Mastek™

Trust. Value. Velocity

G-Cloud 15

Rapid Enterprise Architecture Foundation Data and Innovation Enablement 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:

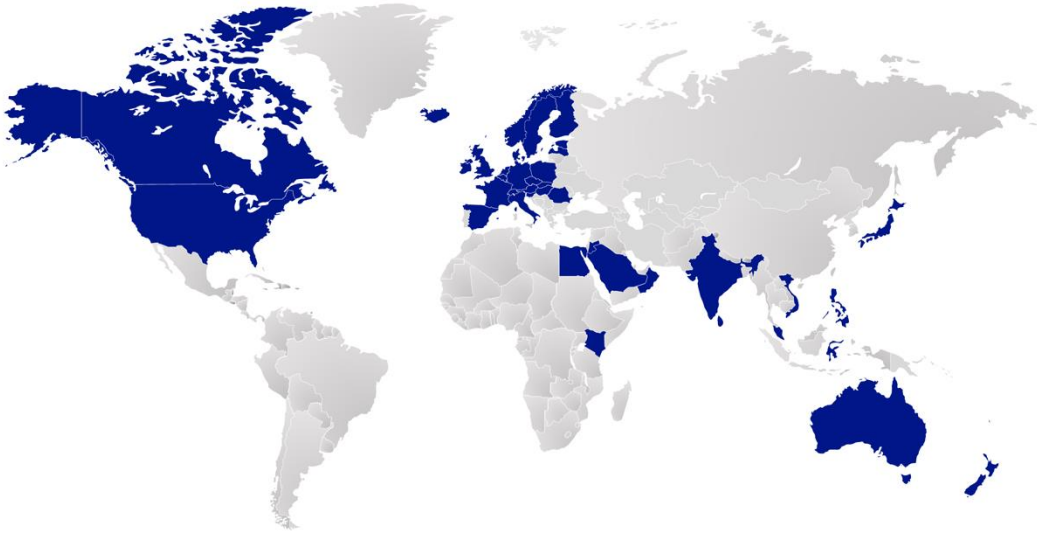
Working through a complex stakeholder landscape: We understand the importance of establishing effective communication channels, building trust and fostering a collaborative working environment that empowers stakeholders to contribute meaningfully to the project's success. Our approach is based on a deep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

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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

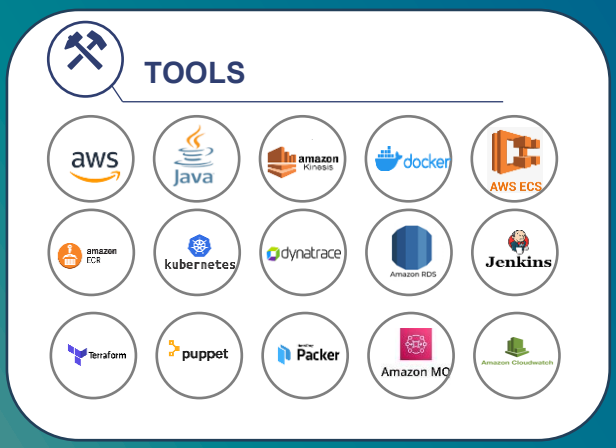
- Transition business-critical Platform services from incumbent supplier with minimal risk
- Migration from private cloud to AWS Cloud.

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:

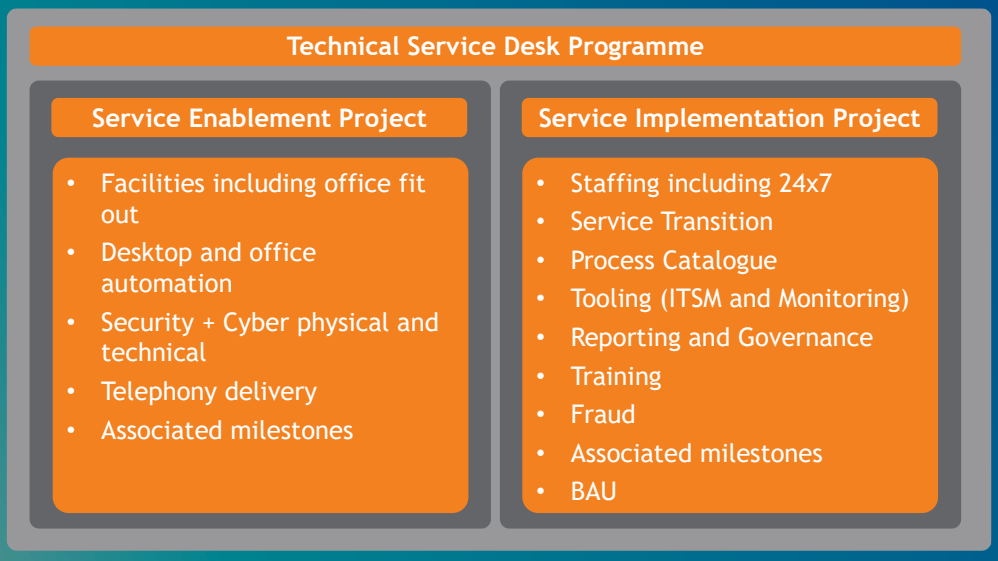
  - Service Management Vice President
  - Programme Director
  - Chief Technology Officer
  - Programme Management office lead.

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.

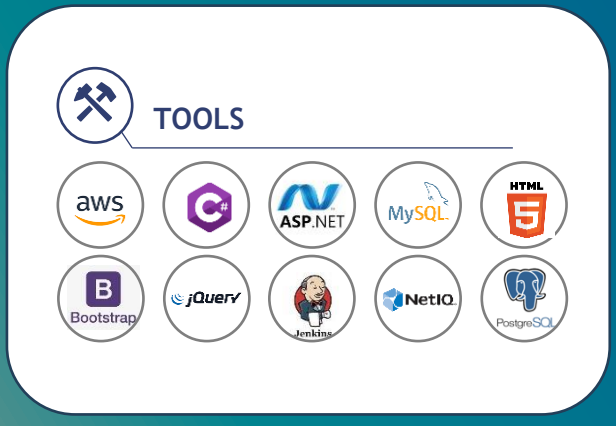
Solution

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

The Rapid Enterprise Architecture Foundation – Data and Innovation Enablement Service is designed to accelerate the establishment of a robust, scalable and future-ready enterprise architecture foundation, enabling organisations to move quickly from strategy to execution.

The service provides a structured yet pragmatic approach to establishing core architectural capabilities that support data-driven transformation, digital innovation and sustained business agility, without the overhead of lengthy, theoretical EA programmes.

The service integrates foundational enterprise architecture disciplines (business, data, application, integration and technology architecture) with modern data platforms, cloud-native services and innovation accelerators. It creates a composable architecture baseline that allows organisations to rapidly onboard new products, data sources, partners and technologies while maintaining security, governance and architectural coherence across the enterprise.

At its core, the service establishes a clear baseline of the current state and a well-defined target-state architecture aligned with strategic priorities. This includes reference architectures, capability maps, data domains, platform standards, integration patterns and technology guardrails. These assets provide immediate clarity and decision support for delivery teams, reducing ambiguity, duplication and technical debt from the outset.

From a data perspective, the service enables the rapid adoption of modern data architectures, including Lakehouse, data meshes and streaming platforms. It defines trusted data domains, ownership models, metadata management, data quality controls, lineage, and access patterns, ensuring that data is discoverable, reusable, and fit for analytics, AI/ML, automation, and operational decision-making. Secure data exchange and interoperability are embedded to support internal and external innovation use cases.

Innovation enablement is achieved through pre-configured accelerators, reusable patterns and automation. These include CI/CD-aligned architecture templates, infrastructure-as-code blueprints, API and event frameworks, sandbox environments and experimentation pathways. This enables teams to quickly prototype, test and scale new ideas while remaining aligned with enterprise standards and controls.

Governance is lightweight and outcome-focused, striking a balance between speed and control. Architecture guardrails, policy-as-code, automated compliance checks and reference patterns enable teams to innovate safely without excessive approval overhead. Continuous feedback loops ensure the architecture evolves in line with business needs, delivery insights and emerging technologies.

The service leverages proven frameworks, industry standards and best practices to accelerate delivery, reducing time to value while improving architectural maturity. Automation and analytics provide visibility into the health of architecture, platform adoption, cost efficiency, risk exposure and performance, enabling informed decision-making and continuous optimisation.

The outcome is an enterprise architecture foundation that is not only stable and secure, but also adaptive and innovation-ready. Organisations gain the ability to rapidly scale new digital capabilities, integrate data across the enterprise, support advanced analytics and AI initiatives and respond confidently to changing business demands. This service transforms enterprise architecture into an active enabler of innovation, growth and long-term digital resilience.

3. Masteks Service

This service provides end-to-end support for rapidly establishing enterprise architecture foundations, data platforms and innovation enablement capabilities.

Key elements include:

- **Foundation Architecture Mobilisation:** Rapid assessment of current state, definition of target architecture and development of a prioritised roadmap for foundational capabilities (business, data, application, technology and security).
- **Modern Data Platform Enablement:** Design and deployment of cloud-native, scalable data platforms (data lakes, data warehouses, data mesh, analytics hubs) with integrated data ingestion, transformation, cataloguing and governance.
- **Innovation Accelerators:** Provisioning of sandboxes, rapid prototyping environments and reusable accelerators (APIs, microservices, automation assets) to enable experimentation and fast-track delivery of new solutions.
- **Data Exchange and Interoperability:** Implementation of secure, standards-based data exchange frameworks (APIs, event streaming, ETL/ELT pipelines) to connect internal and external systems, partners and ecosystems.
- **Governance and Compliance:** Establishment of data governance, metadata management, lineage tracking and policy-as-code for regulatory compliance and operational excellence.
- **Automation and DevOps:** Integration of CI/CD pipelines, infrastructure-as-code and automated testing to accelerate platform provisioning, deployment and lifecycle management.
- **Stakeholder Engagement and Change Management:** Facilitation of collaborative workshops, training and communication strategies to drive adoption, knowledge transfer and continuous improvement.

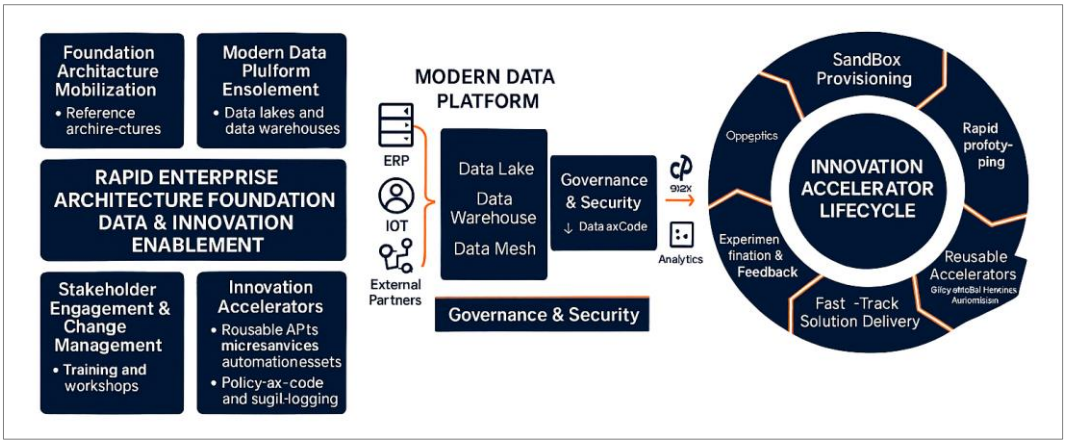


Figure 1: Rapid Enterprise Architecture Foundation Data and Innovation Enablement Service

4. Key Features

4.1 Foundation Architecture Mobilisation

- Rapid current state assessment, gap analysis and target architecture definition.
- Prioritised roadmap for foundational capabilities and quick wins.
- Reference architectures for business, data, application, technology and security domains.

4.2 Modern Data Platform Enablement

- Design and deployment of cloud-native data lakes, warehouses and analytics platforms.
- Data ingestion, transformation, cataloguing and quality management.
- Data mesh, virtualisation and self-service analytics enablement.

4.3 Innovation Accelerators

- Provisioning of sandboxes, rapid prototyping environments and reusable assets.
- API, microservices and automation accelerators for fast-track solution delivery.
- Experimentation frameworks and innovation playbooks.

4.4 Data Exchange and Interoperability

- Secure, standards-based data exchange (APIs, event streaming, ETL/ELT).
- Integration with internal/external systems, partners and ecosystems.
- Schema registry, contract-first design and versioning policies.

4.5 Governance and Compliance

- Data governance frameworks, metadata management and lineage tracking.
- Policy-as-code, automated compliance and audit logging.
- Regulatory alignment (GDPR, HIPAA, sector-specific mandates).

4.6 Automation and DevOps

- CI/CD pipelines, infrastructure-as-code and automated testing.
- Platform provisioning, deployment and lifecycle management.
- Monitoring, alerting and operational analytics.

4.7 Stakeholder Engagement and Change Management

- Collaborative workshops, training and communication strategies.
- Adoption roadmaps, readiness assessments and support channels.
- Continuous improvement and knowledge sharing.

5. Business Benefits

- **Accelerated Time-to-Value:** Rapidly establish foundational architecture and data platforms to enable quick wins and early business impact.
- **Innovation Enablement:** Empower business and IT teams to experiment, prototype and deliver new solutions faster using reusable accelerators and sandboxes.
- **Data-Driven Decision Making:** Provide a governed, scalable data platform for advanced analytics, AI/ML and real-time insights.
- **Seamless Integration:** Enable secure, standards-based data exchange and interoperability across internal and external ecosystems.
- **Operational Efficiency:** Automate platform provisioning, deployment and lifecycle management to reduce manual effort and operational risk.
- **Regulatory Compliance:** Ensure data governance, lineage and policy enforcement for compliance with industry and regulatory standards.
- **Business Agility:** Support rapid onboarding of new capabilities, partners and channels with a composable, modular architecture.
- **Stakeholder Alignment:** Drive adoption and sustained value through collaborative engagement, training and continuous improvement.

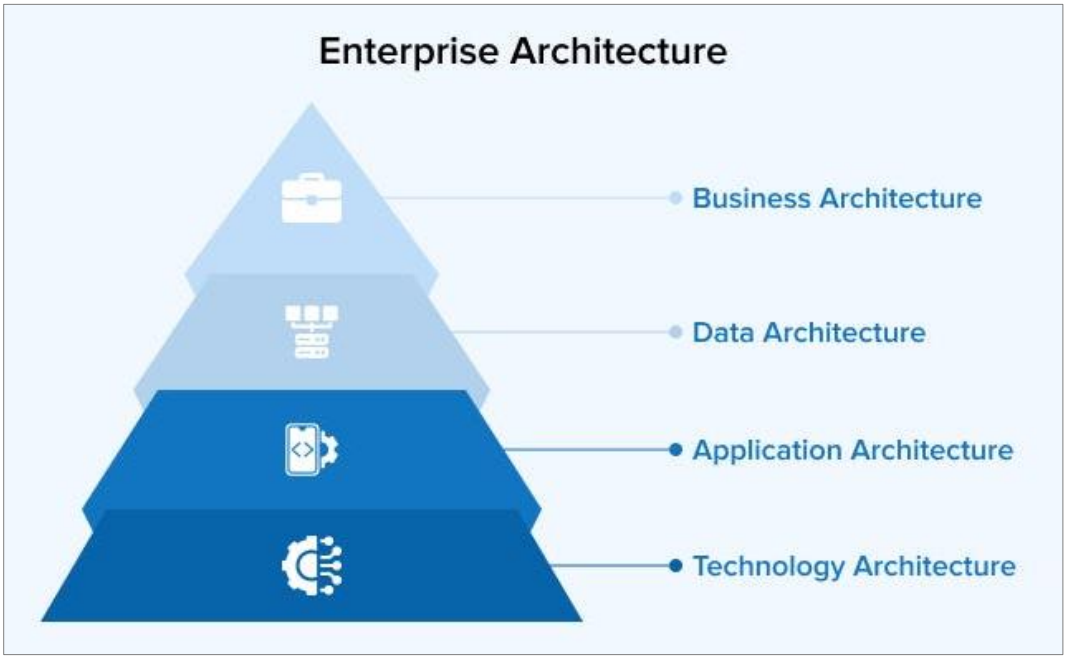


Figure 2: Bridging EA and IT

6. Technologies, Languages, Methodologies and Vendor Support

#	Technologies	Languages	Methodologies	Vendor Support
1	Azure Data Lake, AWS Lake Formation, Google BigQuery, Snowflake	SQL, Python, Scala, Java	Data lake, data warehouse, data mesh, analytics hub	Microsoft, Amazon, Google, Snowflake
2	Apache Kafka, Confluent, Azure Event Hubs, AWS Kinesis	Java, Python, Go, C#	Event streaming, real-time data pipelines, CDC	Confluent, Microsoft, Amazon
3	Informatica, Talend, Azure Data Factory, dbt	SQL, Python, YAML	ETL/ELT, data transformation, orchestration	Informatica, Talend, Microsoft
4	Collibra, Alation, Azure Purview, AWS Glue	SQL, Python, REST	Data governance, metadata management, lineage	Collibra, Alation, Microsoft, Amazon
5	Jenkins, GitHub Actions, Azure DevOps, Terraform	YAML, Shell, Python	CI/CD, infrastructure-as-code, automation	Jenkins, GitHub, Microsoft, HashiCorp
6	Power BI, Tableau, Qlik, Looker	DAX, SQL, Python	Self-service analytics, dashboarding, reporting	Microsoft, Tableau, Qlik, Google

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