



Trust. Value. Velocity

G-Cloud 15

Test Maturity Assessment Service

Contents

1. About Mastek3

2. Summary..... 13

3. Masteks Service..... 14

4. Key Features..... 16

5. Business Benefits 17

6. Technologies..... 18

Table of Figures

Figure 1: Test Maturity Assessment 15

Figure 2: Stages of Maturity Assessment and Improvement:..... 15

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 contexts of high uncertainty and complexity, while collaborating across 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, the Ministry of Defence, and the NHS, we have a proven track record of working seamlessly with large stakeholder groups, including civil servants.

Standards, compliance: We comply with >20 policies and standards, including Government Digital Standards and the Government CDDO Service Toolkit, covering service standards, service manuals, TCoP, and 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

Organisations need intelligent, data-driven insights to assess test maturity, optimise processes and mitigate quality risks for faster, reliable delivery.

Mastek's Test Maturity Assessment Framework, 'QCheck,' provides a structured, analytics-driven evaluation of QA processes, skills, tools and technology. It defines clear goals upfront and delivers actionable insights across all dimensions of testing maturity.

The outcomes of our test maturity assessments play a vital role in shaping the objectives of test organisations, limiting the risk of defect leakage into production and de-risking both traditional and cloud implementations. Our approach leverages advanced analytics and automation to accelerate assessments and deliver precise, outcome-focused recommendations.

3. Masteks Service

Mastek brings decades of assurance expertise combined with modern analytics and automation capabilities to deliver impactful maturity assessments.

Mastek leverages its more than four decades of experience in assurance and testing to provide Test Maturity Assessment and Test Process Improvement services both to test functions within projects and across the organisation.

Our service evaluates the current state of testing with a data-driven approach, identifying gaps and opportunities for optimisation. Our Service provides a valuable roadmap for optimising your software testing capabilities. We leverage industry-recognised best practices and proven assessment methods to comprehensively evaluate your testing maturity level.

We apply industry benchmarks and outcome-based analysis to focus improvements on areas with the highest impact. Our assessment focuses on key areas, including:

- **Testing process:** We analyse your existing testing processes, including test planning, design, execution, defect management and reporting.
- **Testing tools and infrastructure:** We evaluate the tools and technologies you utilise for testing activities, assessing their suitability and effectiveness.
- **Testing resources:** We assess the skills and experience of your testing team, identifying any knowledge gaps or resource constraints.
- **Testing methods:** We examine your current testing methods and identify opportunities for adopting best practices such as Agile and Shift-Left testing.
- **Automation maturity:** We assess automation depth and recommend strategies for scaling intelligent automation across test cycles.
- **Compliance with standards:** We assess your adherence to industry standards and regulations related to software testing.
- **Metrics-driven dashboards:** Provide real-time visibility into maturity scores and improvement areas.

Services include:

- Understanding the status of cross-functional teams, which provide direct or indirect support
- Observations and gaps identified by the assessor
- Practical recommendations and roadmap for continuous improvement
- Improvement models that help in uplifting the maturity.

Mastek's Test Maturity Assessment is an evidence-based assessment conducted for testing projects with the help of stakeholder interviews and questionnaires. The assessment framework can be tailored to align with the delivery methodology, including each phase within testing. These phases start from inception to implementation and closure.

Our consultants collaborate closely with stakeholders, using structured workshops and analytics-backed evaluations to deliver actionable insights and a clear improvement roadmap. They review the project and testing collateral, focusing on gaining knowledge about the various pillars that form the testing function to assess their strengths and weaknesses.

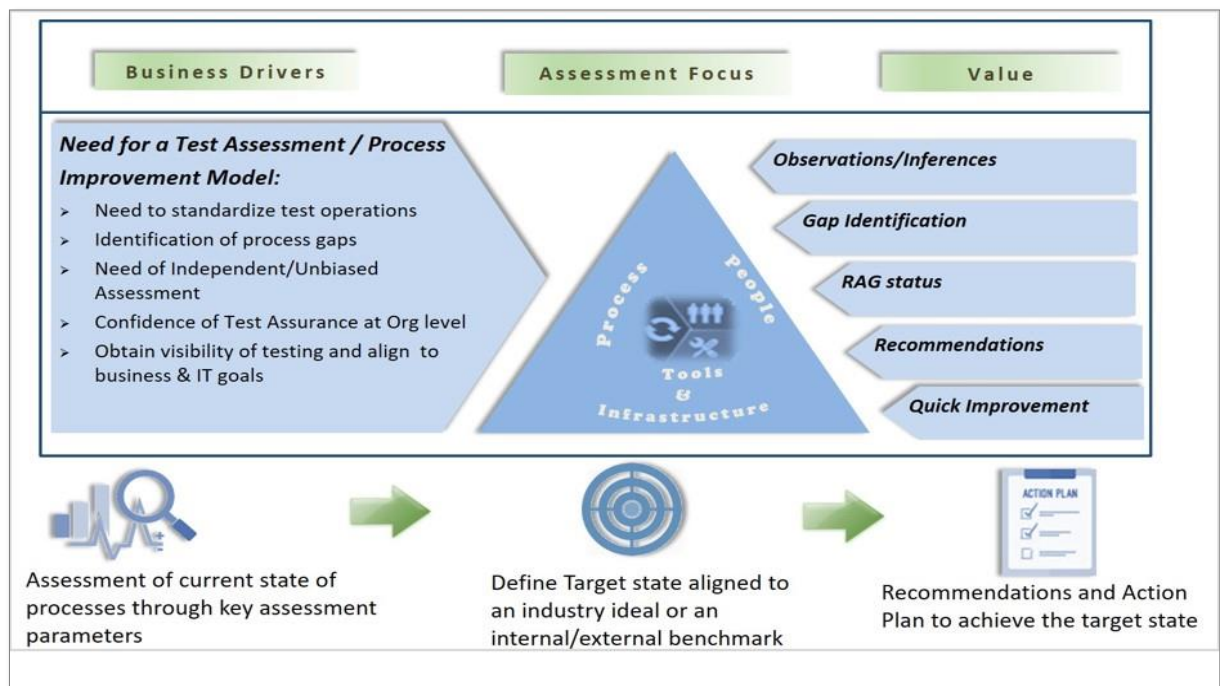


Figure 1: Test Maturity Assessment

Stages of maturity assessment and improvement:

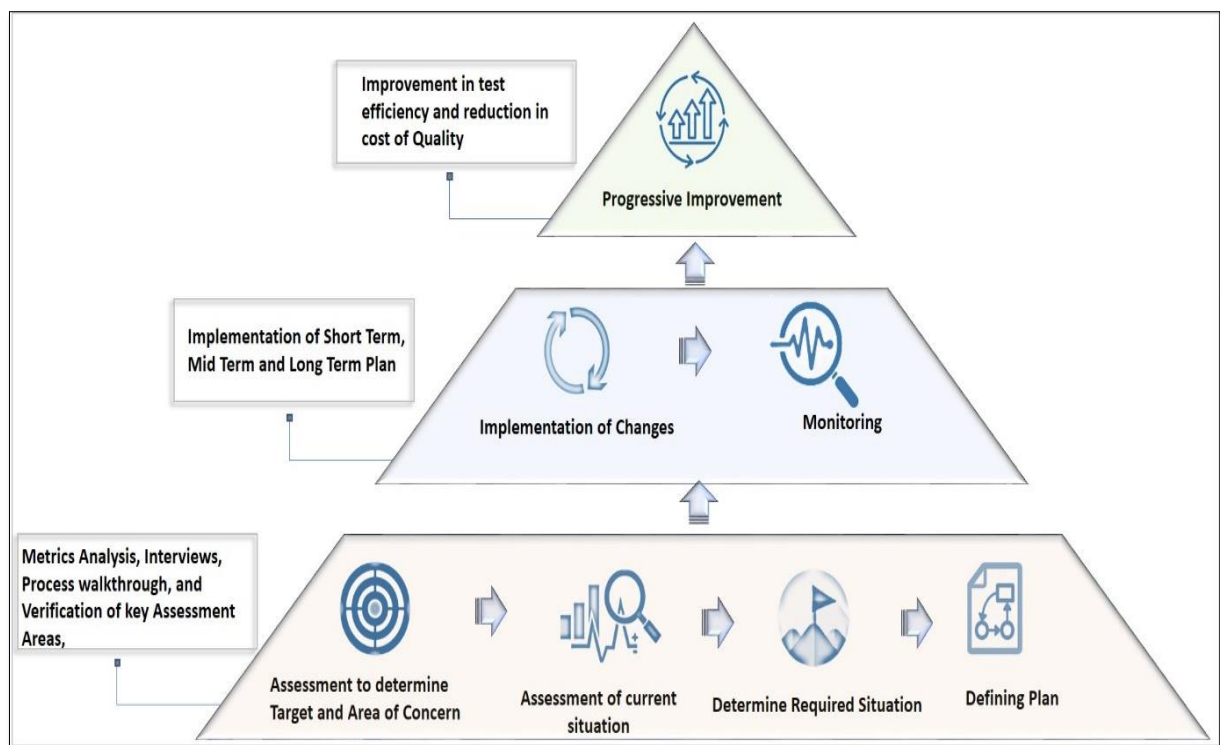
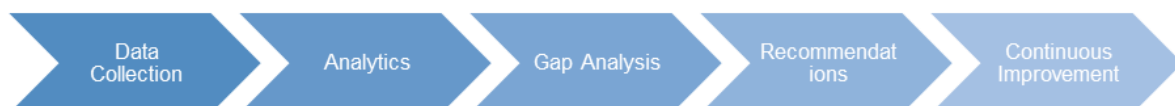


Figure 2: Stages of Maturity Assessment and Improvement:

4. Key Features

To gain a clear understanding of your current testing landscape and identify opportunities for improvement, we offer a comprehensive range of features within our Test Maturity Assessment Service:

- **Standardised assessment framework:** We utilise a well-defined framework based on industry best practices, ensuring a consistent and objective evaluation.
- **Experienced assessment team:** Our team comprises seasoned testing professionals with expertise in various testing methodologies and maturity models.
- **Tailored approach:** We customise our assessment to align with your specific testing needs and project context.
- **Independent and unbiased evaluation:** We provide an independent and objective assessment of your testing maturity, free from internal biases.
- **Actionable insights and recommendations:** Data-driven assessment leveraging analytics for precise maturity scoring. We deliver a comprehensive report with detailed findings, clear recommendations for improvement, and a roadmap to achieve your desired maturity level. Includes prioritised actions to reduce the cost of quality by 25-30%.
- **Expert advice and process Improvement Consultancy:** Leverage our expertise to gain insights into inefficiencies and receive tailored recommendations for process improvement.
- **Identifying and eliminating process gaps:** We meticulously analyse your processes to pinpoint and eliminate any gaps hindering testing effectiveness.
- **Gap analysis and industry benchmarking:** We compare your practices against industry standards, highlighting areas for improvement and aligning your goals with best practices. Compares against global benchmarks and emerging QA trends.
- **Cost and effort reduction opportunities:** Our assessment identifies opportunities to streamline your testing processes, leading to reduced testing cost and effort.
- **Test coverage assessment:** We evaluate the comprehensiveness of your testing approach, analysing both functional and non-functional aspects of your software.
- **Test automation and tool usage assessment:** We assess your current automation practices and the effectiveness of utilised testing tools and frameworks, recommending optimisation strategies.
- **Implementation of best practices:** Our team shares and assists in implementing industry-leading testing practices within your organisation.
- **QA thought leadership:** Benefit from our ongoing thought leadership insights to stay ahead of the curve in the QA landscape.
- **Quality roadmap and benchmarking:** We establish a clear roadmap for your journey towards optimal test maturity, leveraging industry benchmarks for comparison.
- **Continuous Improvement (CI) planning:** We collaborate with you to define actionable recommendations and create a CI roadmap, outlining short-term, mid-term and long-term plans. Improvement roadmap designed for sustained optimisation and evolving quality maturity.



5. Business Benefits

By partnering with us for Test Maturity Assessment, you unlock a multitude of benefits that empower you to optimise your testing processes, enhance software quality and achieve business goals:

- **Clear path to improvement:** We provide a well-defined roadmap with actionable recommendations, guiding you on a clear path towards achieving optimal test maturity.
- **Faster time to market:** Improved testing efficiency and reduced rework through a mature testing process, leading to faster time-to-market for your software releases. Accelerates delivery by 15–20% through streamlined, mature processes.
- **Alignment with business goals:** Our assessment ensures your testing strategy aligns with your business objectives, ensuring testing activities directly contribute to achieving desired outcomes.
- **Repeatable and consistent testing:** We help establish standardised testing processes, promoting consistency and repeatability throughout your testing efforts.
- **Long-term value for your organisation:** Our assessment provides a foundation for continuous improvement, delivering cumulative benefits to your organisation's testing capabilities over time.
- **Shorter test cycles:** Gaining more control over your testing processes through our assessment enables you to optimise test execution and shorten test cycles.
- **Reduced cost of quality:** By identifying opportunities to streamline testing and improve efficiency, we help you achieve a lower total cost of quality while boosting productivity and testing ROI. Optimised processes and automation reduce testing costs by up to 30%.
- **Risk mitigation and improved compliance:** Mature testing processes established through our assessment minimise the risk of releasing poor-quality software and ensure better adherence to industry standards and regulations.
- **Cost reduction and improved ROI:** Our proven approach can deliver a significant value add, potentially reducing your annual testing costs by 25-30% through enhanced testing efficiency.
- **Lower defect costs:** Early identification and correction of defects through a mature testing process lead to significantly lower overall costs associated with defect detection and remediation.
- **Improved decision-making:** Analytics-backed recommendations and real-time dashboards.

6. Technologies

All major technologies, the latest toolsets, best practices and standards are supported.

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