre-Built Reusable Test Suites:** Extensive libraries for Oracle Fusion (Financials, HCM, SCM), Salesforce (Sales Cloud, Service Cloud, CPQ, Lightning flows) and Microsoft Dynamics (Finance, Supply Chain, CRM).
- **AI-Driven Test Automation:** GenAI agents for script generation, orchestration and optimisation.
- **Domain-Specific Accelerators:** Templates and blueprints for ERP/CRM processes (Record-to-Report, Hire-to-Retire, Lead-to-Cash, Procure-to-Pay).
- **Low-Code/No-Code Automation:** Business-user-friendly authoring via NLP; minimal technical dependency.
- **Visual Validation and Compliance:** AI-powered UI validation and automated checks for GDPR, SOX and ISO-aligned controls.
- **Continuous Test Optimisation:** AI agents analyse execution results and recommend improvements for coverage and efficiency.
- **Integration and Interface Testing:** Automated validation of workflows across ERP modules and connected applications/API endpoints.
- **AI-Enhanced Defect Triage:** Clustering, duplicate detection and root-cause hints to accelerate resolution.



Criteria	Manual Testing	Automation	AI-Enabled Automation
Flexibility	High	Low	High - NLP-based test generation
Setup Time	Low	High	Medium - lower with low-code tooling
Reusability	Low	Moderate	High - reusable, auto-adaptive
Maintenance	Easy	Tedious	Low - self-healing test scripts
Cost Over Time	High	Medium	Low - long-term ROI with reduced failures
Exploratory Capability	Excellent	Minimal	Growing - AI learns behavior patterns
UX/UI Testing	Best	Rarely addressed	Improved - Visual diffing + AI image testing
Regression Coverage	Low	High	Very High
Skill Requirement	Moderate	High	Low to Medium - thanks to NLP tools

Figure 3: Shift in Testing – Manual vs AI-Enabled

4.1 Process Coverage By Product

Microsoft Dynamics 365

- **Finance:** GL, AP/AR, Fixed Assets, Cash and Bank, Budgeting, Consolidation; Record-to-Report automation.
- **Supply Chain:** Procurement, Inventory, Warehouse, Order Management; Procure-to-Pay and Order-to-Cash flows.
- **CRM (CE):** Lead, Opportunity, Quote, Order, Case; SLA timers, entitlements, queues.
- **Integrations:** Dataverse, Power Platform, Azure Functions, external payment/tax services.

Salesforce

- **Sales Cloud:** Lead-to-Opportunity, Quotes/Orders, Forecasting, Territory Management.
- **Service Cloud:** Case lifecycle, Omni-Channel routing, Knowledge, Entitlements, SLAs.
- **CPQ and Billing:** Product/rule configuration, pricing, approvals, amendments.
- **Platform/Lightning:** Flows, Apex classes, triggers, metadata deployments.
- **Integrations:** Mulesoft/APIs, external ERPs, identity providers.

Oracle Fusion Cloud

- **Financials:** Chart of accounts, subledger accounting, AP/AR, GL postings, close and consolidation.
- **HCM:** Core HR, Payroll, Absence, Talent, Workforce Compensation; Hire-to-Retire flows.
- **SCM and Procurement:** Requisitions, POs, receiving, inventory, order orchestration.
- **Integrations:** OIC, REST/SOAP APIs, file imports, third-party tax/payment services.

5. Business Benefits

By partnering with us for AI-led test Automation Services, you unlock a multitude of benefits that drive quality, efficiency and user satisfaction for your software projects:

- **Accelerated ERP/CRM Deployments:** Reduce testing cycles by up to 40% with reusable scripts and AI-driven automation.
- **Improved Quality and Coverage:** Comprehensive validation of complex workflows across modules and integrations.
- **Lower Maintenance Costs:** Self-healing scripts minimise effort for frequent product updates and patches.
- **Rapid ROI:** Faster onboarding and reduced manual effort deliver measurable cost savings.
- **Future-Ready Testing:** Continuous adoption of AI innovations ensures scalability and adaptability.
- **Business Agility:** Enables organisations to respond quickly to market and regulatory changes with confidence.



Figure 4: Benefits of Our AI-Enabled Test Automation Solution

6. Technologies, Languages and Methods

#	Technologies	Languages	Methods
1	Playwright, Opkey, TestIM, Copado	Java, Python, JavaScript, TypeScript, C#	Model-based, NLP-driven, Agile, Shift-left.
2	AI Assets: Playwright MCP, Test Case Generation Agent, Automation Starter Script Agent, Synthetic Data Generator	JavaScript, Typescript	GenAI, Self-healing, CI/CD-integrated.
3	CI/CD & Infra: GitHub/GitLab, Azure DevOps, Jenkins, Docker		Parallel execution, artefacted reporting.

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