



Trust. Value. Velocity

G-Cloud 15

Application Enhancement Service

Contents

1.	About Mastek	3
2.	Summary	13
3.	Masteks Service	14
3.1	Operating context	14
3.2	Service Governance and Maturity	14
3.3	Collaboration Model	14
3.4	DevSecOps and Compliance Practices	15
3.5	Observability and Performance	15
3.6	Execution Approach	15
3.7	Measurable Delivery Cadence and Quality Controls	16
4.	Key Features	17
4.1	Innovation and Advisory	17
5.	Business Benefits	18
5.1	Quantified Outcomes and KPIs	18
6.	Technologies, Language, Tools, Methods and Standards	19
6.1	User experience and front-end	19
6.2	Integration, back-end processing, workflow, services, security, Microservices, BPM, operations ...	19
6.3	Data, Insights, Warehouse, Analytics, BI, Data Lake, Data Virtualisation, Visualisation, AI	19
6.4	Build, deployment, storage, code quality, source code repository	19
6.5	Environment and platform technologies	19
6.6	Other delivery tools	19
6.7	Methods and Standards	20
6.8	DevSecOps and Supply Chain Security Tooling (representative)	20
7.	Engagement Onboarding and Service Transition	21
7.1	Transition and Readiness	21
8.	KPIs, SLAs and Reporting	22
8.1	Example Measures (tailored per contract)	22

Table of Figures

Figure 1: Agile Service Management (ASM) service	13
Figure 2: Mastek's DevSecOps	14
Figure 3: Execution Approach	16

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:

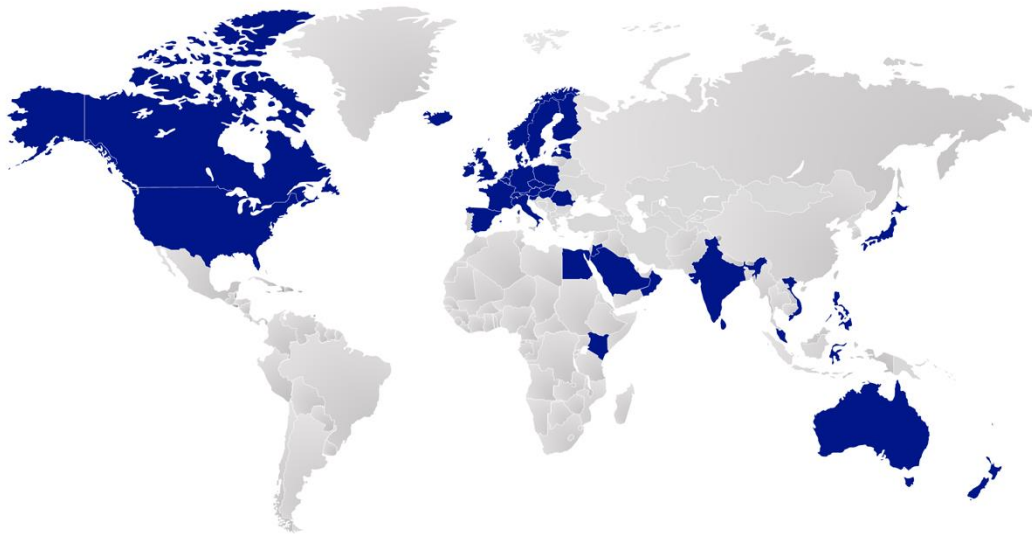
Working through a complex stakeholder landscape: We understand the importance of establishing effective communication channels, building trust and fostering a collaborative working environment that empowers stakeholders to contribute meaningfully to the project's success. Our approach is based on a deep 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

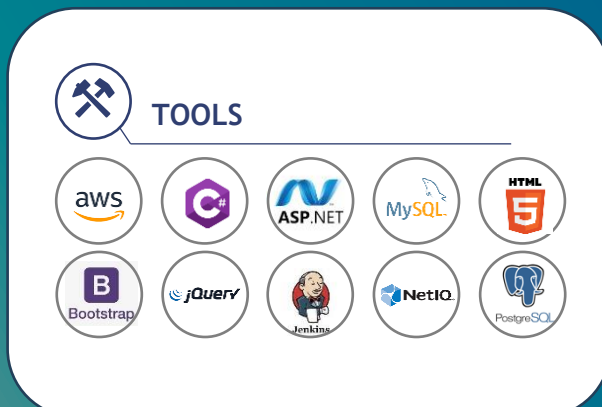
- Leveraging DevOps platform based on reusable GitHub, AWS and Azure DevOps Pipelines
- Introduce more flexible, scalable and reusable IaC capabilities
- Implement CI/CD pipelines.

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

Mastek's Application Enhancement (AES) service is a component part of our overarching Agile Service Management (ASM) service, with relationships between the Level 1 Service Desk, Level 2 Service Support, Level 3 Service Support and Release and Deployment Automation, as illustrated in the following figure:

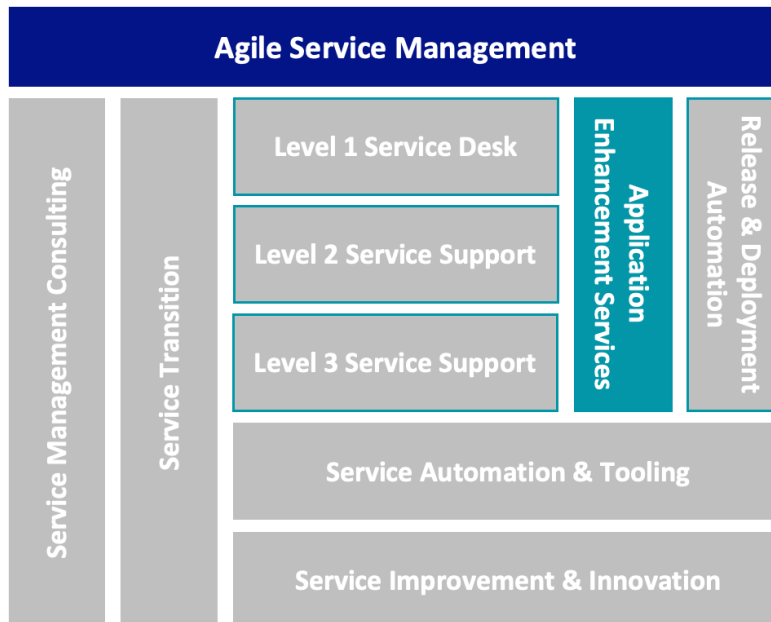


Figure 1: Agile Service Management (ASM) service

The AES service provides Continuous Improvement (CI) of your supported cloud applications and environments/platforms and is delivered in conjunction with related service components (Level 1/2/3 services and Release and Deployment Automation service). The service includes developing or implementing hotfixes and patches (including security patches), defect fixes, minor enhancements and developing new features.

The service's objective is to meet customer demand and address new and emerging business needs while reducing risk and improving service quality.

AES includes the Agile-based delivery of application enhancement planning, coding, building and testing activities and the deployment of release packages into pre-production and production environments.

3. Masteks Service

3.1 Operating context

Application Enhancement Services (AES) service is typically delivered in a DevSecOps operating context using Agile methods, as illustrated in the following figure:

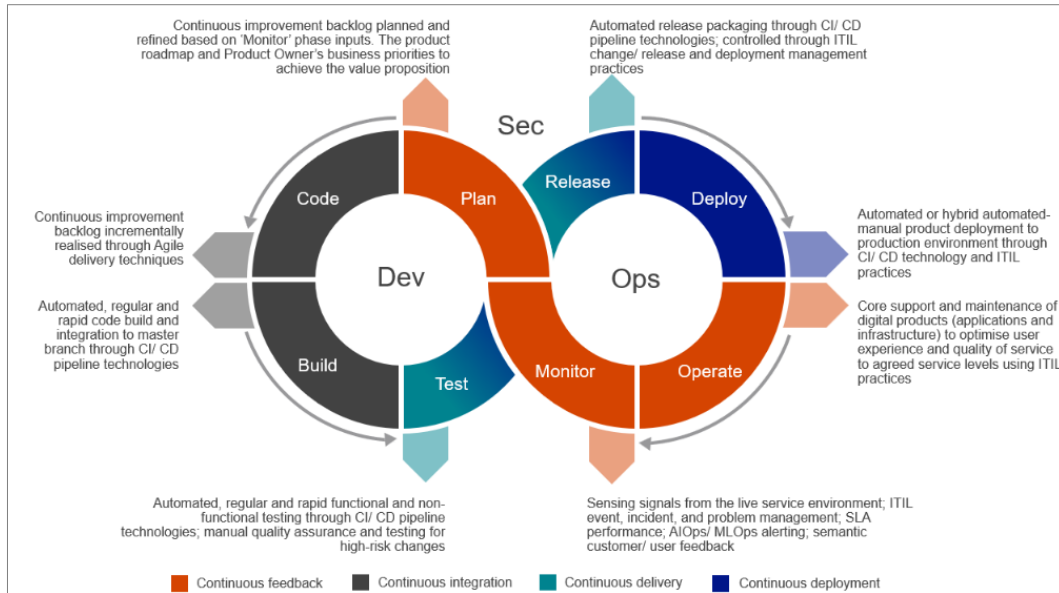


Figure 2: Mastek's DevSecOps

AES service demand can be generated either from the Product/Service Owner of your supported applications and the business/user community they represent or from IT Service Management activities, such as root cause analysis of incidents and problems (as part of the "Monitor" stage shown in the DevSecOps diagram above), triggering a need for a software change.

3.2 Service Governance and Maturity

- AES is governed through Mastek's Service Governance Framework, including a Joint Steering Board, Delivery and Quality Reviews and Risk and Change Control aligned to ITIL v4 and ISO/IEC 20000.
- Every engagement begins with a Service Maturity Assessment (SMA) covering processes, automation, tooling, DevSecOps practices and KPI baselines. SMA findings feed a Continuous Improvement Roadmap with prioritised initiatives (e.g., test automation uplift, CI pipeline maturity, shift-left security controls).

3.3 Collaboration Model

We operate product-centric, multidisciplinary squads or tiered L1–L3 models, depending on the context, with joint backlog refinement, PI planning (across multiple teams and suppliers) and Show and Tell demos to drive adoption and stakeholder buy-in.

Delivery phases and activities:

Using Agile methods and Continuous Integration/Continuous Delivery (CI/CD) pipeline technologies (where available), the scope of our AES service includes:

- Planning

- Business and impact analysis of change requests; user story elaboration; backlog build and refinement; sprint planning; and PI Planning (where cross-alignment between multi-teams/-suppliers is needed).
- Coding
 - Coding user stories to agreed engineering and quality standards using development toolkits and environments appropriate for your supported products/services.
- Building
 - Automated, regular and rapid code build and integration of code branches, typically through Continuous Integration (CI) pipeline technologies.
- Testing
 - Automated, regular and rapid functional and non-functional testing through Continuous Integration/Continuous Delivery (CI/CD) pipeline technologies; manual quality assurance and testing of high-risk changes.
- Release and Deployment
 - Through our Release and Deployment Automation service, we provide end-to-end planning, coordination and execution of releases through pre-production and production environments.

3.4 DevSecOps and Compliance Practices

- Security-by-design and shift-left security: Static/Dynamic code analysis (SAST/DAST), dependency vulnerability scanning (SCA), Infrastructure-as-Code policy checks, container image signing and Software Bill of Materials (SBOM) verification integrated into CI/CD.
- Compliance automation aligned to ISO 27001, Cyber Essentials/Plus, GDPR and customer policies: pipeline gates for encryption, secrets management, least privilege and audit trails (“documentation as code”).
- Regular threat modelling, secure coding standards and security test cases embedded in acceptance criteria.

3.5 Observability and Performance

- End-to-end observability (logs, metrics, traces) and AIOps-enabled monitoring to identify anomalies early and optimise performance (e.g., query tuning, caching, autoscaling).
- Release health dashboards track defect density, change failure rate and mean-time-to-recover (MTTR).

3.6 Execution Approach

Mastek typically executes these activities through an iterative, sprint-based cycle (usually two-week increments), as illustrated in the following figure:

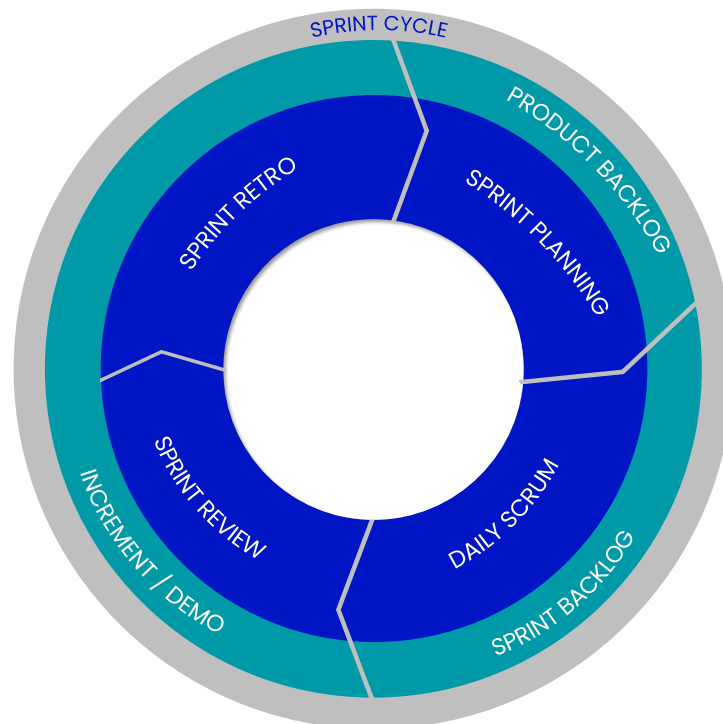


Figure 3: Execution Approach

During sprint planning, the respective Product/Service Owner works with Mastek’s delivery lead to draw down from the overall product backlog to select the user stories for delivery in the sprint, forming the sprint backlog.

The sprint backlog is executed over the sprint cycle using daily scrums/standups to monitor progress and remove impediments to delivery. At the sprint review stage, we use “Show and Tell” sessions to demonstrate the delivered changes/enhancements to key stakeholders, ensuring alignment and adoption. During the sprint retrospective stage, we take the opportunity to learn lessons and course-correct for ongoing delivery optimisation.

3.7 Measurable Delivery Cadence and Quality Controls

- Typical cadence: fortnightly sprints, monthly release trains (where applicable) and hardening sprints for complex changes.
- Built-in quality gates: coding standards, unit test coverage thresholds, automated regression packs, performance baselines and security gating before production deploy.
- Change control integration with CABs (where required), including canary/blue-green deployments and rollback strategies for high-risk updates.

4. Key Features

- Continuous improvement of your supported cloud applications and environments/platforms.
- Includes hotfixes and patches (including security patches), defect fixes, minor enhancements and new feature development.
- Planning, coding, building and testing in a DevSecOps model using Agile, iterative delivery.
- Integration with Release and Deployment Automation service for automated testing, release packaging and deployment management.

4.1 Innovation and Advisory

- Service Improvement and Innovation: roadmap-led automation (test/data/dev), pipeline optimisation and value experiments (e.g., feature flags, progressive delivery).
- DevSecOps Advisory: tooling strategy, governance patterns and operating model design to uplift maturity.
- Platform Engineering Support: reusable golden paths, templates and guardrails for faster, safer changes.

5. Business Benefits

- Reduced risk, improved service quality and new/emerging business needs met.
- Accelerated time-to-market/time-to-value through iterative Agile delivery.
- Optimised efficiency and cost through automation.

5.1 Quantified Outcomes and KPIs

- Typical targets (tailored per engagement):
 - >95% on-time sprint delivery of committed stories.
 - <2% defect leakage post-release; >80% automated test coverage for critical services.
 - Change Failure Rate <5%; MTTR < 4 hours for P1 defects related to enhancements.
 - Deployment Frequency increased (e.g., weekly to daily) for eligible services through CI/CD automation.
- Business KPIs linkage: cycle time reduction, customer experience improvements (NPS/CSAT) and cost-to-serve reductions via automation and “shift-left”.

6. Technologies, Language, Tools, Methods and Standards

We support all major technologies, the latest toolsets, best practices and standards. Mastek has significant experience delivering the following services in our G-Cloud clients' environments.

6.1 User experience and front-end

.Net Core MVC; ADX Studio; Angular; ASP.Net; C#; CSS; D3; Dynamics CRM; Elasticsearch; HTML5; Javascript; JSON; JSP; Mustache template framework; MobX; React.js; Power BI; SharePoint.

6.2 Integration, back-end processing, workflow, services, security, Microservices, BPM, operations

.Net core; ActiveEon; ActiveMQ; Activiti; Apache; Apache/IBM ServiceMix; ASP.NET; Azure API Manager; Azure App Service; Azure Key Vault; Azure SignalR; Azure Web Job; Camel; Commons; Drools; EC2; Fuse Application Server; Fuse ESB; Groovy; Handlebars; Hibernate; Hystrix; IAM; J2EE; Java; JBoss; JBoss Fuse; JSON; LDAP; Mule ESB; NetIQ; Office 365; OpenAM; OpenDJ; Oracle BPL; Oracle SOA; PHP; Python; Quartz; Redhat SSO; REST/SOAP; Scala; Servlets; Sleuth; SMTP; SOAP/WSDL; Spring Boot; Sprint Batch; Sprint Data; Sprint Integration; SQL; Stripe Payment Gateway; Swagger; Tibco; Tomcat; Web Services; Windows services; XML Firewall.

6.3 Data, Insights, Warehouse, Analytics, BI, Data Lake, Data Virtualisation, Visualisation, AI

Apache Solr; Aurora; AWS S3; Azure Storage; Business Objects; DB2; DynamoDB; EBS; Flashback and Data Guard; H2; Ingres; Kibana; Kikari; Liquibase; MariaDB; Microsoft SQL Server; MySQL; MongoDB; OBIEE; ODI; Oracle; Oracle Dataguard; Oracle Golden Gate; ORM/Hibernate; OWB; PgAdmin; PostgreSQL; Power BI; RAC; RDS; Riak; SQL Server; Tableau; Talend; XML.

6.4 Build, deployment, storage, code quality, source code repository

Ant; Apache Maven; Azure DevOps (previously Team Foundation Server (TFS)); Bash; Bitbucket; CLI; Cloudwatch; Cucumber; Docker; Dovecot/Postfix; EBS; EC2; ECS; EFS; Firehose; Git/GitHub; Gradle; Grafana; Helm; Jenkins; Junit; Kinesis; Kubernetes; Linux Administration; Maven; Mockito/PowerMock; Nexus; NIST Ninary Aware; Packer; Prometheus; Puppet; RDS; S3; Selenium; Shell Scripting; SNS; SOCAT; SonarQube; SQS; Squid; Stash; SVN; TeamCity; Terraform; Vault; Virtuoso Listener; WireMock; Zabbix.

6.5 Environment and platform technologies

AWS; Azure; Hyper-V; UKCloud; UNIX; VMware; Windows; Secure IL0, IL2, IL3 environments.

6.6 Other delivery tools

Ansible, Apache Maven, BMC Remedy, CheckStyle, Cherwell, Confluence, Docker, ELK (Elastic Search, Logstash and Kibana), FindBugs, Gatling, GIT, HP Openview, HP Quality Centre, HP Service Manager, HP Test Director, Jenkins, Jira, Jmeter, Junit, Landesk, Microsoft System Center Operations Manager (SCOM), Mockito, Nagios, Piwik, PMD, QTP, Selenium, ServiceNow, Sonar, Splunk, Trello, Zabbix.

6.7 Methods and Standards

Agile, BS 7799, DevOps, ISO 20000 Service Management, ISO27001 Information Security, ISO9001 Quality Management, ITIL, PMP, Prince2.

6.8 DevSecOps and Supply Chain Security Tooling (representative)

- SAST/DAST/SCA scanners; container registries with image signing; SBOM generators and verifiers; secret detection; IaC policy-as-code; CI/CD orchestrators with pipeline audit.
- Observability stack (metrics/logs/traces), synthetic monitoring and performance profiling integrated into pipelines

7. Engagement Onboarding and Service Transition

7.1 Transition and Readiness

- Service Transition includes knowledge capture, environment mapping, dependency analysis and baseline test suite creation.
- Readiness criteria: defined runbooks, CI/CD pipelines configured, observability in place and minimum viable guardrails before the first production change.

8. KPIs, SLAs and Reporting

8.1 Example Measures (tailored per contract)

- Velocity and Predictability: sprint throughput, commitment vs. completion, lead/cycle time.
- Quality: escaped defects, code coverage, security findings trend, performance regression deltas.
- Operational: deployment frequency, change failure rate, MTTR, % automated releases.
- Business Value: feature adoption, NPS/CSAT, cost-to-serve reduction.
- Reporting via service dashboards and monthly service reviews; data-driven CSI actions tracked to closure.

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