Business Requirements Document: Unified Application Integration Framework

Project: Unified Application Integration Framework

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1. Executive Summary

In today's competitive landscape, organizations are often hampered by a portfolio of disconnected legacy and modern applications. This creates information silos, manual process inefficiencies, and significant barriers to innovation. The **Unified Application Integration Framework** project is a strategic initiative designed to address these challenges head-on.

The project's core goal is to "integrate diverse existing / legacy applications or API services" by creating an intelligent middleware layer [Source: ApplicationService.odt, Overview]. This framework will automatically analyze data from various systems, understand the underlying business processes, and expose the combined functionality through a single, modern, and unified interface.

By breaking down data silos and enabling seamless interaction between applications, this initiative will unlock significant business value. It will accelerate the development of new products and services, improve operational efficiency, provide deeper business insights, and create a more agile and responsive organization. This document outlines the business drivers, objectives, and requirements for this critical project.

2. Business Problem & Opportunity

2.1 Current Situation

Our organization, like many others, relies on a multitude of applications to run its daily operations. These systems, including databases, internal APIs, and third-party services, were often developed or acquired at different times and for different purposes. As a result:

- **Data is Siloed:** Critical business information is locked within individual applications, making it extremely difficult to get a holistic view of our operations, customers, or products.
- **Processes are Inefficient:** Employees often resort to manual data entry, "copy-pasting" between systems, and cumbersome workarounds to complete

tasks that span multiple applications. This is slow, error-prone, and costly.

- **Innovation is Stifled:** Launching new services or features that require data from multiple systems is a complex, expensive, and time-consuming development effort. We are slow to react to market changes and miss opportunities.
- **High Maintenance Costs:** Maintaining numerous point-to-point integrations is fragile and expensive. Each new connection adds complexity and a potential point of failure.

2.2 Business Opportunity

By implementing the Unified Application Integration Framework, we have the opportunity to:

- **Unlock Trapped Value:** Leverage the data and functionality within our existing systems to create new, innovative, and value-added services for our customers and partners.
- **Drastically Improve Efficiency:** Automate cross-application workflows, reducing manual effort, minimizing errors, and freeing up employees to focus on higher-value activities.
- **Enhance Decision-Making:** Provide decision-makers with a unified, real-time view of business operations, leading to more informed and timely strategic choices.
- **Increase Agility:** Create a flexible and scalable foundation that allows us to rapidly develop and deploy new capabilities, responding quickly to market demands and competitive pressures.

3. Business Objectives

The primary business objectives for this project are:

ID	Objective	How it will be Measured (KPI)
BO-1	Reduce Time-to-Market for New Services	Decrease the average development time for new cross-functional services by 40% within 18 months.
BO-2	Improve Operational Efficiency	Reduce manual data reconciliation and cross-system data entry tasks by 60%, measured by workflow analysis.

BO-3	Enhance Customer Experience	Enable the creation of at least three new unified customer-facing features (e.g., unified order tracking, personalized recommendations) within the first year.
BO-4	Lower Integration Costs	Reduce the annual cost of developing and maintaining point-to-point integrations by 30%.
BO-5	Foster Data-Driven Culture	Increase the usage of integrated data reports by business analysts and management by 50%.

4. Business Requirements

The following requirements describe the necessary capabilities of the framework from a business perspective.

BR-1: Unified View of Business Data

The framework must break down information silos by automatically consolidating data from various sources.

- **BR-1.1:** The system must be able to connect to and ingest data from key business applications, including our primary CRM, ERP, and inventory management systems.
- **BR-1.2:** The system must be able to understand and reconcile different data formats and naming conventions (e.g., know that a "Client" in one system is the same as a "Customer" in another).
- **BR-1.3:** The system must ensure that the unified data view is kept consistently up-to-date with the source applications.

BR-2: Automated Discovery of Business Processes

The framework must intelligently discover how different parts of the business operate and interact.

- **BR-2.1:** The system must analyze the integrated data to automatically identify and map out end-to-end business processes (e.g., the "order-to-cash" cycle).
- **BR-2.2:** The system must be able to infer the "use cases" that are possible by

combining the functionalities of different applications [Source: ApplicationService.odt, Overview]. For example, it should infer that if we have inventory data and sales data, a "low-stock alert" use case is possible.

BR-3: Enablement of New Cross-Functional Capabilities

The core purpose of the framework is to enable new business capabilities that are currently impractical.

- **BR-3.1:** The system must allow for the creation of new, automated workflows that span multiple applications. For example, "When inventory for a product falls below a threshold, automatically trigger a purchase order in the procurement system" [Source: ApplicationService.odt, Overview].
- **BR-3.2:** The system must expose these newly created, integrated capabilities through a modern, secure, and easy-to-use API for developers.
- **BR-3.3:** The system should allow business users to explore "what-if" scenarios. For example, "Show me all possible actions I can take for a customer who has both an open support ticket and a pending high-value order."

BR-4: Modernized and Simplified User Interaction

The framework must provide a unified and intuitive way to interact with the combined power of our legacy systems.

- **BR-4.1:** The system must provide the foundation for a "generic front end" or "wizard-like interface" that guides users through complex, multi-application tasks without them needing to know which underlying system is being used [Source: ApplicationService.odt, ETL].
- **BR-4.2:** The system must allow users to interact using natural language queries, such as "What's the status of the new product launch?", and receive a consolidated answer.

BR-5: Governance and Control

The business must have full visibility and control over the integration platform.

- **BR-5.1:** The system must provide a central administrative dashboard for monitoring the health and status of all integrations.
- **BR-5.2:** The system must enforce security policies, ensuring that users and applications can only access the data and functions they are authorized for.
- **BR-5.3:** The system must maintain a complete audit trail of all transactions and data modifications made through the framework for compliance and reporting purposes.

5. Project Scope

5.1 In Scope

- Development and deployment of the core Unified Application Integration Framework, including all services (Datasource, Augmentation, Aggregation, Alignment, Activation, Producer, and Helpers).
- Integration of an initial set of three key business applications:
    1. Corporate ERP System
    2. Sales CRM Platform
    3. Inventory Management Database
- Development of one proof-of-concept (PoC) application using the framework's API to demonstrate a new cross-functional use case.

5.2 Out of Scope

- Modification of the source code or databases of the legacy applications being integrated. The framework will interact with them through their existing interfaces (DB connections, APIs).
- Full-scale development of all possible consumer applications. The project will deliver the platform and one PoC; further application development will be handled by separate projects.
- Data cleansing and migration activities within the source systems. The framework will ingest data "as-is," although the alignment process will reconcile differences.

6. Stakeholders

Stakeholder	Role / Department	Interest / Responsibilities
Executive Sponsor	Chief Information Officer (CIO)	Overall project success, budget approval, strategic alignment.
Project Champion	Head of Digital Transformation	Driving adoption, ensuring business value is realized.
Business Analysts	IT / Business Operations	Defining process rules, validating inferred use cases.
Department Heads	Sales, Operations, Finance	Beneficiaries of improved efficiency and new capabilities.
IT Management	Head of Application Development	Managing development resources, overseeing API governance.

| End Users | Sales Reps, Ops Managers | Users of the new unified applications built on the framework. |

7. Assumptions and Constraints

7.1 Assumptions

- The business will provide subject matter experts with deep knowledge of the applications being integrated.
- The IT infrastructure team will provide the necessary server and network resources for deploying the microservices architecture.
- The data within the source systems, while siloed, is of sufficient quality to be usable.

7.2 Constraints

- The initial project budget is fixed at [Insert Budget Amount].
- The first phase, including the integration of three systems and the PoC, must be completed within [Insert Timeline, e.g., 12 months].
- The solution must comply with all relevant data privacy regulations (e.g., GDPR, CCPA).