Mastek™

Trust. Value. Velocity

G-Cloud 15

Cloud Data Modernisation Service

Contents

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:

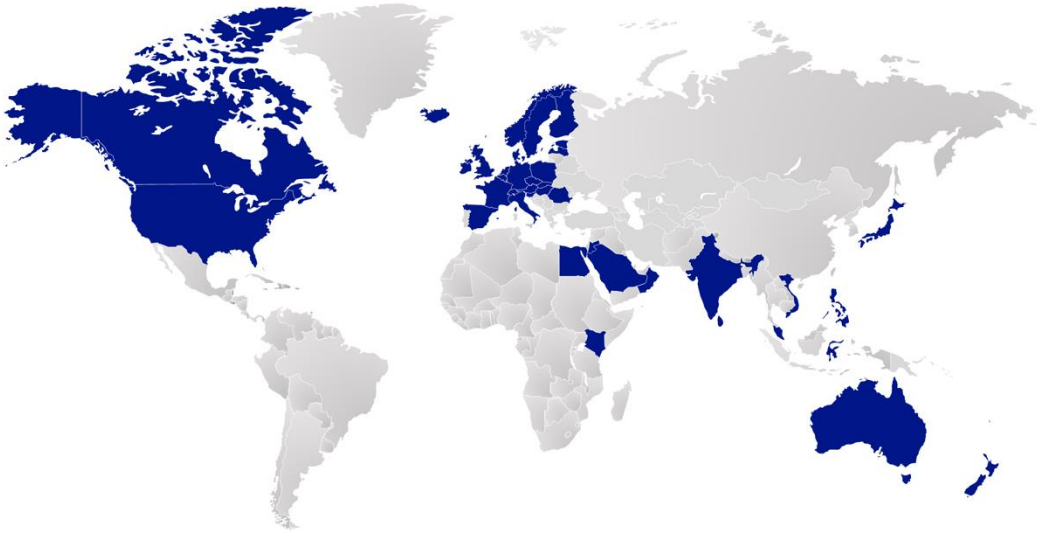
Working through a complex stakeholder landscape: We understand the importance of establishing effective communication channels, building trust and fostering a collaborative working environment that empowers stakeholders to contribute meaningfully to the project's success. Our approach is based on a deep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



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Norway
Oman
Philippines
Poland
Romania
Singapore
Slovakia
Spain
Sri Lanka
Sweden
Switzerland
United Arab Emirates (UAE)
United Kingdom
USA

Mastek
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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 though 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

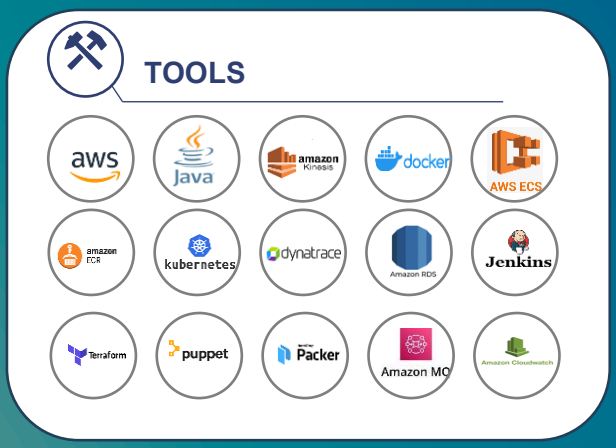
- Transition business-critical Platform services from incumbent supplier with minimal risk
- Migration from private cloud to AWS Cloud.

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:

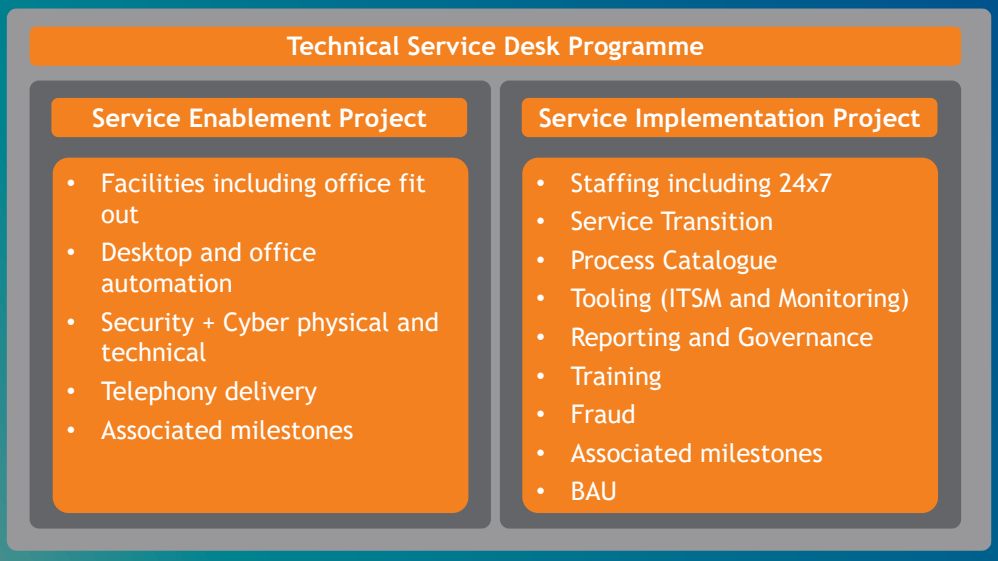
  - Service Management Vice President
  - Programme Director
  - Chief Technology Officer
  - Programme Management office lead.

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 **Cloud Data Modernisation** Services harness the strengths of Snowflake, Databricks, Azure, AWS and Oracle, showcasing our expertise across each platform.

Our strategic Basecamp method ensures seamless integration into diverse environments, positioning organisations for future-ready, data-empowered success with tailored solutions that optimise operational efficiency and enhance competitive edge.

3. Mastek's Service

Mastek delivers comprehensive services to evolve IT data landscapes into Modern Data Platforms, leveraging a proven Basecamp approach to meticulously navigate customer landscapes.

The process begins with an in-depth assessment at Basecamp, evaluating the maturity of cloud and data management. This critical evaluation is conducted by a certified team having a wealth of experience from over 100+ cloud data modernisation engagements and 50+ Basecamp projects.

This expertise enables the crafting of strategies that not only commence with a Minimum Viable Product (MVP) but also ensure a fast-tracked journey towards full production deployment.

Mastek's approach is designed to seamlessly progress organisations from their current states to future-ready, data-empowered enterprises.

3.1 Common Symptoms and Challenges

Topic	Common symptoms and challenges
Strategic Cloud Consultation and Road-mapping	Our approach begins with a detailed evaluation of your current IT ecosystem to assess cloud readiness, identify potential challenges and uncover opportunities for cloud integration. This foundational phase is crucial for tailoring a cloud strategy and roadmap that aligns with your unique business objectives, taking into account cost efficiency, regulatory compliance and security factors.
Data Architecture Modernisation	The transition to modern data architectures is crucial for harnessing the full spectrum of cloud technology's capabilities. Mastek advises and implements proven architecture patterns that cater to the multi-faceted needs of diverse organisations. Our approach not only addresses current requirements but also anticipates future data demands, ensuring scalability, flexibility and innovation. • **Layered architecture**: We design data architectures with distinct layers for data ingestion, processing and analysis. This structured approach enhances clarity, maintainability and scalability, enabling organisations to manage data flow efficiently and adapt to new technologies or processes without extensive reconfiguration. • **Data Lakes and Delta Lakes**: Our solutions for data lakes provide a centralised repository to store all structured and unstructured data at any scale. Delta Lakes build upon this by adding a layer of reliability, ensuring ACID transactions and efficient upserts and deletes, making data lakes more robust and consistent for analytics purposes. • **Hybrid and cloud-native data warehousing:** We leverage the best hybrid and cloud-native data warehousing technologies, integrating on-premises data systems with cloud platforms through data virtualisation. This enables a seamless data ecosystem that supports complex queries and analytics without requiring data movement or replication, thereby optimising performance and cost. • **Data wrangling**: Our expertise extends to real-time data streaming analytics, enabling immediate insight into data as it's generated. Coupled with sophisticated data wrangling techniques, we ensure that raw data is efficiently transformed into an analytics-ready format, speeding up the time to insight. • **Data vault and mesh/fabric** Architecture: We provide highly flexible and secure data storage solutions by adopting Data Vault methodologies, ideal for fast-changing business environments. Mesh or fabric architectures further decentralise data management, promoting domain-driven design and ownership, which enhances data quality, governance and accessibility.

Topic	Common symptoms and challenges
	• **Graph databases**: We use graph databases for use cases that involve intricate data relationships and pattern recognition. These databases excel in scenarios where the connections between data points are as crucial as the data itself, such as social networks, recommendation systems and fraud detection. • **Serverless data processing**: We implement serverless architectures for data processing, where compute resources scale automatically with the workload. This eliminates the need for provisioning and managing servers, allowing teams to focus on developing data transformation logic and queries, thereby reducing operational costs and increasing efficiency. • **API-driven data integration**: Our strategies include API-driven integration for both internal and external data sources, facilitating seamless data exchange and connectivity. This approach supports the development of ecosystems that extend beyond traditional boundaries, enabling more Agile responses to market changes. • **Multi-cloud data strategies**: Recognising the benefits and challenges of multi-cloud environments, we design data architectures that optimise the use of multiple cloud services. This ensures that organisations can leverage the best features and pricing models of different cloud providers while maintaining interoperability and minimising vendor lock-in. • **Data governance frameworks**: Integral to our modernisation efforts are comprehensive data governance frameworks that establish clear policies, roles and responsibilities. These frameworks ensure data quality, privacy and compliance across all cloud data platforms, instilling confidence in data-driven decisions.
Cloud Data Platform Implementation and Migration	Mastek's approach to Cloud Data Modernisation extends beyond mere transition; it encompasses a comprehensive implementation and migration strategy that brings the modernised data architecture to realisation. Through this detailed process, organisations are equipped to leverage the cloud's full capabilities, ensuring data integrity, security and enhanced operational efficiency. Our suite of services in this domain includes: • **Strategic data migration**: Beginning with a thorough planning and evaluation phase, Mastek uses advanced tools and methodologies to ensure a smooth migration of data assets to the cloud. This encompasses a detailed analysis to minimise downtime and optimise costs, ensuring a seamless transition that maintains data integrity and accessibility. – **Database migration**: We utilise industry-standard tools like AWS Database Migration Service, Azure Database Migration Service and Google Database Migration Service to ensure databases are migrated efficiently and support various engines and configurations. – **Data warehousing migration**: We facilitate the shift from traditional to cloud-based data warehousing, optimising data structures for cloud environments to unlock enhanced scalability and performance. • **Cloud data platform implementation**: – **Building scalable data lakes and warehouses**: Mastek specialises in crafting scalable, comprehensive data lakes and warehouses in the cloud. These platforms consolidate diverse data sources with structured, semi-structured and unstructured data, providing a robust foundation for analysis and decision-making. – **Advanced data integration and management**: By implementing state-of-the-art ETL/ELT processes, real-time data streaming and API management,

Topic	Common symptoms and challenges
	we ensure that data across the organisation is accurate, up-to-date and accessible. – **Data analytics and intelligence platforms**: Our services involve deploying advanced analytics and BI tools seamlessly integrated with machine learning (ML) and artificial intelligence (AI) technologies. This integration empowers organisations to transform data into valuable insights, fostering informed decisions and innovation. By harnessing these capabilities, businesses unlock the transformative potential of cloud computing for their data assets. – **Big data processing and analytics**: Utilising cloud services such as AWS Redshift, Azure Synapse Analytics, Azure Data Explorer and Snowflake to process and analyse vast datasets at scale, unlocking insights that were previously inaccessible. – **Metadata management**: At Mastek, we recognise the pivotal role of metadata in transforming cloud environments into highly efficient, manageable and governable ecosystems. Our Metadata Management Service is dedicated to implementing robust practices for metadata management, which is essential for enhancing data discovery, quality and governance in cloud environments. By ensuring accurate metadata capture, maintenance and utilisation, we significantly improve the utility of your data assets. This service facilitates more efficient data operations and stringent governance, laying the foundation for a data-driven organisation. Our expertise in metadata management enables clients to unlock the full potential of their data, making it a strategic asset within the cloud. – **Hybrid data integration**: Mastek recognises the strategic value of hybrid cloud configurations and delivers solutions that ensure seamless, secure data flow between on-premises and cloud environments. This approach supports real-time analytics and business intelligence, enabling a unified data strategy. **Key considerations in Mastek's cloud data platform strategy:** • Security and Compliance: Ensuring the highest data protection standards and adherence to regulatory requirements is central to our strategy, safeguarding your data throughout the migration and operational phases. Strengthening data security posture with comprehensive cloud security solutions, including encryption, identity and access management (IAM) and continuous compliance monitoring to protect sensitive data and ensure adherence to industry standards. • **Data optimisation**: Before migration, we undertake data optimisation to enhance quality and efficiency in the cloud, laying the groundwork for effective data utilisation. • **Cost management**: Strategic planning for data migration and ongoing cloud operations is conducted to maximise cost efficiency, delivering value through optimised resource utilisation. • **Stakeholder engagement**: Our comprehensive stakeholder engagement ensures alignment across all levels, facilitating smooth transitions and uninterrupted access to data resources.

Topic	Common symptoms and challenges
DevOps and DevSecOps Integration	Mastek's integration of DevOps and DevSecOps principles represents a transformative shift in how software development and operations are approached, ensuring that agility, efficiency and security are at the forefront of software delivery processes. • **Continuous Integration and Continuous Deployment (CI/CD) Pipelines**: At the core of our DevOps practices are CI/CD pipelines, designed to automate the software release process. By continuously integrating code changes and deploying them swiftly after successful testing, we minimise manual intervention, reduce development cycles and accelerate time to market. This approach facilitates a seamless flow from development to production, ensuring that software updates are delivered to users faster and with fewer errors. • **Infrastructure as Code (IaC):** IaC is a key practice that automates the provisioning and management of infrastructure through code rather than manual processes. By treating infrastructure setup and changes as code, Mastek ensures consistency, eliminates environment drift and enhances the speed and reliability of infrastructure deployment. This method allows for version control and peer review of infrastructure changes, similar to managing software development. • **Security integration**: In integrating DevSecOps, Mastek embeds security practices and tools into the CI/CD pipeline, ensuring that security considerations are addressed from the earliest stages of development. Automated security scans, vulnerability assessments and compliance checks are conducted throughout the development lifecycle. This proactive stance on security minimises vulnerabilities and ensures that security is a continuous concern rather than an afterthought.
Continuous Cloud Environment Management	Mastek's approach to continuous cloud environment management is comprehensive. It focuses on optimising performance, cost and compliance across cloud ecosystems. This ongoing management practice ensures that cloud environments are aligned with current business objectives and scalable and flexible to meet future demands. • **Regular audits and performance reviews**: Mastek conducts periodic audits of cloud resources and services to ensure they are utilised efficiently and effectively. Performance reviews help identify bottlenecks or underperforming services, allowing for timely adjustments to maintain optimal operation levels. • **Cost-efficiency analysis**: Mastek focuses on cost management and performs regular reviews of cloud spending. This includes identifying unused or underutilised resources, optimising resource allocation and leveraging cloud providers' cost-saving options, such as reserved instances or auto-scaling features. • **Security and compliance checks**: Mastek's continuous management includes rigorous security assessments and compliance checks to ensure the cloud environment meets the latest security standards and regulatory requirements. This encompasses data protection measures, access controls and regular updates to security protocols to guard against emerging threats. • **Adaptation to future demands**: By monitoring the business's evolving needs and technological advancements, Mastek ensures that the cloud environment is responsive to current requirements and prepared to adapt to future challenges and opportunities. This forward-looking approach facilitates innovation and supports long-term business growth.

Topic	Common symptoms and challenges
Utilisation of Accelerators	Mastek offers a suite of accelerators designed to accelerate the cloud modernisation process. These accelerators, developed based on Mastek's extensive experience in cloud transformations, address common challenges and bottlenecks encountered during the journey. By leveraging these accelerators, organisations can benefit from reduced project timelines, increased efficiency, governance and enhanced data platform capabilities. The suite includes tools for automated data processing, integration accelerators and governance solutions. Incorporating Mastek's accelerators into the cloud modernisation initiative enables a more Agile deployment, allowing businesses to quickly realise the value of their cloud investments and adapt to the dynamic demands of the digital marketplace.

4. Key Features

- Basecamp to production strategy: Guided cloud modernisation from assessment to deployment.
- Cloud maturity assessment: Evaluating cloud infrastructure to identify improvement opportunities.
- Custom cloud roadmap development: Tailored strategies for smooth, phased cloud adoption.
- Phased implementation plan: Iterative enhancements from MVP to full-scale production.
- Architectural blueprints for cloud: Detailed plans for cloud-native technology transition.
- Data security and compliance: Ensuring data protection and regulatory adherence.
- Optimisation and Cost Management: Maximising cloud performance and cost-efficiency.
- Expert consultation and support: Experienced consultants ensuring best practice implementation.
- Seamless cloud transition: Smoothly navigating from initial strategy to operational excellence.
- Sustained cloud success: Focused on long-term operational excellence and innovation.

5. Business Benefits

Mastek's Cloud Data Modernisation Services are designed not just to transition businesses to the cloud but to transform how they operate, innovate and compete.

The strategic benefits include:

- Customer-centric cloud modernisation: Aligns with business objectives for strategic transition.
- Accelerated data insights: Achieves up to 50% faster insight generation.
- Streamlined cloud transition: Up to 30% faster migration with specialised accelerators.
- Enhanced decision-making visibility: Enables strategic decisions with advanced analytics.
- Resource and cost Optimisation: Promotes cost-effective cloud migration and savings.
- Scalability and flexibility: Adapts and grows with the business needs.
- Secure data platform: Implements robust security and compliance measures.
- Strategic partnerships: Leverages alliances for cutting-edge cloud solutions.
- Comprehensive risk assessment: Identifies and mitigates potential cloud migration risks.
- Skill gap identification and development: Equips teams for cloud environment challenges.

6. Technologies, Languages, Methodologies and Vendor Support

#	Technologies	Languages	Methodologies	Vendor support
1	Cloud Platforms: AWS, Azure, Oracle Cloud.		Agile Development.	• Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner.
2	Data Warehousing and Analytics: Snowflake, Databricks, Apache Spark, Azure Synapse Analytics, AWS Redshift, Google BigQuery, Oracle Autonomous Data Warehouse.	Scripting/Querying: SQL, Spark SQL, Python, Scala, R, Databricks notebooks.	Big Data Processing and Analytics.	• Snowflake: Premier Partner • Databricks: Microsoft Solution Partner, AWS Advanced Consulting Partner • Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner.
3	Integration: AWS AppSync, AWS Step Functions, Amazon SNS (Simple Notification Service), Amazon SQS (Simple Queue Service), Azure Logic Apps, Azure Event Grid, Azure Service Bus, Oracle Integration Cloud, Oracle SOA Cloud Service.	Scripting: Python, JavaScript (Node.js), PowerShell, TypeScript, Java, BASH.	Data Analytics and BI.	• Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner
4	Database Technologies: Amazon RDS, Amazon DynamoDB, Amazon Aurora, Amazon Redshift, Amazon Neptune, Amazon DocumentDB, Amazon Keyspaces (for Apache Cassandra), Azure SQL Database, Azure Cosmos DB, Azure Database for MySQL, Azure Database for PostgreSQL, Azure Synapse Analytics,	Query Languages: SQL, PL/SQL, CQL (Cassandra Query Language), MongoDB Query Language, Gremlin, NoSQL APIs, SQL API (for Azure Cosmos DB), Proprietary API (for Amazon DynamoDB), OData (for Azure Table Storage), Java API (for Oracle NoSQL Database).	Data Management.	• Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner.

#	Technologies	Languages	Methodologies	Vendor support
	Azure Cache for Redis, Azure Table Storage, Oracle Autonomous Database, Oracle Database, Oracle MySQL Database Service, Oracle NoSQL Database, Oracle Exadata Database Service, Oracle Berkeley DB.			
5	DevOps Tools: Jenkins, GitLab, Azure DevOps, Oracle Developer Cloud Service.	Scripting: Python, Bash, PowerShell, Ruby.	Continuous Integration/Deployment (CI/CD).	• Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner.
6	Serverless Computing: AWS Lambda, Azure Functions, Oracle Functions.	Scripting: Python, Node.js, Java, C#, PowerShell.	Infrastructure as Code (IaC).	• Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner.
7	AI/ML: TensorFlow, PyTorch, Oracle AI Services.	Scripting: Python, R.	Serverless Architectures.	• Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner.
8	Security (AWS, Azure, Oracle): IAM, Cognito, AWS Shield, AWS KMS, Azure Active Directory, Azure Sentinel, Azure Security Center, Azure Key Vault, Oracle Identity Cloud Service.	Scripting: Python, Node.js, PowerShell, Azure CLI, ARM templates.	Security and Compliance.	• Microsoft: Solution Partner • AWS: Advanced Consulting Partner • Oracle: Global Cloud Partner.

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