Systemic Framework for Enterprise Architecture & Transformation

EA GRID

Introduction

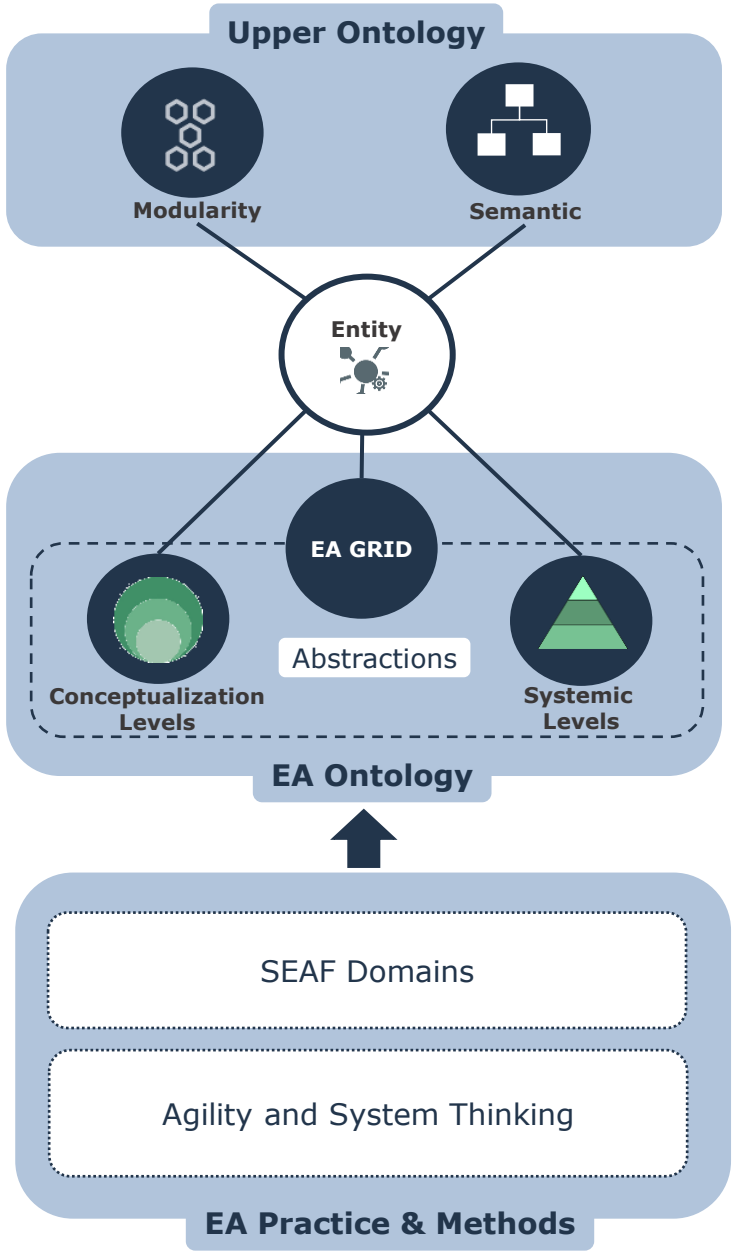
- This document is an integral component of the SysFEAT architectural framework. It provides foundations to address the challenges posed by Enterprise Architecture in the 21st century, which include :
  - Increasing complexity in system structures and behaviors.
  - Growing intricacy in architecture, 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

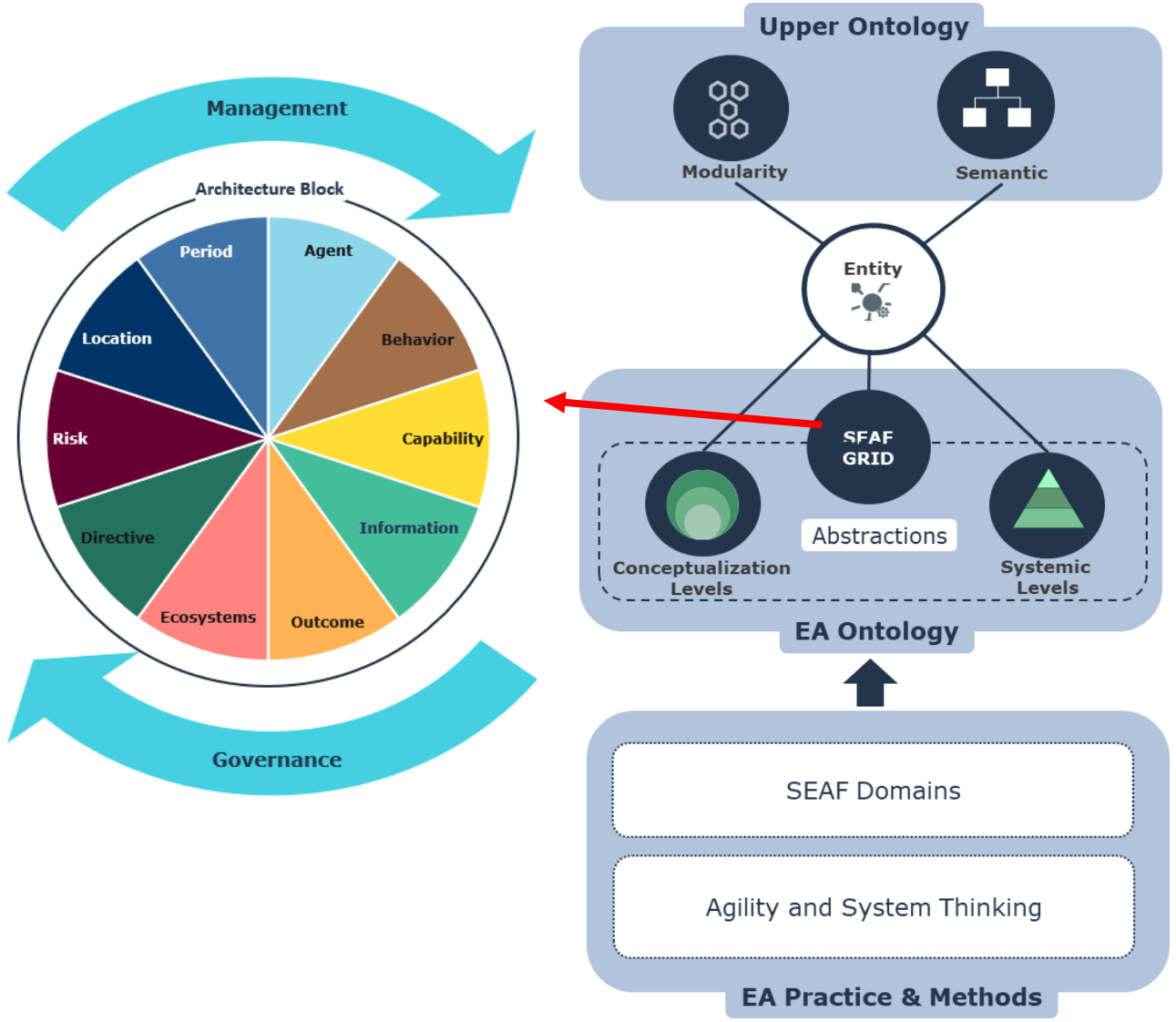
- **Modularity** provides the syntax for building robust, manageable, and scalable architectures, based on the principles of composability and packaging.
- **Semantic** provides robust capabilities for classifying and composing entities, from time-bound entities (individuals) to families of concepts, enabling effective representation of meaning.
- The **EA GRID** 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.
- **EA 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.



The SEAF GRID in the Architecture Framework landscape

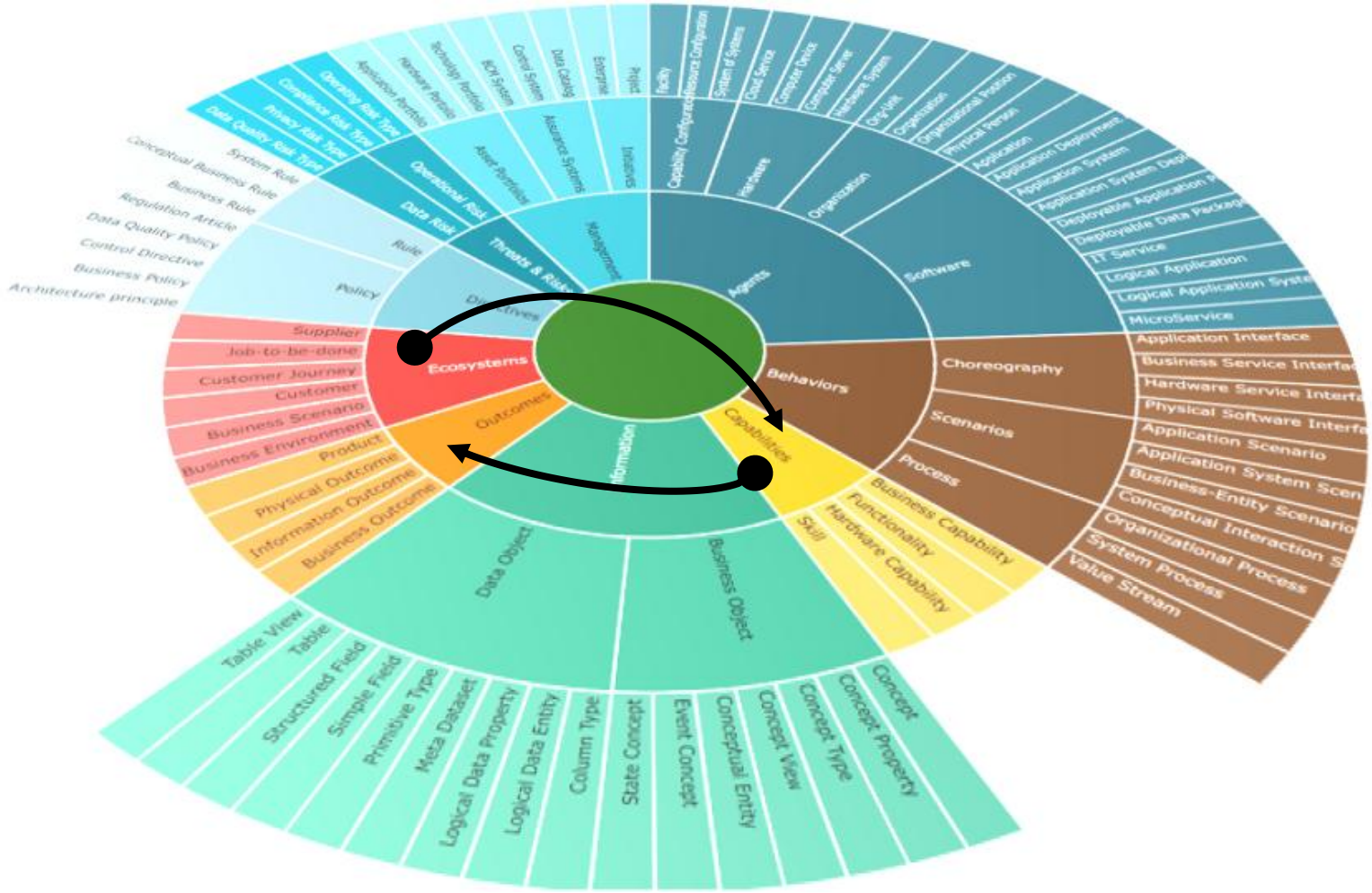
- The SEAF GRID provides a description of the Operating Semantic of the architecture framework,
  - *from Capability fulfilled by Agents who act and interact (Behavior) in their Operating Eco-Systems to produce Outcomes that benefit (value) to other Agents.*

- A complementary GRID (EA GRID - Technology Concepts) provides a classification of Technology Assets that facilitate Business Assets in their production/consumption of Business Outcomes.



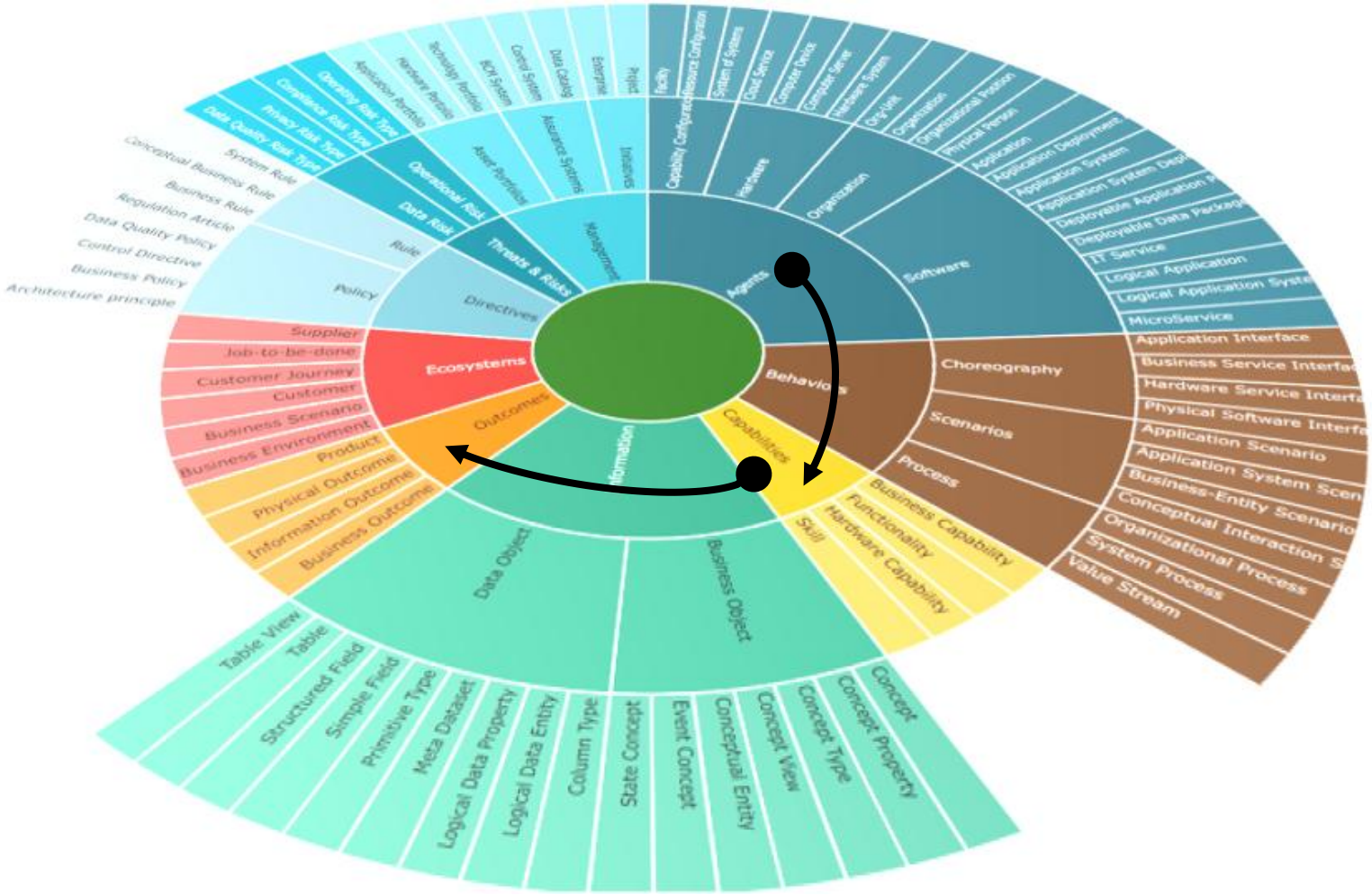
For a given Eco-system, Outcomes are results delivered by a provider that meets a consumer's needs (job-to-be-done).

Capabilities are the provider's abilities to generate those Outcomes.



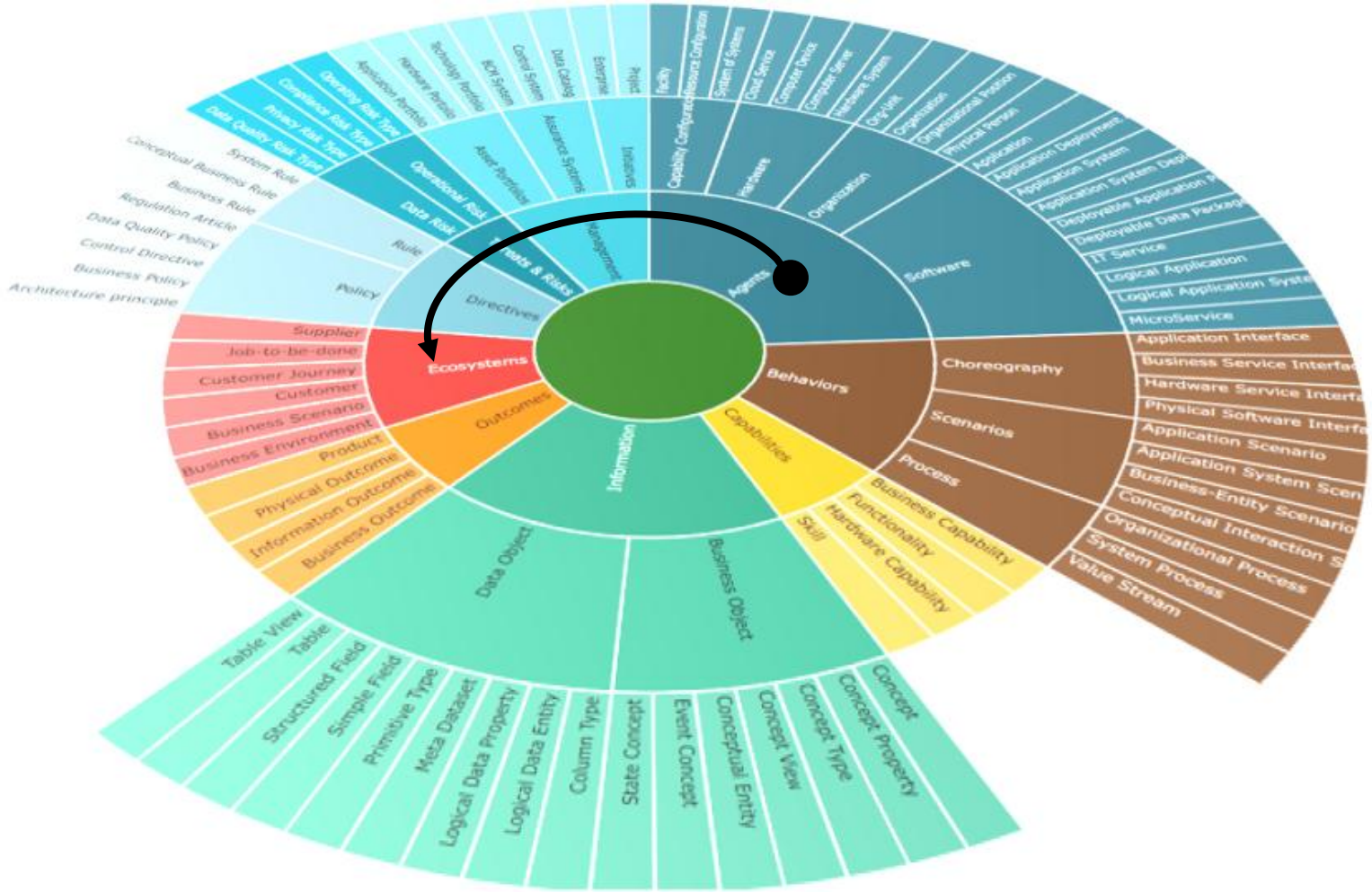
Agents fulfill Capabilities

Thereby, they commit to produce Outcomes



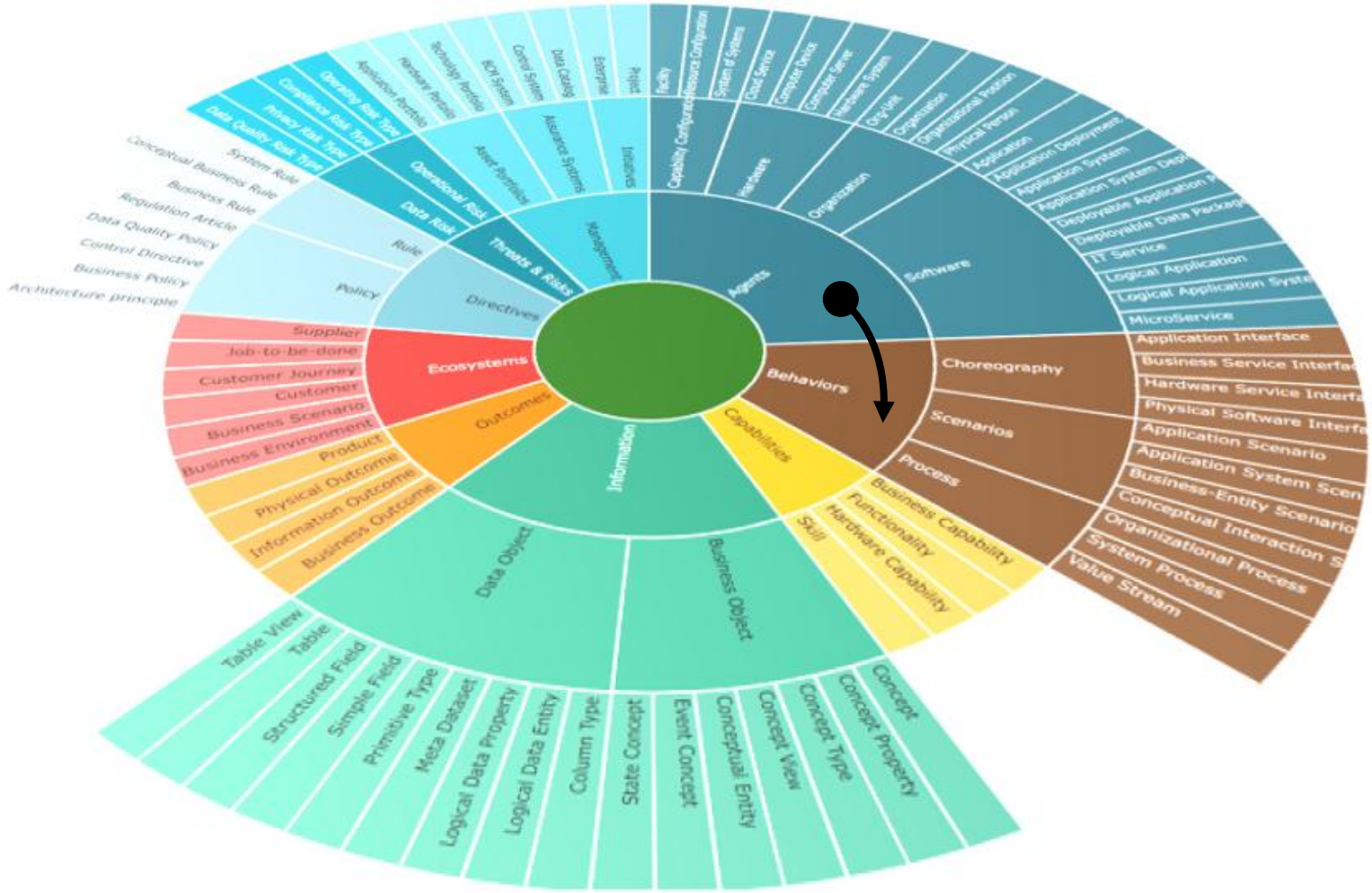
Agents interact and act in Eco-systems

- Ecosystems define how Outcomes are co-produced with Partners.
- Ecosystems define Conditions under which Outcomes are co-produced.



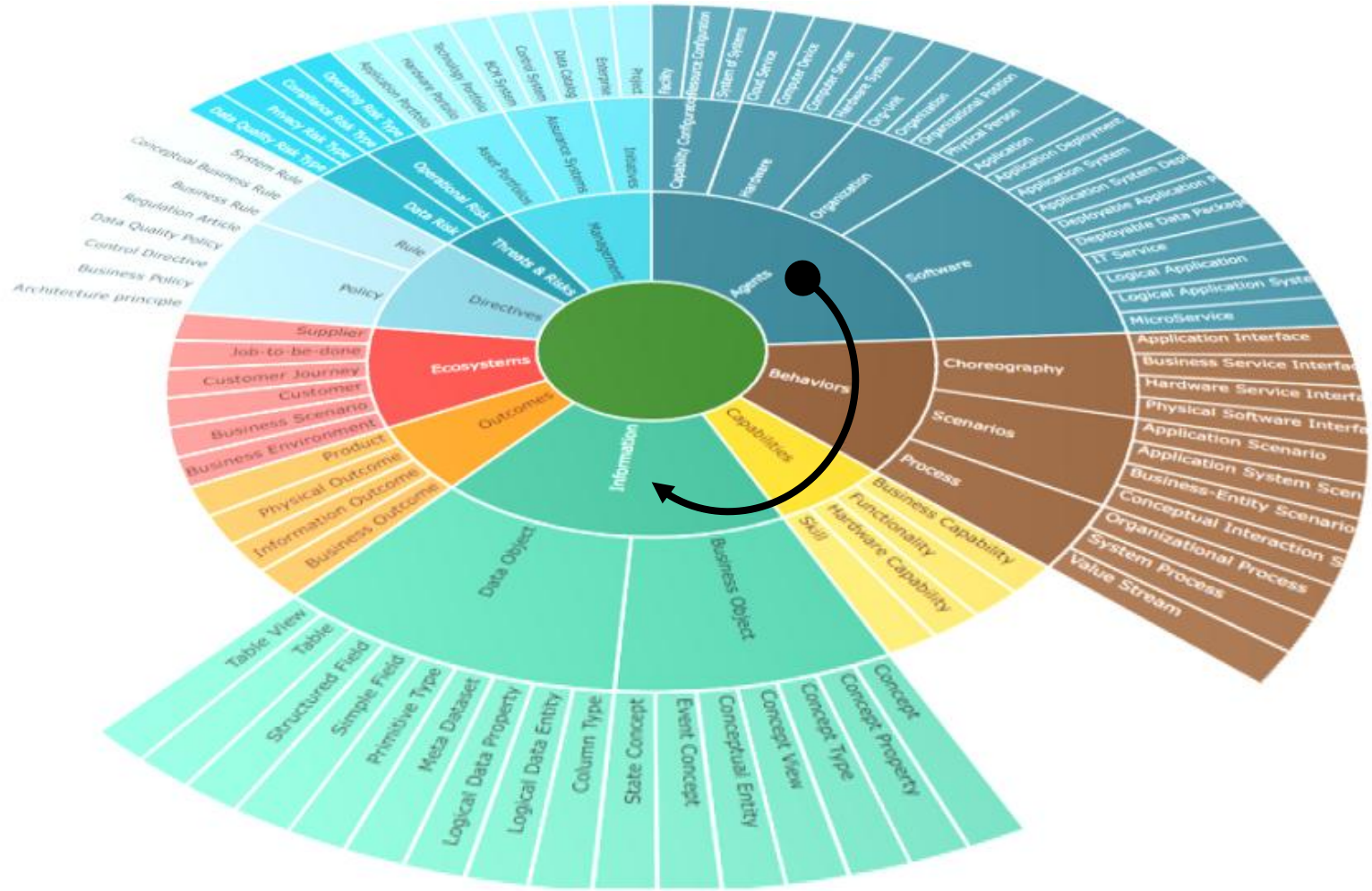
To fulfill Capabilities and produce Outcomes, Agents have behaviors:

- They act: they participate to processes.
- They interact: they participate to exchanges.



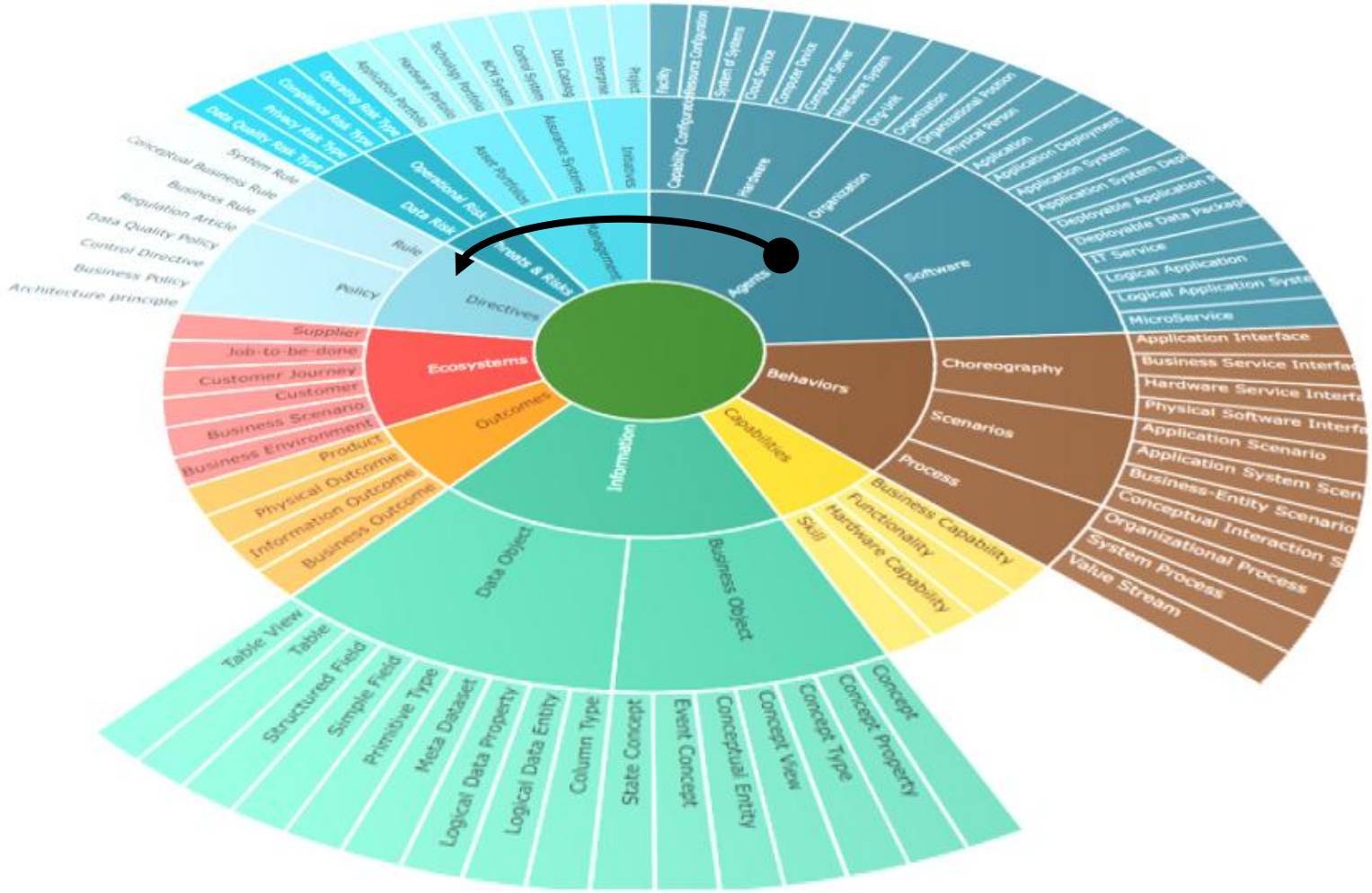
To operate and make decisions, Agents have memory.

They produce and store Information.



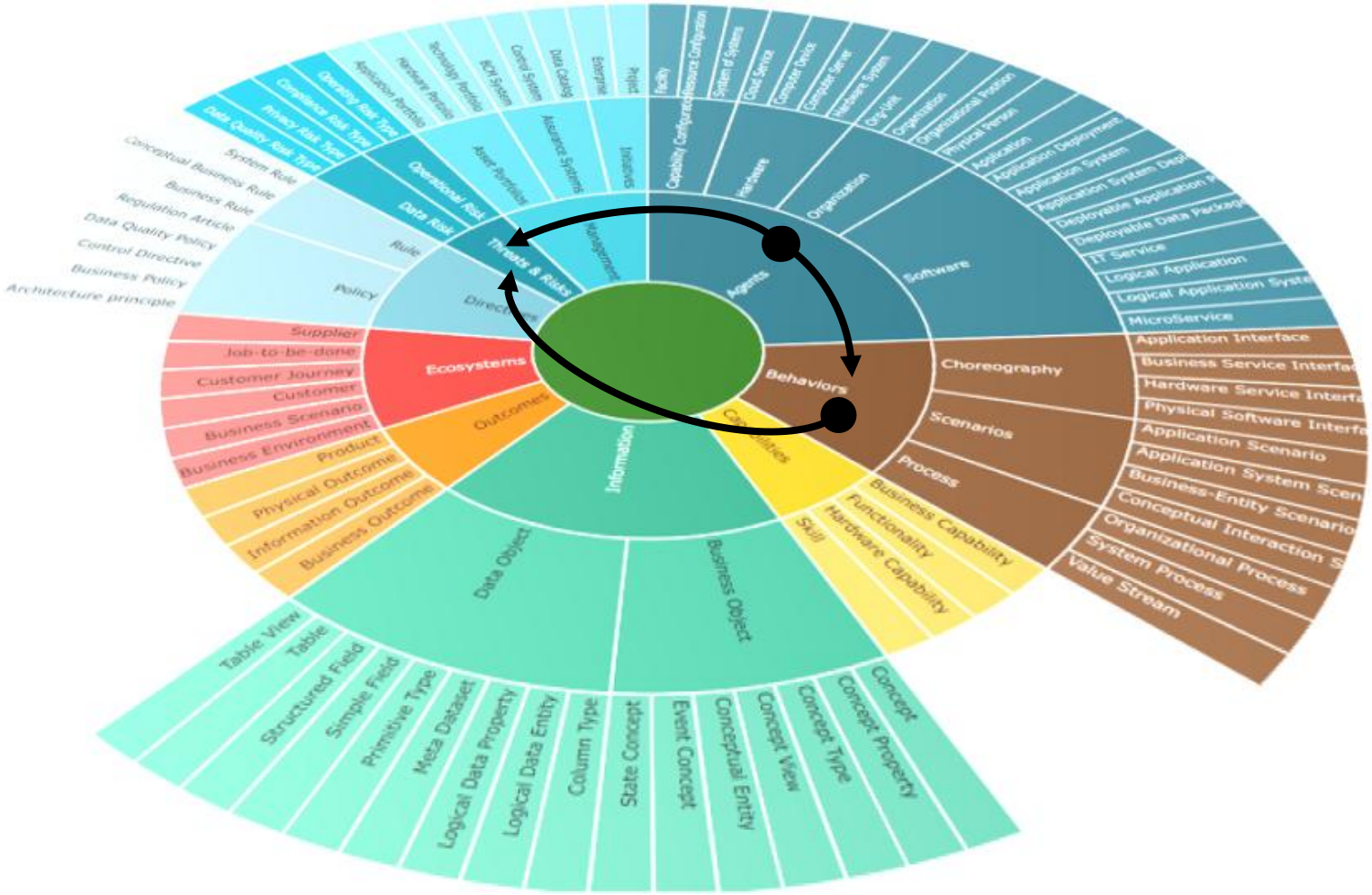
Agent structure and behaviors are constrained by directives.

- Directives indicate what **should** or **should not** be done.
- Directives can be internal policies, regulations (Law) or architecture principles.



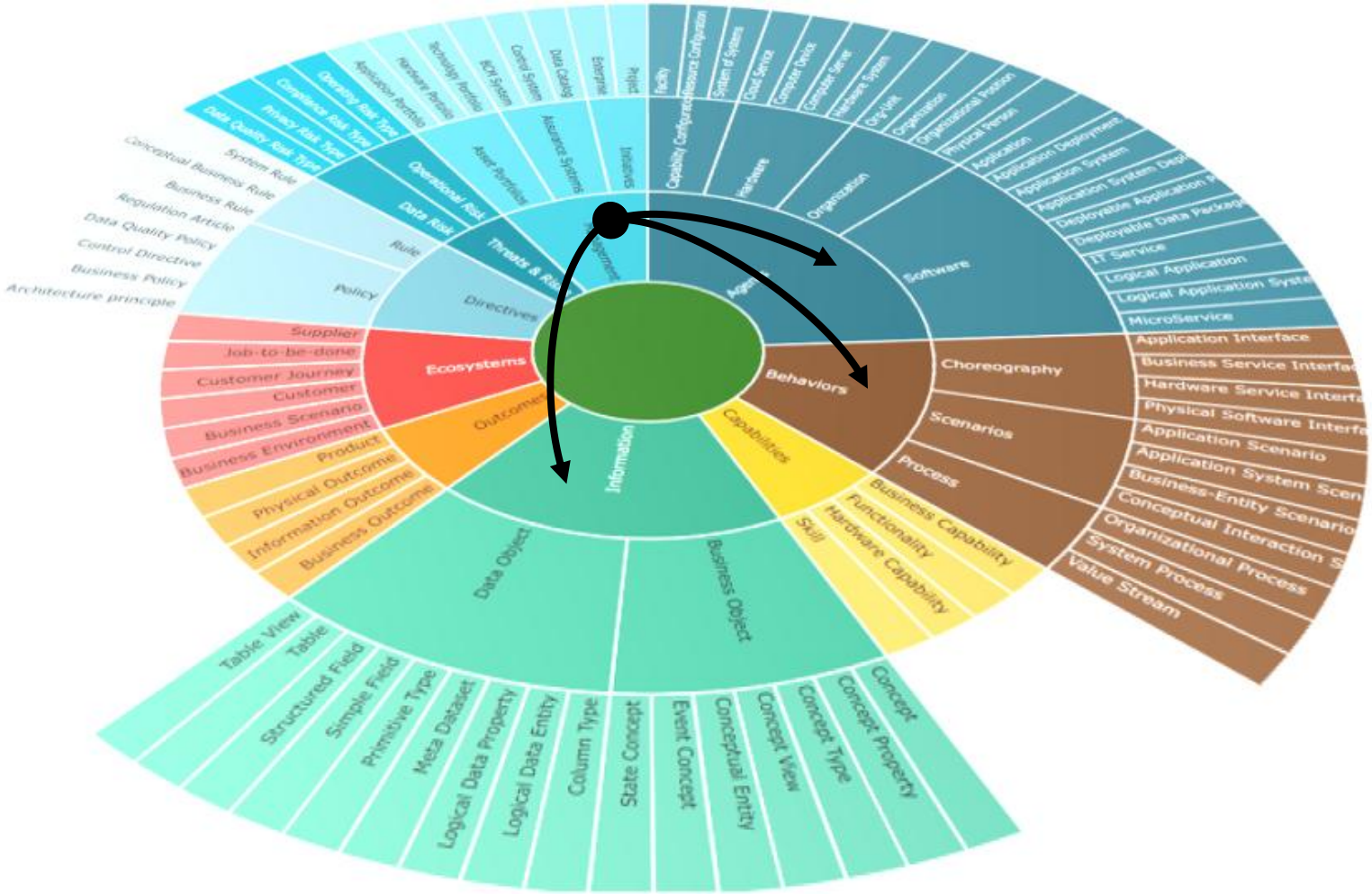
Agents and their behaviors are subject to Risks.

- They are exposed to Threats
- They can exhibit operational Failures
- Controls ensure that associated risks can be mitigated



Agents, their behaviors and their data are managed and governed.

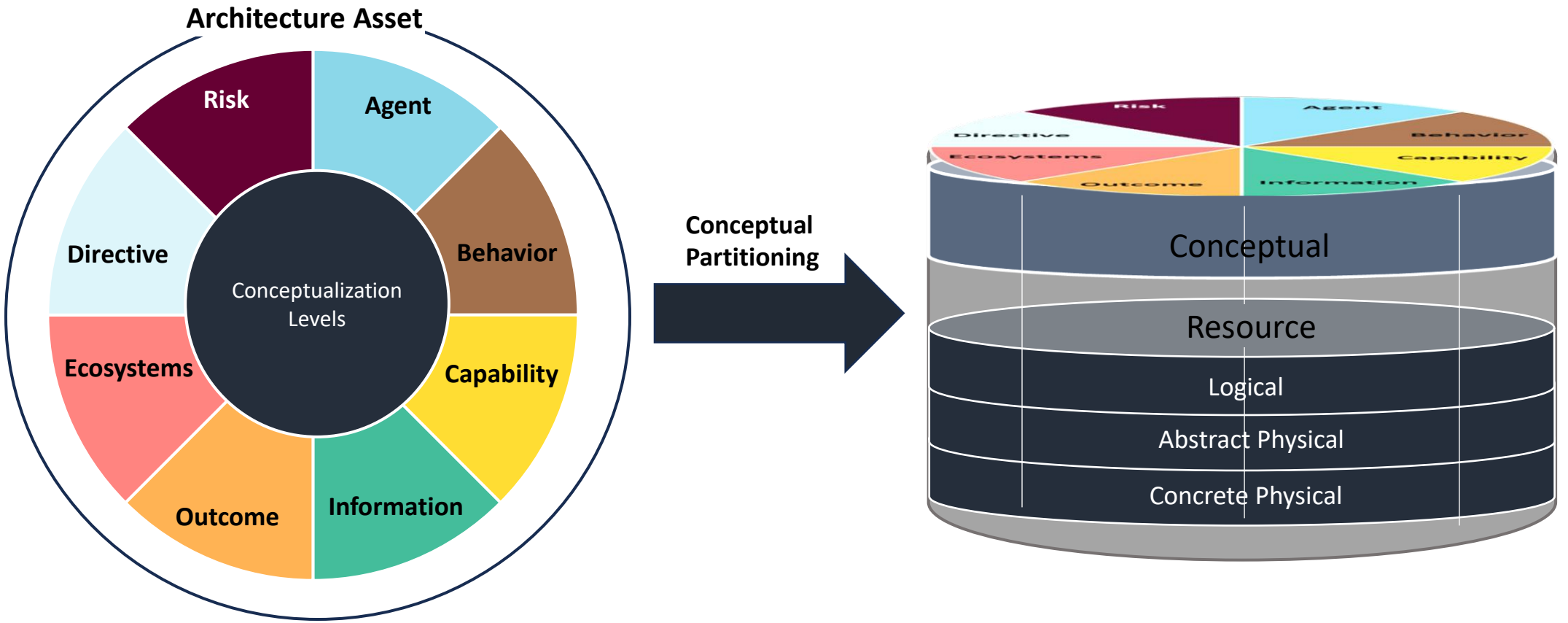
- Management provides transformation and assurance objectives.
  - Transformation is about continuous improvement of effectiveness (value at cost).
  - Assurance is about continuous improvement of resilience.
- Governance ensures that these objectives are understood and fulfilled.



Architecture Stack – Conceptual levels

The Operating Semantic is delineated according to the different levels of conceptualization chosen for the study of the Enterprise.

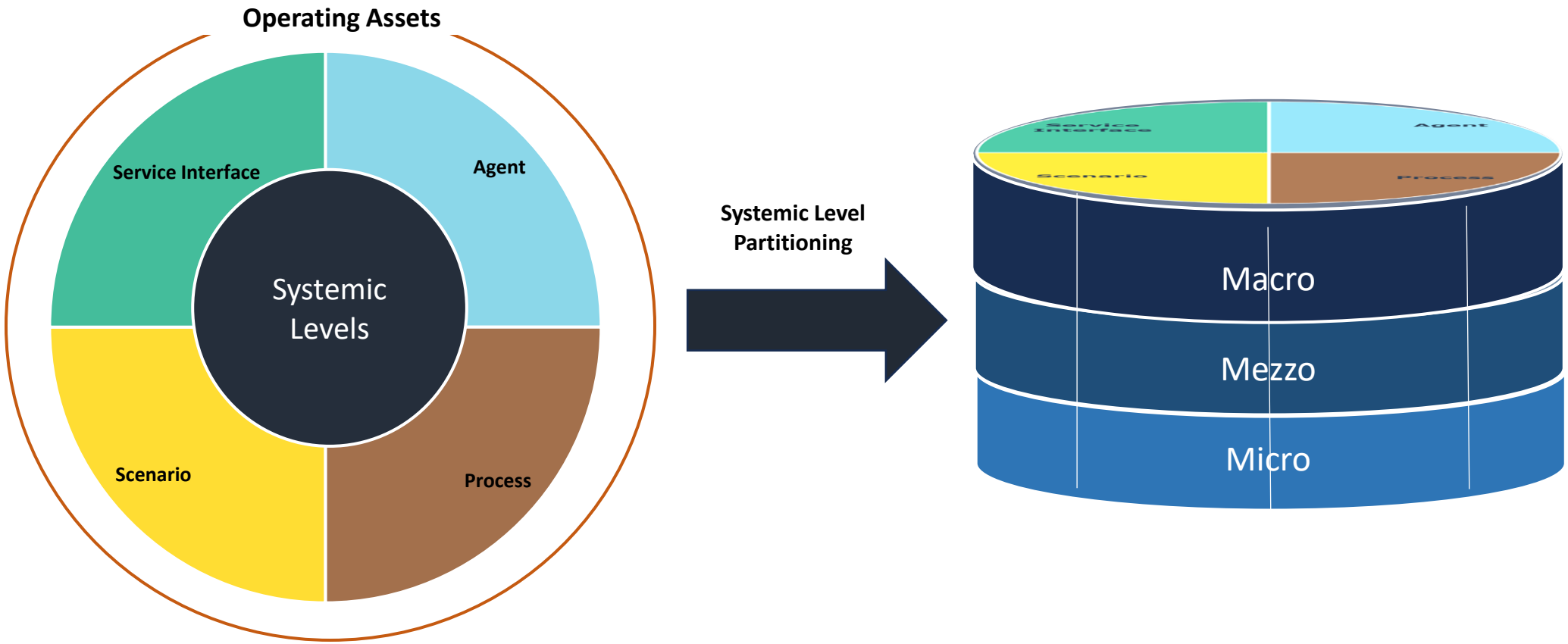
See Conceptualization Levels.



Architecture Stack – Systemic levels

The Operating Assets of the Operating Semantic are configured according to the different levels of granularity chosen for the study and transformation of the Enterprise.

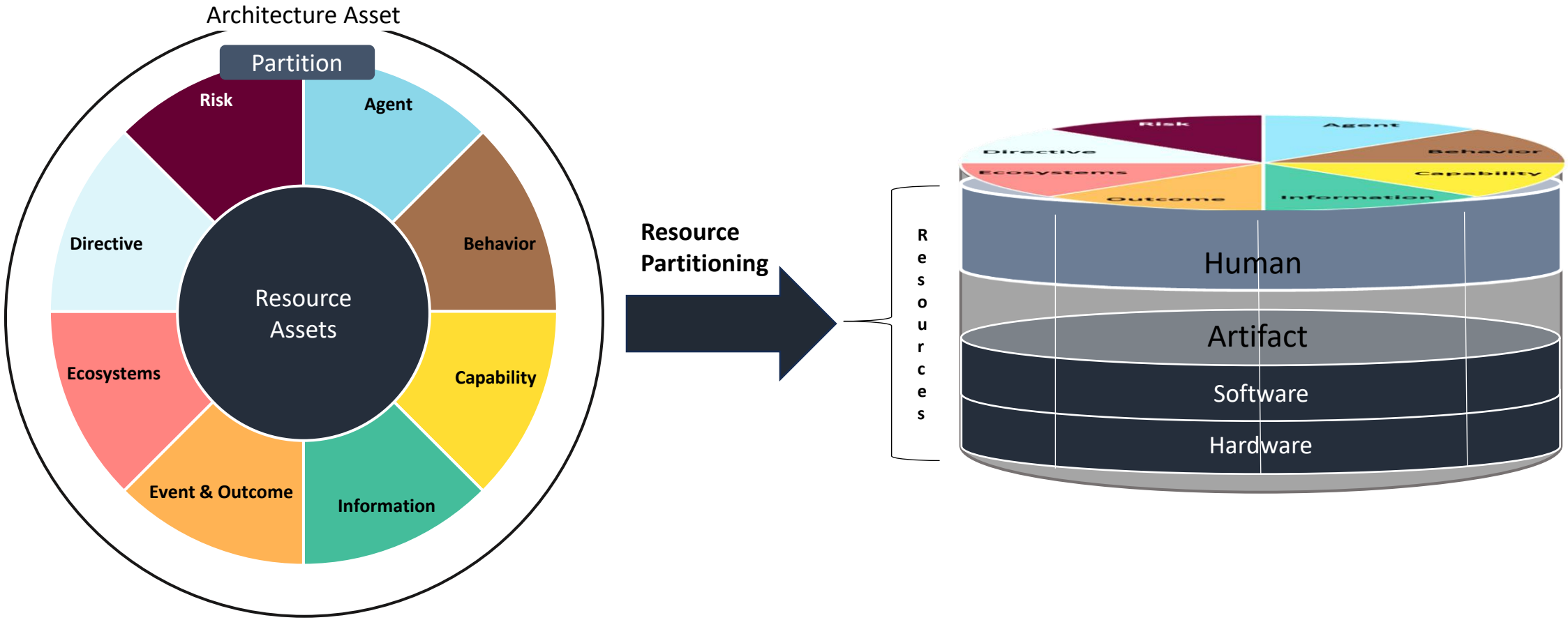
See Systemic Levels.



Architecture Stack – Resource Types

At the resource level, the Operating Semantic is specialized according to the functional division of duties, between human and artifacts, and then between software and hardware.

See Business Operations and Business Arc-Dev-Ops



Architecture Stack – Functional Contribution

Functional Contribution categorizes Functional Assets in two groups:

- Business Assets that directly contribute to the production/consumption of Business Outcomes.
- Technology Assets that facilitate this by the production/consumption of enabling Technology Outcomes.