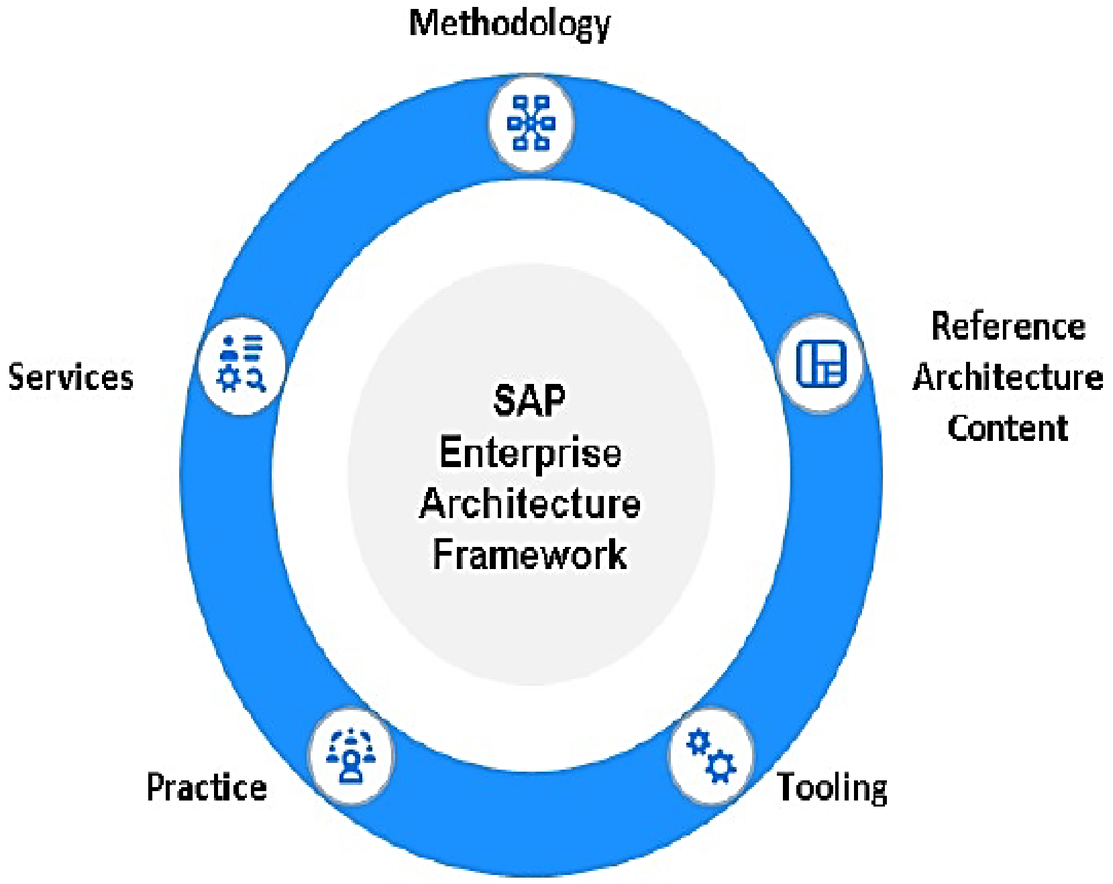
Apply the SAP Enterprise Architecture Framework Along an Architecture Development Cycle

SAP
June 2025

Public

SAP Enterprise Architecture Framework



The SAP EA **Methodology** is based on industry standards (such as TOGAF®, BPMN™, UML®, APQC®) and supports enterprise architect journeys from the definition of target architectures to implementation and continuous transformation. It introduces concepts, artifacts, techniques, and principles.

SAP **Reference** Business and Solution **Architecture Content** maps the business strategy and architecture to SAP solutions.

EA **Tooling** supports documentation, adjustment and consumption of EA artifacts complying to SAP EA Methodology.

The **EA Practice** is the organizational implementation of EA. It operates enterprise architecture within the organization, by adopting the EA methodology and establishing governance processes incl. change management process for the framework.

EA **Services** are supporting transformations by applying the methodology and using EA tooling and reference architecture content. Services can be sourced from SAP, other external providers, or provided by the practice. They can include enablement of different EA target roles in customers' and partners' organizations provided

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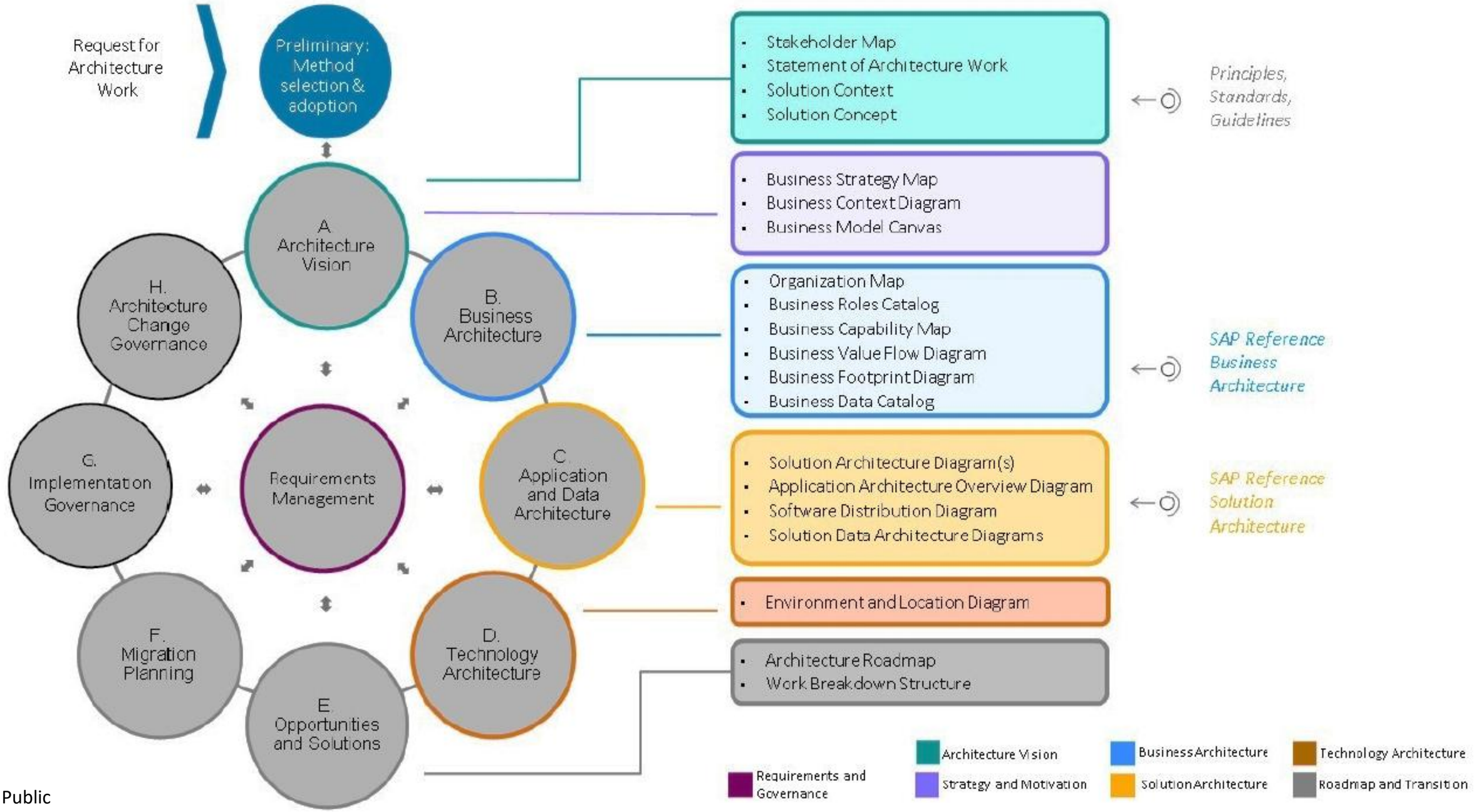
Request for Architecture Work
Preliminary: Method selection & adoption
A. Architecture Vision
B. Business Architecture
C. Application and Data Architecture
D. Technology Architecture
E. Opportunities and Solutions
F. Migration Planning
G. Implementation Governance
H. Architecture Change Governance
Requirements Management
Stakeholder Map
Statement of Architecture Work
Solution Context
Solution Concept
Business Strategy Map
Business Context Diagram
Business Model Canvas
Organization Map
Business Roles Catalog
Business Capability Map
Business Value Flow Diagram
Business Footprint Diagram
Business Data Catalog
Solution Architecture Diagram(s)
Application Architecture Overview Diagram
Software Distribution Diagram
Solution Data Architecture Diagrams
Environment and Location Diagram
Architecture Roadmap
Work Breakdown Structure
Principles, Standards, Guidelines
SAP Reference Business Architecture
SAP Reference Solution Architecture
Architecture Vision
Business Architecture
Technology Architecture
Requirements and Governance
Strategy and Motivation
Solution Architecture
Roadmap and Transition

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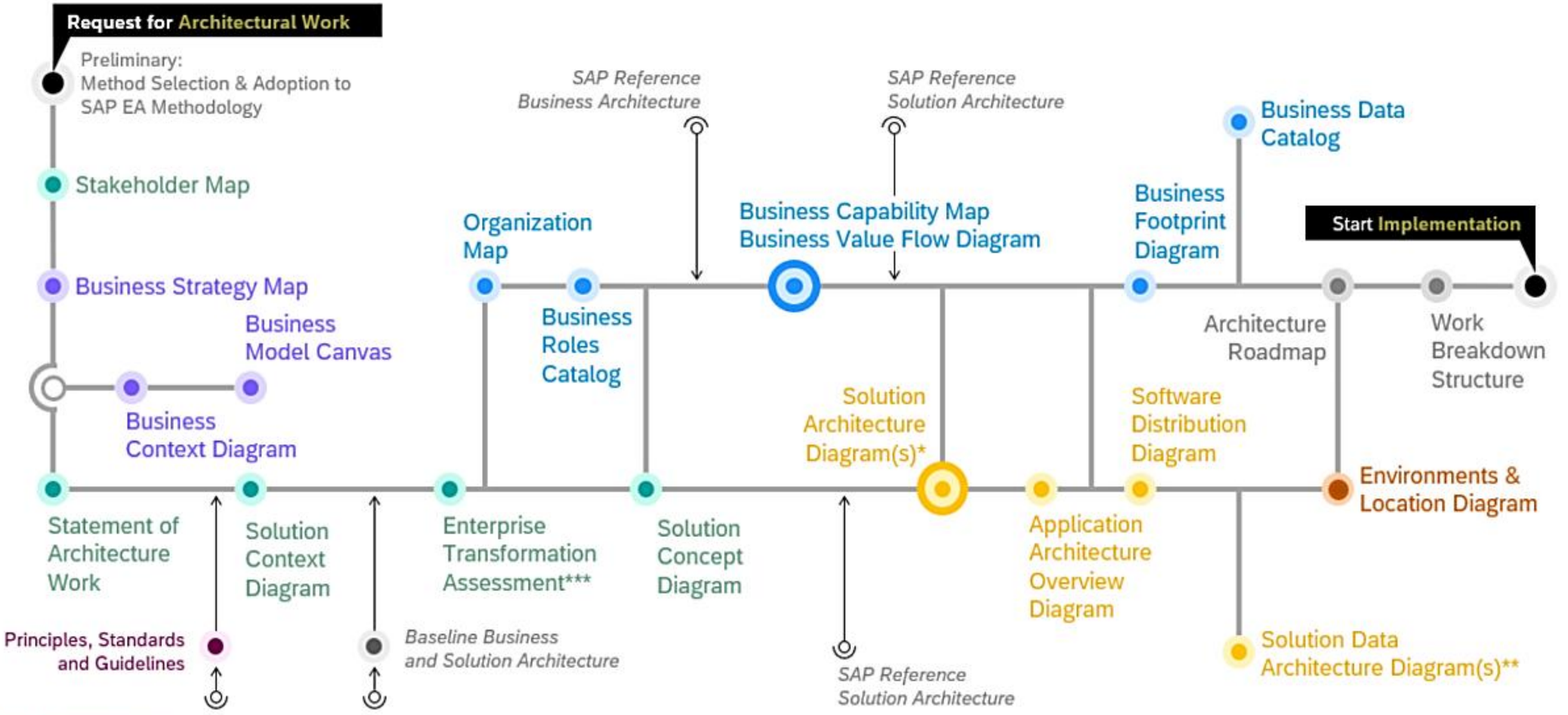
SAP EA Methodology – Metro Map



Requirements Management
Architectural Decisions
Risk Analysis
Executive Summary

* Generic placeholder for selected artifacts like:
- Product Map
- Solution Component Diagram
- Solution Value Flow Diagram
- Solution Process Flow Diagram

** Generic placeholder for selected artifacts like:
- Solution Data Flow Diagram
- Conceptual Data Diagram

*** Enterprise Transformation Assessment
- EA Practice Capability Assessment
- Preliminary Business and Technology Capability Assessment
- Business and Technology Transformation Readiness Assessment

Requirements & Governance
Architecture Vision
Strategy and Motivation
Business Architecture
Solution Architecture
Technology Architecture
Roadmap & Transition

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SAP Intelligent Enterprise Architecture (IEA10) - Training

V2.0

Customer Case Study: N3C

INTERNAL

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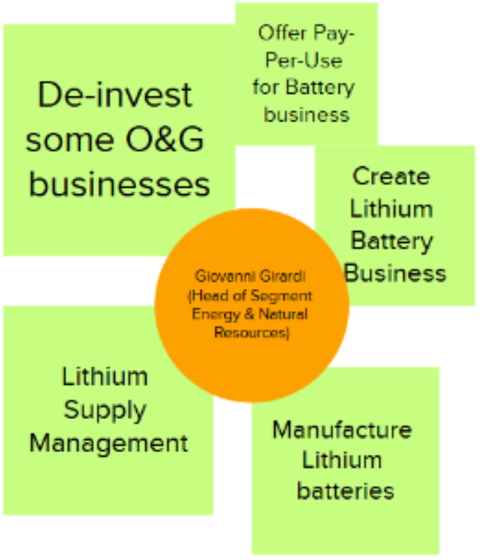
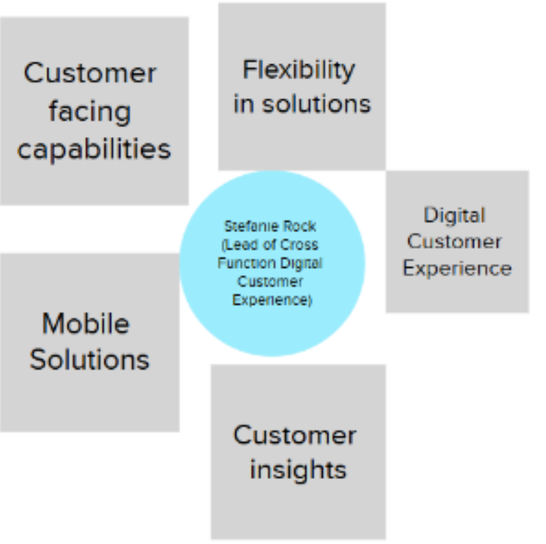
Functional & Non-Functional

Major Stakeholder

Requirement or Business/ Solution Capability

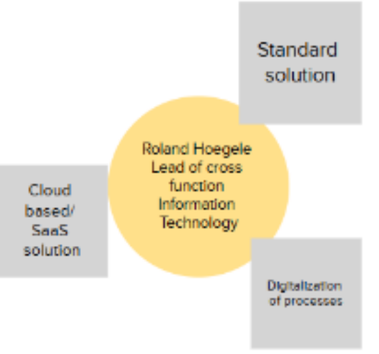




Crop Protection

Energy & Natural Resources

Cross



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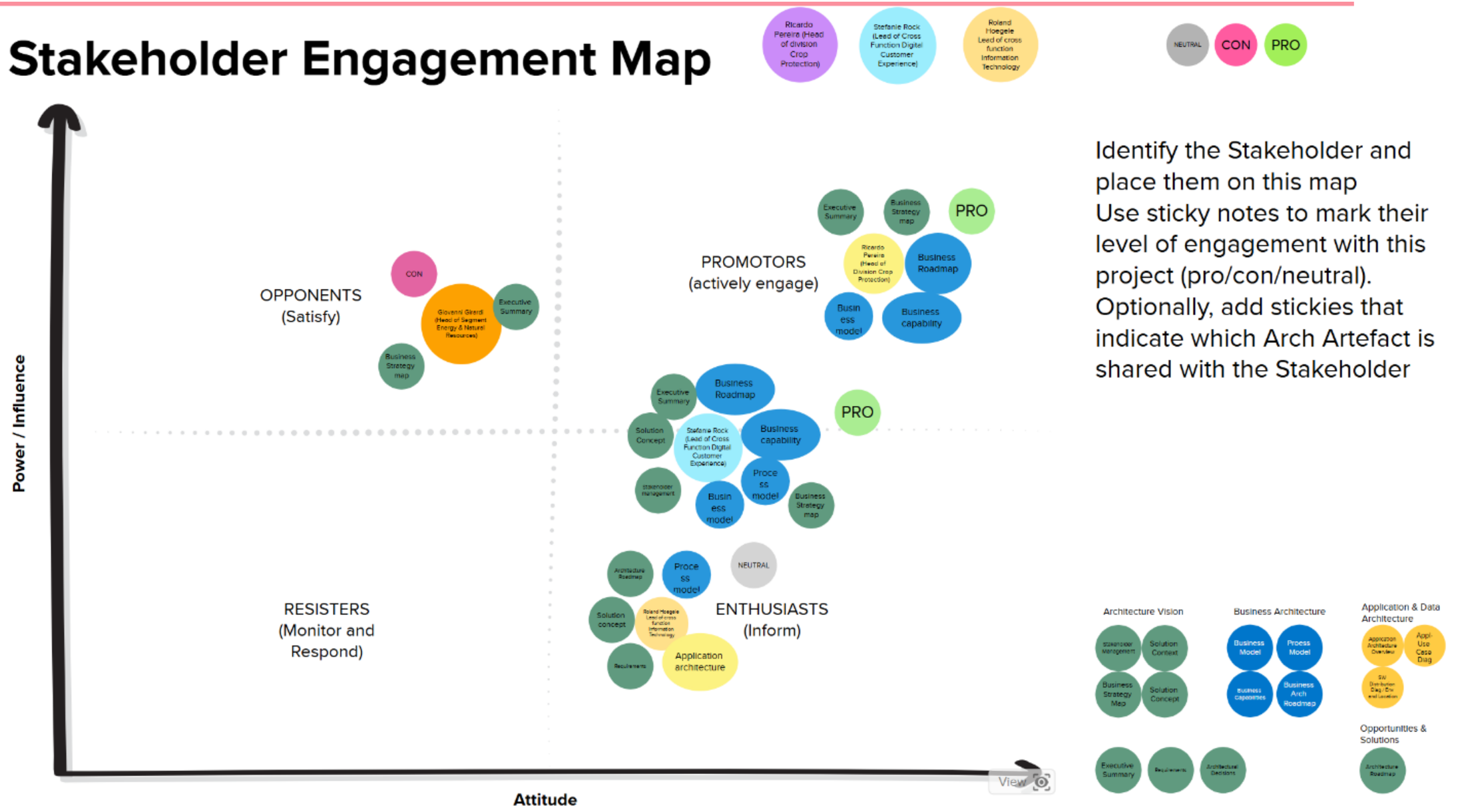
Stakeholder Engagement Map



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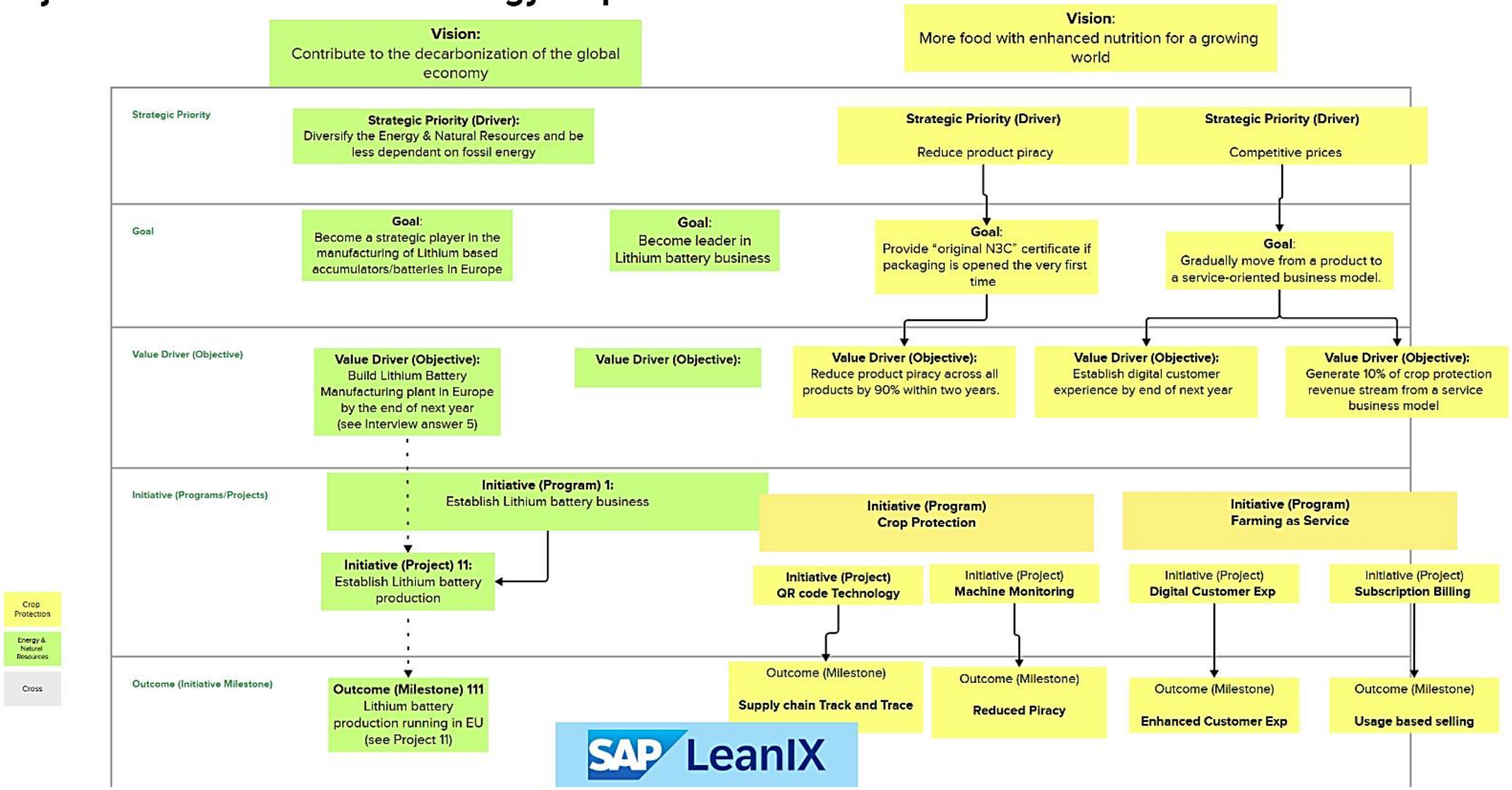
Objective: Build Business Strategy Map



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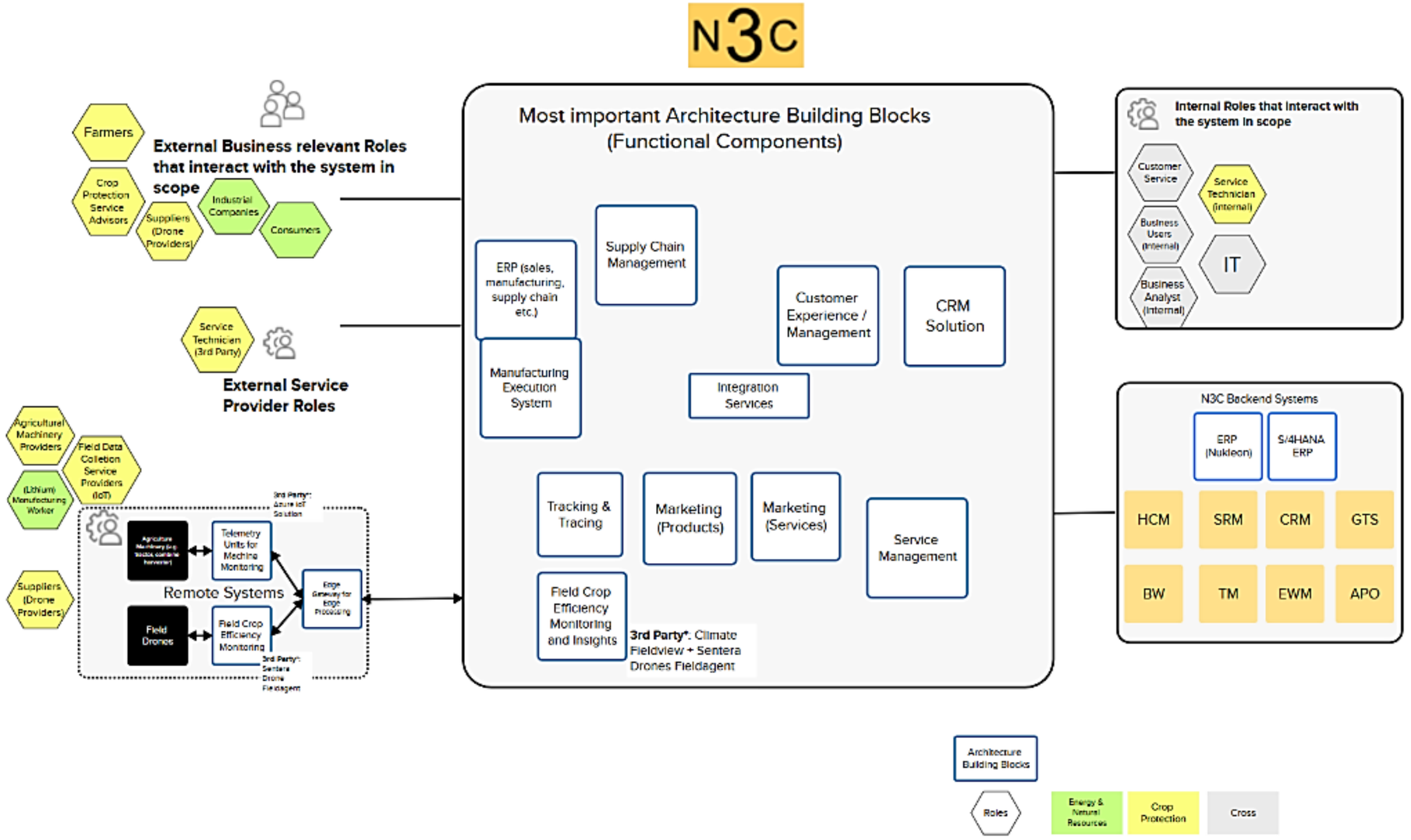
Objective: Build Solution Concept



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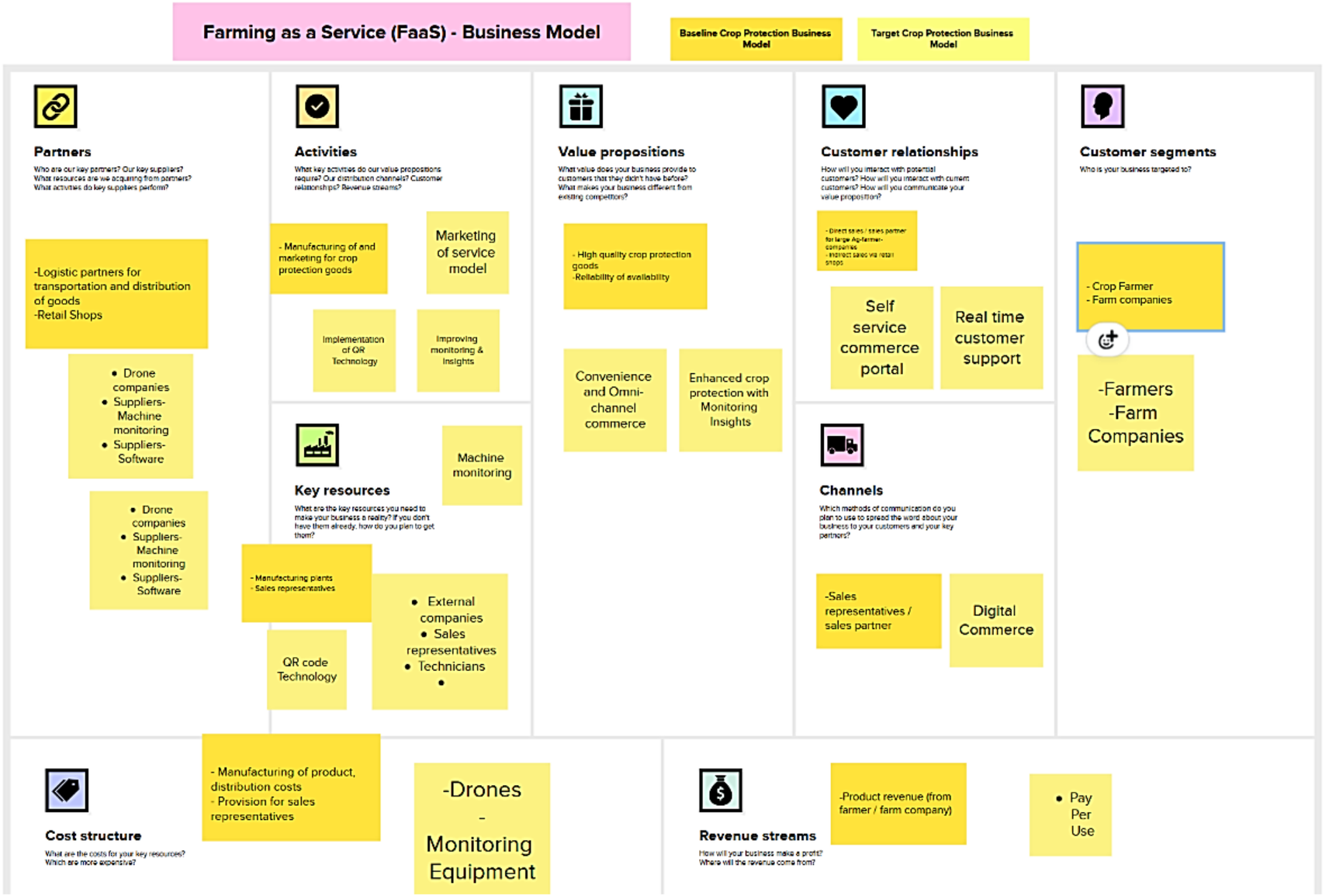
Objective: Build Business Model Canvas



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Lithium Battery - Business Model

Baseline Oil & Gas Business Model

Target Lithium Battery Business Model

Partners

Who are our key partners? Our key suppliers?
What resources are we acquiring from partners?
What activities do key suppliers perform?

-License partner for crude oilfields
-Partner in exploration for O&G fields
-Countries (gas, pipeline, oilfields)

Activities

What key activities do our value propositions require? Our distribution channels? Customer relationships? Revenue streams?

-Exploration and production (upstream) of O&G
-Transporation of Gas
-Creation of olefines and aromatics(start of petrochemical value chain)

-Exploration of lithium
-Production of batteries
-Providing battery services

Value propositions

What value does your business provide to customers that they didn't have before?
What makes your business different from existing competitors?

World class expertise knowledge in exploration, development, production of O&G fields
-Availability of gas transport capacities (scarcity of capacities)
-Refinery production capabilities for competitive prices - at sites where the refinery products can be directly leveraged in the petrochemical value chain (-> low logistics costs)

-Provide Lithium Batteries in a Pay per use model

-Leverage experience in exploration to find lithium and extract it in an efficient way

Customer relationships

How will you interact with potential customers? How will you interact with current customers? How will you communicate your value proposition?

-direct contacts of C-level with country's governance representatives and other partner's board members

Customer segments

Who is your business targeted to?

-Refineries (O&G)
-Gas producer / Gas Distribution companies
-NCF internal (results of petrochemical value chain)
-Other chemical companies

Key resources

What are the key resources you need to make your business a reality? If you don't have them already, how do you plan to get them?

-Knowledge for exploration and production of O&G;
Ownership (License) of crude oilfields
-Gas pipelines
-Refineries

(Lithium) Manufacturing Worker

-Knowledge for exploration
-Service Platform

Channels

Which methods of communication do you plan to use to spread the word about your business to your customers and your key partners?

-Long lasting license contracts - agreed on top management level

-Sales representatives / sales partner
- Digital channels

-Industrial
-Consumer Electronics
-Energy Storage
-Medical
-Automotive
-Other End-user Industries

Industrial Companies

Consumers

Consumers

Cost structure

What are the costs for your key resources?
Which are more expensive?

-License costs for oilfields, costs for exploration and production
-Maintenance for O&G plants, pipelines and refineries
-Cost of production and distribution (O&G)
-Salaries for high-end experts in exploration and production (O&G)

--License costs for lithium mines, costs for exploration
-Production of lithium batteries
--Salaries for high-end experts in exploration and production (Lithium)

Revenue streams

How will your business make a profit?
Where will the revenue come from?

-Sale of O&G
License revenue for gas pipeline use
-Sale for refinery products (NCF internal and other chemical companies)

-Sales of batteries
-Service revenue (pay-per-use)

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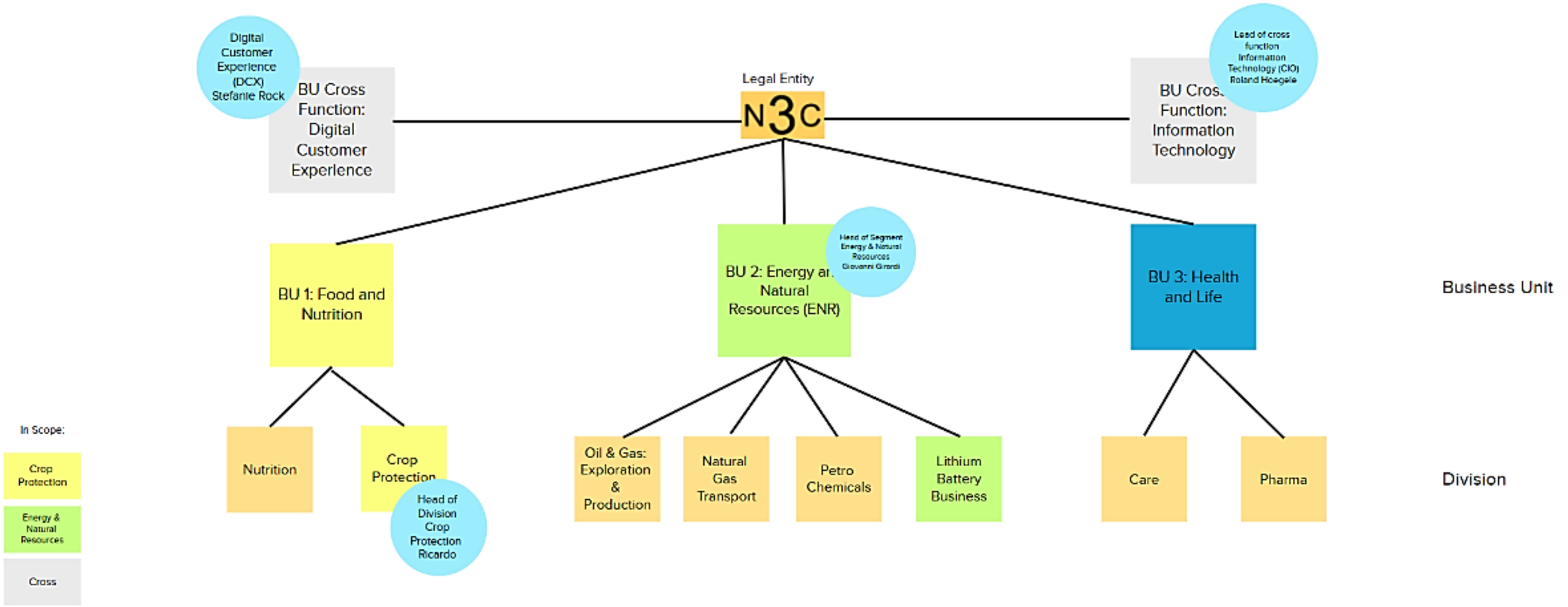
Objective: Build Organization Map



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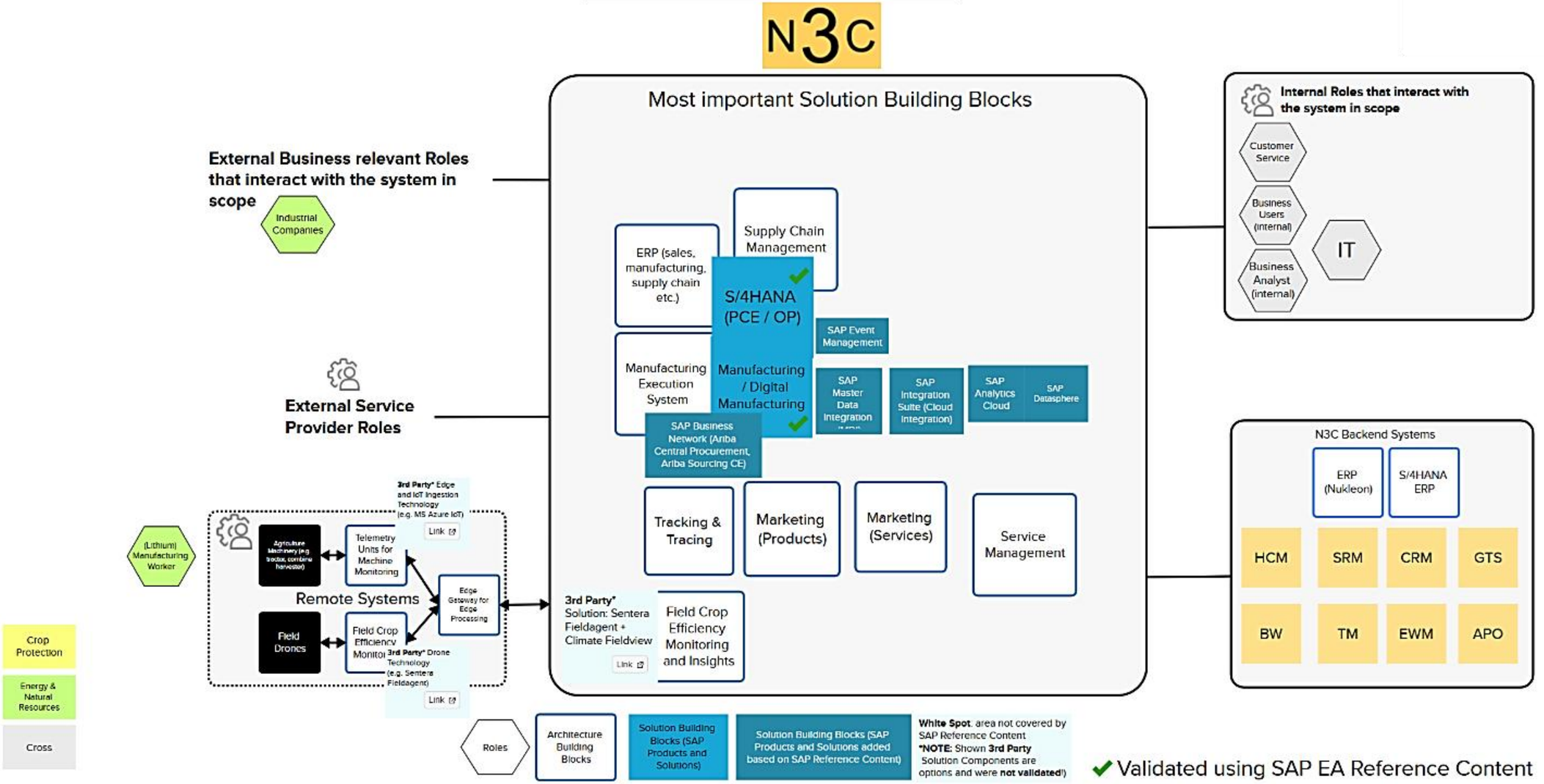
Solution / Product Mapping



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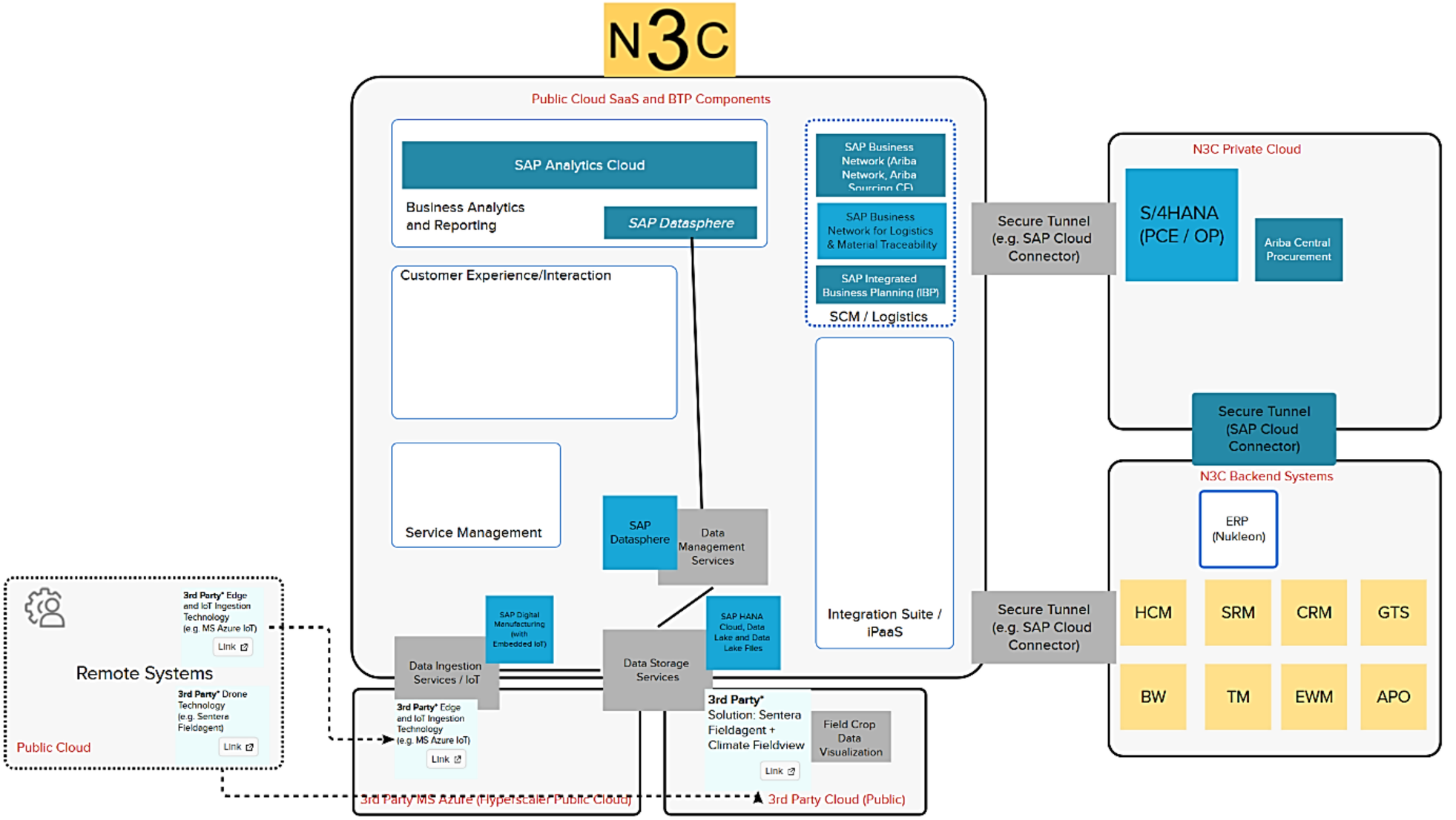
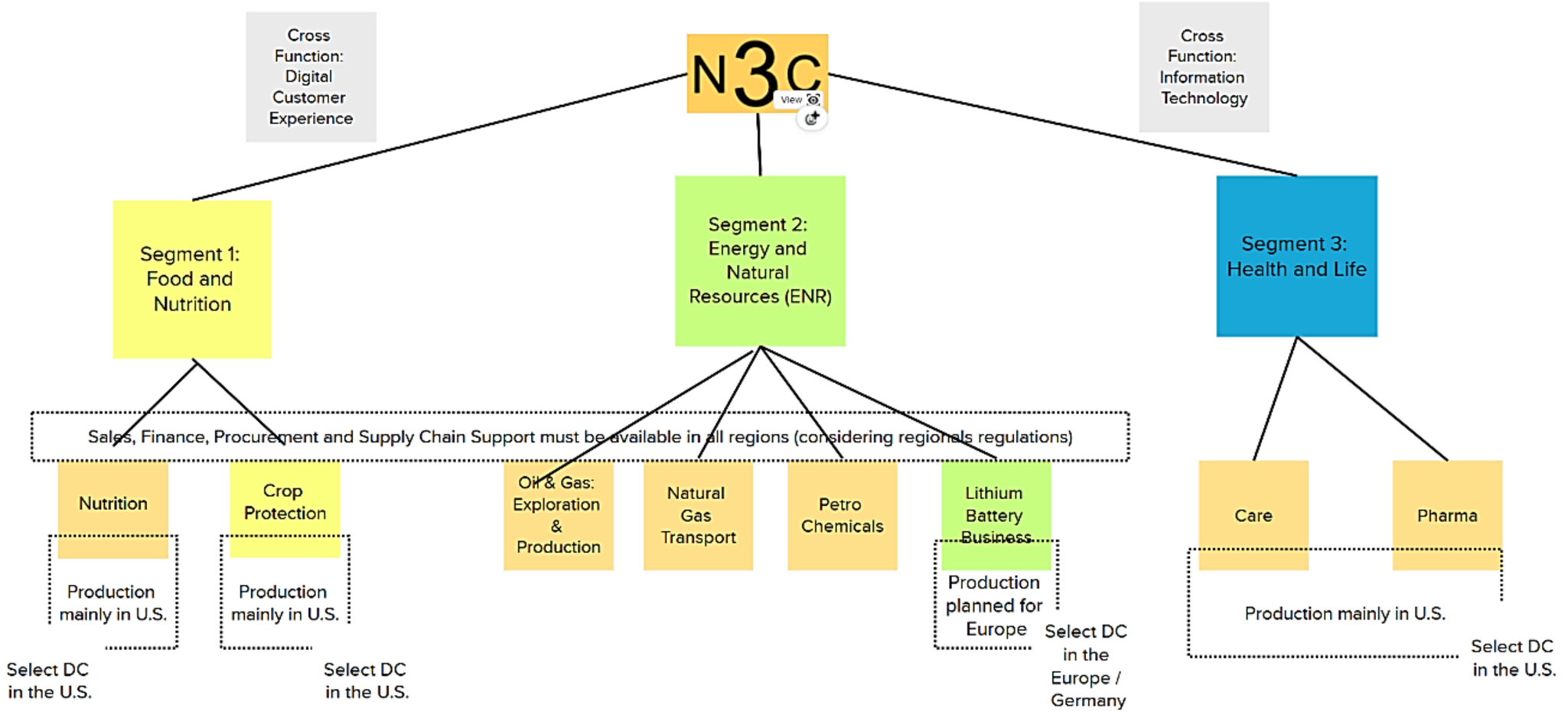
Objective: Build Software Distribution Diagram



Objective: Re-use Organization Map for Location Identification



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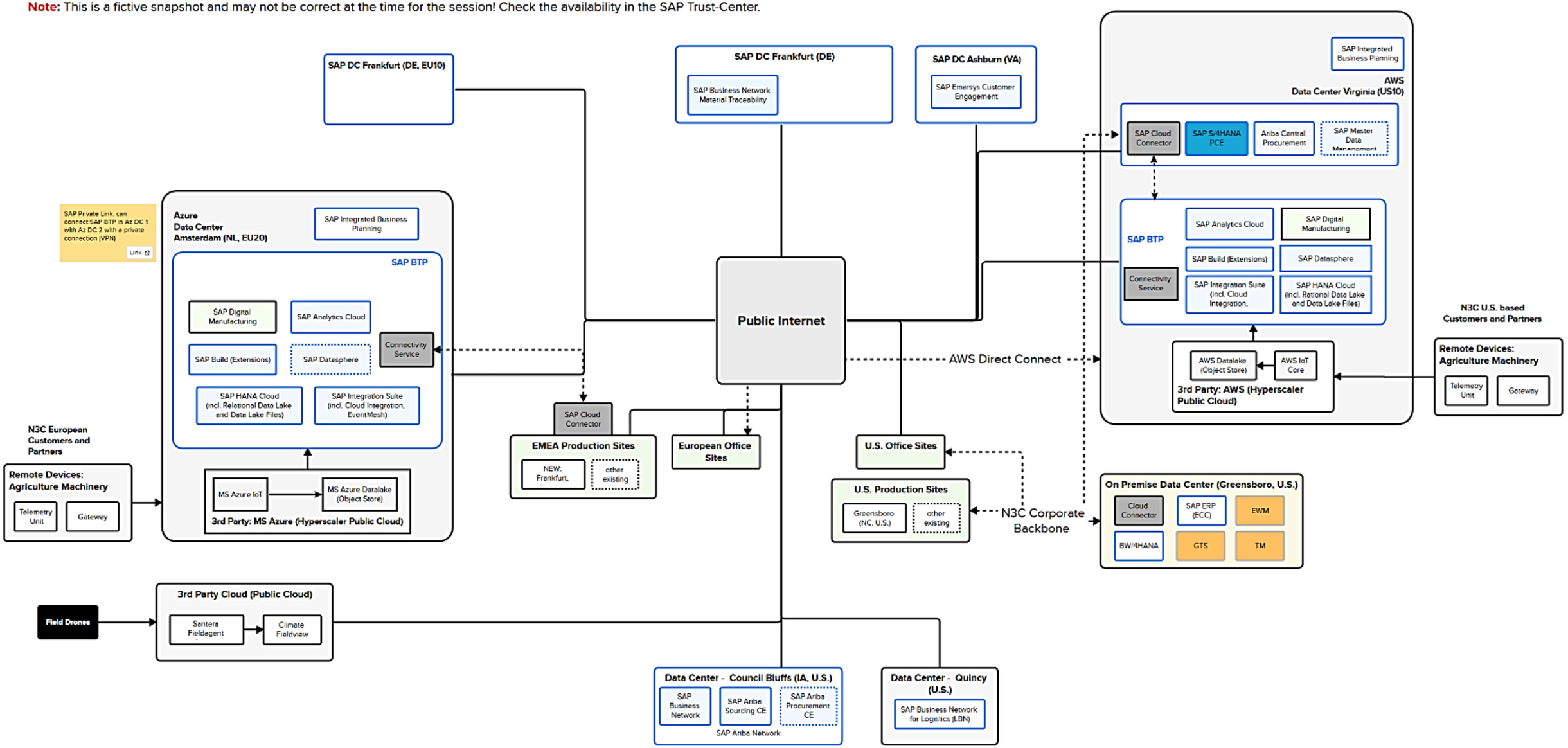
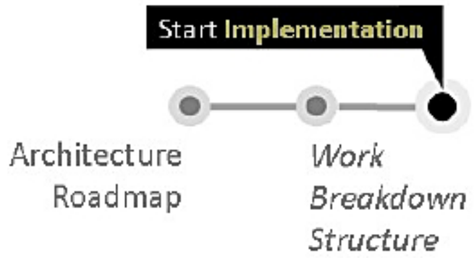
Objective: Build Environment & Location Diagram

Note: This is a fictive snapshot and may not be correct at the time for the session! Check the availability in the SAP Trust-Center.



Opportunities and Solutions - Architecture Roadmap

Architecture Roadmap may reflect different aspects.
A **Business Architecture Roadmap** is a visual representation of business outcomes across time horizons und functional clusters.
An **Application Architecture Roadmap** depicts the solutions required to realize a company's goals within a given time



Work Breakdown Structure is a visual and hierarchically representation of manageable work packages (deliverables) for a given project (timeline). It includes major project milestones and may have assigned effort estimations and budget allocations.

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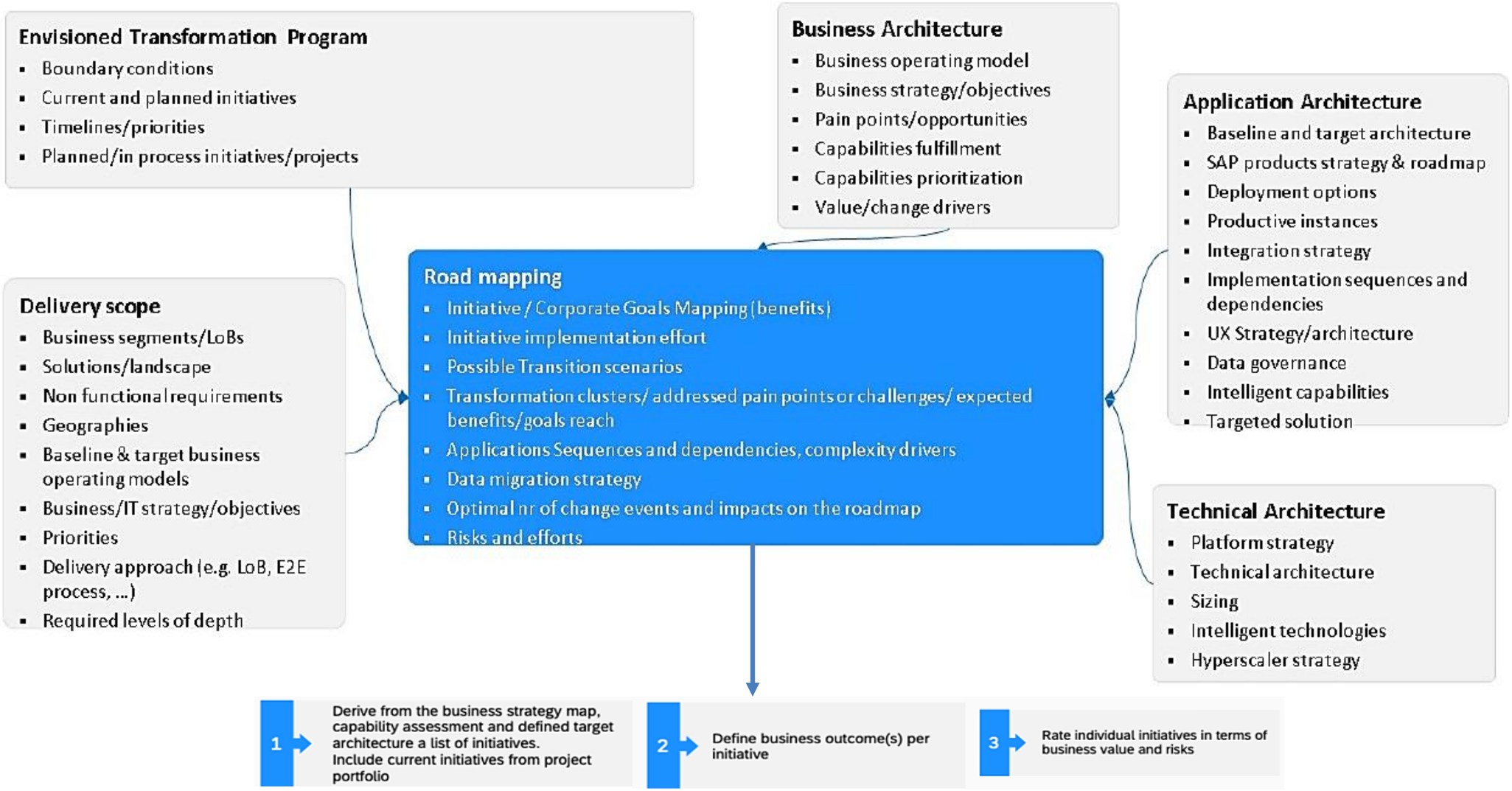
SAP Enterprise Architecture

Road-mapping influencing factors



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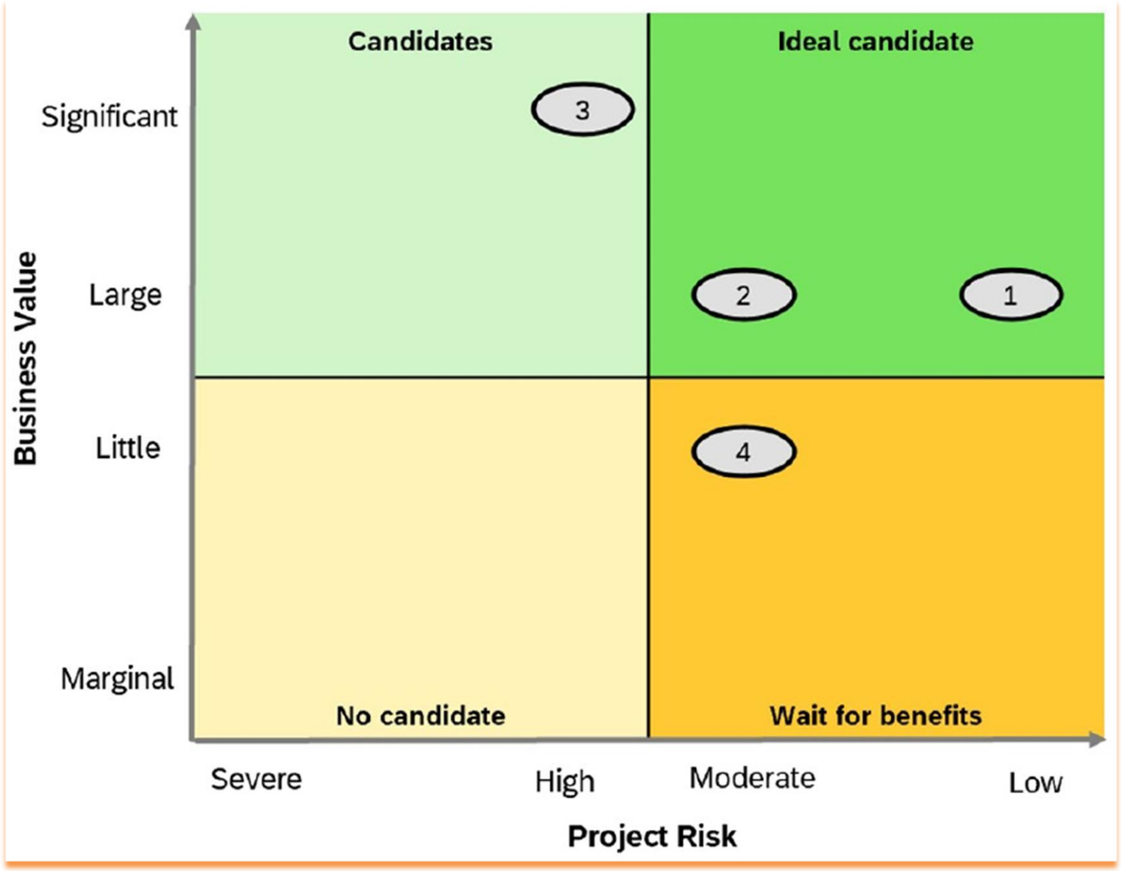
Initiative Catalog and Priorities Matrix

1 Derive from the business strategy map, capability assessment and defined target architecture a list of initiatives.
Include current initiatives from project portfolio

Initiative Catalog

No	Initiative	Description
1	*Monitor and manage capital expenditure*	*Capital expenditure must be measured for return of investment and allow for better modelling in case of major investments*
2	*Implement flexible pricing model*	*Product and service pricing must be flexible to facilitate better competition, fast reaction to changing market and support marketing campaigns*
3	*Improve time-to-market*	*Improve processes from the idea to release-to-market for our products and services to achieve readiness faster and cheaper*
4	*Engage customers*	*Improve customer engagement for various channels and customer types*
5	…	…



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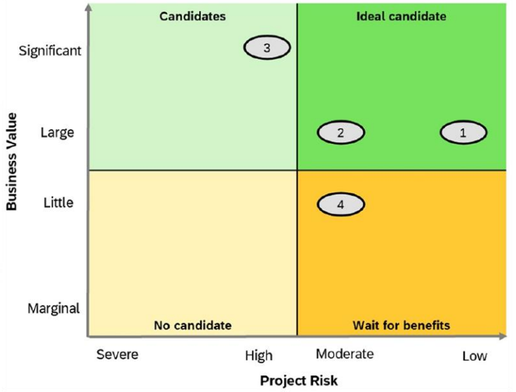
Initiative Catalog and Priorities Matrix

2 Define business outcome(s) per initiative

Initiative Outcome Catalog

No	Initiative	Outcome
1	*Monitor and manage capital expenditure*	*Real-time capital expenditure insights enabled*
2	*Implement flexible pricing model*	*Flexible portfolio and dynamic market pricing implemented*
3	*Improve time-to-market*	*Agile release-to-market in operation*
4	*Engage customers*	*Best in class customer churn rate achieved*
5	…	…

3 Rate individual initiatives in terms of business value and risks



Initiative / Value and Risk

No	Initiative	Description	Business Value	Risk
1	***Monitor and manage capital expenditure***	*Capital expenditure must be measured for return of investment and allow for bett modelling in case of major investments*	★★★☆	↑↑↑↑
2	***Implement flexible pricing model***	*Product and service pricing must be flexible to facilitate better competition, fast res to changing market and support marketing campaigns*	★★★☆	↑↑↑↑
3	***Improve time-to-market***	*Improve processes from the idea to re to-market for our products and services to achieve readiness faster and cheaper*	★★★★	↑↑↑↑
4	***Engage customers***	*Improve customer engagement for various channels and customer types*	★★☆☆	↑↑↑↑
5	…	…		

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Roadmap “Construction Table”

Input from Business Strategy Map

Input from Business Capability Map

Input from Application Architecture

No	Initiative	Description	Business outcome	Business Value	Risk	Business Capability	Solution	Dependency	Timeline
1	*Name of the initiative*	*Description of the initiative*	*Business outcome(s)*	*Value*	*Risk*	*Business Capability(s)*	*Solution(s)*	*Dependency(s)*	*Timeline*
2	*Name of the initiative*	*Description of the initiative*	*Business outcome(s)*	*Value*	*Risk*	*Business Capability(s)*	*Solution(s)*	*Dependency(s)*	*Timeline*
3	*Name of the initiative*	*Description of the initiative*	*Business outcome(s)*	*Value*	*Risk*	*Business Capability(s)*	*Solution(s)*	*Dependency(s)*	*Timeline*

Expected outcome from capability implementation

Identify dependencies between roadmap elements

Expected timeline – incl. quick-wins for value realization

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Construction Table for Architecture Roadmap

INITIATIVE(PROGRAM)	PROJECT	BUSINESS OUTCOME: MILESTONE	OBJECTIVE(VALUE DRIVER)	BUSINESS CAPABALITY	SOLUTION(APPLICATION)	DEPENDENCY	TIMELINE
Initiative (Program) 1:	**Initiative (Project) :**	**Outcome (Milestone)**	**Value Driver:**	**Capabalities:**	**Solution :** S/4HANA	**Initiative Dependency:**	**Lifecycle:**
Source: Initiative Catalog / Strategy Map		*Source: Strategy Map*	*Stakeholder Interview answer*	*Source: Capability Map*	*Source: Application Architecture Overview Diag*	*Lithium extraction must be finished before manufacturing can start*	*Source: Initiative Catalog*
Establish Lithium battery business	**Establish Lithium battery production**	**Lithium battery production running in EU**	**Build Lithium Battery Manufacturing plant in Europe by the end of next year**	**Manufacturing, Production, Plant Operations,MRP**	**SAP Ariba Central Procurement, SAP Digital Manufacturing (DM), SAP Datasphere, SAP Analytics Cloud, SAP Business Network (Ariba Network, Ariba Sourcing CE), SAP Business Network for Material Traceability, SAP Integrated Business Planning (IBP)**	**SAP Integration Suite**	**Planned: 06-2024 Active: 08-2024 Done: 12-2025**
	Establish Pay per Use model for battery business						

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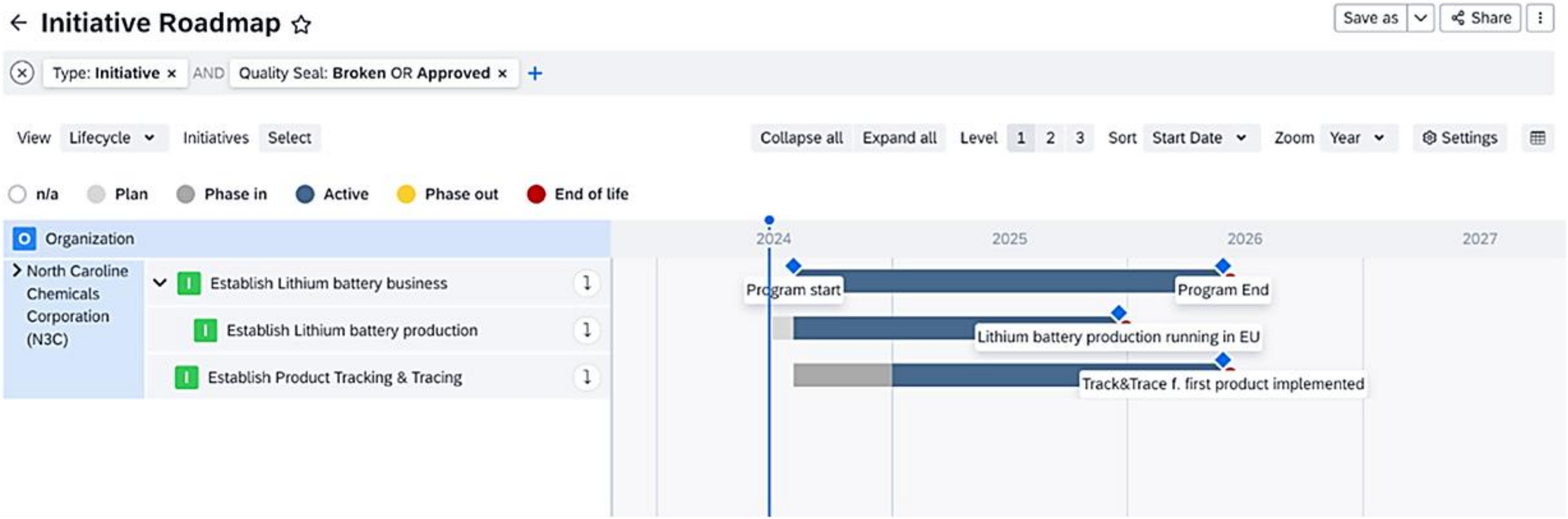
Objective: Build Business Architecture Roadmap

SAP LeanIX
Check Workspace



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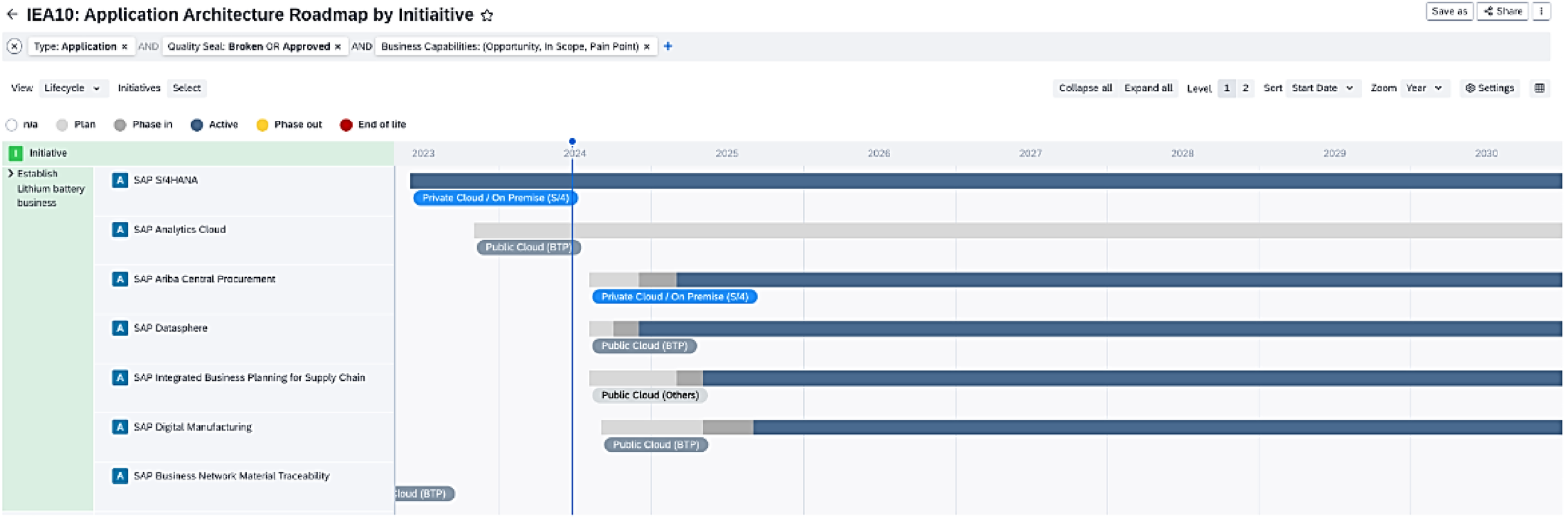
Objective: Build Application Architecture Roadmap

SAP LeanIX
Check Workspace



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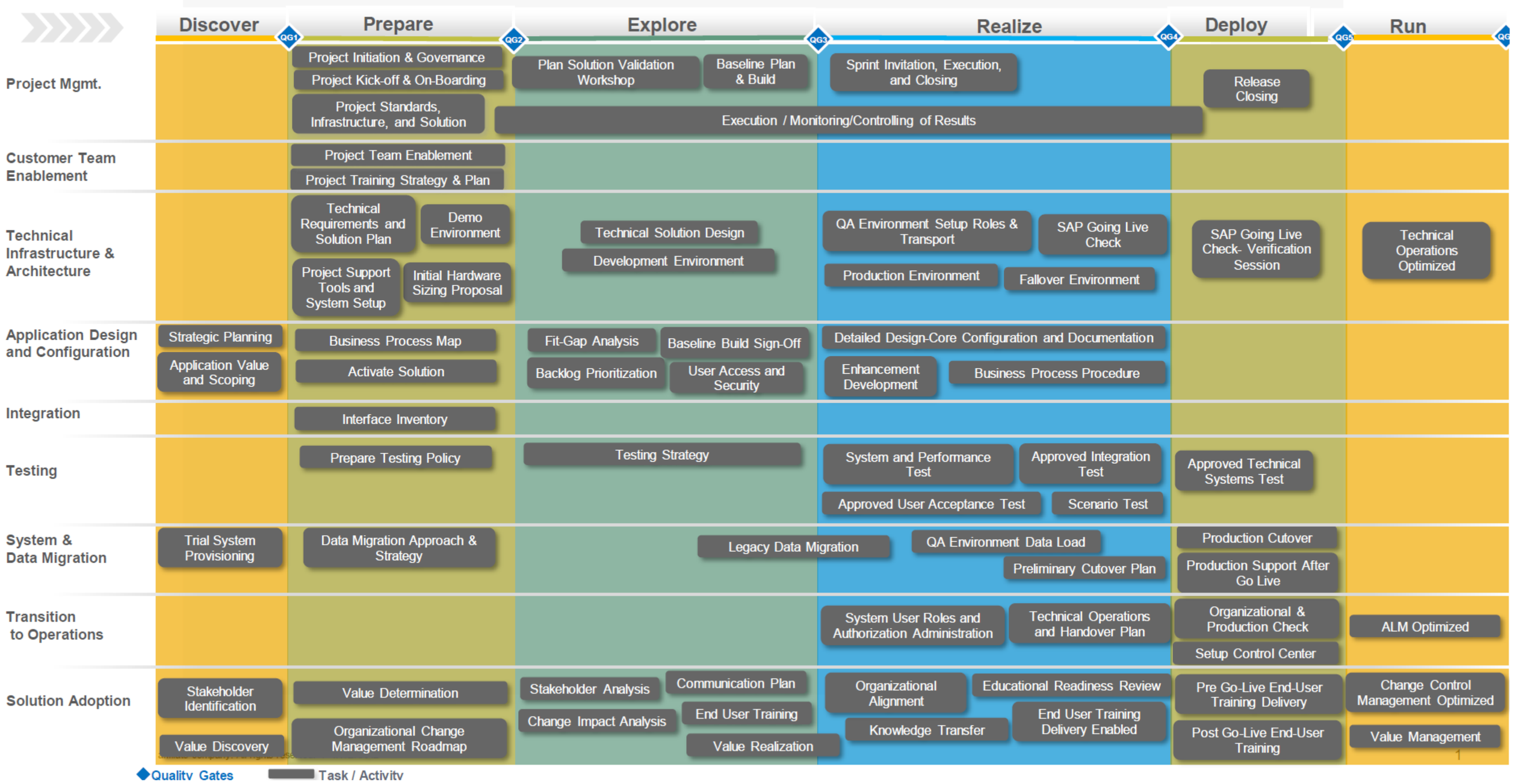
Work Breakdown Structure: SAP ACTIVATE PHASES



Work Breakdown Structure: SAP ACTIVATE PHASES

DISCOVER

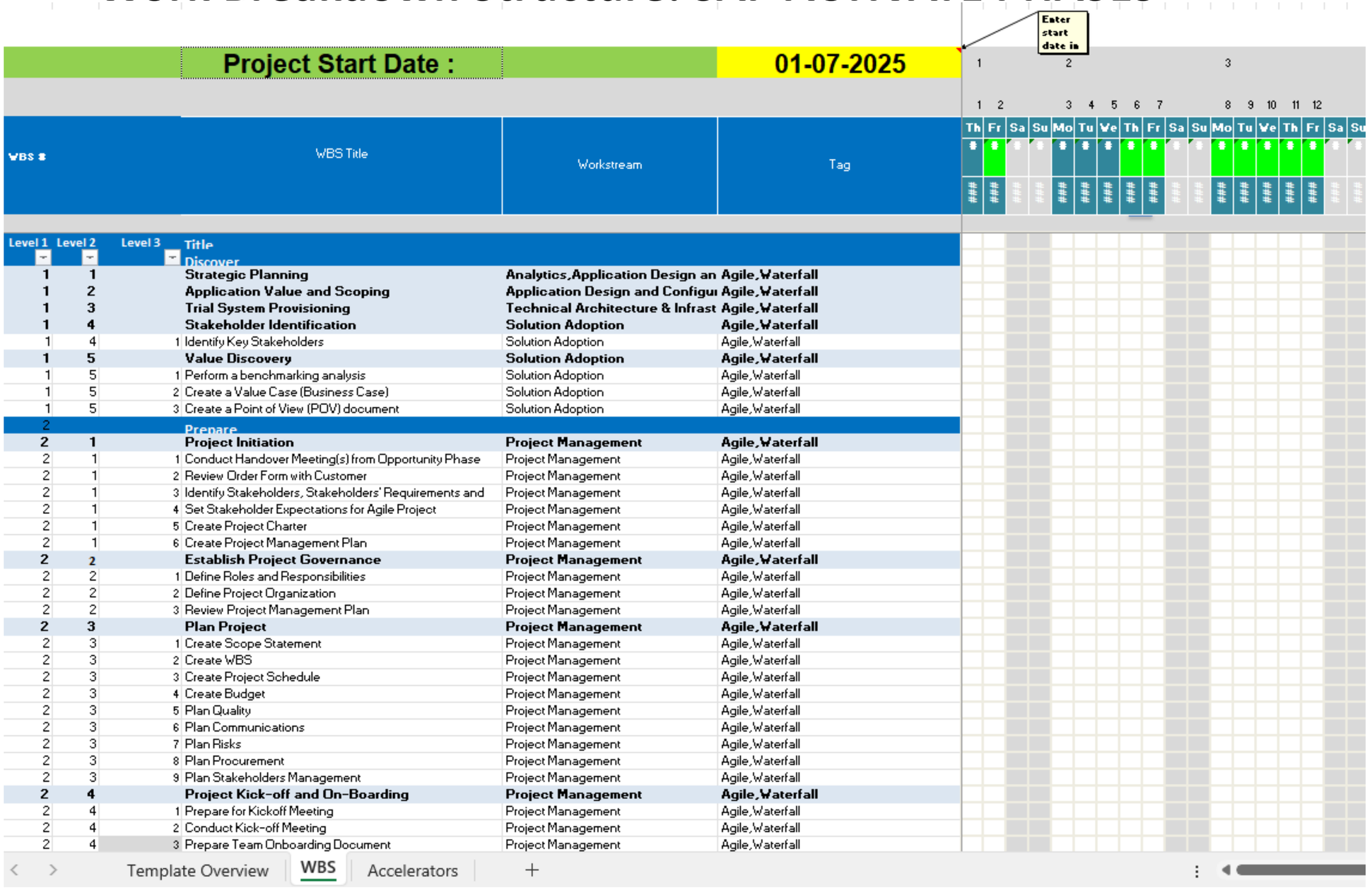
PREPARE

EXPLORE

REALIZE

DEPLOY

RUN



			Project Start Date :		01-07-2025
WBS #			WBS Title	Workstream	Tag
Level 1	Level 2	Level 3	Title		
			Discover		
1	1		**Strategic Planning**	**Analytics,Application Design an**	**Agile,Waterfall**
1	2		**Application Value and Scoping**	**Application Design and Configu**	**Agile,Waterfall**
1	3		**Trial System Provisioning**	**Technical Architecture & Infrast**	**Agile,Waterfall**
1	4		**Stakeholder Identification**	**Solution Adoption**	**Agile,Waterfall**
1	4	1	Identify Key Stakeholders	Solution Adoption	Agile,Waterfall
1	5		**Value Discovery**	**Solution Adoption**	**Agile,Waterfall**
1	5	1	Perform a benchmarking analysis	Solution Adoption	Agile,Waterfall
1	5	2	Create a Value Case (Business Case)	Solution Adoption	Agile,Waterfall
1	5	3	Create a Point of View (POV) document	Solution Adoption	Agile,Waterfall
2			Prepare		
2	1		**Project Initiation**	**Project Management**	**Agile,Waterfall**
2	1	1	Conduct Handover Meeting(s) from Opportunity Phase	Project Management	Agile,Waterfall
2	1	2	Review Order Form with Customer	Project Management	Agile,Waterfall
2	1	3	Identify Stakeholders, Stakeholders' Requirements and	Project Management	Agile,Waterfall
2	1	4	Set Stakeholder Expectations for Agile Project	Project Management	Agile,Waterfall
2	1	5	Create Project Charter	Project Management	Agile,Waterfall
2	1	6	Create Project Management Plan	Project Management	Agile,Waterfall
2	2		**Establish Project Governance**	**Project Management**	**Agile,Waterfall**
2	2	1	Define Roles and Responsibilities	Project Management	Agile,Waterfall
2	2	2	Define Project Organization	Project Management	Agile,Waterfall
2	2	3	Review Project Management Plan	Project Management	Agile,Waterfall
2	3		**Plan Project**	**Project Management**	**Agile,Waterfall**
2	3	1	Create Scope Statement	Project Management	Agile,Waterfall
2	3	2	Create WBS	Project Management	Agile,Waterfall
2	3	3	Create Project Schedule	Project Management	Agile,Waterfall
2	3	4	Create Budget	Project Management	Agile,Waterfall
2	3	5	Plan Quality	Project Management	Agile,Waterfall
2	3	6	Plan Communications	Project Management	Agile,Waterfall
2	3	7	Plan Risks	Project Management	Agile,Waterfall
2	3	8	Plan Procurement	Project Management	Agile,Waterfall
2	3	9	Plan Stakeholders Management	Project Management	Agile,Waterfall
2	4		**Project Kick-off and On-Boarding**	**Project Management**	**Agile,Waterfall**
2	4	1	Prepare for Kickoff Meeting	Project Management	Agile,Waterfall
2	4	2	Conduct Kick-off Meeting	Project Management	Agile,Waterfall
2	4	3	Prepare Team Onboarding Document	Project Management	Agile,Waterfall

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Links to Resources

TOGAF Standard:
https://pubs.opengroup.org/togaf-standard/

Signavio Process Explorer:
https://url.sap/wyuh7q

SAP Business Accelerator Hub:
https://api.sap.com/

SAP Trust Center:
https://www.sap.com/about/trust-center/cloud-service-status.html

SAP Discovery Center:
https://discovery-center.cloud.sap/index.html

ISA-M:
https://community.sap.com/t5/technology-blogs-by-sap/integration-solution-advisory-methodology-isa-m-define-integration/ba-p/13397214

Exam Preparation

Clean Core for SAP S/4HANA Cloud:
https://learning.sap.com/courses/sap-enterprise-architects

Exam Guide:
https://cdn.training.sap.com/cdn/pdf/P_SAPEA_2023_Exam_Guide.pdf

Schedule your Exam:
https://learning.sap.com/certifications/sap-certified-professional-sap-enterprise-architect

THANKYOU

- Continue reading and understand the learning journey
- Read the case study
  Contact@Renotron.co

June, 2025

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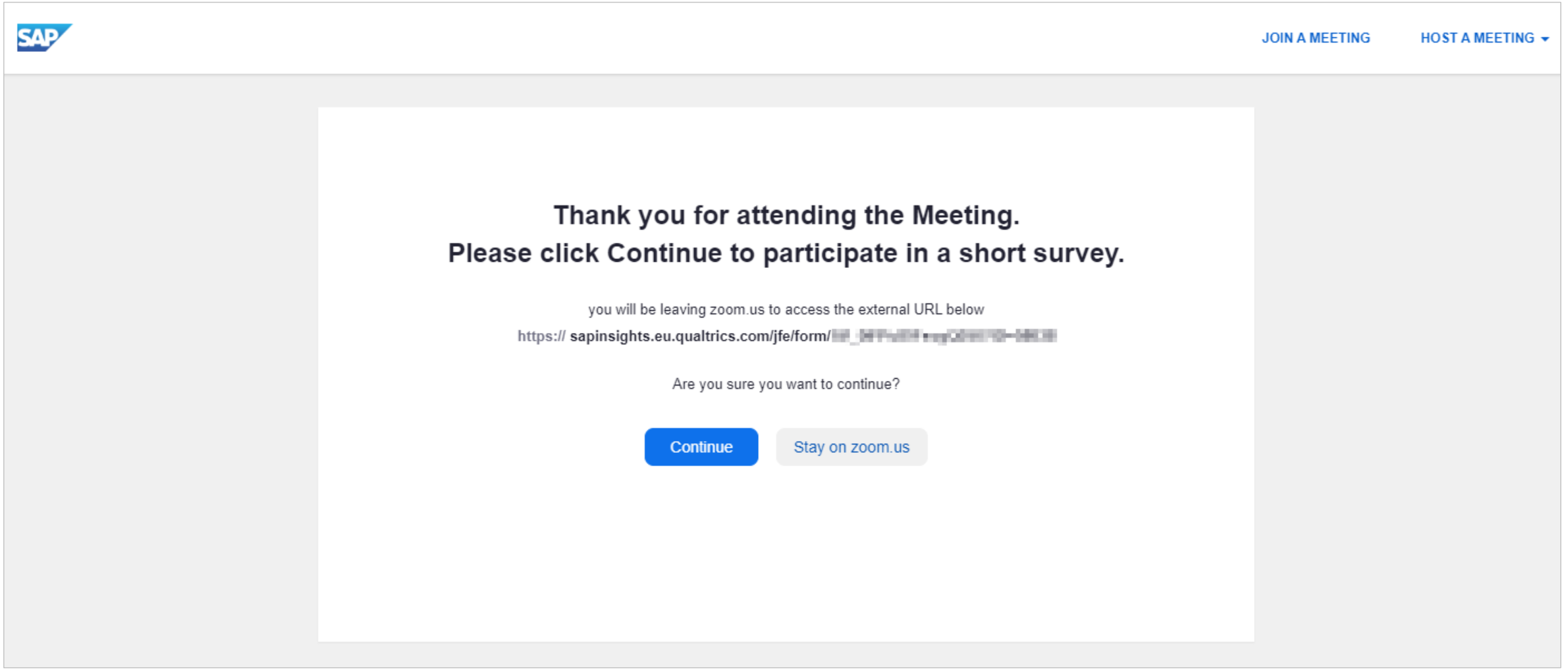

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