Systemic Framework for Enterprise Architecture & Transformation

Agility & System Thinking

Introduction

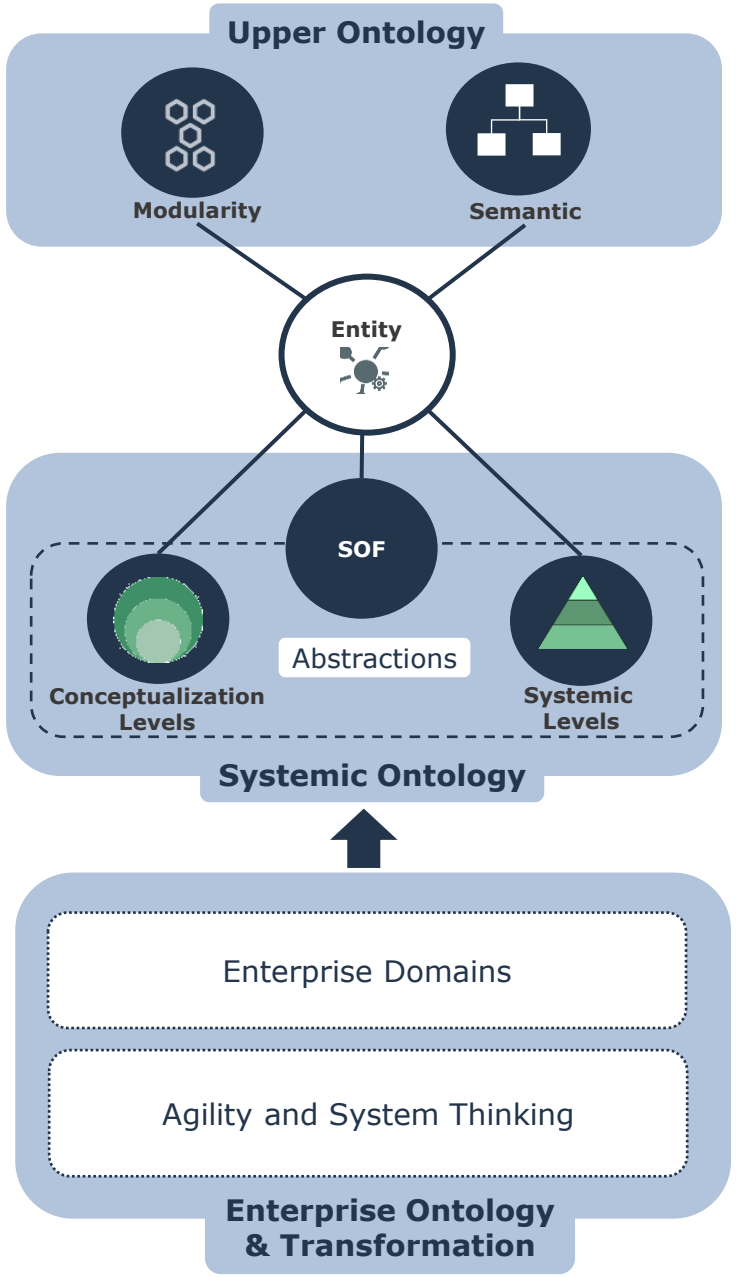
- This document is an integral component of the SysFEAT architectural framework. It provides foundations to address the challenges posed by Enterprise Architecture in the 21st century, which include :
  - Increasing complexity in system structures and behaviors.
  - Growing intricacy in architecture, management and governance of these systems.
  - The mission of the framework is to demystify these complexities, ensuring they are comprehensible to a broad audience, thereby facilitating the design and management of complex-systems across all scales, from micro-systems to enterprise level systems.

- Enterprise Modeling refers to the overarching language and conceptual framework used to describe, understand, and communicate the complex structures and dynamics of an enterprise.
- It integrates both the operating aspects of the enterprise (how it functions and interacts within its ecosystem), the transformational aspects (how it evolves and sustains over time through initiatives, asset management) and how these transformations are governed to ensure effectiveness, efficiency and reliability.

- The following slides present the foundations of enterprise modeling.

Foundations of enterprise modeling

- **Modularity** provides the syntax for building robust, manageable, and scalable architectures, based on the principles of composability and packaging.
- **Semantic** provides robust capabilities for classifying and composing entities, from time-bound entities (individuals) to families of concepts, enabling effective representation of meaning.
- The **Systemic Operating Framework (SOF)** serves as the overarching language that describes why and how a system operates and interacts within its ecosystems.
- **Abstractions** organizes systems and concepts in degree of abstractions, including systemic levels and conceptualization levels.
- **Enterprise Domains** formalize the various disciplines that make-up EA, ranging from enterprise road-mapping to System ArcDevOps.
- **Agility and System Thinking** ensure that the enterprise evolves and sustains over time through governed initiatives, architected for flexibility and responsiveness in complex and dynamic business environments.

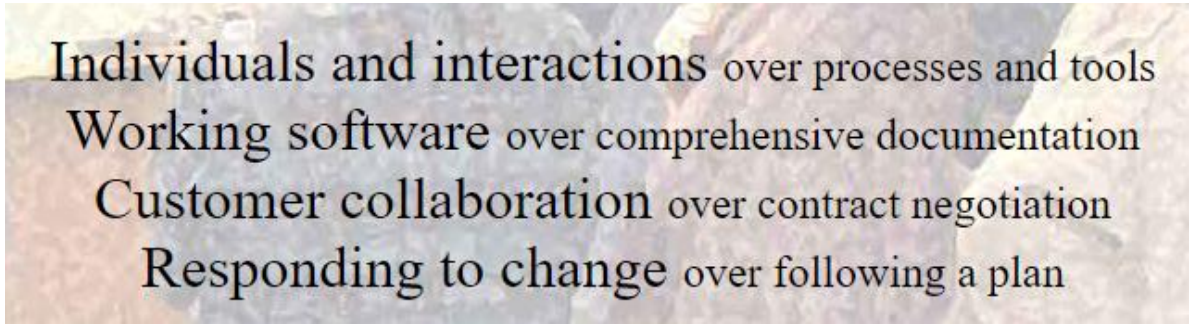


Agility & Enterprise

What is at stake?

What’s at stake?

- Agile @Scale is well positioned to address the Digital Space
  - Management framework, such as SAFe, have gained large adoption when it comes to
  - The agile manifesto has reset the priorities toward people and management concerns



- However … just adopting Agile@Scale processes does not make the enterprise agile nor does it help in describing a scalable and modular architecture

Digital-agile transformation Challenges

- The Digital-agile transformation too often neglects the cultural and architecture dimensions

- Cultural and Management challenges:
  - From task-based to responsibility-based
    - Program/project management versus autonomous & accountable teams
    - Critical path method versus architecturally driven integrating events
  - From sequential to concurrent
    - Multifunctional teams ideate, develop and communicate sets of solutions in parallel

- Architectural challenges:
  - From a requirement centric view to and outside-in view of value creation.
    - Customer centricity & outcome centricity
  - From tightly coupled to loosely coupled systems
  - From integrated systems to platform-based architectures

Issue with traditional program structure

Many organizational entities involved in many streams with unclear boundary, responsibility and accountability

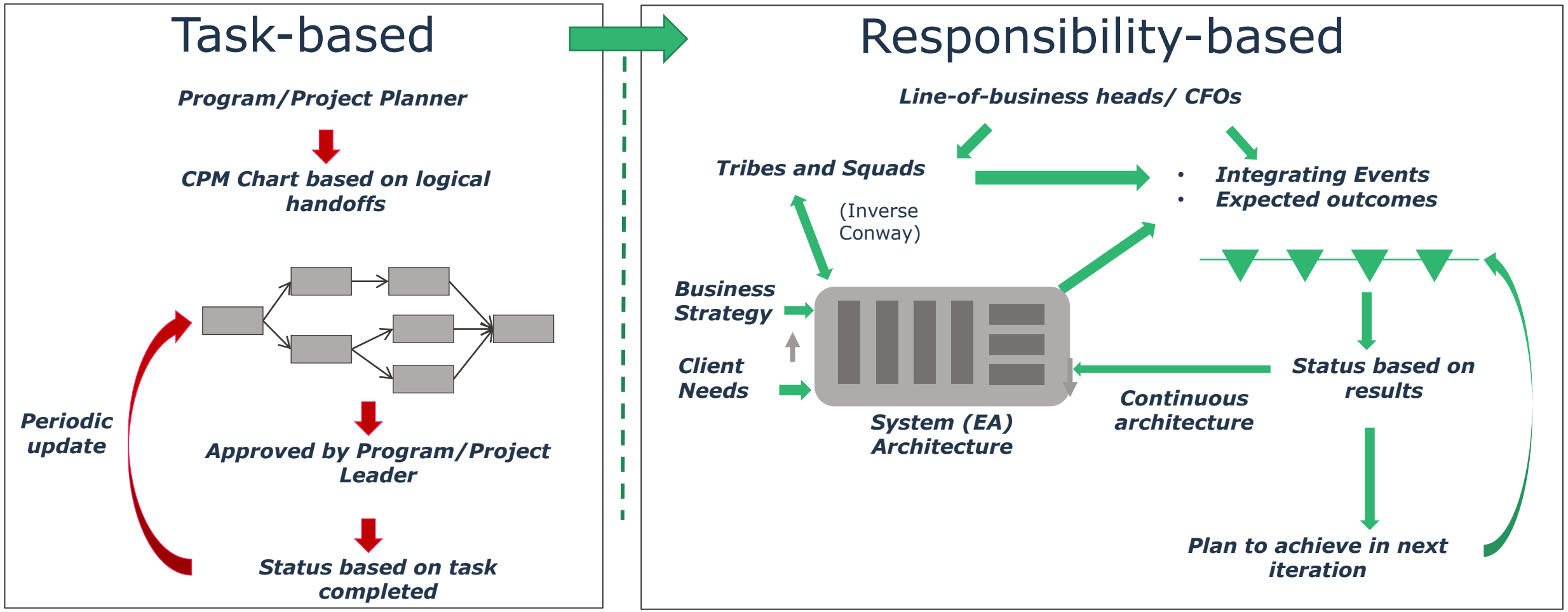
- Sub-optimal ways of working
  - Too many hands-off, Waterfall method,
  - Split between Business & IT

  => linking requirements to expected outcomes is difficult
  - Consumes too much scarce and expensive resources

- Complex and long decision-making process
  - Many committees requiring too much management attention
  - Anticipating operational impacts of capital decisions is difficult
  - Quality of decisions sometimes questionable

The rise of Lean Management best practices

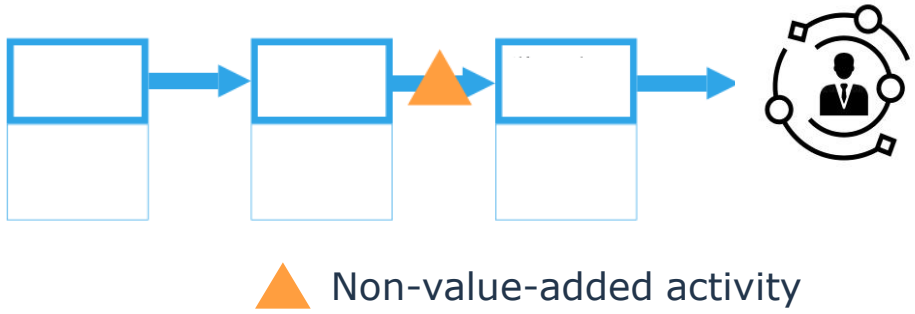
- Lean practices have shifted the focus from task-based management to responsibility-based management …. but …



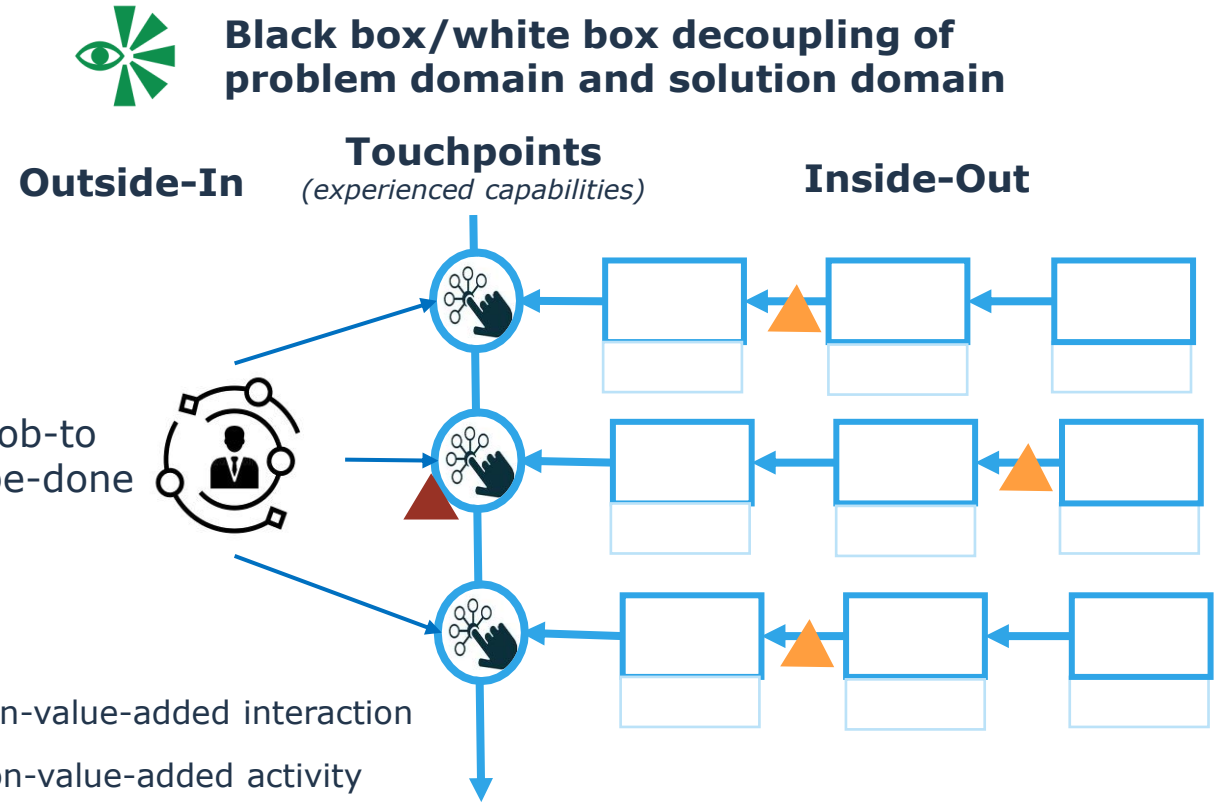
Issue with Lean Practices and Architecture

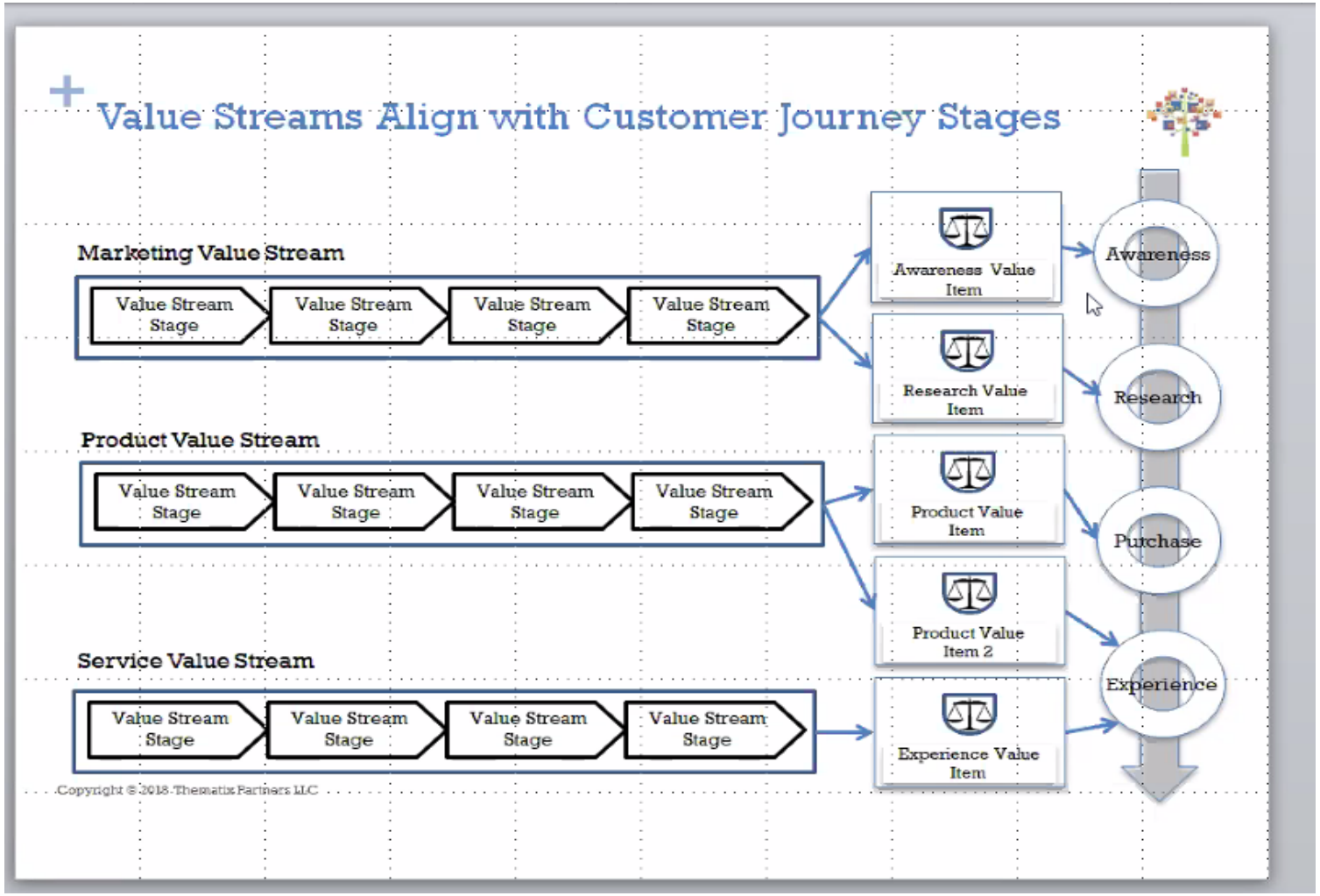
- Many Lean practices tend to focus on « efficiency » using Value Stream Mapping (VSM).
- While VSM also intends to address « effectiveness », it is orphaned from an outside-in perspective where value is determined from a job-to-be done perspective at touch points. "Value" is not a "flow" but a fitness between production (result) and usage (utility) at customer touch points.
- The "flow of value" promoted by some interpretations of VSM (including in Team Topologies) prevents from decoupling the following aspects:
  - Offered capabilities at touch points (value propositions),
  - Use of these capabilities in customer context (effectiveness for job-to-be-done)
  - Efficiency of capability delivery.

Mixed inside-out and outside-in value analysis: The focus is on efficiency



Black box/white box decoupling of problem domain and solution domain




Value Streams Align with Customer Journey Stages
Marketing Value Stream
Value Stream Stage
Value Stream Stage
Value Stream Stage
Value Stream Stage
Product Value Stream
Value Stream Stage
Value Stream Stage
Value Stream Stage
Value Stream Stage
Service Value Stream
Value Stream Stage
Value Stream Stage
Value Stream Stage
Value Stream Stage
Awareness Value Item
Research Value Item
Product Value Item
Product Value Item 2
Experience Value Item
Awareness
Research
Purchase
Experience
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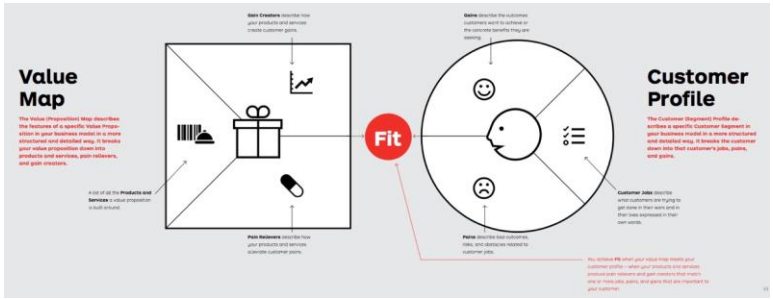
What techniques for EA practitioners?



- What tools should you use among :
  - Customer Value Maps,
  - Business Model Canvas,
  - Value Stream Mapping, Customer Journey
  - Capability Driven, Domain Driven Design, Cloud Native Computing
  - Epics, User Stories, Feature Backlog ???

- … to build Minimum Viable Products (MVP), … to build modular, scalable systems.

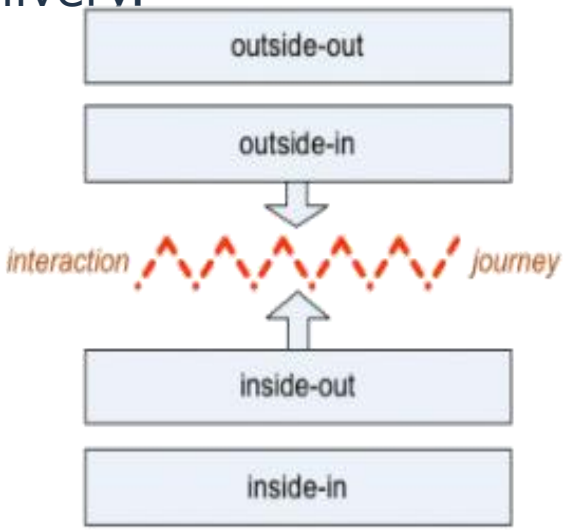
- Architects are struggling to understand how architecture fits into the picture.
  - The answer is often: small chunk of architecture versus big chunk of architecture ….
  - MVAs as been proposed as a mirror to MVP. But MVA is a myth: “viable” apply only to real system/service provision been deployed and experienced. Architecture is an abstraction; it cannot be experienced by itself.

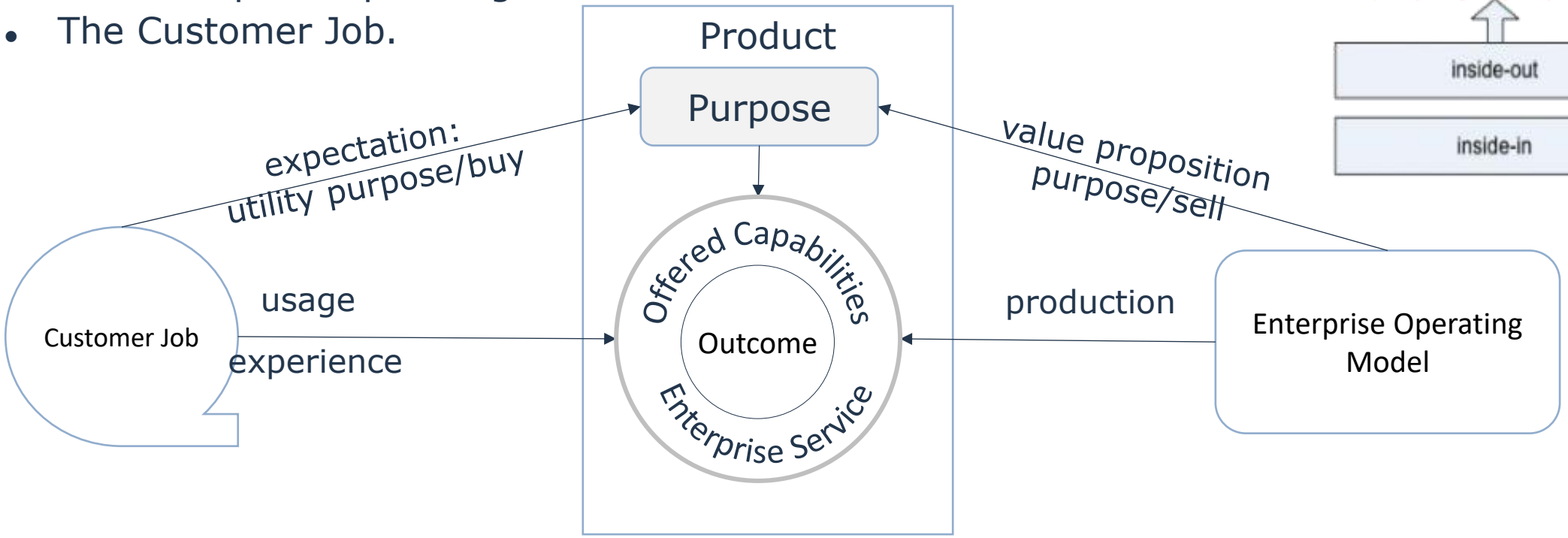
Scale@agile issues

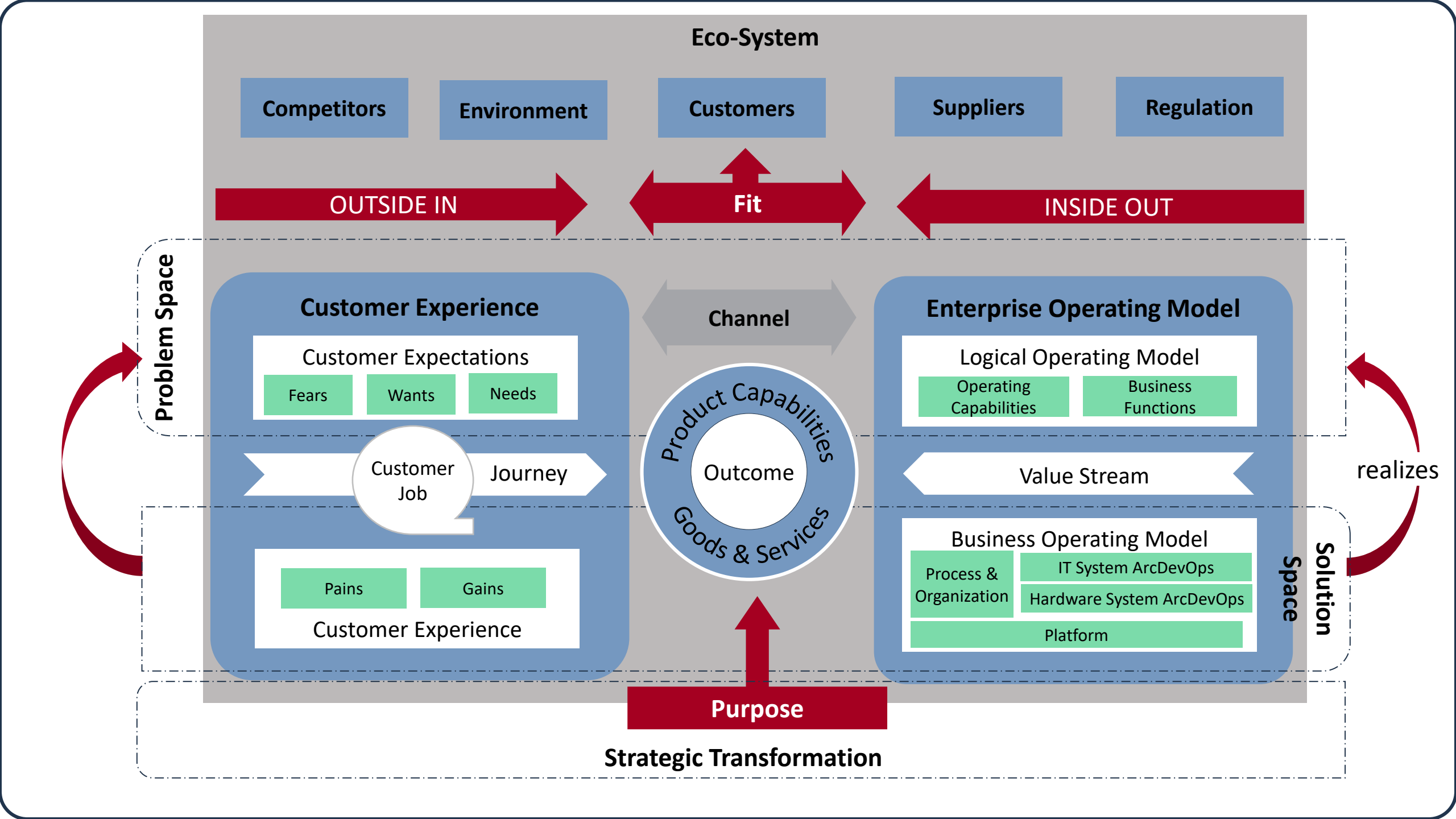
- There is a lack of definition for the core concept of product.
- The is a lack of understanding the capability-based approaches to define requirements and their fulfillment over time.
- There is a lack of understanding of the various aspect of modularity. In particular the core concept of “interface” is lacking a proper formalization.
- The is a lack of understanding of levels of conceptualization used in system architecting and how each level participate to the various design phases of a system.
- There is a lack of understanding of systemic levels and how they affect the “scale” aspect of agility.

Product & Customer

- Goods & Services are at the connection of three dimensions:
  - A joint finality (raison d'être) manifested by an outcome and its delivery.
  - A production of the outcome and its delivery
  - A usage of the outcome through its delivery.
- Product needs to be understood from two perspectives
  - The Enterprise Operating Model
  - The Customer Job.



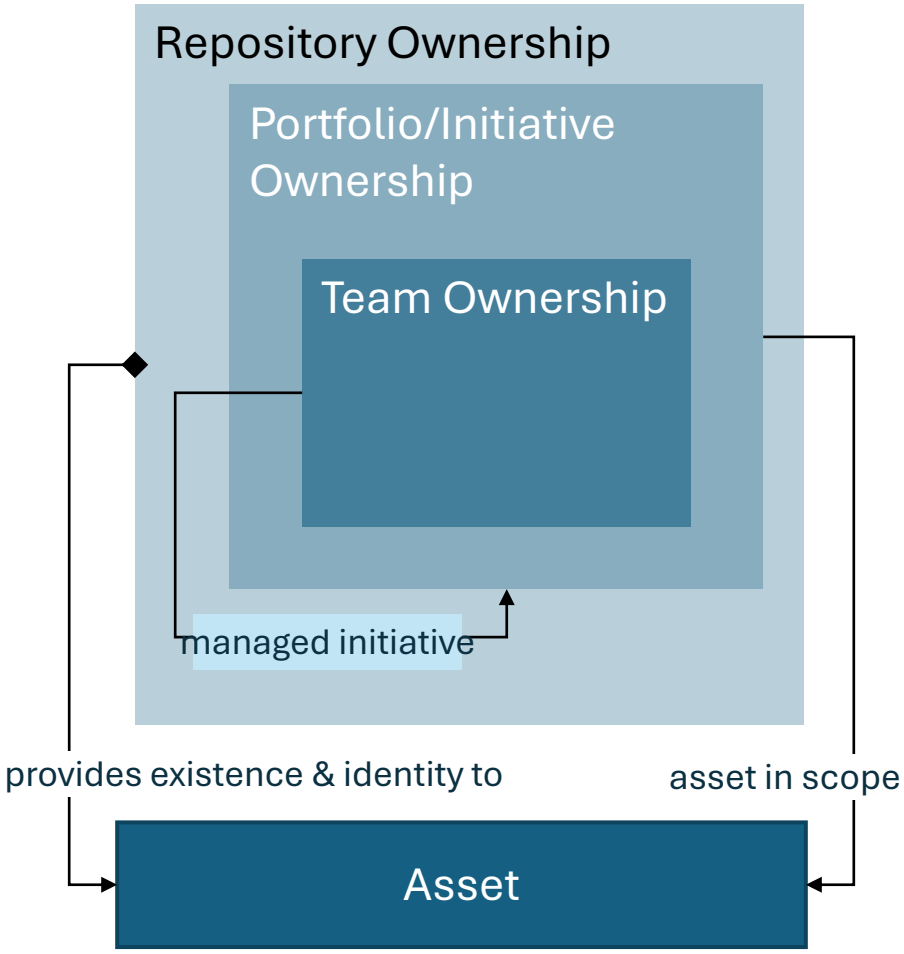



Eco-System
Competitors
Environment
Customers
Suppliers
Regulation
OUTSIDE IN
Fit
INSIDE OUT
Problem Space
Customer Experience
Customer Expectations
Fears
Wants
Needs
Customer Job
Journey
Pains
Gains
Customer Experience
Channel
Product Capabilities
Outcome
Goods & Services
Enterprise Operating Model
Logical Operating Model
Operating Capabilities
Business Functions
Value Stream
Business Operating Model
Process & Organization
IT System ArcDevOps
Hardware System ArcDevOps
Platform
Solution Space
realizes
Purpose
Strategic Transformation

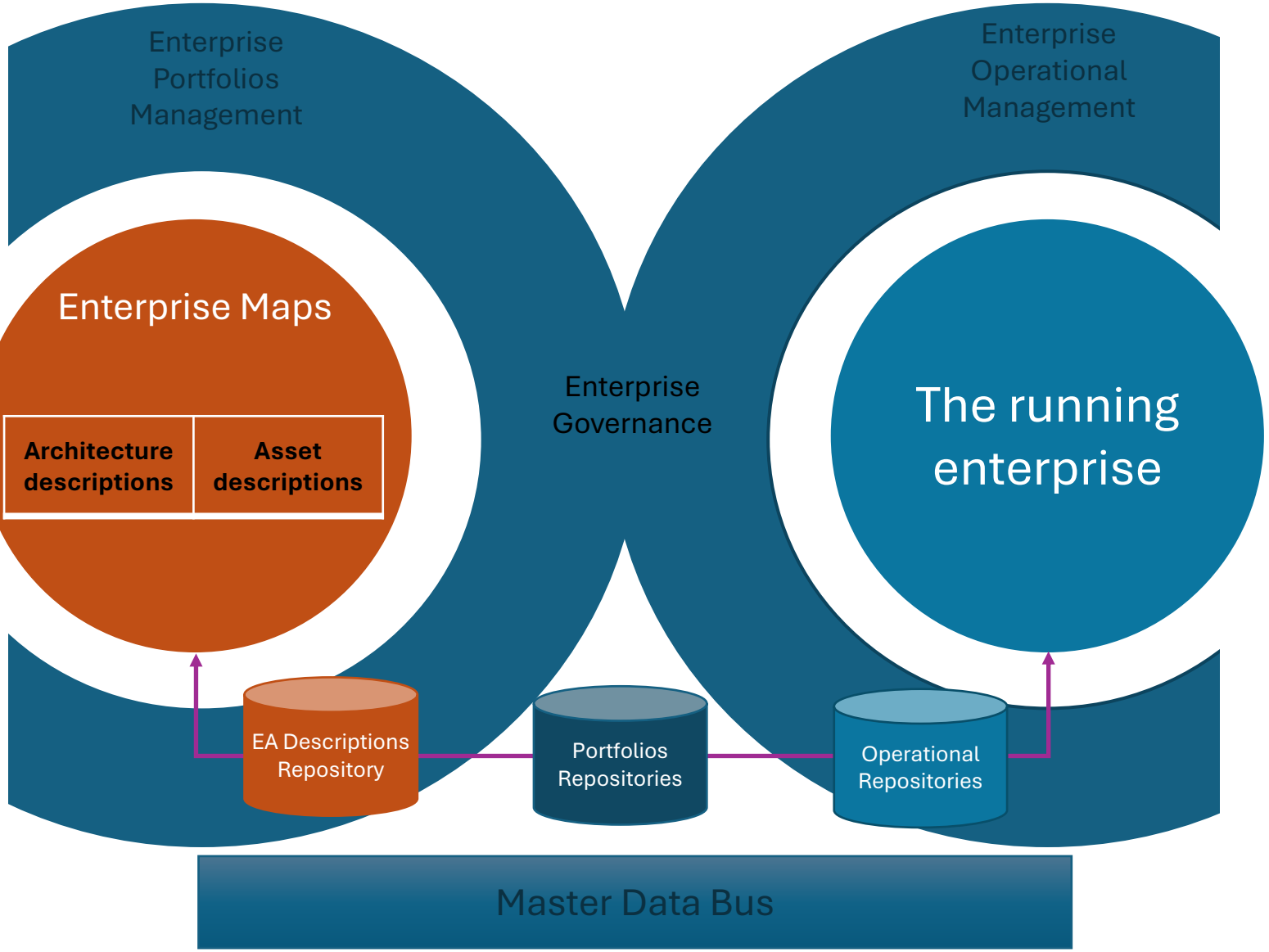
Appendixes

Principles - Ownerships

- Context is organized according to building block ownership, which is divided in three levels:
  - Repository ownership : Enterprise, Libraries
    - Provide *identity* to repository assets.
    - Provide module management of repository assets.
    - Main functions: module import/export, namespaces.
  - Portfolio Ownership : Functional perimeter
    - Ensure purpose-oriented perimeter of building blocks.
    - Main functions: define mission and asset objectives.
  - Team Ownership – Responsibility perimeter
    - Oversee development, maintenance and transformation of managed assets.
    - Main functions: decision making, quality assessment, transformation planning, incident management, ….



EA Contribution to Enterprise Activities



Dimensions of Enterprise Architecting & Change #2

- Enterprise Descriptions provide an understanding of the Enterprise:
  - Its purposes,
  - Its operating models,
  - Its resources
- Management portfolios provides:
  - Purpose of change: Its roadmaps (future goals and objectives).
  - Subject of change
- Governance bodies provide:
  - Teams & responsibilities,
  - instruments to support decision making,
  - Instruments to capture change events and to measure progress.
- All this overtime