

848

848 Insightful Business – Data Integration & Engineering

Part of

The Insightful Business

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Service Overview and Context

What Our Customers Experience

Organisations accumulate data across disconnected systems, legacy applications, unstructured sources, and manual processes. Reporting grows inconsistent, analytics become siloed, and decisions rely on incomplete or out-of-date information.

Teams struggle to trust their data, stakeholders lack clear visibility, and leaders find it difficult to anticipate issues or understand the real impact of change. As operational environments evolve, these gaps grow wider, increasing uncertainty and reducing the organisation's ability to make timely and evidence-based decisions.

Without a structured approach, organisations invest in tools and dashboards that fail to address underlying data issues. Effort becomes fragmented, quality varies across teams, and insights remain shallow or reactive.

To improve performance, organisations require clear data foundations, well-governed processes, reliable integration, and the capability to generate meaningful insight from operational activity.

Our Framework for Clarity and Improvement

848's Intelligent Business Framework provides the structure organisations use to connect strategic outcomes with the foundations that support them.

It defines how core capability is developed, governed, and improved across domains, ensuring that every service is aligned to the organisation's wider objectives.

Within this model, the Framework ensures every Insightful Business Service Stream aligns to strategic outcomes.

By connecting data foundations with governance, engineering, analytics, and intelligent automation, it gives organisations a coherent approach for strengthening insight capability.

This clarity allows leaders to trust their information, anticipate challenges, and plan with confidence.

The Insightful Business Outcome Area

The Insightful Business strengthens an organisation's ability to make informed, timely, and confident decisions.

It focuses on improving visibility of operations, ensuring data is managed responsibly, and enabling teams to interpret information in a way that supports strategic and operational objectives.

This outcome area brings structure to how organisations collect, govern, process, and analyse data. It establishes consistent foundations, integrates data across systems, improves quality, and provides the analytical tools and capabilities needed for meaningful insight.

By strengthening these capabilities, the Insightful Business helps organisations understand performance, identify risks early, and shape decisions that support sustainable improvement.

Services within The Insightful Business create the visibility, analytical capability, and decision-making confidence that underpin modern digital operations.

They ensure the organisation uses data deliberately, manages it responsibly, and applies it to create value across all other Outcome Areas.

848 Insightful Business – Data Integration & Engineering

Organisations rely on data from multiple systems, applications, and sources, yet these environments often evolve independently, creating inconsistent data flows, duplicated logic, and unreliable handoffs between operational and analytical systems.

Teams spend significant effort preparing data manually, addressing gaps in process automation, or working around brittle integrations that limit confidence in output. As business needs grow, these issues constrain the organisation's ability to provide timely, accurate information to stakeholders.

The Data Integration & Engineering Service Stream strengthens The Insightful Business by establishing the structures, pipelines, and orchestration patterns that ensure data flows reliably across the organisation.

It provides the capability to automate movement and transformation of data, preparing it for analytical use while reducing operational effort and error. The service aligns to The Intelligent Business Framework by improving value flow, increasing clarity in how data is processed, and supporting the organisation's ability to respond quickly to change.

Delivery is collaborative, enabling internal teams to build confidence and develop capability through peer-to-peer working, ensuring the organisation can operate and evolve its data flows sustainably.

Purpose of This Document

This document describes how 848 delivers the Data Integration & Engineering Service Stream within The Insightful Business. It defines the purpose, scope, and delivery approach of the service, providing a clear explanation of how data is connected, transformed, automated, and prepared for downstream use.

The document outlines the structure of the service, the methodology used across all Service Elements, and the responsibilities shared between 848 and the customer. It is intended for procurement teams, data leaders, architects, and operational stakeholders who require clarity on how integration and engineering capabilities will be delivered.

The document should be read alongside the Intelligent Business Framework, which explains how this Service Stream contributes to insight generation, operational reliability, and the organisation's wider digital operating model. Readers should expect a structured explanation of activities, boundaries, and outcomes, as well as an emphasis on capability uplift and knowledge transfer to support long-term sustainability.

The Intelligent Business Framework

Modern organisations depend on technology that support clear outcomes: reliable operations, effective protection, efficient processes, informed decisions, and the ability to adapt. Achieving these outcomes requires more than individual systems or isolated projects. It demands a structured approach that links technology, governance, and operational practice to the results the organisation is working toward.

The Intelligent Business Framework provides this structure. It is the model 848 uses to organise, deliver, and improve services in a way that aligns directly to business need. Rather than presenting a catalogue of independent services, the Framework shows how each area of capability connects to a defined aspect of organisational performance. This gives customers a consistent way to understand what each service is designed to achieve and how it contributes to wider improvement.

The Framework also brings coherence across the 848 portfolio. It defines the outcome areas that modern organisations typically strengthen and introduces a common language for discussing priorities, risks, and investment decisions. This supports focused planning and ensures work progresses in a coordinated and integrated manner, regardless of where an organisation chooses to begin.

Introduction to 848's Intelligent Business Framework

An Intelligent Business is an organisation that develops and operates its technology, processes, and governance in a way that directly supports its core outcomes. It uses platforms, data, security controls, and ways of working to maintain resilience, reduce risk, improve performance, and adapt to change in a controlled and predictable manner.

In an Intelligent Business, technology is not implemented as a set of isolated systems. It functions as an integrated part of how work is carried out, how decisions are made, and how the organisation meets its obligations. Stability, protection, efficiency, insight, and innovation are treated as connected aspects of the operating model rather than separate technical concerns.

An Intelligent Business has clear visibility of its environment, understands how its services and processes interact, and makes decisions based on evidence, risk, and organisational impact. It can respond effectively to new demands, maintain operational continuity as conditions change, and introduce new capability without undermining what is already in place.

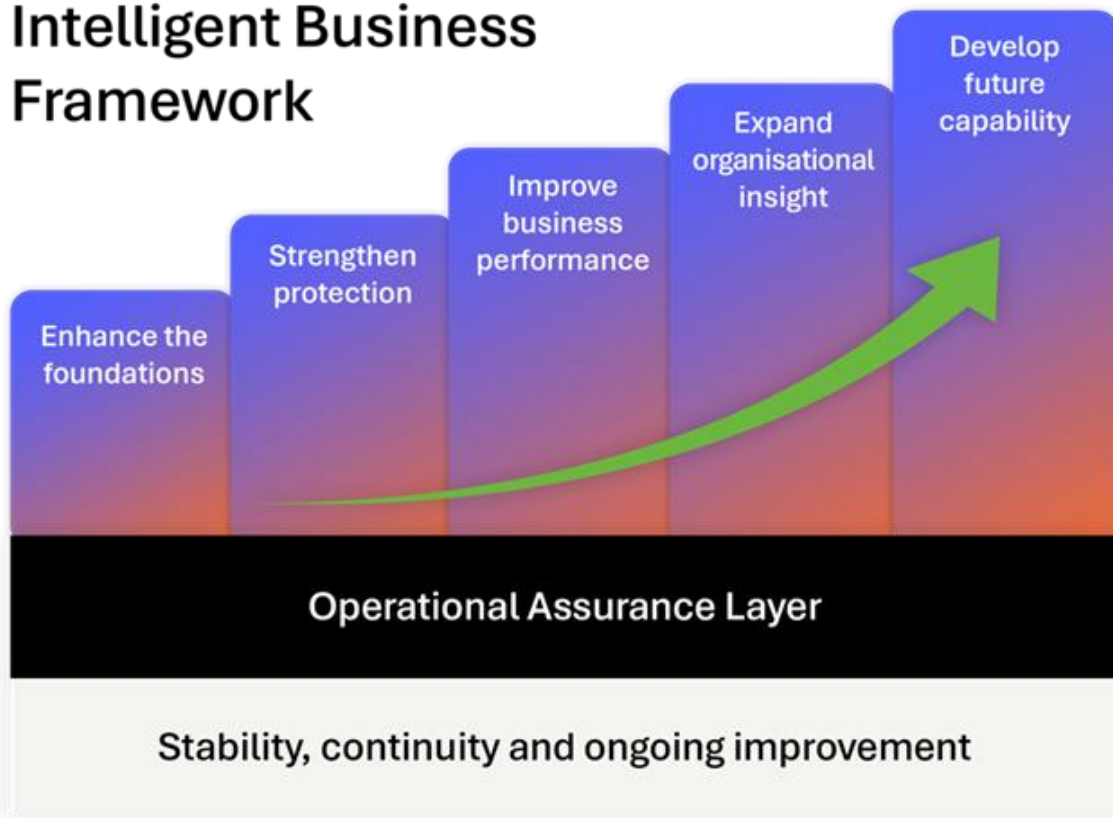
Ultimately, an Intelligent Business uses technology, governance, and operational practice to support reliable, secure, and continually improving performance. It focuses on outcomes, aligns effort to organisational need, and ensures that improvements contribute to long-term capability rather than short-term fixes.

The Intelligent Business Framework is the structure 848 uses to help organisations develop the capabilities required to operate in this way. It translates these characteristics into clear areas of focus, showing how different types of work contribute to stability, protection, efficiency, insight, and future capability. By organising services around these areas, the Framework provides a predictable way to understand what each service achieves and how it supports wider operational goals. This creates a practical link between the outcomes an Intelligent Business depends on and the work required to build and maintain them.

The Operating Domains of The Intelligent Business

An Intelligent Business strengthens capability across several interconnected domains that influence how effectively the organisation operates. These domains reflect the areas where stability, protection, performance, insight, and future capability are developed over time. Each domain represents a different aspect of organisational need, and improvements in one area support progress in others. Organisations may focus on any domain depending on their priorities, with no fixed starting point or prescribed order.

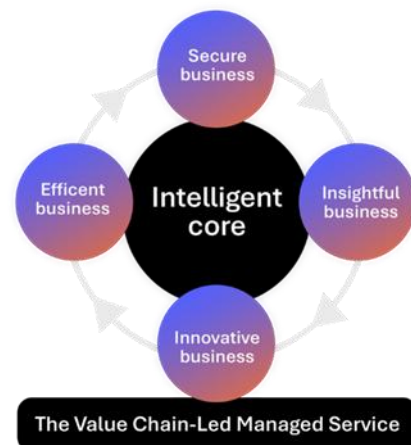
Operating Domains of the Intelligent Business Framework



The Operating Domains describe where organisations strengthen capability, while the Outcome Areas show how the 848 portfolio is structured to support that development. Each Outcome Area represents a defined category of work within the Framework, organising services into clear themes that align to organisational performance. Together, they translate the operating domains into a practical, service-aligned structure that enables consistent planning, delivery, and improvement.

The Six Outcome Areas

The Outcome Areas represent the structured way the Intelligent Business Framework organises capability. Each area describes a distinct aspect of organisational performance and provides the lens through which 848 designs, delivers, and aligns its services. Together, they form a connected model that supports stable, secure, efficient, insightful, and adaptable operations. These areas are not sequential; organisations may focus on any one of them depending on priorities, pressures, or the state of their current environment.



The Intelligent Core

The Intelligent Core provides the technical foundations that support the organisation's ability to operate reliably and scale responsibly. It focuses on the architecture, platforms, and engineering practices that underpin modern digital environments. This includes establishing stable cloud environments, defining coherent enterprise architecture, and applying disciplined platform engineering approaches such as DevOps and SecDevOps.

Strengthening the Intelligent Core ensures that technology aligns to organisational objectives, reduces operational fragility, and creates the structural consistency required for higher-level capability. It enables the organisation to introduce new services, adapt to change, and maintain performance without compromising stability or security.

The Secure Business

The Secure Business focuses on protecting people, data, applications, and operations. It helps organisations understand their risk landscape, implement appropriate safeguards, and maintain resilience as threats and environments evolve. This outcome area ensures that security is embedded into everyday operations rather than treated as a separate or reactive activity.

By strengthening this area, organisations gain clearer visibility of their exposure, greater confidence in their protection measures, and a structured way to govern risk. It supports responsible decision-making and ensures that security contributes directly to safe, predictable, and well-managed operations.

The Efficient Business

The Efficient Business strengthens how work flows across the organisation. It focuses on reducing friction, improving process reliability, and supporting teams to deliver work consistently and effectively. This outcome area addresses the operational constraints that affect performance, from duplicated effort and unclear responsibilities to inconsistent ways of working.

By improving efficiency, organisations reduce operational drag and increase the capacity of teams to deliver value. This supports better utilisation of technology, clearer accountability, and smoother end-to-end processes that contribute to predictable, scalable performance.

The Insightful Business

The Insightful Business enables organisations to make informed, timely, and confident decisions. It focuses on improving visibility of operations, strengthening reporting, and ensuring that data is captured, managed, and interpreted in a way that supports organisational objectives.

Developing this outcome area improves the organisation's ability to understand current performance, identify emerging issues, and assess the impact of change. It provides the foundation for measurement, analysis, and evidence-based planning across all areas of the Intelligent Business.

The Innovative Business

The Innovative Business supports the development of new capability and structured improvement. It enables organisations to explore new approaches, adopt modern tools and methods, and respond effectively to changing needs or opportunities. This outcome area covers areas such as automation, AI adoption, and the creation of new service models or ways of working.

Strengthening this area helps organisations evolve at a controlled pace. It ensures that innovation is introduced safely, aligned to organisational priorities, and built on a stable foundation, without disrupting existing operations or increasing the organisation's level of risk.

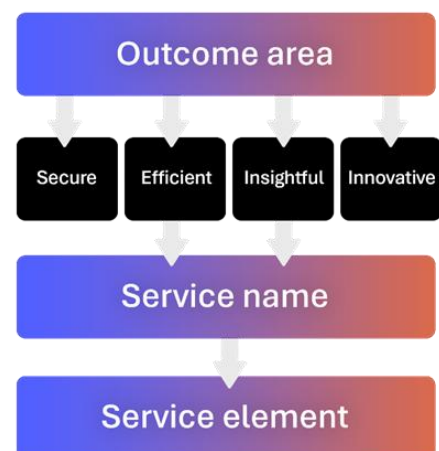
The Value Chain-Led Managed Service

The Value Chain-Led Managed Service provides the operational assurance that underpins every other outcome area. It maintains continuity, stability, and performance by aligning support to the organisation's value chain — the real end-to-end flow of work that keeps the organisation operating.

This outcome area ensures that services are monitored, governed, and improved through a structured, consistent approach. It reduces operational friction, maintains alignment between service delivery and business need, and supports the organisation's ability to sustain improvements made across the other outcome areas.

How Services Align to the Outcome Areas

Each Outcome Area is supported by a set of Service Streams, and each Stream contains the individual Service Elements that make up the work delivered. This structure provides a clear line of sight from each Service Element to the organisational outcome it supports. It ensures that services are delivered consistently, contribute to defined areas of performance, and can be selected according to the organisation's priorities without needing to follow a fixed sequence or maturity path.



The Insightful Business

What The Insightful Business Is

The Insightful Business is the part of the Intelligent Business that ensures the organisation can understand, measure, and interpret what is happening across its operations. It establishes the data foundations, governance structures, engineering models, and analytical capabilities that shape how information flows and how insight is derived.

This outcome area defines how data is captured, integrated, and managed, and sets the standards that maintain its accuracy and reliability. It ensures analytics are based in trusted information, that reporting reflects the true state of operations, and that insights support both immediate decision-making and long-term planning.

The Insightful Business connects strategic intent with operational reality. It gives organisations the ability to see what is driving performance, understand emerging risks, and measure the effect of change through reliable, traceable, and consistent data.

How Work Is Structured Within The Insightful Business

Work within The Insightful Business is organised across five Service Streams that together develop and mature the organisation's data and insight capabilities:

Data Foundation & Architecture

This stream defines the structural models, architectures, and platform foundations that determine how data is stored, organised, and accessed. It establishes the technical principles that support scalable, governed data environments.

Data Integration & Engineering

This stream manages how data is moved, processed, and prepared for use. It ensures data flows reliably across systems, creating consistent and usable datasets that support analytics, reporting, and operational insight.

Data Governance & Quality

This stream defines the controls, responsibilities, policies, and processes that maintain data accuracy, lineage, and trust. It establishes the organisational structures that support responsible and compliant data use.

Analytics & Insight Enablement

This stream enables the organisation to interpret its data through reporting, dashboards, analysis models, and decision-support capabilities. It ensures insights are meaningful, timely, and aligned to organisational need.

Data Science & Intelligent Automation

This stream provides advanced analytical capability, including machine learning, predictive modelling, and intelligent process automation. It supports proactive decision-making and the creation of new value through data-driven innovation.

These Service Streams operate as a single model for strengthening insight capability. Each focuses on a specific area of maturity, but all contribute to the organisation's ability to understand performance and make informed decisions with confidence.

What The Insightful Business Helps Organisations Achieve

The Insightful Business enables organisations to work with clarity, accuracy, and foresight. By strengthening this outcome area, organisations gain:

- Reliable and trusted data that supports evidence-based decision-making.
- Clear visibility of operational performance, risks, and dependencies.
- Improved measurement and reporting that aligns to strategic and operational objectives.
- Faster identification of issues, trends, and emerging challenges.
- The ability to predict outcomes and understand the impact of change.
- Confidence that insights are accurate, timely, and grounded in data that is well-governed and consistent.
- A structured foundation for advanced analytics, automation, and intelligent capability.

With these improvements, organisations move from reactive reporting to proactive, insight-led management. They make decisions supported by evidence, reduce uncertainty, and build the capability to plan and respond with greater confidence.

How This Outcome Area Supports The Intelligent Business

The Insightful Business enables the Intelligent Business to operate with clarity and purpose. It strengthens every other Outcome Area by providing the visibility required to understand performance, measure progress, and assess risk.

- The **Intelligent Core** relies on trusted data to inform architectural and engineering decisions.
- The **Secure Business** requires accurate information to manage risk, monitor exposure, and maintain compliance.
- The **Efficient Business** depends on reliable insight to identify bottlenecks, measure flow, and improve processes.
- The **Innovative Business** uses data to test ideas, validate change, and scale new capability responsibly.
- The **Value Chain-led Managed Service** depends on insight to maintain operational continuity and improve service performance.

By aligning data, analytics, governance, and intelligent capability to the organisation's operating model, the Insightful Business ensures that decisions at every level are informed, traceable, and grounded in reality. It strengthens the organisation's ability to plan effectively, adapt confidently, and maintain control as conditions evolve.

848 Insightful Business – Data Integration & Engineering

848 INSIGHTFUL BUSINESS PORTFOLIO

DATA FOUNDATION & ARCHITECTURE	DATA INTEGRATION & ENGINEERING	DATA GOVERNANCE & QUALITY	ANALYTICS & INSIGHT ENABLEMENT	DATA SCIENCE & INTELLIGENT AUTOMATION
Data Strategy and Roadmap Design	Data Integration Strategy and Roadmap	Data Governance Framework Design	Analytics Strategy and Roadmap Design	AI Readiness and Use Case Assessment
Data Estate Modernisation Assessment	Data Pipeline Readiness Assessment	Data Stewardship Model Development	KPI Framework and Metrics Definition	Fabric Data Science Environment Enablement
Data Architecture Governance Framework	Source-to-Target Mapping and Design	Data Policy and Standards Definition	Analytics Use Case Discovery Workshop	MLOps Framework Implementation
Cloud Data Platform Implementation (Azure/Fabric)	Fabric Data Factory Pipeline Deployment	Microsoft Purview Governance Deployment	Power BI Enterprise Deployment	Predictive and Advanced Analytics Model Development
Hybrid Data Architecture Design	Synapse Data Engineering Implementation	Data Quality Management Implementation	Fabric Lakehouse Analytics Implementation	Generative AI and Copilot Integration
Reference Data Management Setup	Dataflow Gen2 Transformation Enablement	Data Compliance and Privacy Automation	Semantic Data Model Design	Model Deployment and Monitoring Service
Metadata and Data Catalogue Enablement	API and Connector Integration Services	Data Lineage and Classification Enablement	Executive Dashboard and Performance Reporting	Embedded Analytics in Business Applications
Master Data Management (MDM) Deployment	ETL/ELT Orchestration Framework Setup	Data Quality Monitoring and Reporting	Self-Service Analytics Enablement	Decision Workflow Automation (Power Automate)
Data Storage and Performance Optimisation	Data Pipeline Automation and Scheduling	Governance Maturity Assessment and Roadmap	Data Literacy and Adoption Programme	Fabric Data Activator Enablement
Data Platform Health and Compliance Review	Pipeline Monitoring and Performance Optimisation	Data Issue Management and Resolution Service	Analytics Performance Optimisation and Governance	

Alignment to The Intelligent Business

The Data Integration & Engineering Service Stream strengthens The Intelligent Business by ensuring data moves through the organisation in a controlled, reliable, and structured manner. The Intelligent Business depends on information that is timely, consistent, and aligned to operational reality.

This Service Stream provides the engineering capability that enables data to flow between systems, supports the creation of analytics-ready structures, and automates processes that previously required manual effort or unstable integrations.

By establishing repeatable patterns for data movement and transformation, the service improves operational reliability and reduces the uncertainty that arises when data pipelines behave inconsistently.

It connects operational systems with analytical platforms, supporting clear value flow across the Insightful Business and enabling insight generation that reflects the true state of the organisation. The service improves clarity for internal teams by providing predictable workflows, supporting responsible data use, and ensuring transformations are controlled and transparent.

For employees involved in data management, analysis, and reporting, the service enhances productivity through structured, dependable pipelines and orchestration. It builds confidence that data is processed as intended and reduces the need for corrective effort downstream.

Through collaborative delivery and embedded knowledge transfer, the service improves capability across internal teams, supporting long-term resilience and enabling the organisation to manage its integration and engineering estate with independence and confidence.

Service Purpose

The purpose of the Data Integration & Engineering Service Stream is to provide the organisation with a reliable and scalable capability for moving, transforming, and orchestrating data across systems and platforms.

It addresses the operational challenges created by fragmented data flows, inconsistent transformation logic, and manual processes that limit the availability and quality of information. The service establishes structured, automated pipelines and integration patterns that ensure data is processed consistently and made available in a form that supports analytical and operational needs.

This service improves the organisation's ability to consolidate, prepare, and manage data by implementing controlled and repeatable engineering practices. It reduces the risk associated with ad-hoc or legacy integrations and strengthens alignment to defined architectural principles.

The intended outcome is a dependable integration and engineering capability that prepares data for insight generation, supports efficient operations, and enables the organisation to evolve its data estate in a predictable and sustainable way.

What This Service Provides

The Data Integration & Engineering Service Stream provides individuals across the organisation with clearer, more reliable access to the data they depend on. It establishes predictable data flows, reduces manual preparation effort, and creates a consistent foundation for transforming and delivering information.

Through structured engineering patterns and collaborative delivery, internal teams gain both improved data reliability and the opportunity to develop deeper capability in how data is integrated, processed, and prepared for use. The service strengthens confidence across all roles that rely on timely, accurate, and well-managed data.

Role Group	What They Gain	Why They Matter
Executive Teams & Senior Leaders	Clear visibility of reliable, predictable data flows. Improved operational stability supported by structured engineering practices. Confidence that internal capability is maturing and dependency on external suppliers is reducing.	They set organisational priorities and rely on dependable, well-managed data to support decision-making and long-term planning.
Data Owners and Data Stewards	Greater transparency in how data is moved and transformed. Predictable integration patterns that support stewardship responsibilities. Confidence that data aligns to business definitions and governance expectations.	They are accountable for data quality, meaning, and responsible usage across the organisation.

Business Domain Leaders and Process Stakeholders	More reliable, timely, and accurate data for operational use. Reduced delays, errors, and manual data preparation effort. Stronger data foundations supporting informed domain-level decisions.	They depend on trustworthy data to manage operational processes and assess performance within their business areas.
Data Architects and Data Modelling Specialists	Consistent integration structures aligned to architectural expectations. Clearer traceability of data as it moves and transforms across systems. Improved alignment between engineered pipelines and defined data models.	They design the data structures and relationships that underpin the Insightful Business outcome area.
Data Engineers and Platform Engineers	Hands-on experience building and maintaining modern Microsoft data pipelines. Development of skills in orchestration, scheduling, transformation logic, and workload optimisation. Peer-to-peer collaboration with 848 engineers, strengthening capability and independence.	They implement and operate the technical integration patterns that feed downstream analytical and operational processes.
BI Developers, Analytics Practitioners, and Report Builders	More stable and consistent analytical datasets. Reduced preparation effort due to improved upstream reliability. Greater confidence in the timeliness and accuracy of data used for reporting and insight.	They transform integrated data into meaningful outputs relied upon across the organisation.
Data Governance, Compliance, and Information Management Functions	Transparent data flows and defined lineage for governance oversight. Predictable transformation logic supporting quality and compliance expectations. Clearer insight into how data is used and maintained across its lifecycle.	They uphold governance standards and ensure data is catalogued, managed, and used responsibly across the Microsoft data estate.

How This Service Is Delivered

The Data Integration & Engineering Service Stream is delivered through a structured methodology that ensures data flows are designed, implemented, and operationalised in a consistent and sustainable way.

The methodology supports reliable integration, clear engineering patterns, and strong capability uplift through peer-to-peer delivery. It applies to all Service Elements within the stream and provides the framework through which pipelines, transformations, and orchestration are delivered.

Method Component	Stage 1: Understand Data Flows and Requirements	Stage 2: Design Integration Patterns and Transformation Logic	Stage 3: Build and Implement Pipelines	Stage 4: Validate, Assure, and Operationalise Pipelines	Stage 5: Embed, Optimise, and Transition Ownership
Stage Description	Establishes a clear view of how data currently moves and what engineered data flows must achieve.	Defines how pipelines will operate, how data will be transformed, and how orchestration will behave across the data estate.	Implements ingestion, transformation, and orchestration components using Microsoft data engineering technologies.	Ensures that pipelines perform as designed and meet architectural, governance, and operational expectations.	Supports early operational cycles, optimises pipeline performance, and transitions ownership to internal teams.
Purpose of the Stage	To ensure all engineering activity is grounded in a shared understanding of required data flow behaviour.	To create a predictable and maintainable engineering design that supports reliable integration and transformation.	To deliver reliable, maintainable pipelines while strengthening internal engineering capability.	To ensure engineering outputs are reliable, production-ready, and operationally sustainable.	To ensure internal teams can confidently manage, maintain, and evolve pipelines independently.
Activities Included	Reviewing existing data flows, interfaces, and patterns. Understanding source structures, constraints, and update behaviours.	Designing source-to-target mappings and transformation logic. Defining orchestration, sequencing, and error-handling patterns.	Creating ingestion pipelines for datasets, APIs, and system connectors. Building transformation logic in notebooks,	Running validation tests on performance, scheduling, and dependencies. Confirming transformation	Fine-tuning pipelines based on early performance insights. Supporting initial operational cycles for stability.

	Identifying transformation logic and mapping requirements.	Selecting appropriate Azure/Fabric components.	Dataflow Gen2, Synapse, or code.	correctness, lineage, and orchestration behaviour.	Providing guidance on long-term improvements and extensions.
	Reviewing dependencies, triggers, schedules, and quality considerations. Agreeing engineering patterns, naming conventions, and orchestration principles. Joint discovery and explanation of engineering implications with customer data engineers.	Documenting lineage expectations and dependency structures. Validating designs with engineering and architecture teams. Co-design and walkthroughs with customer engineers.	Implementing orchestration and scheduling processes. Enabling logging, notifications, and operational checks. Applying patterns and templates for consistency. Pairing with customer engineers through hands-on delivery and code walkthroughs.	Assessing resilience and failure-handling capability. • Producing operational and support documentation. Preparing pipelines for production use. Joint validation and operational training with customer engineers.	Transitioning operational responsibility to internal teams. Coaching and supplying runbooks and engineering guidance.
What This Provides	A validated and shared understanding of existing and required data flow behaviour.	A well-defined integration design that supports consistent and maintainable engineering.	Production-ready pipelines engineered using consistent patterns and uplifted internal capability.	Assured, documented, and stable pipelines ready for production operation.	Shared confidence in findings and readiness to progress improvement.

Service-Level Benefits

The key business-level benefits of the service are:

- Improves reliability of data movement.
- Strengthens consistency across data flows.
- Reduces manual data preparation effort.
- Enhances engineering capability and confidence.
- Increases predictability of data delivery.
- Supports scalable data processing patterns.
- Improves clarity across transformation logic.
- Reduces technical risk in integrations.
- Enables sustainable engineering practices.
- Supports timely access to prepared data.

Service Scope

In-Scope Summary

The Data Integration & Engineering Service Stream covers the design, build, automation, and operational readiness of data pipelines and integration patterns across cloud, hybrid, and on-premise environments.

The service focuses on preparing, transforming, and orchestrating data for analytical and operational use by implementing consistent, scalable engineering practices. All activity is aligned to architectural direction, governance expectations, and the Intelligent Business Framework. The scope includes collaborative delivery with internal engineers to strengthen capability and ensure long-term sustainability.

Theme	Description
Data Flow Assessment	Understanding existing data movement, interfaces, and pipeline behaviour.
Integration Pattern Design	Designing source-to-target mappings, transformation logic, and orchestration patterns.
Pipeline Development	Building ingestion and transformation pipelines using Fabric, Azure, or hybrid tools.
API and Connector Integration	Implementing integrations using APIs, SaaS connectors, and standard adapters.
Transformation Enablement	Implementing transformation logic in notebooks, Dataflows Gen2, or Synapse.
Orchestration Framework Setup	Establishing scheduling, dependencies, and operational sequencing patterns.
Pipeline Automation	Automating pipeline runs and operational workflows.
Performance and Reliability Checks	Validating pipeline behaviour and performance characteristics.

Operational Readiness	Preparing pipelines for production, with documentation and support materials.
Knowledge Transfer	Capability uplift through peer-to-peer delivery with customer engineers.

Out-of-Scope Summary

The service does not include activities outside the boundaries of data integration and engineering. Excluded activities focus on preventing scope drift into data governance, analytics development, MDM, data strategy, or managed operations. These boundaries ensure integration and engineering activities remain clearly defined, avoiding duplication of effort and minimising procurement ambiguity.

Theme	Description
Data Governance Policy Development	No creation of data governance policies, standards, or enterprise rules.
Data Quality Remediation	No cleansing, correction, or manual fixing of data issues.
Data Modelling for BI	No semantic model or BI dataset creation.
Analytical Product Development	No dashboards, visualisations, metrics, or analytical models.
Master Data Management	No golden record creation, survivorship logic, or domain modelling.
Full Application Integration Redesign	No refactoring of business applications to support integration.
Legacy System Replacement	No redevelopment or migration of legacy operational platforms.
Cloud Foundation Deployment	No identity, network, or landing zone engineering.
Long-Term Operations	No managed service, monitoring, or ongoing operational support.
Full Security Assessment	No penetration testing, threat modelling, or SIEM integration.

Service Element: Data Integration Strategy and Roadmap

Description

The Data Integration Strategy and Roadmap service defines the strategic direction, architectural principles, and prioritised delivery plan for unifying and orchestrating data flows across the organisation.

It establishes how data should move between systems, how integration patterns should be standardised, and how the organisation should approach automation, transformation, and orchestration activity.

The service provides a coherent strategy for improving integration maturity and a phased roadmap that aligns engineering activity to organisational objectives.

It strengthens clarity, reduces integration risk, and prepares the organisation to deliver data flows that support reliable insight and operational effectiveness.

Deliverables

Deliverable	Description
Integration Strategy Overview	High-level articulation of integration goals, priorities, and desired outcomes.
Current State Integration Assessment	Review of existing data flows, patterns, and engineering practices.
Integration Principles and Standards	Defined guidance for patterns, tooling, and engineering approaches.
Strategic Integration Architecture	High-level architecture for data movement across systems and platforms.
Capability and Skills Gap Review	Assessment of engineering capability, constraints, and uplift needs.
Technology Alignment Summary	Guidance on the use of Fabric, Azure, APIs, and connectors.
Integration Improvement Opportunities	Identified initiatives to strengthen reliability and reduce risk.
Prioritised Roadmap	Phased plan for delivering integration improvements and engineering outcomes.
Dependencies and Risk Summary	Identified risks, constraints, and assumptions affecting integration planning.
Knowledge Transfer Review Session	Walkthrough of the strategy, roadmap, and capability expectations.

Dependencies

Delivery of this Service Element requires:

- Access to existing pipeline documentation, integration patterns, and platform designs.

- Availability of data engineers, architects, analysts, and system owners for discovery.
- Visibility of business priorities, data consumption needs, and key process dependencies.
- Access to information on organisational architecture, governance, and security constraints.

Constraints

This Service Element is subject to the following constraints:

- Strategy accuracy depends on the completeness of available information.
- Legacy system limitations may restrict integration options or sequencing.
- Roadmap timelines depend on internal resourcing, skills availability, and business priorities.
- Some recommendations may require follow-on design or engineering services.

Benefits

This Service Element strengthens The Intelligent Business by providing clear, consistent direction for how data should move across the organisation.

It reduces integration risk, improves alignment between systems, and ensures engineering activity supports organisational priorities.

The strategy and roadmap create a shared understanding of required work, establish predictable patterns, and prepare the organisation to develop sustainable integration capability.

By defining the path toward reliable, automated data flows, the service supports the generation of timely, accurate insight and reinforces confidence in the organisation's ability to use data responsibly and effectively.

848 Responsibilities

Under this Service Element, 848 will:

- Conduct discovery to understand current integration landscape and constraints.
- Define integration principles, standards, and high-level patterns.
- Develop the strategic integration architecture and improvement opportunities.
- Assess capability gaps and identify uplift requirements.
- Produce a prioritised roadmap with clear sequencing and dependencies.
- Document risks, assumptions, and recommendations.
- Deliver a knowledge transfer session to support internal understanding.
- Ensure all outputs align to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide access to documentation, systems, and subject matter experts.
- Validate integration priorities, constraints, and strategic objectives.
- Confirm architectural and governance expectations.
- Review and approve integration principles and roadmap elements.
- Support data engineers and stakeholders to engage throughout discovery.

Assumptions

This Service Element is delivered on the basis that:

- Existing integration patterns and pipeline materials can be reviewed.
- Stakeholders participate in workshops and validation sessions.
- Business priorities and data consumption needs are documented and accessible.
- Customer engineering capability and resourcing constraints can be assessed.

Exclusions

This Service Element does not include:

- Development or redesign of data pipelines.
- Detailed engineering design, mapping, or transformation logic.
- Implementation of orchestration, scheduling, or code components.
- Data quality remediation or cleansing activities.
- Governance policy creation or steward workflow development.
- BI dataset creation, analytical modelling, or reporting outputs.
- Detailed security assessments, penetration testing, or compliance audits.
- Migration or integration of systems.

Success Measures

This Service Element is successfully delivered when:

- Integration strategy and principles are documented and agreed.
- Current-state findings are validated by stakeholders.
- Strategic integration architecture is reviewed and accepted.
- Roadmap is prioritised and approved for progression.
- Capability and resource requirements are understood.

- Knowledge transfer session is delivered.
- Customer stakeholders confirm readiness to proceed with next-stage work.

Service Element: Data Pipeline Readiness Assessment

Description

The Data Pipeline Readiness Assessment provides a structured evaluation of the organisation's existing data pipelines and integration landscape. It identifies bottlenecks, inefficiencies, architectural inconsistencies, and issues that limit the reliability, scalability, or maintainability of data flows.

The service reviews transformation logic, orchestration behaviour, performance characteristics, and alignment to defined engineering patterns. It provides clear findings and prioritised recommendations that help the organisation understand where improvements are needed before committing to modernisation or further engineering work.

This assessment strengthens confidence in the integration estate and supports responsible planning for future enhancement.

Deliverables

Deliverable	Description
Pipeline Landscape Inventory	Catalogue of existing pipelines, integrations, and orchestrations.
Pattern and Architecture Assessment	Review of engineering patterns and alignment to architectural expectations.
Performance and Reliability Review	Analysis of pipeline run behaviour, stability, and bottlenecks.
Transformation and Dependency Evaluation	High-level review of transformation logic, sequencing, and dependencies.
Operational and Maintenance Findings	Assessment of error handling, retries, and operational readiness.
Engineering Practice Assessment	Review of naming, structuring, scheduling, and maintainability patterns.
Risk and Issue Register	Identified risks affecting scalability, reliability, or operational behaviour.
Prioritised Improvement Recommendations	Actions required to improve reliability or support future modernisation.
Readiness Summary	Overall readiness rating for each pipeline or integration group.
Knowledge Transfer Session	Walkthrough of findings, risks, and improvement options with data engineers.

Dependencies

Delivery of this Service Element requires:

- Access to pipelines, metadata, logs, run histories, and orchestration environments.
- Availability of customer data engineers and platform administrators for discovery.
- Documentation describing existing integrations, mappings, and system interfaces.
- Access to Fabric, Azure, SaaS, or hybrid integration components as applicable.

Constraints

This Service Element is subject to the following constraints:

- Assessment quality depends on the completeness of available logs and documentation.
- Legacy pipelines may provide limited observability or inconsistent telemetry.
- Some issues may originate from source systems beyond the scope of this service.
- Recommendations may require future engineering or architectural decisions.
- No remediation or optimisation is performed during this assessment.

Benefits

This Service Element strengthens The Intelligent Business by improving understanding of how current data flows behave and where structural or operational risks exist. It reduces uncertainty by identifying bottlenecks, inconsistencies, and issues that affect the reliability of insight and operational processes.

The assessment provides a clear basis for prioritising integration improvements and helps ensure future engineering work aligns to organisational priorities. By clarifying the condition of existing pipelines, the service supports more predictable and responsible data operations across the business.

848 Responsibilities

Under this Service Element, 848 will:

- Review existing pipelines, integrations, and orchestration structures.
- Analyse performance, stability, and deployment characteristics.
- Evaluate alignment to architectural and engineering standards.
- Identify risks, issues, and improvement requirements.
- Provide prioritised recommendations for remediation and optimisation.
- Conduct knowledge transfer to support internal understanding.
- Ensure all outputs align to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide access to relevant integration platforms, logs, and documentation.
- Supply information on source systems, dependencies, and business requirements.
- Validate findings and support discussions on improvement priorities.
- Participate in review sessions and knowledge transfer activities.
- Own implementation of recommendations unless separately scoped.

Assumptions

This Service Element is delivered on the basis that:

- Integration environments are operational and accessible for review.
- Logs and run histories provide sufficient insight into pipeline behaviour.
- Customer engineers participate actively in discovery and validation.
- Business context for pipeline operation is available where required.

Exclusions

This Service Element does not include:

- Redesign or redevelopment of pipelines.
- Modification or optimisation of existing engineering logic.
- Detailed transformation mapping or schema design.
- Platform-level performance tuning or environment optimisation.
- Data quality remediation or correction.
- Implementation of recommended improvements.
- Security assessments, penetration tests, or access model redesign.
- Ongoing monitoring or operational support.

Success Measures

This Service Element is successfully delivered when:

- Pipelines and integrations are assessed and documented.
- Findings and prioritised recommendations are validated by stakeholders.
- Risks and issues affecting reliability are clearly articulated.
- Readiness ratings are agreed for each pipeline group.
- Knowledge transfer session is completed.

Service Element: Source-to-Target Mapping and Design

Description

The Source-to-Target Mapping and Design service documents and defines how data moves from source systems to target environments across the organisation's data estate. It provides detailed schema mappings, transformation logic, lineage relationships, and structural specifications required to build reliable and consistent data pipelines.

The service ensures that the logic applied within integration workflows is clearly designed, traceable, and aligned to architectural expectations. It reduces ambiguity, supports engineering accuracy, and provides a repeatable design pattern that underpins consistent data processing across Fabric, Azure, and hybrid environments.

Deliverables

Deliverable	Description
Source System Analysis Summary	High-level review of source structures, formats, and metadata.
Schema Mapping Specifications	Attribute-level mappings from source to target structures.
Transformation Logic Definitions	Documented rules for cleansing, derivation, enrichment, and formatting.
Lineage Documentation	End-to-end lineage representing data movement and transformation steps.
Dependency and Sequencing Notes	Identified dependencies that influence mapping and transformation behaviour.
Data Standards Alignment Check	Review of mapping alignment to defined standards and naming conventions.
Integration Boundary Definitions	Clear boundaries for what will be transformed, staged, or passed through.
Mapping Design Pack	Full design artefact set for engineering team implementation.
Change Tracking and Versioning	Documented mapping changes to support governance and traceability.
Knowledge Transfer Session	Walkthrough of mapping logic and design approach with customer engineers.

Dependencies

Delivery of this Service Element requires:

- Access to source systems, metadata, and relevant documentation.
- Understanding of target structures within Fabric, Azure, or hybrid platforms.
- Availability of Data Owners, Stewards, SMEs, and Engineers.
- Defined architectural direction and engineering patterns.

- Access to lineage and governance structures where available.

Constraints

This Service Element is subject to the following constraints:

- Mapping precision depends on the completeness of source metadata and documentation.
- Legacy or proprietary sources may require manual structure discovery.
- Transformation logic may require clarification from business SMEs.
- Mapping accuracy does not resolve underlying data quality issues.
- Downstream targets must be defined before mapping finalisation.

Benefits

This Service Element strengthens The Intelligent Business by ensuring that data transformations are designed consistently and transparently across the organisation. Clear mappings reduce ambiguity, improve engineering accuracy, and support reliable data processing.

Documented lineage enables accountability and improves understanding of how data changes across systems. The detailed mapping design provides a stable foundation for pipeline development, reduces downstream rework, and supports predictable integration outcomes. This improves the reliability of insight and strengthens responsible data use across the organisation.

848 Responsibilities

Under this Service Element, 848 will:

- Analyse source structures and metadata.
- Document schema mappings and transformation logic.
- Produce lineage documentation and dependency notes.
- Ensure mappings align to data standards and architectural patterns.
- Provide full mapping design packs for engineering implementation.
- Conduct knowledge transfer with customer engineers.
- Align all outputs to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide access to source metadata, documentation, and SMEs.
- Validate transformation rules, mapping definitions, and lineage structures.
- Confirm target structures or environments for mapping.
- Participate in mapping and review sessions.

- Approve mapping outputs prior to engineering implementation.

Assumptions

This Service Element is delivered on the basis that:

- Source systems and metadata are accessible for review.
- Target structures are defined and documented.
- Data SMEs are available to clarify ambiguous business rules.
- Customer engineers engage fully in validation and knowledge transfer sessions.

Exclusions

This Service Element does not include:

- Development of ingestion or transformation pipelines.
- Data quality remediation or cleansing activities.
- Detailed data modelling or schema redesign.
- Mapping for systems not in scope or undocumented sources.
- Implementation of lineage tools or platform-level lineage enablement.
- Business glossary creation or governance operating model design.
- Ongoing maintenance or updates to mapping post-handover.

Success Measures

This Service Element is successfully delivered when:

- Schema mappings and transformation logic are documented and approved.
- Lineage documentation is complete and validated.
- Dependencies and boundaries are clarified and understood.
- Mapping design packs support downstream engineering confidently.
- Knowledge transfer session is delivered.
- Customer stakeholders confirm mapping readiness for implementation.

Service Element: Fabric Data Factory Pipeline Deployment

Description

The Fabric Data Factory Pipeline Deployment service builds automated data pipelines that ingest, transform, and move data across the organisation using Microsoft Fabric Data Factory. It delivers production-ready engineering components that follow agreed design patterns, mapping specifications, and architectural standards.

The service implements ingestion connections, applies transformation logic, establishes orchestration behaviour, and prepares pipelines for operational use. Delivery is completed through a collaborative engineering approach that supports capability uplift for customer data engineers while establishing reliable, maintainable integration workflows aligned to the Intelligent Business Framework.

Deliverables

Deliverable	Description
Pipeline Build Plan	Agreed pipeline scope, components, and sequencing.
Ingestion Pipeline Components	Implemented ingestion activities connecting to approved source systems.
Transformation Logic Implementation	Applied transformation steps based on mapping specifications.
Orchestration and Scheduling Setup	Configured dependencies, triggers, branching, and scheduling.
Configuration and Parameterisation	Application of naming standards, templates, and reusable components.
Logging and Error Handling	Implemented retries, notifications, and operational checks.
Connectivity and Connector Setup	Working connections to APIs, SaaS, databases, or file-based sources.
Pipeline Deployment Package	Build artefacts ready for deployment into development, test, or production.
Operational Documentation	Documentation describing pipeline behaviour, dependencies, and operational notes.
Knowledge Transfer Session	Walkthrough of pipeline structure, components, and operational behaviour.

Dependencies

Delivery of this Service Element requires:

- Approved source-to-target mapping and transformation specifications.
- Access to source systems, credentials, and metadata required for ingestion.
- Fabric Data Factory availability, workspace configuration, and capacity readiness.
- Engagement from customer data engineers for paired engineering and validation.
- Defined architectural and governance patterns to align pipeline structure.

Constraints

This Service Element is subject to the following constraints:

- Build quality depends on the completeness of mapping and design specifications.
- Connector availability and performance may be limited by source system constraints.
- Legacy or proprietary sources may require alternative ingestion approaches.
- Scheduling and orchestration behaviour depend on confirmed business requirements.
- Pipeline performance may be affected by Fabric capacity allocation or data volumes.
- No remediation of upstream data issues is included.

Benefits

This Service Element strengthens The Intelligent Business by delivering reliable and automated data flows that support consistent insight generation and operational processes. Well-engineered pipelines reduce manual effort, remove inconsistent transformations, and strengthen the trustworthiness of downstream data.

The service supports predictable value flow by establishing structured and maintainable integration patterns. Through collaborative delivery, the service also improves engineering capability within the organisation, supporting long-term sustainability and reducing operational risk

848 Responsibilities

Under this Service Element, 848 will:

- Build ingestion, transformation, and orchestration components in Fabric Data Factory.
- Configure connectors, parameters, schedules, and operational logic.
- Implement logging, notifications, and error-handling patterns.
- Apply defined engineering standards and architectural principles.
- Prepare build artefacts for deployment into relevant environments.
- Document pipeline structure and operational behaviours.

- Deliver knowledge transfer to internal engineering teams.
- Align all delivery to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide access to source systems, credentials, and documentation.
- Validate transformation logic and pipeline behaviour during build and testing.
- Confirm scheduling, runtime behaviours, and operational requirements.
- Ensure Fabric workspaces and capacities are available and configured.
- Engage customer data engineers in paired engineering and knowledge transfer.
- Approve completed pipelines prior to deployment.

Assumptions

This Service Element is delivered on the basis that:

- Mapping and design artefacts have been approved prior to implementation.
- All required Fabric components are provisioned and accessible.
- Source systems are available and stable during build and testing.
- Internal teams participate actively in engineering and validation activities.
- Governance, naming, and architectural patterns have been defined.

Exclusions

This Service Element does not include:

- Source-to-target mapping creation or transformation design.
- Dataflow Gen2 or notebook development delivered as standalone artefacts.
- Redesign or remediation of existing pipelines.
- Data quality remediation or cleansing of source data.
- Performance tuning or optimisation of existing Fabric workloads.
- Development of BI datasets, semantic models, or dashboards.
- Migration from Azure Data Factory or Synapse unless separately scoped.
- Ongoing operational support, monitoring, or run management.
- Security assessment or identity model redesign.

Success Measures

This Service Element is successfully delivered when:

- All pipeline components are built, validated, and documented.
- Ingestion, transformation, and orchestration behave as designed.
- Logging, error handling, and notifications operate reliably.
- Deployment artefacts are approved for production readiness.
- Knowledge transfer session is completed with customer engineers.
- Stakeholders confirm readiness for operational adoption.

Service Element: Synapse Data Engineering Implementation

Description

The Synapse Data Engineering Implementation service builds scalable, reliable data pipelines and transformation components within Azure Synapse Analytics. It delivers ingestion, transformation, and orchestration workflows aligned to defined mapping specifications and organisational architecture.

The service uses Synapse Pipelines, Spark, SQL, and other Synapse components to automate the movement and preparation of data across hybrid, cloud, and operational environments. Delivery is completed through collaborative engineering with customer data engineers, supporting capability uplift while ensuring pipelines are structured, maintainable, and ready for operational use.

Deliverables

Deliverable	Description
Pipeline Build Plan	Scope, components, and sequencing agreed prior to build.
Ingestion Pipelines	Implemented pipelines for approved source systems using Synapse Pipelines.
Transformation Components	Implemented Spark or SQL logic aligned to mapping specifications.
Orchestration Configuration	Defined dependencies, flow logic, triggers, and scheduling.
Connector and IR Configuration	Working connections to databases, APIs, SaaS, and on-prem systems.
Error Handling and Logging	Logging patterns, retries, alerts, and failure-handling steps.
Parameterisation and Templates	Reusable components aligned to engineering standards.
Deployment Package	Artefacts prepared for dev, test, and production environments.
Operational Documentation	Documentation explaining pipeline behaviour and dependencies.
Knowledge Transfer Session	Review of pipeline structure, logic, and operational practices.

Dependencies

Delivery of this Service Element requires:

- Approved source-to-target mapping and transformation logic.
- Access to Synapse workspace, Spark pools, SQL pools, and integration runtimes.
- Credentials and connectivity for source systems.
- Availability of customer engineers for paired development.
- Defined architectural, naming, and governance patterns.

Constraints

This Service Element is subject to the following constraints:

- Build accuracy depends on the quality of mapping specifications.
- Source system limitations may impact pipeline design options.
- Spark performance depends on available compute and pool configuration.
- Legacy connectors may reduce transformation or ingestion flexibility.
- No remediation of upstream data issues is included.
- Pipeline behaviour may be affected by workspace capacity or data volume.

Benefits

This Service Element strengthens The Intelligent Business by establishing automated and reliable data flows within existing Synapse environments. It reduces manual effort, improves consistency across transformations, and prepares data to support operational and analytical needs.

The service ensures integration activity follows structured engineering patterns and aligns to organisational architecture. Collaborative delivery strengthens internal capability, enabling customer teams to extend and maintain Synapse workloads with confidence.

This results in predictable, scalable data processing that supports timely, accurate insight.

848 Responsibilities

Under this Service Element, 848 will:

- Build ingestion, transformation, and orchestration components in Azure Synapse.
- Configure connectors, integration runtimes, and scheduling.
- Implement logging, retries, and error-handling patterns.
- Apply engineering and architectural standards consistently.
- Prepare deployment artefacts and operational documentation.
- Deliver knowledge transfer to customer engineering teams.
- Align all work to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide access to Synapse workspaces, pools, and credentials.
- Validate transformation logic and pipeline behaviour throughout the build.
- Confirm scheduling needs and operational expectations.
- Ensure internal engineers participate in paired engineering sessions.
- Approve pipelines prior to deployment.

Assumptions

This Service Element is delivered on the basis that:

- Synapse environment and compute resources are provisioned and accessible.
- Mapping and transformation designs have been approved.
- Source systems are stable and available during development.
- Customer stakeholders can participate in validation and knowledge transfer.
- Required governance and architectural standards are already defined.

Exclusions

This Service Element does not include:

- Mapping creation or transformation logic design.
- Re-engineering or optimisation of existing Synapse pipelines.
- Performance tuning or Spark optimisation.
- Synapse workspace deployment, network, identity, or security configuration.
- Data quality remediation or cleansing.
- Migration to Fabric or platform modernisation.
- Creation of BI datasets, semantic models, or analytical artefacts.
- Ongoing operational support or run management.

Success Measures

This Service Element is successfully delivered when:

- Pipelines and transformations are built and validated.
- Orchestration behaviours perform as intended.
- Error handling and logging operate reliably.
- Deployment artefacts and documentation are complete.

- Knowledge transfer session is delivered.
- Customer stakeholders confirm readiness for production deployment.

Service Element: Dataflow Gen2 Transformation Enablement

Description

The Dataflow Gen2 Transformation Enablement service designs and implements low-code data transformation components within Microsoft Fabric using Dataflow Gen2. It applies defined transformation logic to prepare, cleanse, reshape, and combine data before it is consumed by downstream pipelines, lakehouses, warehouses, or analytical processes.

The service establishes consistent patterns for low-code transformation, ensuring outputs align with architectural standards and engineering expectations. Delivery is completed collaboratively with customer data engineers to strengthen capability, increase confidence, and support sustainable use of Dataflow Gen2 within the organisation's integration landscape.

Deliverables

Deliverable	Description
Transformation Build Plan	Agreed scope, logic components, and Dataflow Gen2 structure.
Dataflow Gen2 Transformation Components	Implemented low-code transformations for defined datasets.
Cleansing and Reshaping Logic	Implemented filtering, joining, derivation, and enrichment steps.
Schema Handling and Validation	Configured schema rules and data validation behaviours.
Output Configuration	Defined outputs for lakehouses, warehouses, or downstream pipelines.
Naming and Pattern Alignment	Application of engineering standards, patterns, and conventions.
Error Handling and Logging	Configured validation checks, alerts, and error-handling patterns.
Deployment Artefacts	Dataflow Gen2 assets prepared for dev, test, and production.
Operational Documentation	Documentation describing logic, structure, dependencies, and behaviours.
Knowledge Transfer Session	Walkthrough of Dataflow Gen2 components and transformation patterns.

Dependencies

Delivery of this Service Element requires:

- Approved source-to-target mapping and transformation logic.
- Access to Fabric workspaces, capacities, and connectors.
- Credentials for source systems and relevant datasets.
- Defined architectural and engineering standards for transformation.
- Participation from customer data engineers during paired development.

Constraints

This Service Element is subject to the following constraints:

- Transformation accuracy relies on quality of mapping specifications.
- Dataflow Gen2 performance is dependent on Fabric capacity allocation.
- Complex transformations may exceed Dataflow Gen2 capabilities.
- Source connectors may limit transformation options.
- Does not correct upstream data quality issues.

Benefits

This Service Element strengthens The Intelligent Business by providing structured, low-code transformation components that improve clarity and consistency in how data is prepared for downstream use.

It reduces manual effort, standardises transformation logic, and ensures data is shaped reliably before analytical or operational consumption. The service improves the transparency and maintainability of transformation processes and supports long-term sustainability by uplifting internal engineering capability.

These transformations contribute to predictable data flow and enhanced confidence in downstream insight.

848 Responsibilities

Under this Service Element, 848 will:

- Build Dataflow Gen2 transformation components.
- Apply defined transformation logic and mapping specifications.
- Configure schema handling, validation rules, and output behaviours.
- Apply engineering patterns, conventions, and reusable components.
- Prepare Dataflow Gen2 assets for deployment.
- Produce documentation covering transformation logic and structure.

- Deliver knowledge transfer to customer engineers.
- Align all outputs to The Insightful Business and The Intelligent Business Framework

Customer Responsibilities

The customer must:

- Provide access to source systems and required credentials.
- Validate transformation logic and Dataflow Gen2 outputs.
- Confirm structural and operational requirements for downstream use.
- Ensure data engineers engage in paired development and knowledge transfer.
- Approve completed Dataflow Gen2 components before deployment.

Assumptions

This Service Element is delivered on the basis that:

- Transformation logic is already defined and approved.
- Fabric environment configuration is complete.
- Source systems are available and stable for development and testing.
- Required connectors are functional and supported.
- Governance structures and naming conventions are established.

Exclusions

This Service Element does not include:

- Creation of mapping or transformation logic.
- Ingestion pipeline development or orchestration.
- Notebook or Spark-based engineering.
- BI dataset creation or analytical modelling.
- Data quality remediation or cleansing outside transformation logic.
- Platform optimisation or capacity configuration.
- Migration from Synapse or Azure Data Factory.
- Ongoing monitoring, maintenance, or operational support.

Success Measures

This Service Element is successfully delivered when:

- Dataflow Gen2 components are implemented and validated.
- Transformation logic behaves as designed.

- Outputs integrate correctly with downstream structures.
- Documentation is complete and approved.
- Knowledge transfer session is completed with customer engineers.
- Stakeholders confirm readiness for operational use.

Service Element: API and Connector Integration Services

Description

The API and Connector Integration Services element establishes secure, reliable integrations between the organisation's ERP, CRM, SaaS, and custom systems and its data platform. The service configures APIs, prebuilt connectors, and supported integration adapters to enable consistent extraction of source data into Fabric, Azure, or hybrid environments.

It ensures data can be accessed, ingested, and prepared for downstream engineering and transformation processes. Delivery is completed collaboratively with customer data engineers, supporting capability uplift while ensuring connectors and API integrations operate predictably and align to architectural and governance expectations.

Deliverables

Deliverable	Description
Integration Configuration Plan	Defined scope, endpoints, connectors, and authentication approach.
API Connectivity Setup	Configured API connections, including authentication and request structures.
SaaS and ERP Connector Setup	Configured prebuilt connectors for approved systems.
Hybrid Integration Runtime Setup	Configuration of on-premise or hybrid connectivity (if required).
Metadata and Schema Verification	Validation of exposed metadata and structures for ingestion.
Throttling and Pagination Handling	Implemented patterns for handling API limits and pagination.
Error and Retry Configuration	Patterns for connection retries and error-handling behaviours.
Logging and Monitoring Setup	Visibility of connection status and integration events.
Integration Validation Pack	Verification of connectivity, data retrieval, and schema stability.
Knowledge Transfer Session	Walkthrough of integration configurations and maintenance approach.

Dependencies

Delivery of this Service Element requires:

- Access to ERP, CRM, SaaS, API endpoints, and custom systems.
- Credentials and authentication details for relevant integrations.
- Fabric or Azure Data Factory environment with required connectors enabled.
- Integration runtime or gateway availability for hybrid/on-prem sources.
- Approved mapping or transformation requirements for downstream use.
- Customer engineers available for paired configuration and knowledge transfer.

Constraints

This Service Element is subject to the following constraints:

- API availability and stability depend on source system performance.
- API limits, throttling, and licensing constraints may restrict extraction frequency.
- SaaS connectors may expose limited metadata or schema detail.
- On-premise sources depend on reliable network connectivity.
- No remediation of source system defects is included.
- Integration behaviour is affected by changes to API endpoints or vendor updates.

Benefits

This Service Element strengthens The Intelligent Business by ensuring data from critical operational systems can be accessed consistently and reliably. It establishes secure, predictable connections that enable automated ingestion and reduce manual extraction effort.

By standardising integration patterns and aligning them to architectural direction, the service supports responsible data movement and improves reliability across downstream engineering processes. It also strengthens internal capability by enabling customer data engineers to configure, maintain, and extend integrations with confidence.

848 Responsibilities

Under this Service Element, 848 will:

- Configure API connections and prebuilt connectors.
- Establish integration runtimes or gateways where required.
- Validate schemas, metadata, and connection outputs.
- Implement error handling, retry patterns, and basic monitoring approaches.
- Align integration approaches to engineering and governance standards.

- Provide documentation describing connection structures, behaviours, and maintenance.
- Deliver knowledge transfer to customer engineers.
- Align all work to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide credentials, API keys, authentication tokens, or access approvals.
- Enable access to SaaS, ERP, CRM, and on-premise systems.
- Validate integration behaviours and confirm connection outputs.
- Ensure internal engineers participate in paired configuration sessions.
- Approve integration components prior to downstream engineering use.

Assumptions

This Service Element is delivered on the basis that:

- API endpoints and connectors are available and functional.
- Source systems expose stable metadata and predictable schema behaviour.
- Network and identity configurations support integration.
- Customer stakeholders participate in validation and knowledge transfer.
- Mapping and downstream data requirements exist or will follow.

Exclusions

This Service Element does not include:

- Pipeline engineering or transformation development.
- Development or hosting of custom APIs.
- Modification of ERP, CRM, or SaaS configuration.
- Detailed mapping creation or transformation design.
- Data quality remediation or cleansing.
- Performance tuning of source systems.
- Long-term monitoring or operational support.
- Migration from ADF or third-party iPaaS platforms.
- Security or penetration testing of APIs.

Success Measures

This Service Element is successfully delivered when:

- API and connector integrations are configured and validated.
- Metadata and schema outputs are confirmed as stable and usable.
- Error handling and retry behaviours function as intended.
- Logging and visibility of integration events are enabled.
- Documentation is completed and approved.
- Knowledge transfer session is delivered with customer engineers.
- Customer stakeholders confirm readiness for downstream engineering use.

Service Element: ETL/ELT Orchestration Framework Setup

Description

The ETL/ELT Orchestration Framework Setup service establishes a consistent, scalable framework for coordinating extract, transform, and load operations across the organisation's data estate. It defines and implements the orchestration structures required to schedule, sequence, and control data processing workloads within Fabric, and where necessary, hybrid environments.

The service introduces standardised patterns for triggers, dependencies, workflow control, error handling, and operational visibility. It strengthens integration reliability by ensuring all pipelines follow predictable orchestration behaviours aligned to architectural direction. Delivery is completed collaboratively with customer data engineers to build long-term capability and confidence in managing the orchestration layer.

Deliverables

Deliverable	Description
Orchestration Framework Design	Definition of orchestration patterns, workflow logic, and control structures.
Trigger and Scheduling Configuration	Time-based, event-based, or dependency-driven trigger setup.
Workflow Sequencing Framework	Defined execution order, branching, and dependency management patterns.
Error Handling and Retry Logic	Framework-level patterns for retries, alerts, and exception routing.
Logging and Monitoring Setup	Visibility into workflow execution, status events, and failures.
Configuration Templates	Reusable components for future orchestration expansion.
Framework Implementation	Implemented orchestration components within Fabric (and Synapse where required).
Operational Documentation	Documentation covering framework structure, behaviours, and extension guidance.
Governance and Standards Alignment	Confirmation that framework aligns to architecture and governance expectations.

Knowledge Transfer Session	Walkthrough of framework operation and extension patterns with customer engineers.
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Dependencies

Delivery of this Service Element requires:

- Existing pipelines, placeholder jobs, or components available for orchestration testing.
- Access to Fabric (and Synapse, if hybrid) workspaces and orchestration capabilities.
- Clear upstream and downstream requirements for scheduling and workflow triggers.
- Defined architectural and engineering standards.
- Participation from customer data engineers for paired delivery and validation.

Constraints

This Service Element is subject to the following constraints:

- Framework complexity depends on available metadata and clarity of pipeline behaviour.
- Trigger options and event-based orchestration may be restricted by source system capabilities.
- Fabric capacity or workspace configuration may affect orchestration behaviour.
- Legacy or external systems may impose sequencing or timing constraints.
- The service does not address underlying data quality or structural issues.

Benefits

This Service Element strengthens The Intelligent Business by providing a predictable and unified orchestration structure that improves the reliability of data processing across the organisation.

It reduces operational risk by ensuring ETL and ELT workloads follow consistent patterns for sequencing, dependencies, and error handling. The framework improves transparency, supports controlled processing, and reduces the effort required to manage complex data flows.

Through collaborative delivery, it also enhances internal capability, enabling teams to extend and maintain orchestration patterns responsibly and sustainably.

848 Responsibilities

Under this Service Element, 848 will:

- Design the orchestration framework structure and patterns.
- Configure triggers, scheduling, dependencies, and workflow logic.
- Implement error handling, alerting, and retry behaviours.
- Establish logging and monitoring visibility.

- Provide templates for continued expansion of the framework.
- Produce operational documentation for internal use.
- Deliver knowledge transfer sessions to customer engineering teams.
- Ensure alignment with The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide access to Fabric (and Synapse if required) orchestration environments.
- Confirm scheduling requirements and dependency rules.
- Validate framework behaviours and workflow logic.
- Ensure internal engineers participate in knowledge transfer activities.
- Approve framework components prior to operational use.

Assumptions

This Service Element is delivered on the basis that:

- Pipelines or placeholder assets exist to support orchestration testing.
- Fabric and orchestration environments are configured and accessible.
- Business stakeholders can confirm scheduling and dependency expectations.
- Customer data engineers engage actively in testing and review sessions.
- Governance structures and architectural standards are defined.

Exclusions

This Service Element does not include:

- Building ingestion or transformation pipelines.
- Dataflow Gen2, notebook, or Spark engineering.
- Redesign or optimisation of existing orchestration processes.
- Development of job scheduling for non-data workloads.
- Data quality remediation or cleansing.
- Platform or capacity optimisation.
- Long-term operational monitoring or incident resolution.
- Security assessment or access model redesign.
- Migration from other orchestration platforms (ADF/Synapse) unless separately scoped.

Success Measures

This Service Element is successfully delivered when:

- The orchestration framework structure is implemented and validated.
- Triggers, scheduling, and dependency logic function as intended.
- Error handling and retry behaviours operate reliably.
- Logging and monitoring visibility is enabled.
- Documentation is approved by stakeholders.
- Knowledge transfer session is completed with customer engineers.
- Customer confirms readiness to apply the framework to new workloads.

Service Element: Data Pipeline Automation and Scheduling

Description

The Data Pipeline Automation and Scheduling service configures automated execution of data pipelines to ensure consistent, predictable, and timely data delivery. It establishes reliable scheduling and trigger mechanisms that remove manual effort and support controlled data processing across Fabric and hybrid environments.

The service applies approved orchestration patterns, aligns pipeline execution to operational and analytical requirements, and ensures pipelines run in a structured and sustainable manner. Delivery is completed collaboratively with customer data engineers to strengthen capability and support future extension of automation behaviours.

Deliverables

Deliverable	Description
Automation and Scheduling Plan	Defined schedules, triggers, dependencies, and execution timing.
Time-Based Scheduling Setup	Configuration of hourly, daily, weekly, or monthly execution windows.
Event-Based Trigger Configuration	Trigger setup based on file arrival, API call, or system event.
Dependency Automation Logic	Automation configured to run pipelines only when prerequisites are complete.
Execution Window and Cut-off Setup	Configured operational timing rules and allowable execution periods.
Error and Retry Behaviour	Defined and configured automated retry and failure-routing logic.
Logging and Execution Visibility	Logging for schedule execution, trigger events, and automation status.
Framework Alignment Review	Confirmation that automation aligns with the orchestration framework.
Operational Documentation	Documentation describing automation behaviour and configuration details.
Knowledge Transfer Session	Walkthrough of automation logic and configuration practices.

Dependencies

Delivery of this Service Element requires:

- Pipelines must be built, tested, and stable prior to automation.
- Access to Fabric (and Synapse if hybrid) orchestration components.
- Clear business requirements for timing, dependencies, and execution cadence.
- Defined orchestration framework components already in place.
- Engagement from customer engineers for validation and transfer of knowledge.

Constraints

This Service Element is subject to the following constraints:

- Scheduling reliability depends on upstream system behaviour and availability.
- Some event-based triggers may require additional configuration or supported connectors.
- Execution windows may be constrained by business or regulatory requirements.
- Automation cannot compensate for unstable or failing pipelines.
- Connector throttling or API limits may affect execution timing.

Benefits

This Service Element strengthens The Intelligent Business by ensuring data pipelines run consistently and predictably, reducing operational effort and providing timely availability of data for decision-making.

Automated scheduling reduces manual intervention, supports operational reliability, and ensures data is processed according to agreed requirements. The service improves confidence in downstream insight and strengthens responsible data movement.

Collaborative delivery also enhances internal capability, enabling teams to maintain and extend automation patterns independently.

848 Responsibilities

Under this Service Element, 848 will:

- Define and implement scheduling and trigger configurations.
- Apply dependency logic and execution control patterns.
- Configure retries, error routing, and logging for automation.
- Validate automated behaviour through controlled testing cycles.
- Document automation structure and operational considerations.
- Deliver knowledge transfer to internal engineering teams.
- Align all work to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide scheduling requirements, operational timing windows, and priority workloads.
- Validate automated execution behaviour during testing.
- Confirm dependency rules and upstream event definitions.
- Ensure internal engineers participate in knowledge transfer.

- Approve automation configuration before production execution.

Assumptions

This Service Element is delivered on the basis that:

- Pipelines and orchestration components already exist.
- Fabric (and hybrid) environments support required trigger types.
- Upstream systems expose predictable events or markers for automation.
- Business stakeholders confirm timing and dependency needs.
- Customer teams engage actively in validation and adoption activities.

Exclusions

This Service Element does not include:

- Pipeline development or transformation logic creation.
- Orchestration framework setup or redesign.
- Platform performance tuning or capacity optimisation.
- Data quality remediation or cleansing.
- Incident response, ongoing monitoring, or operational run support.
- Redesign or migration of existing automation from ADF/Synapse unless separately scoped.
- Security or access model configuration.

Success Measures

This Service Element is successfully delivered when:

- Automated schedules and triggers are configured and validated.
- Pipelines run reliably according to agreed timing and dependencies.
- Error handling and retry logic behave as intended.
- Logging and execution visibility are enabled.
- Documentation is complete and approved.
- Knowledge transfer session is delivered.
- Customer stakeholders confirm readiness for operational use.

Service Element: Pipeline Monitoring and Performance Optimisation

Description

The Pipeline Monitoring and Performance Optimisation service evaluates and improves the performance, reliability, and operational behaviour of data pipelines across Fabric, Synapse, and hybrid environments. It uses available telemetry, logs, and run histories to identify bottlenecks, inefficient logic, and operational issues that affect pipeline stability.

The service applies targeted engineering improvements to enhance runtime efficiency, strengthen error handling, and reduce failure rates. Delivery is completed collaboratively with customer data engineers to build understanding of optimisation techniques and support long-term sustainability of the organisation's integration estate.

Deliverables

Deliverable	Description
Pipeline Performance Assessment	Review of pipeline run histories, telemetry, bottlenecks, and runtime behaviour.
Error and Failure Analysis	Identification of recurring failures, slow stages, and instability points.
Engineering Pattern Review	Assessment of design choices, sequencing, and transformation logic impacts.
Optimisation Recommendations	Targeted improvements to enhance reliability and runtime efficiency.
Pipeline Improvements	Implementation of approved optimisation changes.
Retry and Error Handling Enhancements	Improvements to error routing, retries, and exception handling patterns.
Logging and Visibility Improvements	Enhanced logging structures for improved operational insight.
Operational Readiness Checks	Validation of improved performance and stability post-optimisation.
Documentation Update	Updated operational documentation reflecting pipeline improvements.
Knowledge Transfer Session	Walkthrough of findings, improvements, and optimisation techniques.

Dependencies

Delivery of this Service Element requires:

- Access to pipeline telemetry, run histories, and logs.
- Access to Fabric, Synapse, or hybrid orchestration environments.
- Availability of mapping or design documentation for context.
- Participation from customer engineers for review and validation.
- Access to source systems where connector behaviour impacts performance.

Constraints

This Service Element is subject to the following constraints:

- Optimisation options depend on available telemetry and historical pipeline behaviour.
- Some issues may originate from upstream systems or data quality issues outside this scope.
- Legacy connectors may limit achievable performance improvements.
- Requires customer approval before applying optimisation changes.
- Large-scale redesigns or re-platforming are not included

Benefits

This Service Element strengthens The Intelligent Business by improving the reliability and efficiency of data flows that support operational and analytical processes. It reduces pipeline failures, shortens processing times, and ensures data is delivered in a more consistent and predictable manner.

Optimised pipelines reduce operational risk and improve the organisation's ability to trust and use data effectively. Collaborative optimisation activities also uplift internal engineering capability, preparing teams to maintain and tune pipelines responsibly in the future.

848 Responsibilities

Under this Service Element, 848 will:

- Analyse pipeline telemetry, performance, and failure behaviour.
- Identify efficiency improvements and address bottlenecks.
- Apply optimisation changes to pipeline logic, sequencing, and error handling.
- Enhance logging and monitoring visibility.
- Validate improved behaviours and prepare updated documentation.
- Deliver knowledge transfer on optimisation techniques and best practices.
- Ensure all work aligns to The Insightful Business and The Intelligent Business Framework.

Customer Responsibilities

The customer must:

- Provide access to pipelines, telemetry, and run histories.
- Validate optimisation findings and approve improvement actions.
- Confirm operational expectations and priority areas.
- Ensure customer engineers participate in knowledge transfer.
- Approve final optimised pipeline behaviour before production deployment.

Assumptions

This Service Element is delivered on the basis that:

- Pipeline logs and telemetry provide sufficient detail for assessment.
- Fabric or Synapse is configured and operational.
- Source systems behave consistently during testing and optimisation.
- Mapping and transformation logic is documented and available.
- Customer engineers engage in review and validation.

Exclusions

This Service Element does not include:

- End-to-end pipeline redevelopment or re-engineering.
- Migration to Fabric or re-platforming activities.
- Platform capacity or infrastructure optimisation.
- Data quality remediation or cleansing.
- Long-term monitoring, operational support, or managed service.
- Redesign of source systems, APIs, or enterprise applications.
- Synapse workspace or Fabric environment deployment.

Success Measures

This Service Element is successfully delivered when:

- Pipeline performance improvements are validated by stakeholders.
- Failures or bottlenecks are reduced or removed.
- Logging, retry logic, and error handling behave as intended.
- Runtime efficiency is improved and documented.
- Knowledge transfer session is completed with customer engineers.