



Trust. Value. Velocity

## G-Cloud 15

Level 2 Service Support 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 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

|                                           |                                                                                                                                                                                                                  |                                                                                                                                                                                   |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Digital engineering and experience</b> | <ul style="list-style-type: none"> <li>• Cloud engineering and migration</li> <li>• Legacy modernisation</li> <li>• Low code / no code App Dev</li> <li>• DevSecOps</li> <li>• Enterprise integration</li> </ul> | <ul style="list-style-type: none"> <li>• MACH</li> <li>• Digital commerce</li> <li>• UX and CX</li> <li>• Platform engineering</li> <li>• Gen AI software development.</li> </ul> |
| <b>Oracle Cloud and enterprise apps</b>   | <ul style="list-style-type: none"> <li>• Oracle Cloud applications</li> <li>• Oracle consulting</li> <li>• Oracle Cloud infrastructure</li> </ul>                                                                | <ul style="list-style-type: none"> <li>• Value-based delivery</li> <li>• Glide 4.0.</li> </ul>                                                                                    |
| <b>Data, automation and AI</b>            | <ul style="list-style-type: none"> <li>• Cloud data modernisation</li> <li>• Business Intelligence and Analytics</li> </ul>                                                                                      | <ul style="list-style-type: none"> <li>• Data management</li> <li>• Intelligent automation</li> <li>• Data Governance.</li> </ul>                                                 |
| <b>Salesforce</b>                         | <ul style="list-style-type: none"> <li>• Sales Cloud</li> <li>• Service Cloud</li> <li>• Marketing Cloud</li> <li>• Industry Cloud</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>• Experience Cloud</li> <li>• Mulesoft.</li> </ul>                                                                                         |
| <b>Innovation labs and platforms</b>      | <ul style="list-style-type: none"> <li>• Enterprise workforce scheduler</li> <li>• Connected enterprise</li> <li>• icx-Pro – intelligent part assistant</li> </ul>                                               | <ul style="list-style-type: none"> <li>• iLeaseFinPro.</li> </ul>                                                                                                                 |
| <b>Cloud enhancement managed services</b> | <ul style="list-style-type: none"> <li>• Oracle managed services</li> <li>• Digital managed services</li> <li>• Commerce managed services</li> </ul>                                                             | <ul style="list-style-type: none"> <li>• Salesforce managed services.</li> </ul>                                                                                                  |

# 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                            |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------|
| <b>Software Development</b><br>Continuous Integration,<br>Platform - Other Products,<br>Cloud Collaboration Tools |                                | <b>Software Engineering</b><br>2354 FTE |
| <b>QA and Test</b> ; API, Automated<br>Functional and Compatibility,<br>Accessibility & Performance               |                                | <b>QA and Testing</b><br>774 FTE        |
| <b>Cloud Platforms</b><br>Amazon Web Services AWS<br>Microsoft Azure                                              |                                | <b>Cloud Platforms</b><br>1046 FTE      |
| <b>Data BI/MI</b><br>Components, Integration                                                                      |                                | <b>BI and Visualisation</b><br>725 FTE  |
| <b>User-Centered Design</b>                                                                                       |                                | <b>UCD</b><br>25 FTE                    |
| <b>Office Automation Tools</b>                                                                                    |                                | <b>Collaboration</b><br>4565 FTE        |

## 2. Summary

Mastek's **Level 2 Service Support** is a core component of our Agile Service Management (ASM) framework, designed to ensure resilient, efficient and future-ready IT operations. Leveraging ITIL best practices, DevOps principles and automation, we deliver proactive incident resolution, effective problem management and ongoing improvement across cloud applications and platforms. Our service integrates advanced capabilities, including shift-left strategies and self-healing technologies, to reduce costs, accelerate recovery and enhance the user experience. Delivered 24x7x365 through flexible onshore, nearshore and offshore models, Mastek ensures compliance with ISO/IEC 20000 and ISO 27001 standards while driving measurable business outcomes. Below is a summary of our Agile Service Management (ASM) service.

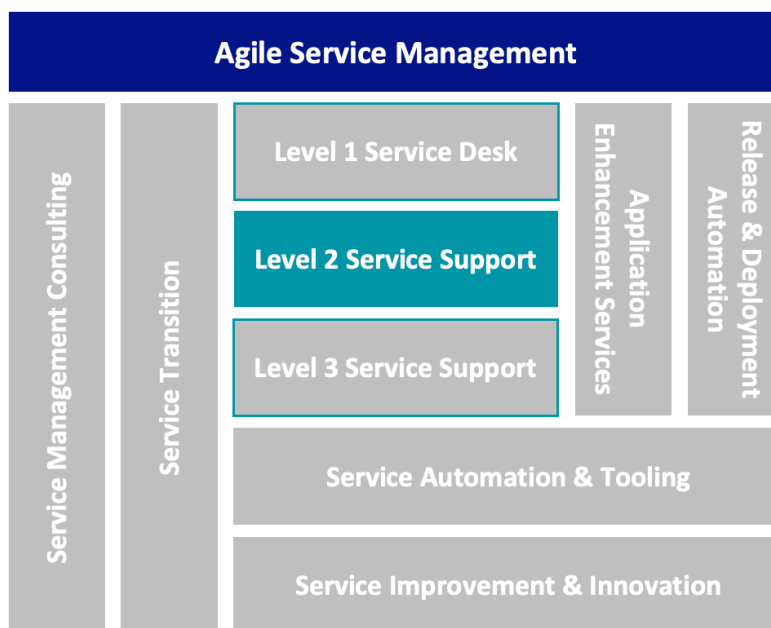


Figure 1: Agile Service Management (ASM) Service

In conjunction with or standalone, Mastek's Level 2 Service Support service provides a DevOps-based approach to sustaining cloud applications and environments/platforms in live service operations, including Early Life Support (ELS) and retirement.

In delivering our Level 2 Service Support service (and its related Level 1 Service Desk and Level 3 Service Support service components), we adopt and blend Agile and ITSM methods and best practices to provide:

- Event management.
- Incident management.
- Problem management.
- Change management.
- Knowledge management.
- Continual service improvement.

Mastek provides Level 2 Service Support services tailored to business requirements. Our service focuses on delivering a consistent, efficient and resilient service.

We bridge business and IT by making IT deliver optimum business value. We are committed to providing factual, technical answers and guidance at the right time and in the proper format.

Key responsibilities for Level 2 support include incident resolution, proactive monitoring and reporting of the issues, performing housekeeping activities and restoring service after an incident with minimal degradation/outage.

Our Level 2 Service Support service is available during core service hours and 24x7x365.

The support model is flexible, offering on-site, near-site, near-shore, and offshore support options.

### 3. Masteks Service

Level 2 Service Support service scope comprises:

- **Event management:** monitoring, logging and alerting; routine housekeeping tasks.
- **Incident management:** service restoration following interruption or degradation.
- **Problem management:** root cause analysis, known error elaboration and root cause resolution
- **Change enablement:** supporting the elaboration of service operations-oriented continuous improvement (CI) user stories and driving them through the Change Advisory Board (CAB) and agile-based execution.
- **Knowledge management:** ensuring that Service KMS is updated for all ITIL disciplines and maintaining knowledge repositories in tools such as Confluence and ServiceNow.
- **Continual service improvement:** identifying service improvement candidates that can drive more effective and efficient service operations; working with relevant stakeholders to implement service improvement plans (SIPs).

Mastek has experience delivering these services using most of the leading IT Service Management / Service KMS tools. We can work on the existing customer toolset or set up the required tools, typically including:

- Atlassian.
- BMC Software.
- ServiceNow, and
- Others.

The teams work to industry-standard SLAs and response times. The Level 2 team would also monitor dashboards to report on the KPIs applicable to the service. Reporting is another critical responsibility of L2 teams, which provides various reports necessary to deliver management information based on business requirements.

#### 3.1 Shift Left

In delivering our Level 2 Service Support service, Mastek strongly advocates for using the “shift left” approach to achieve cost efficiency, productivity and enhanced customer experience benefits.

In the ASM world, shift left involves moving service request fulfilment and incident resolution to the lowest support tier possible (i.e. as close to the end-user). By shifting left, these activities are transferred to lower-cost delivery channels, improving the customer experience by fulfilling requests and resolving incidents more quickly and as close to the user as possible.

Mastek’s approach to shift left includes:

- After careful consideration and selection, transitioning a subset of Level 2 Service Support activities from Level 2 to Level 1 Service Desk (e.g. those activities that can be resolved with a standardised (or scripted) response and recur with a high degree of frequency).
- Likewise, transitioning Level 3 Service Support activities to Level 2 (e.g. those activities that can usually be resolved with a semi-standardised response from a set of fixed scenarios) and so on.

Mastek considers the following three critical success factors for shift left:

- **IT self-service:** A fit-for-purpose self-service capability is critical for delivering shift-left benefits
- **Knowledge management:** The availability of fit-for-purpose knowledge articles and FAQs is crucial for winning with IT self-service and, thus, Level 0 support. Making knowledge management a BAU activity embedded within day-to-day operations is imperative.
- **Automation** is key to delivering the benefits related to increased speed of resolution/provisioning and cost reduction. Additionally, it offers a more enhanced customer experience.

### 3.2 Application and Environment/Platform Self-Healing

Mastek's self-healing service can identify errors in the operation of cloud applications and environments/platforms and make pre-defined and safe changes to them without intervention from service support engineers. Thus, it restores them to a better functioning state at a minimal cost, allowing service support engineers to focus on more complex incidents, problems and maintenance activities.

#### a) Cloud application layer

In cloud applications, issues are written to an 'exceptions log'. Serious issues may require the application to stop (e.g. inability to connect to a database).

Mastek's self-healing application incorporates design elements that resolve these problems. For example, applications that use specific libraries arrange elements in a hierarchy and assign an actor's problems to its supervisor. Many such libraries and frameworks facilitate applications that self-heal by design.

#### b) Environment/Platform-layer

Environment/platform-level self-healing does not depend on a programming language or specific components. It can be generalised and applied to all services and applications, independent of their internal components.

The most common environment/platform-level issues include process failures (often resolved by redeploying or restarting) and response time issues (often resolved by scaling and descaling). Self-healing systems conduct health checks on different components and automatically attempt fixes (such as redeploying) to recover to their desired states.

#### 4. Key Features

- Team of ITIL-qualified professionals with a wide range of technical abilities.
- Providing support for infrastructure, software, applications and tools.
- 24/7 shift coverage following the Shift Rotation schedule, where applicable.
- Provide off-hours support, as needed, to resolve system problems during non-business hours.
- Respond promptly to incoming incidents, problems and change requests in accordance with their identified priorities and response times.
- Service health checks as frequently as needed with proactive monitoring and resolution of issues.
- Provide support to ensure customer satisfaction. Develop and maintain good relationships with lines of business.
- Compliance with proven procedures and any relevant legislation or regulations.
- Comprehensive documentation for knowledge management.
- Communicate effectively, courteously and promptly with all internal and external stakeholders.
- Testing and deploying new code updates and patches through change control practices.
- Developing scripts to automate repeatable manual tasks
- Disaster recovery and major event changes.
- Engaging with third-party suppliers to resolve application issues.

## 5. Business Benefits

- **Operational efficiency:** Ensuring smooth and transparent operations, highly available systems, reduced manual efforts and increased productivity over time.
- **Cost-effective services:** Various cost options to choose from.
- **Flexibility:** Meet changing business requirements whenever required.
- **24/7 services support:** We provide 24x7x365 days support providing business continuity
- **Disaster recovery:** The data will be safe and services will continue to be delivered even in the event of a disaster.
- **Security:** We have a team of security-cleared staff.
- **Competitiveness:** We have access to enterprise-class technology. It allows us to act faster than other established competitors.
- **Future-proof services:** We ensure that the business has a minimum additional cost and financial risk using the best and latest technology.
- **Expertise:** Highly skilled resources and SMEs.
- **Elevated collaboration:** All employees can sync up and work on documents and apps simultaneously wherever they go and receive critical updates in real-time.
- **Converged services:** Provide multiple IT services over a single converged connection, enabling cost savings on infrastructure.
- **Centralisation:** Businesses can benefit from the ability to centralise all their applications and servers within managed data centres.

## 6. Technologies, Tools, Methods, Standards and Vendor Support

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.

**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.

**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.

**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; Mongo DB; OBIEE; ODI; Oracle; Oracle Dataguard; Oracle Golden Gate; ORM/Hibernate; OWB; PgAdmin; PostgreSQL; Power BI; RAC; RDS; Riak; SQL Server; Tableau; Talend; XML.

**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 Binary Aware; Packer; Prometheus; Puppet; RDS; S3; Selenium; Shell Scripting; SNS; SOCAT; SonarQube; SQS; Squid; Stash; SVN; TeamCity; Terraform; Vault; Virtuoso Listener; WireMock; Zabbix.

**Environment and platform technologies:** AWS, Azure, Hyper-V, UKCloud, UNIX, VMware, Windows and secure IL0, IL2 and IL3 environments.

**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 Centre Operations Manager (SCOM), Mockito, Nagios, Piwik, PMD, QTP, Selenium, ServiceNow, Sonar, Splunk, Trello, Zabbix.

**Methods and standards:** Agile, BS 7799, DevOps, ISO 20000 Service Management, ISO27001 Information Security, ISO9001 Quality Management, ITIL, PMP, Prince2.

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