

Approach Note – Phase 2: Solution Design & Architecture

1. Objective

To define the solution architecture, data models, workflows, and integration strategy, ensuring scalability, security, and alignment with business goals.

2. Key Activities

2.1 System Architecture Design

- Define the high-level system architecture (on-premise, cloud, or hybrid).
- Establish API and integration frameworks for seamless data exchange.
- Ensure scalability, performance, and security considerations.

2.2 Data Modelling & Governance

- Identify critical data entities, relationships, and structures.
- Design a standardized data model with clear definitions and attributes.
- Establish data governance policies for accuracy, consistency, and security.

2.3 Workflow & Process Design

- Define process flows for data ingestion, transformation, and reporting.
- Optimize workflows for automation and minimal manual intervention.
- Establish checkpoints and validation mechanisms for data integrity.

2.4 Security & Compliance Planning

- Define authentication, authorization, and encryption standards.
- Ensure compliance with industry standards (GDPR, ISO, SOC2, etc.).
- Design access control mechanisms based on user roles and data sensitivity.

2.5 Technology & Tool Selection

- Finalize database, ETL tools, reporting platforms, and analytics frameworks.
- Evaluate trade-offs between open-source and enterprise solutions.
- Ensure interoperability with existing systems.

3. Deliverables

- **Solution Architecture Blueprint** (high-level system design and integrations).
- **Data Model & Governance Framework** (schema, definitions, and data policies).
- **Process Flow Diagrams** (detailed workflows for data processing and reporting).
- **Security & Compliance Plan** (risk mitigation, access controls, and compliance adherence).
- **Technology Stack Documentation** (tools, platforms, and rationale for selection).

This phase establishes the technical foundation, ensuring a robust and scalable solution.