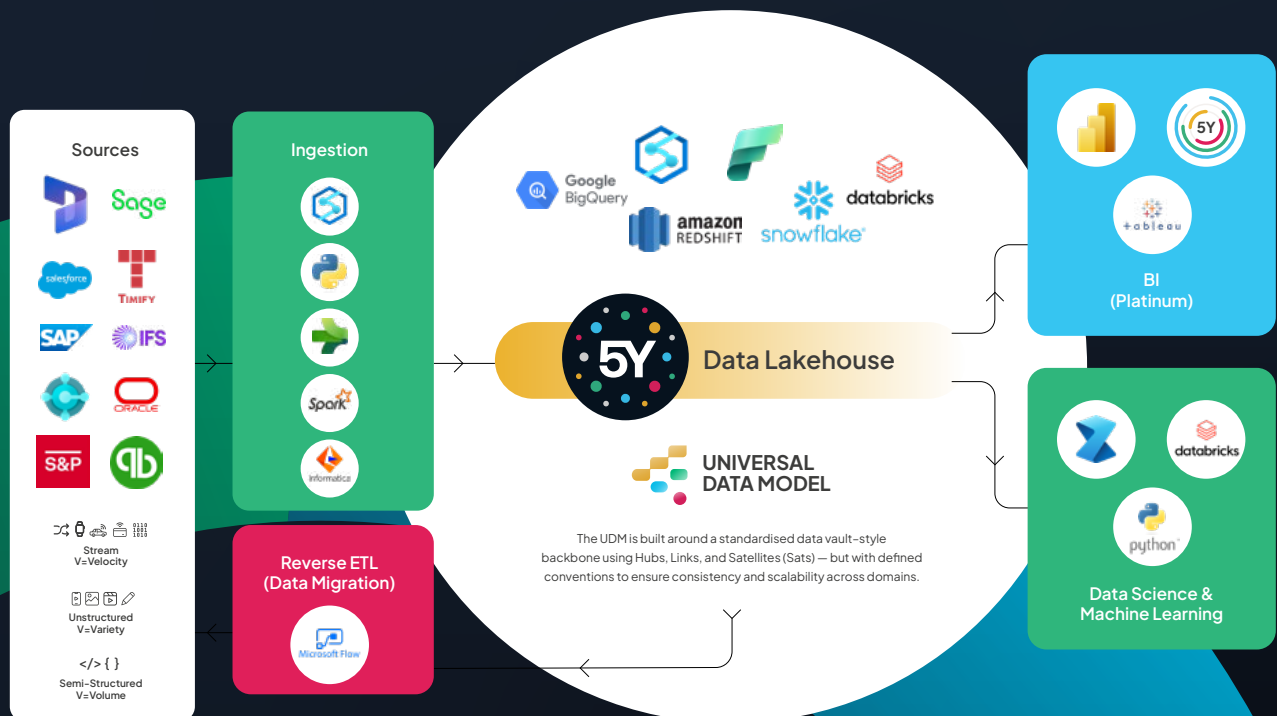




Engineering Suite

Accelerated Data Engineering Tooling



Service Definition

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Why 5Y?

We take a different approach to data transformation

We believe transformation starts with insight, not systems. We're disrupting the traditional landscape with a suite of platforms, services and solutions that get you from raw data to insights faster and more cost-effectively than ever before.



Faster Insights. Lower Costs. Better Outcomes. Guaranteed.

We empower organisations to become data-centric by accelerating access to data from any system or application. We transform this data into actionable insights that guarantee to drive improved business outcomes and enable sustainable growth.

We're confident we can deliver these outcomes because we've done it for others—turning data chaos into clarity and inefficiencies into savings.

80%

of your BI analytics ready out of the box from day one

50%

faster implementation, freeing up your team's time and budget

50%

reduction in data engineering costs

*The "80% analytics-ready" figure applies specifically to engineering tasks such as data ingestion, integration, and preparation. The 50% faster implementation and 50% reduction in engineering costs are based on our observed averages across typical client projects. Actual results may vary depending on project scope, data quality, and unique business requirements.

We believe in a data-centric future.

Everything we do is driven by the following four principles...

Build systems, deliver outcomes.

Our aim is always to go beyond technology, helping organisations use data to drive meaningful, lasting change.

Insight should be embedded, not episodic.

We designed our platforms to not only unify data but also empower people to act on it every day.

Independence over dependency.

Our goal is to enable customers to self-serve, not to lock them into long-term service contracts.

Enablement, not ownership.

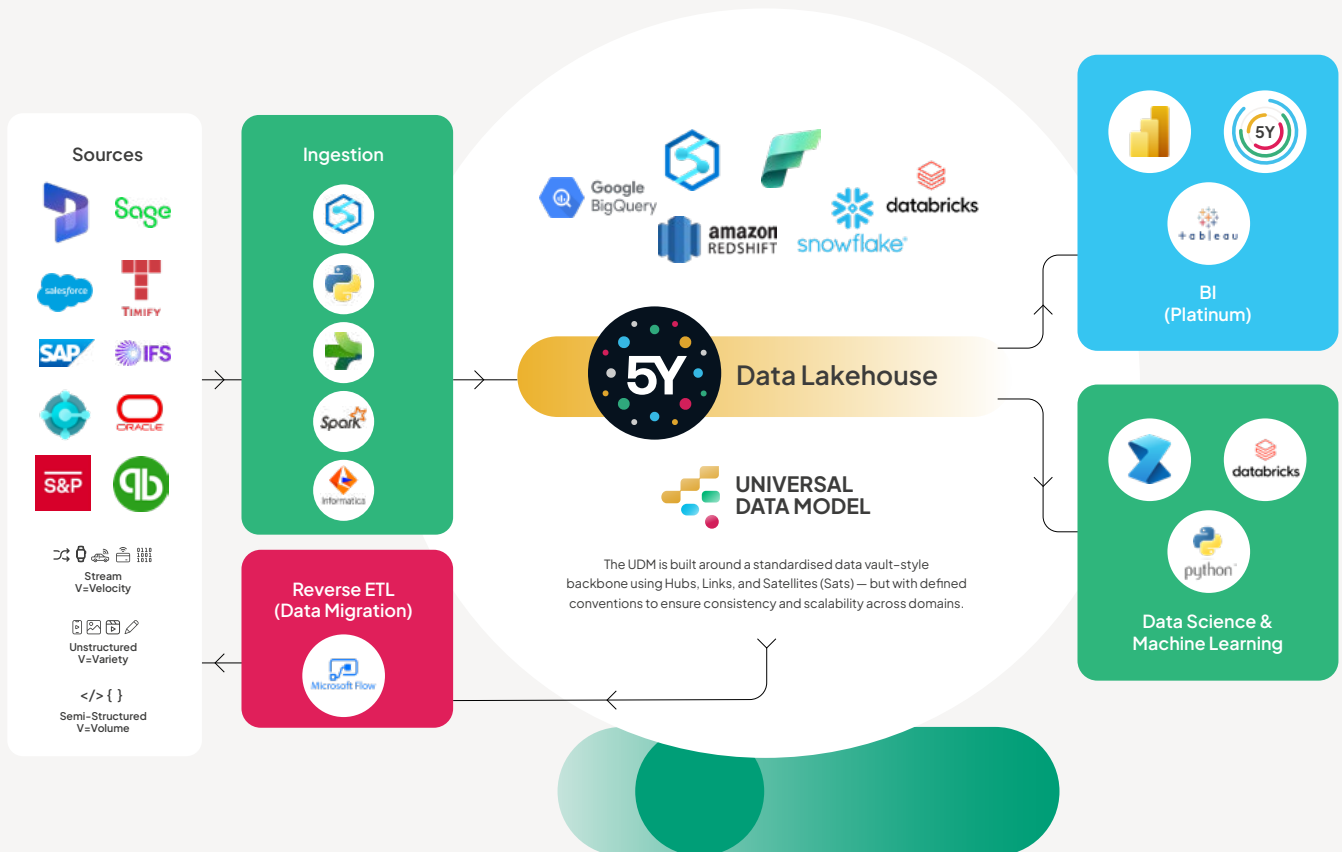
We built a modular platform so customers could scale at their own pace. Where customers need additional support, we offer a managed service model to help them succeed.

The 5Y way

We believe organisations shouldn't have to choose between speed, quality and cost when becoming data-driven. The world is constantly evolving and businesses that build systems from scratch or rely on slow, expensive consultancies will get left behind.

Service Definition

A cloud-native SaaS solution that simplifies and automates data ingestion, transformation, and governance, using a proven Medallion architecture and our Universal Data Model to deliver trusted, compliant insights across any analytics platform.



Detailed Service Description

The 5Y Engineering Suite is a cloud-native data engineering automation and control layer designed to operate within the customer's environment.

It facilitates automated extraction, transformation, and loading (ETL) of data from multiple systems, leveraging a Medallion architecture (Bronze → Silver → Gold) and Data Vault style patterns for comprehensive auditability.

Functional Components

5Y Data Transformation Engine (5YDT)

- The suite includes an orchestration engine that standardizes and validates data pipelines across platforms such as Azure, Databricks, Microsoft Fabric, and other supported environments. It enforces governance rules including consistent naming, historization, and lineage logging, and accelerates development with reusable macros and templates.

Universal Data Model (UDM) - The UDM provides a canonical data schema and set of business definitions applied at the Silver and Gold layers. It consolidates disparate source data into a single, coherent view, such as a master "Customer" entity, simplifying analytics and reporting.

Target Users

The 5Y Engineering Suite is designed for a broad range of roles involved in data management and analytics. Primary users include:

Data Engineers, who build and maintain pipelines

BI Developers, responsible for creating dashboards and reports

IT Operations teams, who oversee infrastructure and system health.

Data Architects leverage the platform's governed frameworks to design scalable, compliant data models

CIO/CDO teams use the solution to drive strategic data initiatives and ensure alignment with organisational objectives.

Data Governance teams benefit from the suite's lineage tracking, auditability, and compliance features, enabling them to enforce standards and maintain trust in enterprise data processes.



Core Features

1

Platform Agnostic Integration

Works seamlessly with Microsoft Fabric, Azure Synapse, Databricks, AWS Redshift, and on-prem SQL servers, leveraging native scalability for enterprise workloads.

2

5Y Data Transformation Engine

Automated orchestration with built-in historisation, lineage tracking, and governance enforcement across all supported platforms.

3

Universal Data Model (UDM)

Provides a canonical schema and consistent business definitions, ensuring unified analytics and simplified reporting.

4

Medallion Architecture

Implements Bronze → Silver → Gold layering for structured, governed data transformation and auditability.

5

Deployment Flexibility

Offered as SaaS, Public Cloud, Private Cloud, or fully self-hosted within your environment to meet sovereignty and compliance requirements.



6

Pre-Built Connectors & Templates

Ready-to-use ingestion connectors and reusable macros accelerate onboarding and pipeline development.

8

Dynamic Scaling & Performance Optimisation

Adapts to enterprise-scale data volumes with automated resource optimisation.

10

Self-Documentation & Automated Mapping

Built-in lineage tracking and auto-generated documentation for compliance and transparency.

7

Security & Access Control

Integrates with Azure AD/Entra ID for authentication, role-based permissions, and audit logging aligned to your IAM policies.

9

Self-Service & Extendable

Business-friendly configuration and SQL-based extensibility empower teams without heavy IT dependency.

Benefits

Key benefits for public-sector organisations include:



Data Sovereignty & Compliance – Ensures UK residency and alignment with GDPR and HMG security standards.



Accelerated Delivery – Cuts pipeline build effort by up to 50%, enabling faster analytics value realisation.



Governance & Trust – Full auditability and lineage tracking for regulatory compliance and stakeholder confidence.



Resilience to Change – Absorbs source system changes via configuration, minimising disruption to KPIs and dashboards.



Reduced Maintenance Burden – Replaces fragmented manual pipelines with a managed, configurable framework.



Future-Proof Architecture – AI-ready data structures and modular design support evolving analytics needs.



Improved Operational Efficiency – Standardised processes reduce errors and streamline updates.



Enhanced Security Posture – Operates within your security framework, leveraging existing IAM and network controls.



Rapid Onboarding & Scalability – Pre-built templates and connectors enable quick start and easy expansion.



Business Empowerment – Self-service capabilities and clear documentation empower teams to manage and extend without heavy IT dependency

Analytics Content

Key Concept

Highlights of Analytics Content

Customisation Ready: Extend or tailor KPIs and visuals to meet unique organisational requirements without compromising governance.

Scalable Approach: Start with core packs and expand as your analytics maturity grows.



Add-On Feature

End-to-End Solutions

The End-to-End Solutions add-on accelerates data integration and reporting by providing pre-configured ingestion, model mapping, and dashboards for common ERP and CRM platforms. Instead of building connectors and mappings from scratch, organisations can deploy these ready-made packs to achieve rapid time-to-value with full governance.

Key Concept

End-to-End Solutions deliver a pre-bundled pipeline and analytics framework that connects source systems directly to governed data layers and curated dashboards. This approach ensures consistency, compliance, and speed for organisations modernising their ERP/CRM estates.

Highlights of End-to-End Solutions

Pre-Built Connectors & Mappings:

Ready integrations for widely used public-sector ERP/CRM systems.

Governed Data Models: Aligns with the 5Y Universal Data Model and Medallion architecture for standardisation.

Out-of-the-Box Dashboards:

Includes domain-specific dashboards for Finance, Procurement, Housing, and Operations.

Rapid Deployment Packs: Designed for quick onboarding with minimal configuration effort.

Modular Expansion: Add extra sources or premium KPI packs as your requirements grow.

Benefits

Speed to Insight: Deploy governed pipelines and dashboards in days, not months.

Predictable Cost: Fixed-price packs reduce uncertainty and procurement complexity.

Compliance by Design: Built-in governance, lineage, and security controls ensure regulatory alignment.

Reduced Technical Overhead: Eliminates the need for custom connector development and manual mapping.

Scalable Foundation: Start with core ERP/CRM packs and expand to additional domains as needed.

Public-Sector Use Cases

The 5Y Engineering Suite and its add-ons are designed to address complex data challenges across diverse public-sector organisations. Typical scenarios include:

Local Government

Unify fragmented datasets from finance, housing, and citizen services into a single governed model for compliance reporting, performance dashboards, and transparency initiatives.

Central Government Departments

Accelerate analytics programmes by automating data ingestion and governance, reducing reliance on manual processes, and ensuring alignment with UK data residency and security standards.

NHS & Healthcare Providers

Standardise clinical, operational, and workforce data to enable accurate performance insights, improve patient care metrics, and support integrated care systems with auditable data flows.

Housing & Social Care

Integrate asset management, tenant records, and financial data to deliver better service outcomes, optimise resource allocation, and support regulatory reporting with trusted, consistent data.

High-Level Architecture Summary

The Engineering Suite is designed as a cloud-native, tenant-controlled data engineering framework that enforces governance and accelerates analytics readiness.

Its architecture follows the Medallion layered model (Bronze → Silver → Gold):

Core Components

Data Ingestion (Bronze Layer): Configurable, pre-built connectors ingest raw data from ERP, CRM, APIs, and flat files into secure Bronze storage (e.g., Azure Data Lake Gen2 or equivalent).

Transformation & Standardisation (Silver Layer): The 5Y Data Transformation Engine applies validation, historisation, and governance rules to create structured, standardised datasets.

Curated Analytics Models (Gold Layer): Business-ready models aligned to the Universal Data Model (UDM) feed BI tools and AI workloads, ensuring consistency and traceability.

Governance & Compliance: Automated lineage tracking, audit logging, and schema enforcement are embedded throughout all layers to meet regulatory and organisational standards.

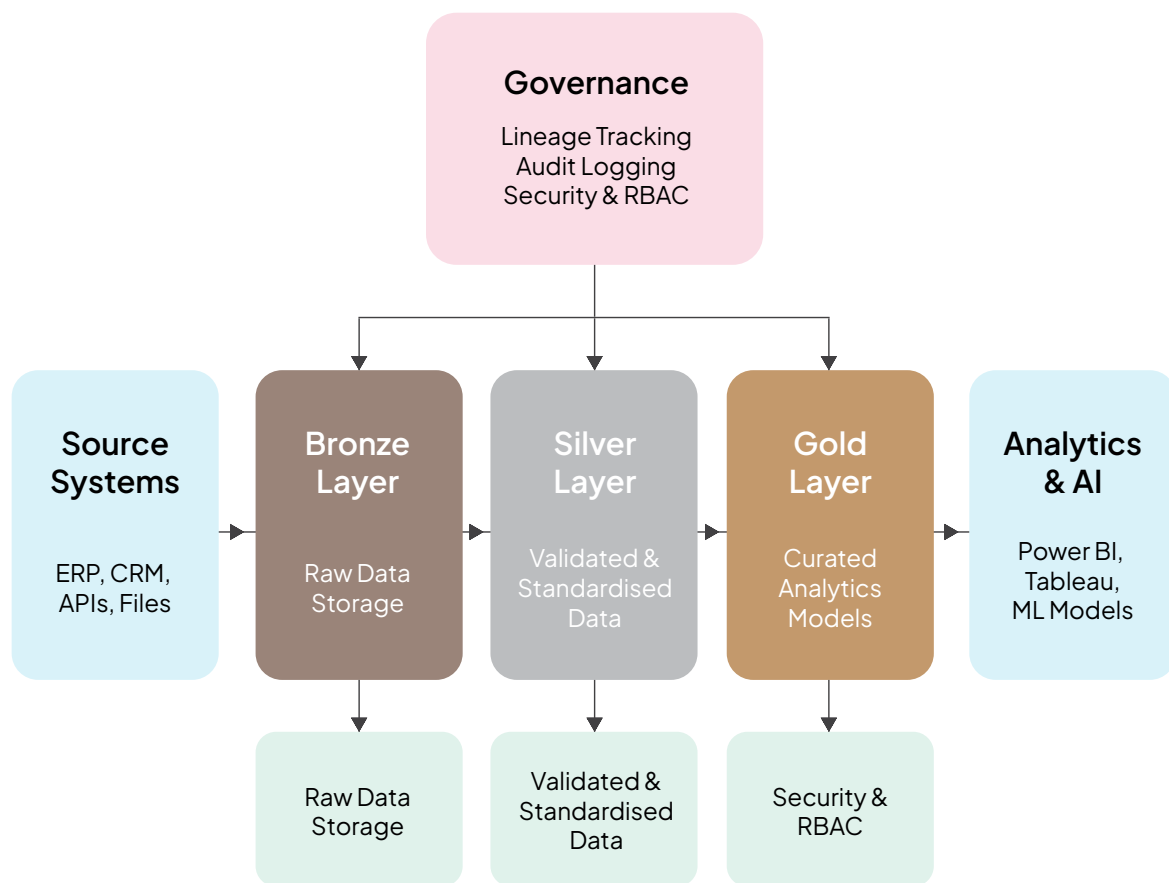
Security & Deployment: All processing remains within the customer's cloud tenant (Public Cloud, Private Cloud, or self-hosted), leveraging platform-native security (Azure AD/Entra ID) and role-based access control.

Integration Points

Supported Platforms: Azure Synapse, Microsoft Fabric, Databricks, AWS Redshift, on-prem SQL servers.

Analytics Consumption: Gold layer outputs connect seamlessly to Power BI, Tableau, and other BI tools; optional add-ons (Analytics Content, End-to-End Solutions) accelerate reporting.

High-Level Architecture Summary



Accessibility (WCAG 2.2 AA)

The Engineering Suite and all associated documentation are designed to meet the intent of WCAG 2.2 AA standards, ensuring inclusivity and usability for all public-sector users. Key accessibility features include:

Screen Reader Compatibility: All Engineering Suite interfaces and documentation support assistive technologies for visually impaired users.

Keyboard Navigation: Full functionality of the Engineering Suite is accessible without a mouse, supporting users with motor impairments.

Colour Contrast Compliance: The Engineering Suite UI adheres to WCAG contrast ratios for readability and clarity.

Accessible Documentation Formats: All Engineering Suite guides and manuals are provided in formats suitable for screen readers and alternative text rendering.

Alternative Formats on Request: Large print, Braille-ready files, and other accessible versions of Engineering Suite documentation are available upon request to meet specific user needs.

This commitment ensures that the Engineering Suite is fully usable by diverse audiences across the public sector, aligning with UK accessibility regulations and best practice.

Onboarding process

The on-boarding process for the Engineering Suite is structured to ensure a smooth transition:



Typical duration: 4–6 weeks, flexible for onsite or remote delivery.

Offboarding and exit

The off-boarding process for the Engineering Suite ensures continuity and minimal disruption:

1

Data Retention

All data remains in your environment;
no extraction from 5Y required.

2

Final Handover

Provide updated documentation and
operational guides.

3

Software Removal

Assist in disabling/removing
components and access.

4

Data Deletion Confirmation

Certify secure deletion of any incidental
supplier-held data.

5

Optional Support

Migration assistance available on a
time-and-materials basis.

After off-boarding, all
datasets and configurations
remain fully accessible for
future use.

Customer and supplier responsibilities

Customer

To ensure secure and effective operation of the Engineering Suite, **customers are responsible for:**

Data Access: Provide and maintain secure connections to all required source systems.

Identity & Access Management: Manage user onboarding, roles, and permissions within your tenant (e.g., Azure AD).

Data Quality & Governance: Ensure clean data inputs and define business rules for validation and transformation.

Operational Oversight: Monitor pipeline executions and address alerts or environment issues promptly.

These responsibilities help maintain compliance, security, and optimal performance of the Engineering Suite.

Supplier

The supplier (5Y) is responsible for:

Provisioning the Engineering Suite: Deliver and maintain the core software components within agreed deployment models.

Maintaining Governance Frameworks: Keep templates, macros, connectors, and governance rules updated for compliance and best practice.

Support & Service Delivery: Provide technical support and incident resolution in line with agreed SLAs.

Security & Compliance Alignment: Ensure processes, documentation, and updates adhere to UK security standards, GDPR, and accessibility requirements.

Service Levels (SLAs)

The 5Y Engineering Suite is supported by robust, ITIL-aligned service levels to ensure operational continuity and rapid incident resolution. All SLA commitments are tracked and reported during service reviews, and remedies for persistent breaches are detailed in the call-off contract.

Incident Priorities & Response/Resolution Targets

Priority	Definition	Initial Response	Resolution / Workaround	Full Resolution
P1 – Critical	Complete service outage or critical business impact (e.g. Suite inaccessible, all pipelines failing)	1 hour	4 hours	1 business day
P2 – High	Major functionality loss, significant user impact, but partial operation possible	4 hours	1 business day (workaround same day if needed)	2 business days
P3 – Medium	Minor issue, moderate impact, or usage question	1 business day	5 business days or next release	
P4 – Low	Cosmetic issue, documentation request, or suggestion	2 business days	Planned for future update	

Escalation

If an issue is not resolved within the target timeframe, it is escalated to a senior support engineer and, if necessary, to the CTO. For P1 incidents, a major incident manager is assigned and communication cadence is established (typically hourly updates until resolution).

Incident Management

All incidents are logged with unique ticket numbers. Clients receive regular updates on progress and resolution status. For critical incidents, 5Y can initiate a bridge call for joint investigation.

Out-of-Hours Support

Standard support is provided during UK business hours (09:00–17:30, Monday–Friday). Out-of-hours support for P1 incidents is available by arrangement or as specified in the contract.

Proactive Maintenance

5Y performs regular health checks and releases software updates (including enhancements and security patches). Updates are scheduled in advance to minimise disruption, with advance notification to client admins.

Service Credits

In line with G-Cloud guidelines, service credits may be applied if SLA targets are missed in a given period. Credits are typically capped (e.g., not exceeding 20% of the monthly service fee) and are applied to future service periods rather than as cash refunds. Persistent SLA breaches may entitle the client to terminate for cause.

Security Summary

5Y Technology holds a valid Cyber Essentials certification, demonstrating our commitment to baseline cyber security standards. We are actively implementing ISO/IEC 27001 standards across our organisation, but we are not yet certified.

The security of the Engineering Suite is primarily governed by the customer's own platform controls and policies. 5Y acts solely as a software supplier and support partner, with no persistent access to customer data.

All confidential or personal data processed by the pipelines remains fully under the customer's governance and control at all times.

Key highlights

- | Cyber Essentials certified
- | ISO 27001 aligned processes
- | Encryption in transit (TLS 1.2/1.3) and at rest (AES-256)
- | Role-based access control and audit logging
- | All processing occurs inside the customer tenant
- | Monitoring and logging support through platform-native services



GDPR Summary

The Engineering Suite is designed to operate within strict UK GDPR and Data Protection Act requirements, ensuring privacy and compliance throughout the service lifecycle.

Role

5Y acts as a Data Processor, while the customer remains the Data Controller for all data processed within the Engineering Suite.

Data Categories

Customer Data: Business and operational data ingested and transformed by the platform.

Metadata: Pipeline configurations, schema definitions, and transformation rules.

Logs: Operational logs for monitoring, troubleshooting, and audit purposes.

Deletion: Secure deletion of any incidental data held by 5Y (e.g., troubleshooting logs) is performed upon service termination or retention expiry, with written confirmation provided.

Data Subject Access Requests (DSAR): Supported via a customer-led process. The customer has direct access to all data within their environment, enabling fulfilment of DSARs without dependency on 5Y. Assistance is available for identification or extraction if required.

Lawful Basis: Determined by the customer as Data Controller. The Engineering Suite does not alter or impose lawful basis decisions; it operates under the customer's governance framework.

Data Residency: All processing and storage occur within the customer's UK-based cloud or data centre, ensuring compliance with UK data residency requirements.

Privacy by Design: The Engineering Suite enforces role-based access control, audit logging, and encryption in transit and at rest (via platform-native features). No data is used for profiling or model training outside the agreed scope.

Data Residency

The Engineering Suite is designed with sovereignty-by-design principles, ensuring that all data processing and storage remain under the customer's control:

Customer Tenant Control: All data, including raw, transformed, and curated datasets, resides within the customer's cloud tenant or approved on-premises environment.

UK Region Recommended: For public-sector compliance and alignment with UK Government security policies, hosting in a UK-based region is strongly recommended.

No Supplier Data Movement: 5Y does not extract, replicate, or persist customer data outside the customer's environment. Any incidental data (e.g., troubleshooting logs) is temporary and securely deleted after use.

Customer-Driven Exports: Data only leaves the tenant if explicitly exported by the customer for reporting, migration, or integration purposes.

Compliance Alignment: Supports UK GDPR, HMG Security Policy Framework, and NCSC cloud security principles by ensuring data residency and sovereignty requirements are met.

Optional BYOK (Bring Your Own Key): Customers can manage encryption keys within their own Key Vault for additional assurance.

Subprocessors

The Engineering Suite is designed to minimise external data handling and maintain strict control within the customer's environment:

No External Processing: All customer data remains within the customer's cloud tenant or approved on-premises environment. The service does not transfer or process data outside these boundaries.

Platform Dependencies: Any required services (e.g., Azure Data Factory, Databricks, Synapse) are deployed and configured within the customer's subscription, ensuring compliance with UK data residency and security requirements.

Supplier Access: 5Y does not maintain persistent access to customer data. Temporary access for support is granted only under customer control and revoked immediately after resolution.

Subprocessor List: If additional components or third-party services are introduced (e.g., optional AI modules, monitoring tools), a full list of subprocessors will be provided in advance, including their roles, compliance certifications, and geographic location.

Compliance Assurance: All subprocessors, if used, must meet UK GDPR and HMG Security Policy Framework standards. Contracts include data protection clauses and audit rights to ensure adherence.

Customer Control: Customers retain full authority to approve or reject any optional subprocessors before activation.

Constraints & Assumptions

Infrastructure: Customers must provide and maintain agreed cloud or on-premises resources.

Service Scope: Standard service includes ingestion, transformation, governance, and orchestration. Custom development requires a separate Statement of Work.

Add-Ons: Features like Analytics Content and End-to-End Solutions need compatible environments (e.g., Azure) and valid licenses (e.g., Power BI Premium, Databricks).

Customer Duties: Customers supply clean data, manage access, and ensure compliance with their policies.

Third-Party Dependencies: Customers must keep all platform components (e.g., Azure Data Factory, Synapse) supported and operational.

Change Management: Notify of major changes to source systems or configurations in advance.

Performance: Designed for batch/micro-batch workloads; near real-time via dedicated SKU. Continuous streaming is excluded.

Licensing: Usage is restricted to the licensed tenant/environment. Additional sites require separate licenses.

Pricing Information

Pricing is not included in the Service Definition and is provided separately in the mandatory G-Cloud Pricing Document.

Client Success Story

From fragmentation to a unified patient experience



The Challenge:

Our client, a leading global healthcare group in the hearing care sector faced significant challenges after a major acquisition program in North America, inheriting fragmented and unstable legacy systems. These included customer relationship management (CRM) tools, patient management platforms, and heavily customised ERP systems, all containing overlapping and inconsistent B2C data. The challenge was immediate and complex: How do you consolidate private patient data across fragmented, unstable legacy systems into a single, trusted view—without disrupting ongoing operations or breaching regulatory compliance frameworks such as GDPR?

The Solution:

Deployment of the 5Y Engineering Suite addressed these challenges by unifying data across legacy systems through a modular, Azure-native framework. With pre-built logic for mastering, survivorship, and recovery, the platform enabled seamless integration between modern front-end applications (CMS, AC App) and backend systems like NAV 17 and Dynamics CE. This solution maintained patient data, enhanced patient engagement across their care journey through stable omnichannel experiences and provided a scalable foundation for future growth—all while maintaining full compliance and operational continuity.

Business Impact

Transformed disconnected patient records into a single trusted view

Eliminated costly system outages

-70%
Duplicates

+85%
Matching

2×
Processing

12+
Countries

Client Success Story

From complex reporting requirements to actionable insights



The Challenge:

How do you give every team timely access to operational insights when manual reports are slowing you down? That was the challenge facing one of the UK's largest providers of affordable and social rent housing. While they had implemented Microsoft Dynamics 365 across the organisation, reporting remained slow, fragmented and heavily reliant on manual processes. A traditional system upgrade hadn't resolved the problem. Without a consistent, centralised reporting environment, decision-making was delayed and operational oversight was limited.

The Solution:

We deployed the 5Y Engineering Suite to centralise reporting, improve operational oversight and simplify access to key metrics across the business. By integrating Dynamics 365 with internal systems and applying a pre-built data model, we created a templated, cloud-based reporting and analytics environment aligned with the organisation's strategic goals. The outcome enabled teams to achieve real-time access to critical data through a single source of truth, replacing slow, manual reporting with governed, consistent insights.

Business Impact

Seamless integration of Dynamics 365 and other core systems

A secure, scalable environment designed for long-term transformation

80+
Self-Serve KPIs

Our Social Commitments

At 5Y, we believe business success goes hand in hand with responsibility. Our social commitments reflect our dedication to people, communities, and the planet.



Fair Work & Well-being

- | Fair pay above the National Living Wage.
- | Flexible working and open culture.
- | Health and well-being initiatives, including mental health support and certified Mental Health First Aiders.



Equality & Inclusion

- | Gender and ethnicity pay gap monitoring.
- | Active Women in Tech group and DEI training.
- | Recruitment practices promoting diversity and accessibility.



Skills & Growth

- | Personal Development Plans for every employee.
- | Annual training allowance and access to global certifications.
- | Apprenticeships and graduate programmes to nurture talent.



Community & Charity

- | Two paid volunteering days per year.
- | Annual charitable giving: A percentage of profit before tax donated to employee-chosen charities.
- | Partnerships with local charities and associations.



Environmental Action

- | Commitment to biodiversity initiatives such as tree planting
- | Working towards Net Zero through carbon offsetting initiatives

Together, we create a positive impact – for our people, our communities, and our planet.



Ethics & Responsibility

- | Mandatory modern slavery, sexual harassment and ethics training.
- | Whistleblowing and grievance policies.
- | Strong safeguarding and compliance processes.





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