The Business Architecture Metamodel Guide V3.0

Defining a business architecture knowledgebase founded on formal design principles with extensions to align with related disciplines

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1. ABSTRACT

Organizations are faced with a myriad of threats to manage, weaknesses to improve, strengths to leverage, and opportunities to pursue. As organizations seek to execute strategies to address these issues, they encounter a common obstacle: an inability to act in a coordinated fashion across multiple business units and levels of management in pursuit of a shared goal.

Addressing this challenge involves defining and executing coordinated cross-business strategies based on clearly defined goals that scale across teams, projects, business units, and partners. This whitepaper provides a guide for organizations seeking to formalize and scale business architecture as a basis for executing complex strategies, performing root cause analysis, responding to business challenges, and delivering more effective solutions in less time and for less money. Further, it formalizes and expands upon the concept of the business architecture knowledgebase, which allows organizations to establish multidimensional views of what it does and how it delivers value to customers and related stakeholders.

For a business architecture knowledgebase to enable the representation of an organization and to scale effectively, it must be structured around a formally defined "metamodel". A metamodel is defined as an "abstract syntax of a class of models". Readers new to the metamodel concept can think of it as a model that describes a model, one that is used to turn abstract concepts into something concrete (within a specific context). In this sense, a metamodel-enabling implementation of a business architecture knowledgebase sets out the rules for how to define "things" that exist within a business.

This whitepaper discusses how to begin modeling an organization using a business architecture knowledgebase, but without having to know the finer details underlying the associated metamodel. The resulting business architecture knowledgebase can help an organization create a foundation for decoupling and clarifying entangled terms and concepts that can otherwise overwhelm planning, design, operations management, program management, and technology deployment. These clarified perspectives will contribute to more clear-minded analysis, business planning, and strategy execution.

The Business Architecture Guild®, in conjunction with other entities, has been working with the Object Management Group (an international standards organization) over the last few years to develop a cross-industry, standardized business architecture metamodel called the Business Architecture Core Metamodel (BACM).[1] The Guild Business Architecture metamodel described in this whitepaper aligns and conforms with the BACM but is more practitioner-friendly. The intent is to provide business architecture practitioners and infrastructure support teams with a basis for associating different business architecture domains with related disciplines in support of strategic execution, operating model optimization, program management, and IT architecture (for example). This version of the whitepaper formalizes associations to three interrelated disciplines: customer journey mapping; requirements management; and business process management. Future versions will explore additional interdisciplinary perspectives.

Readers will also benefit from studying the underlying concepts and principles behind business architecture, which can be found in *A Guide to the Business Architecture Body of Knowledge®* ("*BIZBOK® Guide*").[2] This whitepaper is not meant to replace or eliminate the need for the *BIZBOK® Guide*.

2. INTRODUCTION

Modeling is an ancient technique supporting the act of analysis. In the 20th century, analytical philosophers came to understand the term analysis to mean "the decomposition of something into its constituents."[3] In that sense, modelers take something from the real world and represent it with a symbol. However, this seemingly simple act quickly becomes complicated when referring to an abstract concept such as a business. This is because it is rare for two individuals to share the same mental picture or meaning of a term. Figure 1, as an example, depicts how even the symbol of an apple can trigger two very different mental abstractions.

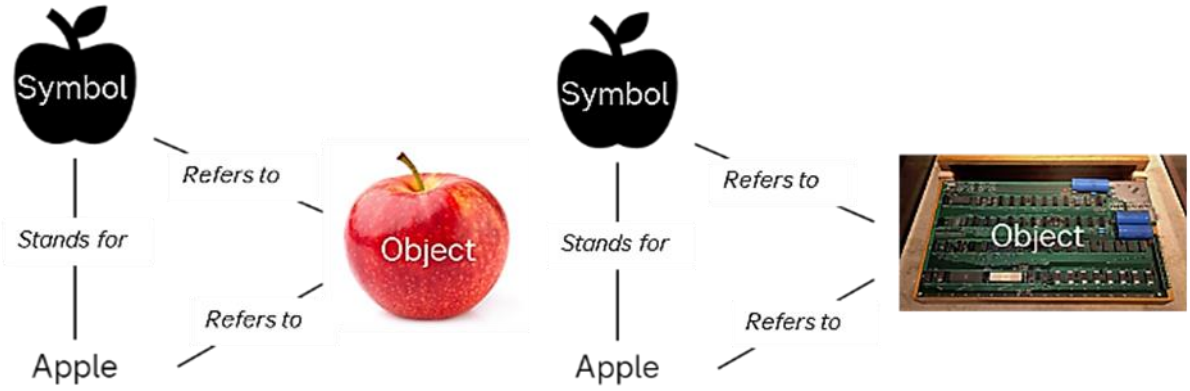

Figure 1: The Philosopher's Dilemma: Appearance and Reality

To function in the real world, we need to turn abstract concepts into something concrete for which we can share a mental picture. One popular technique is to describe things in terms of business objects. The overall context, scope, or thing we are describing is an organization, framed by the business ecosystem[4] in which it exists. Business object definition, along with the ability to represent actions performed against those business objects, is a fundamental part of understanding and representing a business ecosystem.

A model of a business ecosystem describes the rationale of how an organization creates, delivers, and captures value. Two critical aspects of a business that should be represented in a business ecosystem include:

1. The act of "producing" (provider value creation and deployment).
2. The act of "consumption" (consumer value reception).

The key players across an organization are thus the *producer* (provider) and the *consumer* (customers, partners, and internal stakeholders).

One way of looking at this concept of value exchange is that customers have some need that they seek to fulfill, while the provider creates a need fulfillment – an offer to satisfy customers' wants or needs. If the fulfillment offered – the provider's value proposition – meets the customer's wants or needs, there can be an exchange of value (often money for goods and services).

Figure 2 highlights these perspectives.

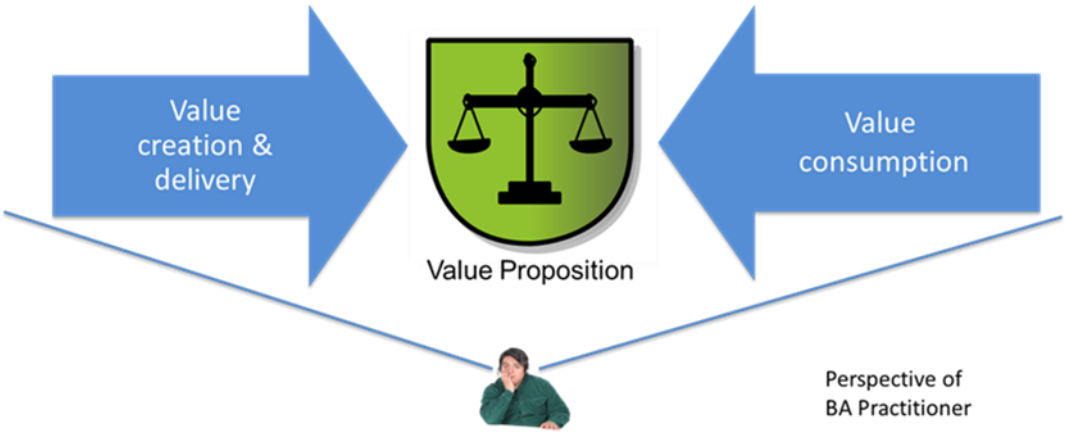

Figure 2: Business Architecture's Primary Focus: Stakeholder Value Delivery

The value concept is central to business architecture. The business architecture practitioner should take great interest in what is necessary to create and deliver value to customers and to other stakeholders. Business architecture modeling focuses on the provider side of the value proposition equation. This offers an *outside-in perspective,* yet it tends to be the opposite view of the perspective taken by many organizations today.

A business architecture practitioner uses the business architecture knowledgebase to articulate and leverage a wide variety of organizational perspectives, including value creation and value consumption, to enable visual thinking and storytelling as a means of defining challenges and framing shared solutions.

While a heavy emphasis is placed on value creation and consumption, the knowledgebase must also incorporate views of the business' capabilities, information, business units, strategies, policies, products, and initiatives. Capabilities and information concepts are the primary vehicle for representing the collective set of business objects that make up a business ecosystem. These two business architecture domains enable the practitioner to articulate the impacts of business objectives, perform root cause analysis, define cross-organizational solutions, and execute a wide range of business strategies.

The following sections of this whitepaper provide an overview of business architecture and introduce the business architecture framework™, which incorporates the business architecture knowledgebase, business blueprints derived from the knowledgebase, and the scenarios that frame business-specific contexts for using business architecture in practice.

3. BUSINESS ARCHITECTURE OVERVIEW

Business architecture represents holistic, multidimensional business views of capabilities, end-to-end value delivery, information, and organizational structure, and the relationships among these business views with strategies, products, policies, initiatives, stakeholders, and metrics.[5] Business architecture is framed around these ten domains as shown in figure 3. Each domain represents business ecosystem abstractions, which are formalized in the Guild business architecture metamodel.

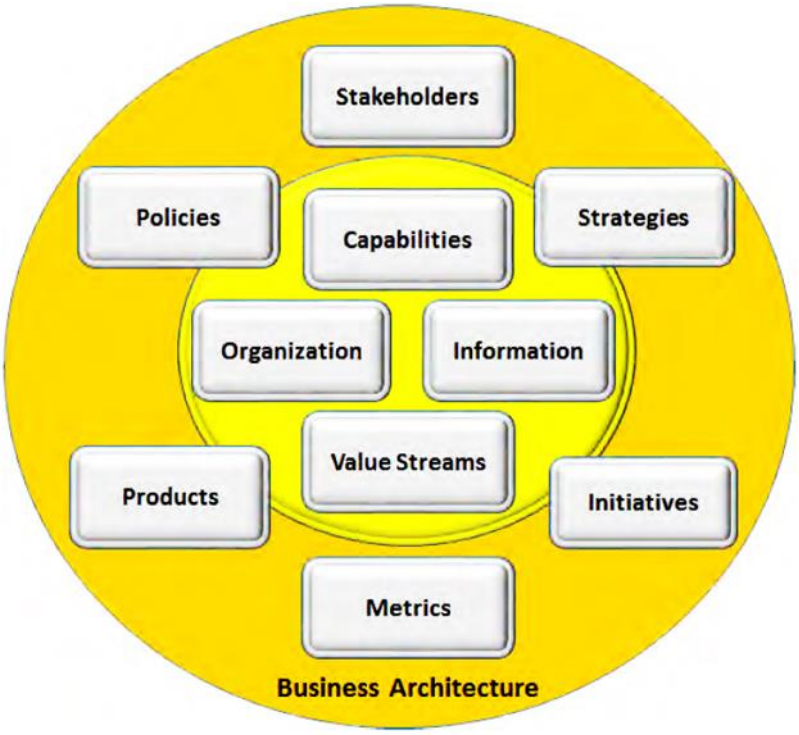

Figure 3: Business Architecture Domains

This whitepaper provides details about each domain and its relationship to other domains. It also breaks down each domain into its constituent elements. The strategy domain, for example, incorporates goals, objectives, and courses of action. Capabilities incorporate capability instances, capability behaviors, and capability outcomes.

Figure 4 highlights the perspective of capability as being the central focal point of business architecture. Capability provides a critical link between the other core domains (value stream, information, and organization). If one wanted to understand the information relevant to customer value delivery in a value stream, those views would be derived from the association between the capabilities and information that they require and modify, and the capabilities and value streams they enable. The following sections provide more details on the relationships among these core domains and between these core domains and the extended domains.

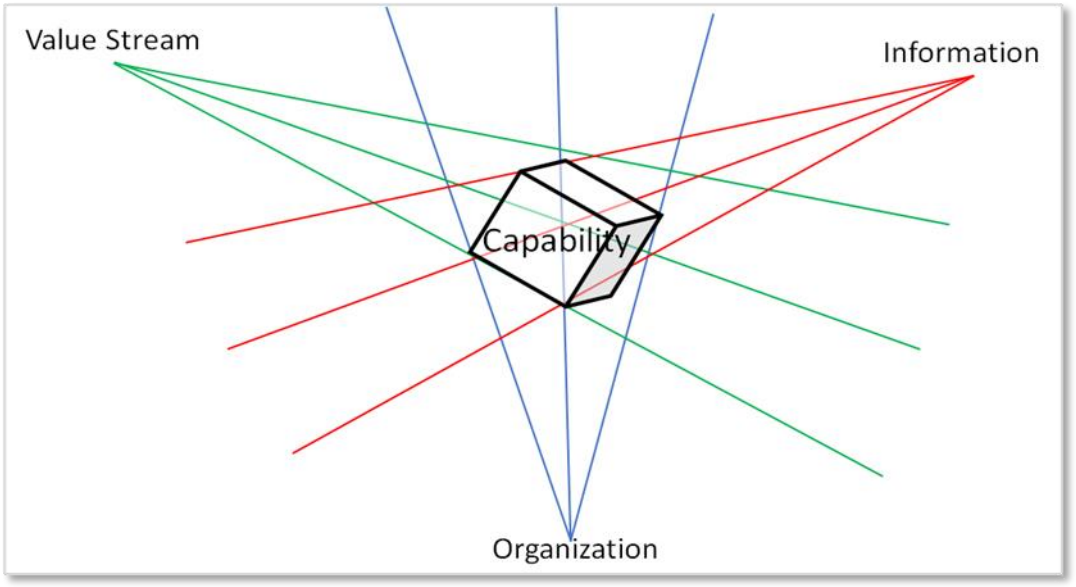

Figure 4: Capability: Business Architecture Focal Point

4. THE BUSINESS ARCHITECTURE FRAMEWORK™

The business architecture framework™ provides a basis for practitioners of all types to leverage business architecture. The framework, shown in figure 5, is comprised of the business architecture knowledgebase, business blueprints or visualizations extracted from the knowledgebase, and the business scenarios that determine the type and scope of those blueprints.

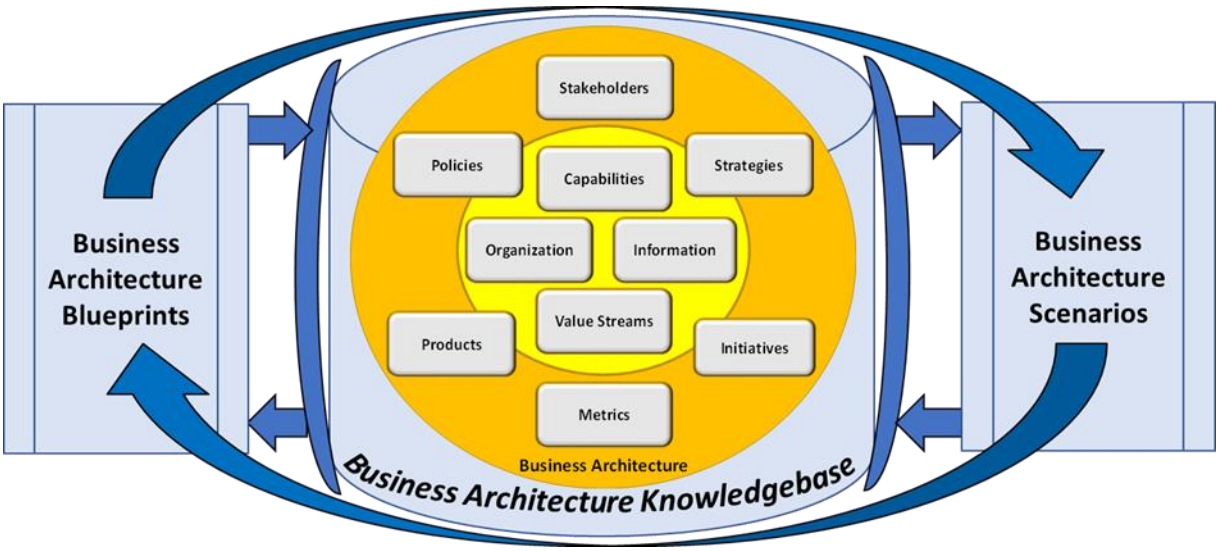

Figure 5: Business Architecture Framework & Knowledgebase

4.1 The Business Architecture Knowledgebase

To realize the full value of business architecture, an organization should deploy a framework[6] for capturing, managing, and leveraging its business architecture. This framework rests upon a knowledgebase and metamodel that formalizes common perspectives in a way that is readily applicable to planning, analysis, design, operational improvement, and deployment.

The Guild business architecture metamodel is based on the framework illustrated in figure 5. While the overall framework is detailed in the *BIZBOK® Guide* (including principles, guidelines, best practices, and usage scenarios), this whitepaper provides the metamodel perspective for defining the underlying mechanics needed to establish and manage the knowledgebase.

4.2 Business Architecture Blueprints

The *BIZBOK® Guide* is a principle-based body of knowledge and, while providing useful blueprint examples, offers the business architecture practitioner a foundation for developing their own blueprints and related scenarios. One can think of the *BIZBOK® Guide* as a cookbook containing recipes and detailed instructions on how to prepare a dish, rather than prescribing a menu. As such, the *BIZBOK® Guide* may be applied to an ever-growing list of business scenarios that range from strategic planning through to solution deployment.

Business planners and executives create blueprints in order to answer a wide variety of questions and address a multitude of challenges. The business architecture practitioner requires blueprints or maps to represent core capability, value stream, information, and organization domains, as well as relationships across these core domains and with extended domains.

A blueprint showing associations between two or more business architecture domains is called a "cross-mapping". Cross-mapping is the technique of relating multiple business architecture domains to each other or to related business and IT disciplines. This technique, which is represented in the metamodel via associations, allows the practitioner to connect multiple artifacts in a way that more effectively represents real-world relationships. Cross-mapping is always *between* domains and is not used to associate elements *within* a domain. For example, capability instance relationship–to–capability behavior is an intra-domain association, not highlighted in cross-mapping.

The recommended starting point for a business architecture baseline includes commonly engaged and customer-initiated value streams; a capability map; and an information map. Organizations will prioritize extending these perspectives based on specific business scenarios once the business architecture begins to scale.

Experience has found that certain industries share common value streams and capabilities. The Guild provides industry reference models to accelerate efforts to establish a baseline business architecture. These reference models are specialized for various industries including financial services, healthcare, insurance, government, manufacturing, telecommunications, and transportation, as well as a common or generic business architecture baseline. Industry-specific business architecture mappings defined within these reference models are built upon the same principles applied to defining the business architecture metamodel. As a result, organizations seeking to apply and benefit from these industry reference models should establish a knowledgebase that aligns to the Guild metamodel.

4.3 Business Architecture Scenarios

A business architecture knowledgebase and its associated blueprints can be used to consider and understand a range of different business scenarios. The knowledgebase cannot be restricted to single-use situations, meaning that the knowledgebase must not only be principle-based but intentionally architected to enable a wide range of known and unknown business scenarios. Populating core and extended business architecture domains, cross-mapping the captured knowledge, representing those views in various blueprints, and applying those blueprints to a given business scenario turn the captured knowledge into wisdom and insights needed to improve strategy execution.

For example, understanding the capabilities possessed by an organization is a single dimension of knowledge. Understanding the business units within a business ecosystem, including those of partners, creates more knowledge. Cross-mapping capability and organizational domains provides insights into how best to address a specific business issue or scenario. For example, imagine a scenario where an organization has outsourced certain capabilities to a supplier and that supplier is the victim of a ransomware attack. Knowing which business units rely on the capabilities provided by the supplier would allow the organization to quickly assess the impact of that event and to respond accordingly. The same multidimensional view could be used for other business scenarios as well, such as business unit consolidation or even divestiture when an outsourced capability no longer adds value.

One of the most important cross-mapping blueprints is the value stream/capability cross-mapping. This blueprint pinpoints the specific capabilities that enable value delivery at each stage of a value stream. If a value stream that delivers customer value is underperforming, the value stream/capability cross-mapping enables analysts to rapidly decipher the underlying capabilities responsible. While providing a rapid means of targeting weaknesses in one specific value-delivery situation, the cross-mapping perspective also allows a rapid fanning out of how this same underperforming capability may be impacting customer value within other value streams.

By cross-mapping different core domains and combining two or more dimensions into a new consolidated blueprint, a host of complex questions can be answered confidently and quickly. By using these cross-dimensional views of the business architecture, organizations can shine light on a range of scenarios that might be encountered, including (but not limited to) business model realignment, digital transformation, globalization, and merger and acquisition analysis.

The remainder of this paper will present the domains defined by the Guild metamodel, showing how to attain the above-described features.

5. BUSINESS ARCHITECTURE DOMAINS AND ASSOCIATIONS

Each of the ten domains in the business architecture knowledgebase is explicitly related to one another. The Guild business architecture metamodel, shown in figure 6, defines the relationships among nine of the ten business architecture domains: capability, value stream, information, organization, stakeholder, initiative, product, strategy, and policy. As introduced in figure 3, metrics is also a business architecture domain. The Guild's business architecture metamodel does not specify or require any business metrics, although examples are provided in the *BIZBOK® Guide*. Rather, the metamodel allows organizations to define a wide range of metrics that may be derived from the rich tapestry of information collected in each knowledgebase. For example, the *BIZBOK® Guide* discusses metrics such as effectiveness, impact, and breadth of coverage ratings. The metamodel provides a mechanism to use metrics libraries, including upcoming and not-yet-established measurement libraries for business architecture.

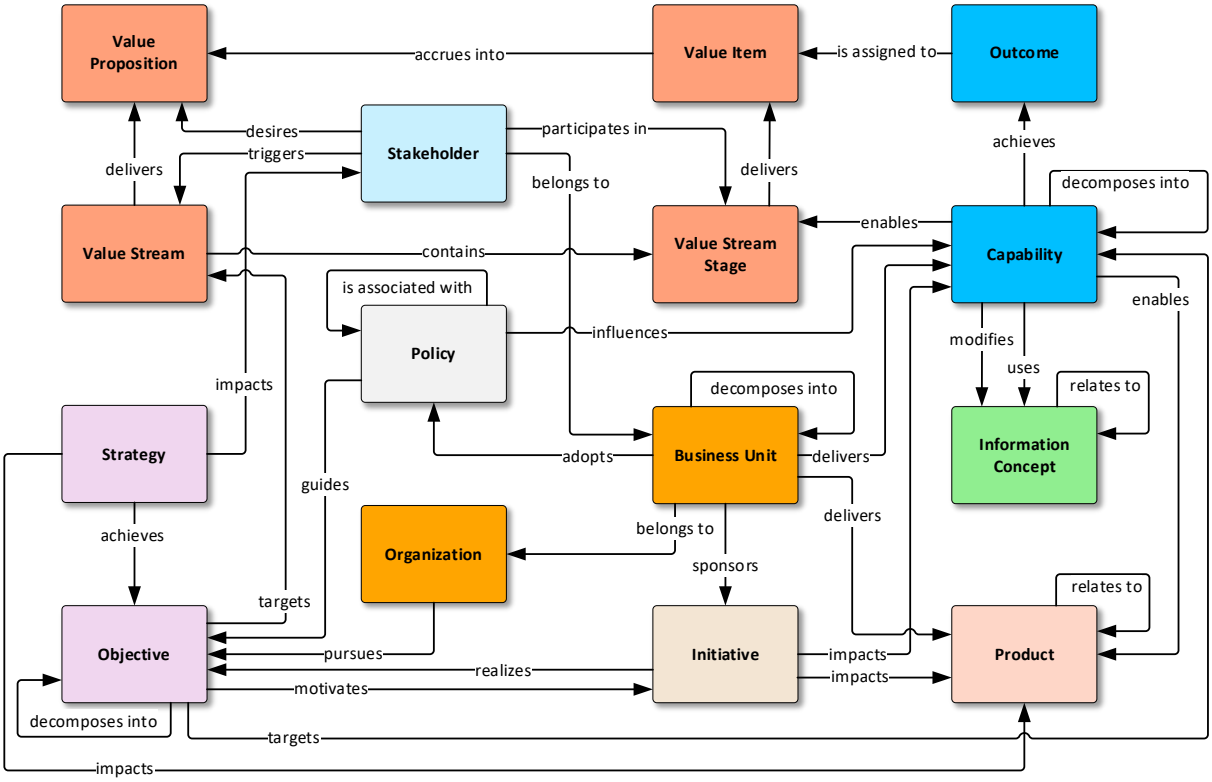

Figure 6: Overview of Business Architecture Metamodel

Figure 6 uses a color-coding scheme that groups elements associated with a given domain. For example, capability and outcome share one color, while value stream, value proposition, value stream stage, and value item share another. This color-coding scheme, which includes elements unaffiliated with a given domain such as business object, customer journey, requirement, and process, is shown in figure 7.

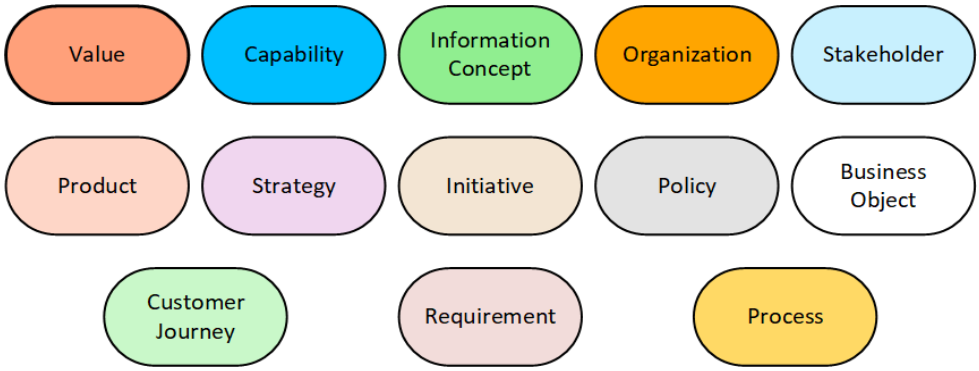

Figure 7: Metamodel Domain Color-coding Scheme

Figure 7.a depicts the relationship notation used in the remainder of this whitepaper. The notation for a relationship between two classes is to be read as follows. Class A (e.g., Stakeholder) is connected to Class B (e.g., Value Stream) by an arrowhead at the target end and a label in the middle of the connecting line. The relationship line starts at the source Class and ends with an arrowhead at the target Class. Reading direction is from source to target. The label name gives orientation to the action performed.

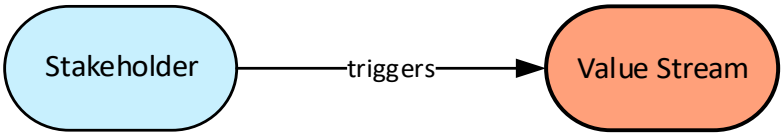

Figure 7.a: Relationship Notation

5.1 Value Stream

Organizations exist to provide value to customers and to other external and internal stakeholders, making value another important focal point for business architecture. Value streams provide end-to-end stakeholder value delivery perspectives, with one value proposition per value stream.

Figure 8 breaks down the value stream domain and its various relationships. Here, the triggering stakeholder triggers the value stream to obtain the desired value proposition. Capabilities enable the value stream stages contained within a value stream. Stakeholders participate in value stream stages. Capabilities achieve outcomes that are assigned to the value item(s) delivered by each value stream stage. Value items contribute to or accrue towards the value proposition desired by the triggering stakeholder.

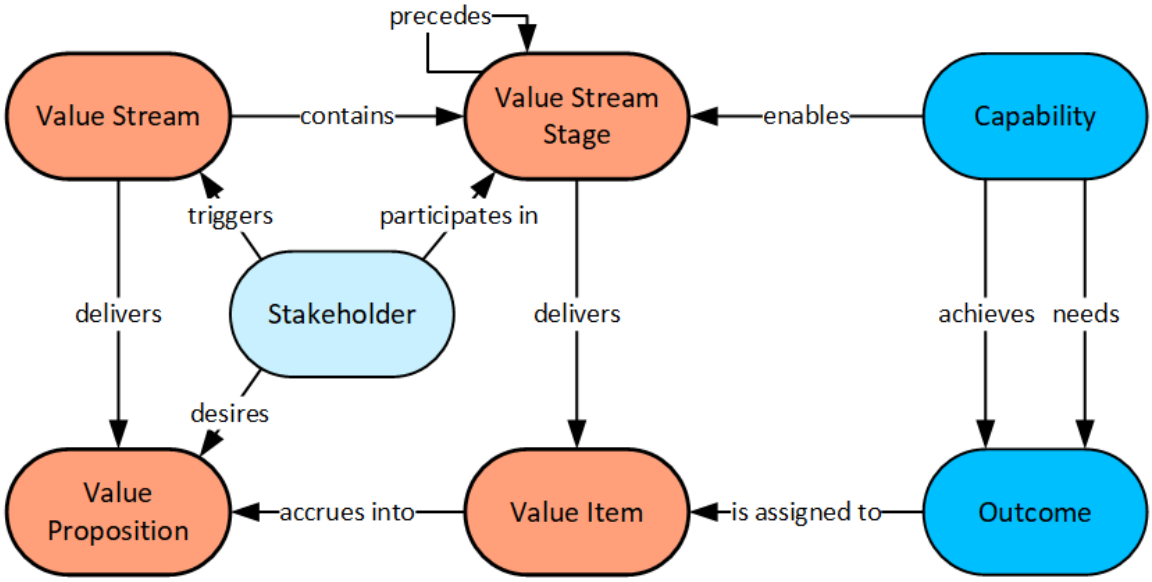

Figure 8: Value Stream Associations

In a world of limited resources, a business needs to ensure that the resources assigned to achieve a specific outcome add value to the triggering stakeholder. It follows that resources allocated to capabilities that are not enabling a value stream stage are, by definition, not adding value. In the words of Peter Drucker:

> "There is nothing so useless as doing efficiently that which should not be done at all."[7]

5.1.1 VALUE STREAM CROSS-MAPPING

Value stream cross-mapping establishes a basis for strategy impact analysis, initiative and investment scope determination, business design, requirements definition, and solution deployment.

- Cross-mapping between value stream stage and capability is one of the most useful cross-mappings. It highlights which capabilities enable a value stream stage to deliver a value item or value items

- Cross-mapping capability outcome to value item highlights the capabilities that play a role in delivering stakeholder value and subsequently become a target for capability-based planning and investment

- Cross-mapping between stakeholder, value stream, and value proposition highlights which stakeholders desire a given value proposition and trigger the value stream to deliver that value proposition

- Cross-mapping between stakeholder and value stream stage identifies the stakeholders who participate in that value stream stage and contribute to the delivery of value item(s) for the stakeholder who triggers that value stream

Value Streams and Value Chains

For readers not familiar with the principles of business architecture as laid out in the *BIZBOK® Guide*, it is essential to differentiate between the "business architecture value stream" and a "value chain".

Business architecture value streams are value-oriented, targeting the end objective of delivering a value proposition from the perspective of the triggering stakeholder.

A value chain is concerned with the specific activities that an organization performs in the process of creating a product or service.

The business architecture value stream also differs from the "Lean value stream". Lean value streams provide a means to analyze waste in existing operations, and focus less on providing actual stakeholder value.

The business architecture value stream also differs from a "Scaled Agile Framework (SAFe) value stream" which is concerned with operation or development value streams employed on projects.

5.1.2 Value Stream Navigation

Value stream stages are ordered in a certain sequence as indicated by the "precedes" relationship for the value stream stage. Formalizing the relationship between value stream stages with this association, while important for framing generic navigation, only represents de facto sequencing of value stream stages. Accommodating real-time value stream flow requires leveraging entrance and exit criteria for each value stream stage, where these criteria dynamically control navigation.

Within a value stream stage, capabilities achieve outcomes that impact business object states, which are represented by corresponding information concepts for those objects. Each information concept has a finite number of allowable states. When a certain combination of valid states is achieved, as articulated by value stream stage entrance and exit criteria, control will exit one stage and, where appropriate, enter another stage. Generally, exit criteria for a preceding stage aligns with a subsequent stage's entrance criteria. If, on the other hand, the right combination of object states is not achieved for a subsequent stage's entrance criteria, then control is shifted to a stage that does accommodate those entrance criteria.

Value stream navigation is not flow-based but is rather state-based, with control fully reliant on the combined states of active business objects, as allowed and interpreted through the information concepts representing those states.

5.1.3 Value Creation and Consumption Perspectives

Figure 2 highlighted the fact that business architecture frames both value consumption and value creation. The primary vehicle for framing value consumption and creation is the value stream and its corresponding stages. Consider a customer, for example, that has a value-consuming perspective gained through the lens of the value proposition the customer is seeking, where value proposition represents an amalgamation of all value items produced at each stage of a value stream.

Value items represent the value creation aspect of a value stream and are the result of capability outcomes being assigned to those value items by the capabilities enabling a given value stream stage. Within each value stream stage, a triggering stakeholder, along with other internal and external stakeholders participating in a value stream stage, create value by contributing to capability outcomes.

Figure 9 highlights the relationships among value stream, value stream stage, value item, capability outcome, and capability. It depicts an example of an outcome called "route fixed" that is assigned to a value item called "routing option selected", which is produced by a value stream stage called Plan Route within the Take a Trip value stream shown in figure 10. A route switching to a "fixed" state coincidentally is one of the information concept states that enables value stream navigation to exit the Plan Trip value stream stage.

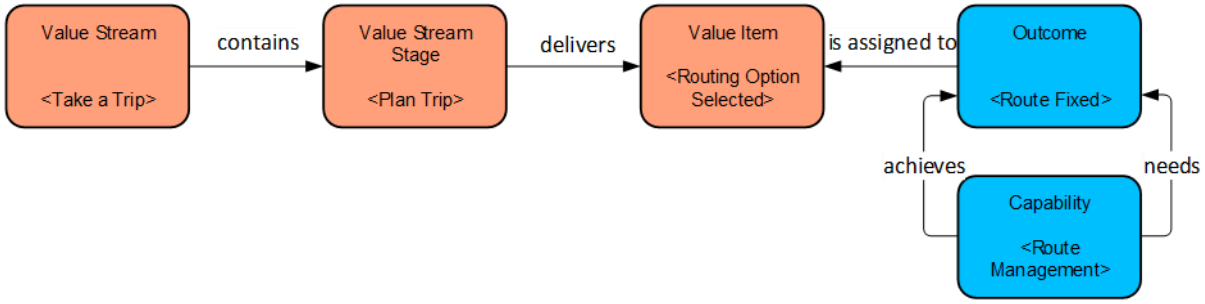

Figure 9: Value Stream Perspective on Value Creation

5.1.4 VALUE STREAM EXAMPLE

Figure 10 depicts three value streams for a commercial airline: Take a Trip, Send Shipment, and Execute Route. Take a Trip encapsulates the end-to-end experience of a customer completing a journey, including multiple stopovers and route changes. Send Shipment encapsulates the journey of a shipment, which can be a package, freight, or luggage, bundled collectively or shipped individually along different routes as a single shipment. The airline, which in this example moves people, packages, and freight, would use these value streams to examine, manage, and improve customer satisfaction.

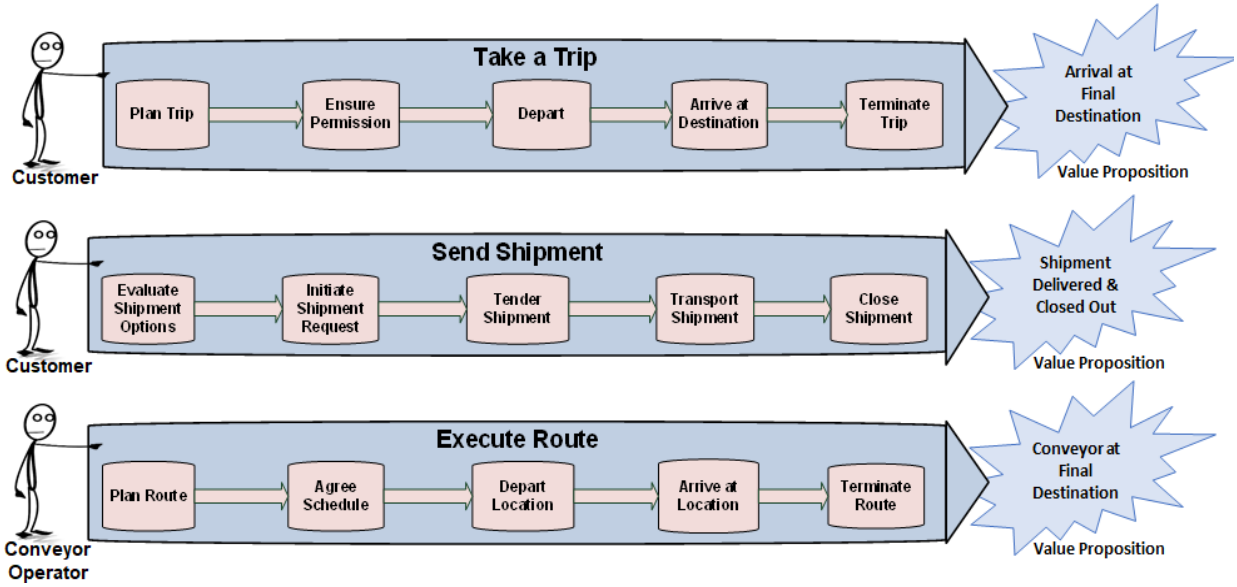

Figure 10: Transportation Value Streams Example [8]

These value streams represent a formal description of how stakeholder value is delivered. They include the value stream stages, triggering stakeholder, and value proposition, as well as value stream stage entrance and exit criteria, value items that accrue to achieve the value propositions, and the stakeholders that contribute to value at each stage. Not shown are the many capabilities that enable value accrual at each stage of the value stream.

Consider the first example of a customer taking a trip. The customer would plan the trip in stage 1, acquire a ticket in stage 2 (which equates to ensuring the ability to travel), and then travel to multiple destinations through numerous iterations of departures and arrivals. Upon arriving at the final destination, the customer's trip would terminate.

If the customer checks luggage, it initiates the Send Shipment value stream, which is the end-to-end journey of the luggage, independently traveling to its own destination. A separate value stream is used for the luggage because the value proposition differs and the luggage is on a unique trip that differs from that of the customer. While the customer and their luggage are on their respective journeys, the airline would be moving multiple conveyors (e.g., planes, shuttles, and trams) across multiple routes, with each conveyor traveling through a unique instance of the Execute Route value stream. Capabilities would match the customer and the luggage to various conveyors; as the conveyors change locations, the customer and the luggage simultaneously change locations by virtue of these matching capabilities.

The value streams shown in figure 10 work for commercial airlines, shipping companies, railroads, urban transport operators, and cruise lines. When a company seeks to improve the customer experience or increase the operational efficiencies of that experience, the value stream provides the lens into the capabilities that require analysis, improvement, and investment.

5.2 Capability

Capabilities represent the basic building blocks of a business. These building blocks can be used, improved, rearranged, and leveraged in a variety of ways to achieve an infinite range of business objectives. To do that, a business must first define those building blocks.

A capability is *what* the business does. The business architecture practitioner is advised to take particular care to define this concept. The *BIZBOK® Guide* gives the practitioner guiding principles, tools, and techniques to identify these critical architectural building blocks. Crucially, capabilities are identified through a business' value streams, and there can only be one set of capabilities for each organization.

Capabilities are identified with a business object in focus. For example, if there is a capability such as "Customer Management", this capability has the business object "customer" in focus. Any decomposition of this capability will not change the focus on the customer. For example, child capabilities under Customer Management may include the ability to "define a customer", "determine customer-related risks", or "capture customer preferences". In no case would a child capability of Customer Management veer outside customer scope. For example, Customer Management child capabilities would not manage agreements, products, financial accounts, or other business objects.

Each business ecosystem has one, and only one, set of capabilities. In other words, one capability map crosses all business units and, where applicable, business partners who deliver outsourced capabilities. In organizations with multiple business units, each business unit will typically have or plan to have various implementations of a capability. For example, a business with two business units, each with different numbers and types of customers, will most likely have implemented the capability of "Customer Information Management" quite differently. Therefore, a capability must be connected to the specific activities of the business concerned to support problem analysis and solution formulation. This connection is made through three perspectives:

- Capability Instance: A specific realization of a capability, as it exists or is envisioned to exist, in the context of a given business unit or another situational context
- Capability Behavior: The way in which a capability acts or conducts itself in certain circumstances or instances
- Outcome: A result or final product that is a consequence of an event or action, or a series of events or actions

Figure 11 breaks down the capability domain. The capability instance inherits the properties of the capability so it can produce and consume outcomes from other capabilities. In other words, an instance realizes the capability in practice. A business unit implements a capability instance and influences the behavior of that capability instance. It follows that an organization with many business units is likely to have many instances of an implemented capability, requiring independent analysis of the effectiveness and efficiency (use of resources) of each of those capability instances so they may be improved or otherwise acted upon. The capability map captures capabilities within a business ecosystem and serves as essential metadata that is derivable from the knowledgebase. Capability definition and decomposition, starting at level 1, is enabled by the "capability decomposes into capability" relationship.

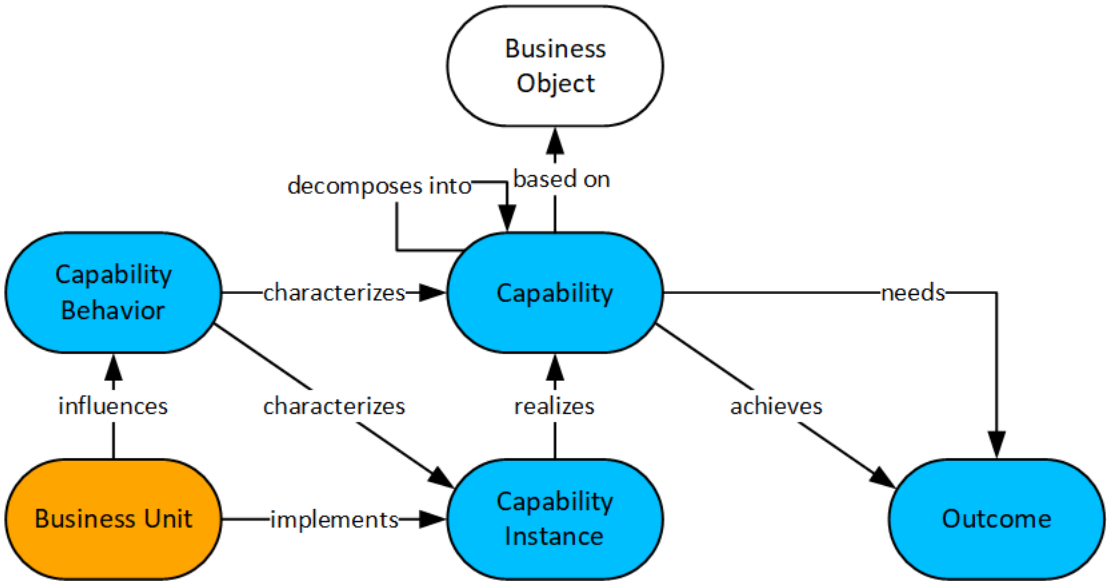

Figure 11: Capability Associations

Viewing a business through a capability perspective involves looking at the business at rest, whereas looking at the business from the value stream perspective involves looking at the business in motion, where value is being sought by a triggering stakeholder. Capabilities enable the value stream stages to produce value items through capability outcomes, which in turn deliver the value stream value proposition. When value gaps exist, issues can be traced to capability instances enabling that value stream and from there to related areas that may cause those capability instances to underperform.

Drilling down to improve customer value delivery focuses on the capability instance, which represents a real-world implementation of that capability. The behavior of capability instance is viewed from a procedural, process definition, policy, and norm-based standpoint. Understanding and improving or correcting capability instance behavior is the focal point for root cause issue analysis and resolution.

Taking the analysis to the next level, capability outcome, with a particular focus on instances, aggregates all activities that provide that outcome. When the outcome underdelivers from a value aggregating perspective, analysts can trace this aggregation of activities related to the issue, such as insufficient staffing or lack of good experience, to the underlying issue or issues. One common technique employed by practitioners is to create effectiveness ratings or metrics to indicate the performance of a capability instance, or to differentiate between as-is and to-be versions, to determine where a behavior can be improved to achieve the business objective.

5.2.1 Capability Cross-mapping

Cross-mapping between capability and business units highlights which business units or partners deliver the capability. When expanded to capability instances, it identifies how many different implementations of the same capability exist in an organization.

5.2.2 Capability Example

The transportation example shown in figure 10 highlighted a scenario in which a customer took a holiday with multiple stopovers involving multiple modes of transport or conveyors and checked luggage at various intervals. Several capabilities are required to plan, contract, and complete the customer's journey. A key subset of these capabilities is shown in figure 12.

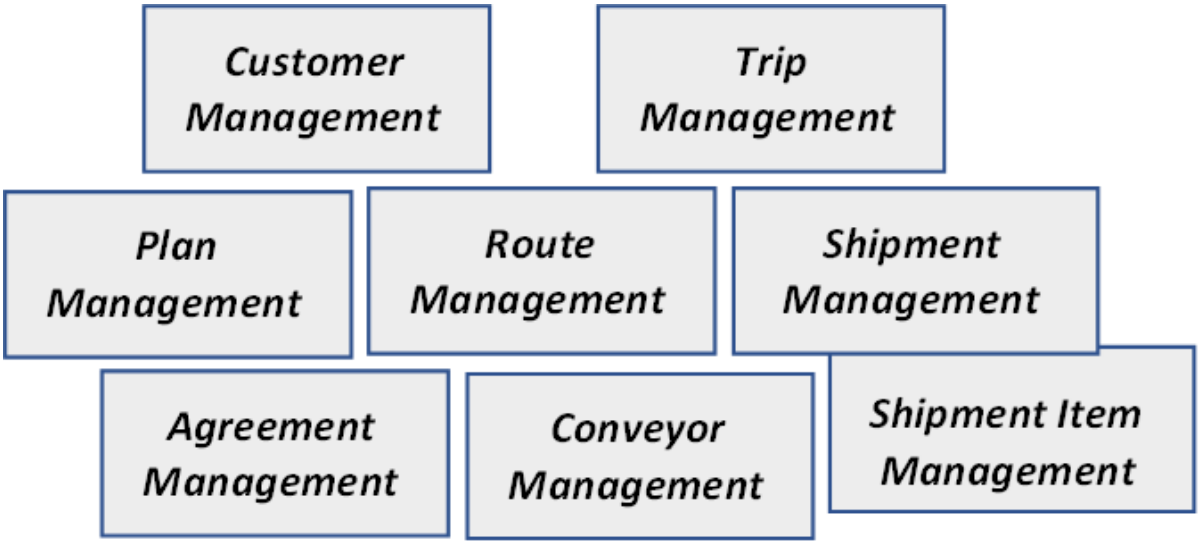

Figure 12: Sample Transportation Capabilities[9]

The roles of the subset of capabilities required to enable such a journey are explained in figure 13. Additional capabilities associated with partners, transportation networks, messaging, work items, decisions, and events would augment the work being performed by the capabilities in figure 13. To represent the value stream-enabling relationship, organizations cross-map the collection of enabling capabilities to each stage of each value stream required to complete the trip, receive the shipment (i.e., luggage), and execute a given route.

Capability	Role in Transportation Scenario
Customer Management	Establishes the customer; validates eligibility; determines and sets preferences; recognizes the customer going forward; and maintains profile, type, state, and history.
Plan Management	Establishes and tracks a formal plan for the trip.
Agreement Management	Establishes, provides access to, prices, sets terms, and enables a customer to travel based on a formal contract.
Trip Management	Established upon customer engagement, the Trip Management capability manages risk, preferences, access, profile, and state transitions through the journey until the trip is terminated.
Route Management	The trip, customer, luggage (shipment), and conveyor all travel along routes. This capability sets beginning and endpoint locations, tracks risks, and can change dynamically.
Conveyor Management	Conveyor is the mode of transport whereby the company may move the customer in planes, trams, buses, or rental cars. Each conveyor trip travels a path through the instance of the Execute Route value stream, often on a fixed schedule. The customer is matched to a given conveyor in advance or as required based on shifting conveyor schedules.
Shipment Management	Shipment in this example would be the customer's luggage, which may be formally shipped in advance or ad hoc at check-in. A shipment goes on a different trip than the customer, on the same or a different conveyor, with its trip being completed in the Send Shipment value stream.
Shipment Item Management (child object of Shipment)	Where a customer checks multiple pieces of luggage, each piece is tracked independently in case they are separated, with each taking unique routes on unique conveyors.

Figure 13: Sample Transportation Capabilities and Usage Context

5.3 Information

The information concept represents a foundation for several modeling approaches. Some methods use entities, domains, and relations, while others use individuals, classes, and properties. Regardless of the approach, the information concept forms the basis of the business vocabulary, making concepts tangible. It creates consensus and a shared understanding of what an organization is all about.

To understand a business' value proposition, we first need to understand what information is used to construct that value proposition. While data is often considered an IT domain concern, business information is the baseline from which business knowledge can evolve. Business information is transformed into business knowledge when organizations use that information in context to improve business decision-making and respond to challenges.

For organizations that strive to become data-driven, it is essential that the resources employed to achieve that goal understand the role of information and how to improve it from a business perspective. This is particularly true of the capabilities that impact and deliver information. Figure 14 highlights the relationships between information concept and other business architecture domains.

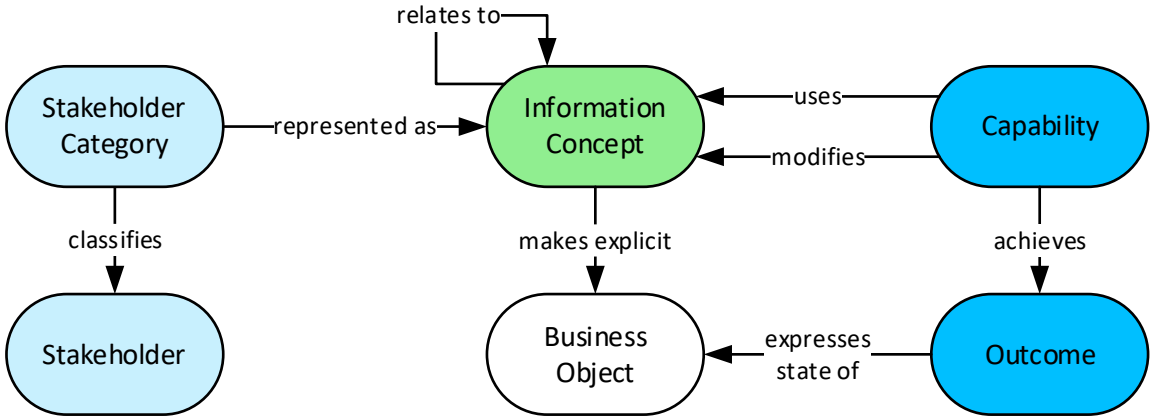

Figure 14: Information Concept Associations

The information concept is an explicit representation of a business object in the business architecture knowledgebase. There is a one-for-one relationship between the business objects that form a set of information concepts within a business ecosystem and the business objects that form the corresponding capabilities in the capability map.

The information concept is the focal point for the capabilities in a capability map. The users of this map must share human knowledge (e.g., decision-making skills) of what is being discussed or considered. The information concept is a passive element of the business that will be affected by capability behavior through the outcomes of the capability instance.

An information map includes relationships among information concepts. This is represented in figure 14 as an "information concept relates to information concept" relationship. Information concepts also include the valid information types and information states associated with the concept.

Information concepts cover a wide range of business perspectives, many of which are not represented in the data associated with IT systems. An example would involve a "decision"; a decision is represented as an information concept but organizations would be unlikely to record and track every decision made as IT data. On the other hand, the information map does expose the need to capture and record substantive decisions made during strategic planning, or in customer or partner dealings. In business architecture, therefore, information has human knowledge associated with it.

A common mistake involves using data model(s) found in IT departments as a substitute for an information map. As the previous example highlights, taking a data-oriented approach would omit critical information from being mapped within a business ecosystem. Lineage between the IT data architecture and the business information map is part of the business architecture and IT alignment.

5.3.1 Information Cross-mapping

Information concepts are cross-mapped to the capabilities that use and modify those information concepts. The modify/use relationships would be shown in a capability-to-information concept cross-mapping.

Information concept is cross-mapped to the stakeholder category. For stakeholder-oriented information concepts, such as customer, partner, or human resource, stakeholder categories associated with those information concepts are represented as information concept types. For example, a customer may break down into customer segments that include retail customers and wholesale customers. Information concept types align to the stakeholders defined in the stakeholder map, which are (in turn) cross-mapped to value stream stages. The important point is that stakeholders are managed as information within a business architecture.

5.3.2 Information Concept Example

Information is used and modified by various capabilities for those capabilities to do their job. Prior to defining capability dependencies, a business architecture practitioner would incorporate a formal mapping of information concept relationships. Figure 15 depicts the relationships among the subset of transportation information concepts required by the previously discussed transportation capabilities.

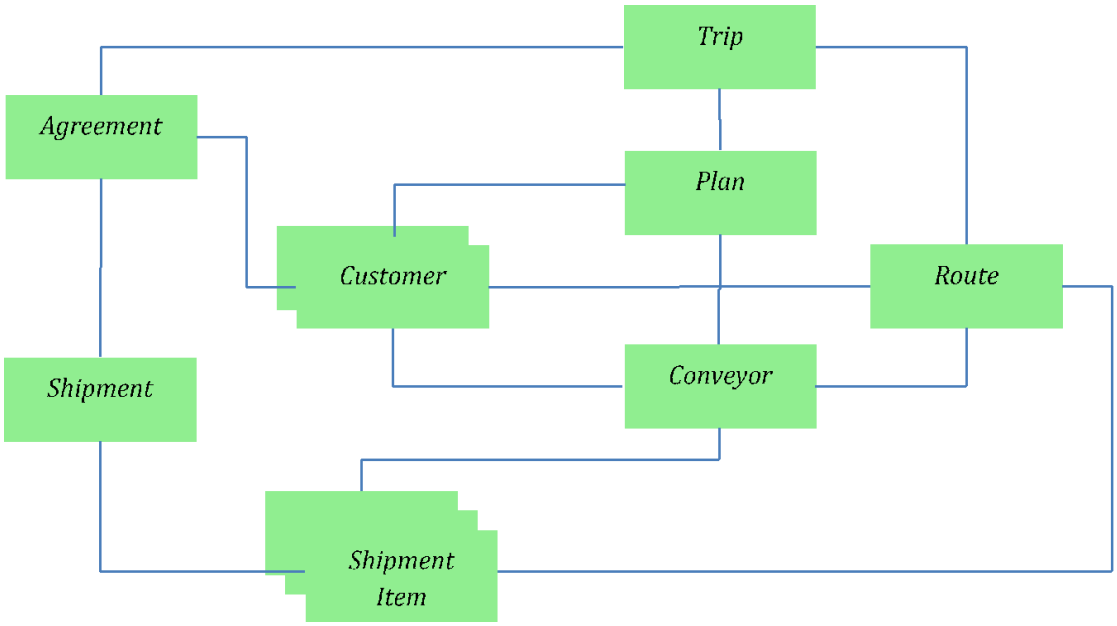

Figure 15: Transportation Information Concepts[10]

The relationships among the information concepts shown in figure 15 align to a cross-section of transformation scenarios for a given organization, across multiple business models. For example, they enable a passenger travel scenario and a package shipping scenario for a commercial airline. A summary of these information concepts is highlighted in figure 16.

Information Concept	Relationship Context
Customer	Customer establishes a plan, executes an agreement to travel, and is associated with multiple conveyors for each leg of the trip. There may be multiple customers per agreement.
Plan	The plan reflects the formal or informal trip plan a customer might have and is associated with the customer and the trip. A conveyor may also have a plan, such as the case with a flight plan.
Agreement	The agreement is the contract that tickets the trip for the customer and is associated with the actual trip.
Trip	The trip remains active until it is terminated at the end of a journey, has an overall route (including all destinations), and may be associated with transient artifacts such as a trip itinerary.
Route	Routes may be complex, multi-stop, or non-stop. Routes are associated with anything that travels, including the customer, luggage (i.e., shipment), and the conveyor.
Conveyor	Conveyors, based on a given business model, may include planes, trams, buses, or other means of transport, and represent the main business object transitioning through the Execute Route value stream. The customer and the luggage are associated directly with a conveyor on which they may travel. Schedule changes, cancellations, or other situations may require re-matching a customer or their luggage to another conveyor.
Shipment	Shipment is the collective set of items being shipped, which in this scenario is a set of luggage. A shipment is associated with the same agreement the passenger is traveling on, but may require a second payment.
Shipment Item	A shipment is composed of one or more shipment items, where each one is assigned to a conveyor in case a multi-piece set of luggage is separated. The shipment item travels the route on a given conveyor. When all shipment items are delivered, the shipment is considered delivered.

Figure 16: Transportation Information Concepts for a Travel Scenario

Information maps depict additional information, but concept-to-concept relationships are an important aspect of defining the information required to ensure capability effectiveness. For example, organizations and customers have a strong vested interest in knowing which plane a piece of luggage (i.e., a shipment item) is traveling on or the corresponding route on which it traveled. The ability to clearly and consistently identify, track, and relate information across business units, partners, and a variety of real-world scenarios is essential for organizations to ensure customer satisfaction.

5.4 Organization

Organization is another one of the core business concepts in business architecture, providing the "who" and "what" view of a business. But in today's modern business environment, the organization can no longer simply be described by hierarchical models that represent purely internal structures. The businesses that operate today increasingly leverage strategic partnerships that cross geographical, corporate, and legal boundaries.

An organization map describes an ecosystem-wide perspective of business units, which can be internal business units, partners or external units, and collaborations that are often not represented in hierarchical models. By considering all the business units within the boundaries of the business activity, the organization map provides visibility into the business and its organizational context. It provides clarity about the structure of the entire business ecosystem rather than a siloed view of a business.

The organization mapping approach considers the whole of the business ecosystem. Strategic partners, outsourcing arrangements, collaborative teams, and others may all provide business capabilities that need to be understood. Being able to view an organization map and the relationship of business units to other core business concepts (such as capabilities) paints a picture of how an organization works, rather than how an executive might think it works.

Understanding the structure of the organization from a value delivery perspective (beyond the confines of a company's organizational chart) is fundamental. Without this whole organizational view and the ability to cross-reference it to other core business concepts, it is difficult to see the real impact of a given course of action. A clearer picture of the organization and its relationships with other business concepts can then facilitate:

- Issue analysis
- Business planning
- Solution deployment
- Transformation planning

Organization mapping is not constrained to a specific format. A business unit is a sub-type of organization. With the right level of decomposition of business units and consideration given to horizontal and external relationships (including partnerships and outsourced capabilities), an organization map is a powerful tool that provides a useful visualization of the organization. Organizations will need to maintain this map to keep it accurate and applicable across a wide range of business scenarios.

Figure 17 depicts adjacent relationships among an organization, objective, business unit, and capability.

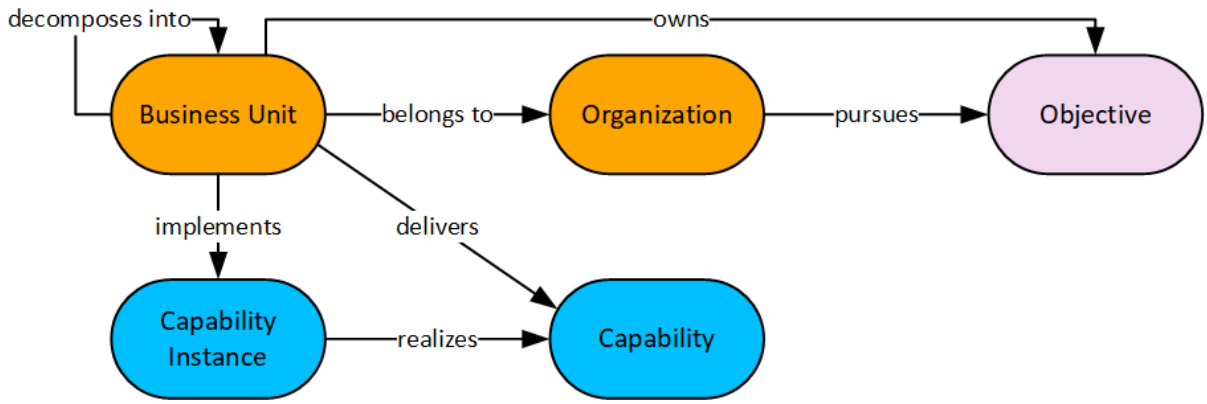

Figure 17: Organization Associations

Note that a business unit can decompose into more business units, enabling the creation of organizational hierarchies. The relationship structure in figure 17 is simple, yet coupling the structural view of an organization with capabilities enables planning teams to view where functional redundancies exist and may be detrimental to the organization. This view also streamlines rapid impact analysis during strategic planning exercises.

5.4.1 Organization Cross-mapping

- Cross-mapping between organization and objective highlights which objective(s) an organization pursues
- Cross-mapping between business unit and capability implements a capability instance, highlighting which business units or partners deliver a capability in practice
- Cross-mapping between business units and objective highlights which objectives the organization pursues are owned by this business unit

5.4.2 Organization Example

The abbreviated extraction of a transportation organization map shown in figure 18 highlights where business units and business partners share capabilities that collectively contribute to customer and stakeholder value delivery. For example, if there was an objective driving a planned investment in improving the Shipment Management capability, the scope of consideration should investigate the use of those capability instances within each business unit shown. The knowledgebase would quickly highlight the business units that need to be engaged to ensure that planning is complete, comprehensive, and scoped effectively.

Business Unit Level	Business Unit	Business Unit Type	Definition	Key Capabilities Associated with Business Units
0	Transport Company	Enterprise	Global shipping service provider.	All
1	Retail Facility	Business unit	Handles the decisioning of credit product offerings to an organization's client.	Customer Management, Agreement Management, Shipment Management, Payment Management, Financial Account Management

Business Unit Level	Business Unit	Business Unit Type	Definition	Key Capabilities Associated with Business Units
1	Shipping Distribution Center	Business unit	Manages shipping and receiving, sort center, and logistics control.	Shipment Management, Asset Management, Human Resource Management
2	Dispatch Center	Business unit	Coordinates ground transport, operator assignments, conveyor assignments, and fleet maintenance.	Conveyor Management, Route Management, Human Resource Management, Asset Management
2	Customs Clearance Service, Ltd.	Partner	Handles the development and enhancement of the channel's product offerings.	Partner Management, Policy Management, Agreement Management, Shipment Management
2	Network Control	Business unit	Controls network design, optimization, route definition, and incident rerouting.	Network Management, Route Management, Incident Management

Figure 18: Transportation Example: Business Unit-to-Capability Cross-mappings

5.5 Stakeholder

A key objective of business architecture is to clearly identify and represent all the stakeholders within a business. Business objects such as Customer, Employee, and Partner are usually viewed as stakeholders. But in business architecture, the concept of stakeholder has a more specific meaning. Stakeholders are either *triggering* or *participating* stakeholders within the context of value streams, as well as being those who affect or are affected by an aspect of the architecture, e.g., an initiative.

When defining value streams, stakeholders are identified in terms of:

- Triggering stakeholders who desire the value proposition of the value stream
- Participating stakeholders in the value stream stage who participate in achieving the value item

The concept of being a triggering or a participating stakeholder is value stream context-dependent. A given stakeholder may: trigger a value stream and participate in a value stream stage; only participate in a value stream stage; both trigger a value stream and participate in a value stream stage; or be absent from the value stream altogether.

A stakeholder is further classified by its type: External or Internal. Stakeholders are also organized by category, or according to an information concept, e.g., customer, partner, or employee.

Another major emphasis is on identifying stakeholders as individuals as opposed to business units, e.g., a Compliance Officer as opposed to a Compliance Office.

A value stream begins with a stakeholder triggering the first stage of the value stream and ends when a value proposition, in the form of a product or service, notification, a degree of satisfaction, or other result, is delivered back to that stakeholder. The triggering stakeholder initiates a value stream to achieve a stated value proposition.

Figure 19 highlights adjacent relationships between stakeholders and other business architecture domains. It shows where a stakeholder belongs to a business unit; defines an information concept type; triggers and/or participates in a value stream; is impacted by strategy; and contributes to a capability outcome.

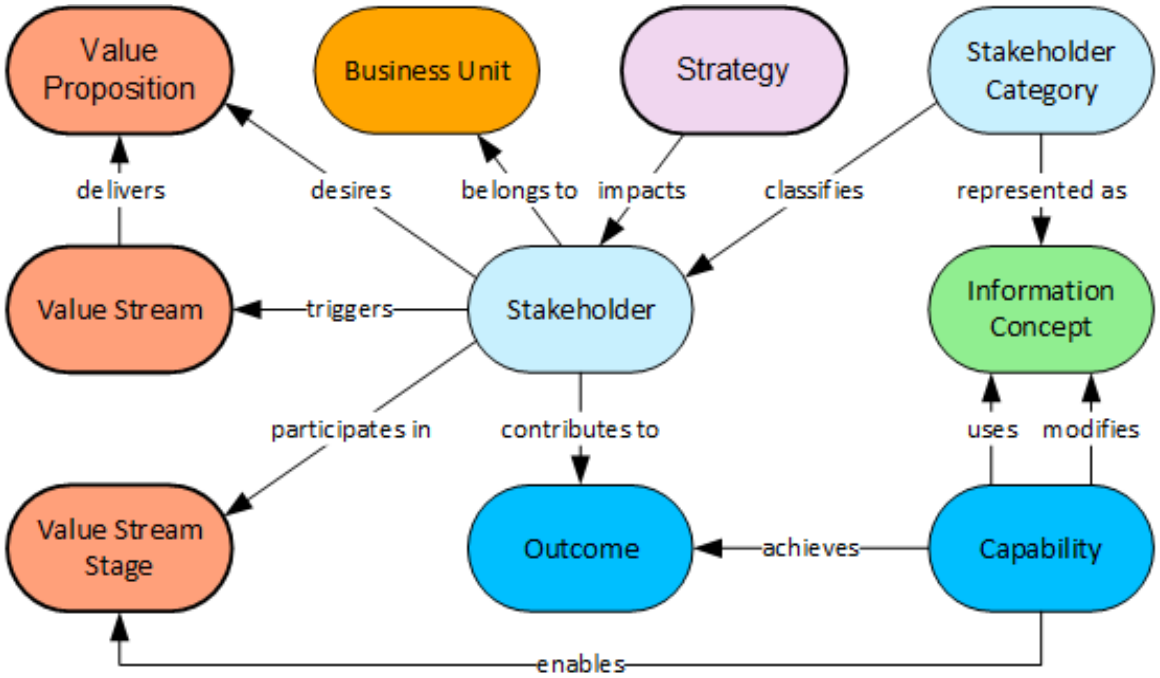

Figure 19: Stakeholder Associations

5.5.1 STAKEHOLDER CROSS-MAPPING

- Cross-mapping the stakeholder category ensures that stakeholders are represented by an information concept that corresponds to formally defined business objects such as Customer, Partner, or Human Resource
- Cross-mapping stakeholders and value needs to be considered from two perspectives:
    - Stakeholders who are considered a customer desire a value proposition and trigger a value stream that delivers the value proposition
    - Stakeholders who belong to a business unit participate in a value stream stage and contribute to the outcome of a capability
- Cross-mapping between strategy and stakeholder highlights which stakeholder is impacted by which strategy
- Cross-mapping between stakeholder and value stream and value stream stages highlights where different stakeholders affect value delivery, and through its relationship (secondary) to information concepts; information about who is needed and when
- Cross-mapping between stakeholder and business unit defines where stakeholders exist or belong to across an organization or partner organization
- Cross-mapping between stakeholder and outcome provides the view of the stakeholder's contribution to the achievement of the outcome in the context of the capability

5.5.2 STAKEHOLDER EXAMPLE

Figure 20 depicts an example of stakeholders engaged in the Take a Trip value stream. The customer triggers the value stream when they engage an organization for the purpose of taking a trip. The customer is also involved in each stage of the value stream as a participant. The customer transitions through the value stream as their journey progresses and ultimately terminates. Figure 20 also identifies the other participating stakeholders, each of whom contributes to value accrued as the trip progresses.

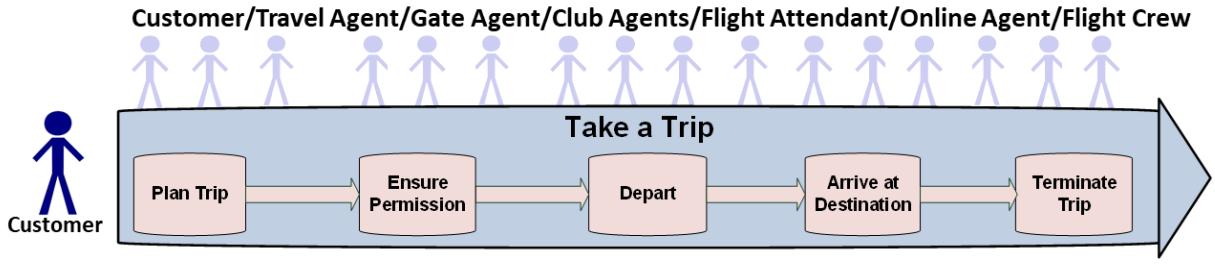

Figure 20: Triggering Stakeholder and Participating Stakeholders in a Value Stream

For example, an airline customer seeking an earlier flight would engage an airline gate agent in order to satisfy this request. The gate agent would, in a best-case scenario, be able to move the customer to another flight. In this example, the gate agent would play a role in the Customer/Conveyor Matching capability that would switch that person to a new flight. The agent would additionally play a role in the Customer Authorization and Authentication Management capability, allowing the customer to access a different flight. Other stakeholders, which may be proxied by technology in some cases, would similarly contribute to value along a journey.

5.6 Strategy

The strategy domain encompasses the processes of creation, execution, monitoring, and supervising a strategic change to aspects of the business. The *BIZBOK® Guide* and other modern strategic practices consider strategy creation, initiative planning, and initiative execution and tracking to be of equal importance. Strategy mapping in the business architecture metamodel focuses on strategy creation and formulation, whereas initiative mapping addresses initiative planning and execution, as seen in Section 5.7.1.

There are two popular techniques used for execution and monitoring initiatives. One method is the Balanced Scorecard, whereby a business implements a monitoring and measurement system for strategic initiatives by defining Key Performance Indicators (KPIs). Another method is Hoshin Kanri, a management technique to ensure that there is a shared understanding and coordination of the strategy execution across the business.

As shown in figure 21, strategy is comprised of goals and objectives. Objectives achieve goals, target value streams and capabilities, and are needed and realized by courses of action. Change, which relies on a given objective for its rationale, affects a capability, which in turn would be the target of the corresponding objective. Change can evolve as strategy execution progresses and required changes come into focus.

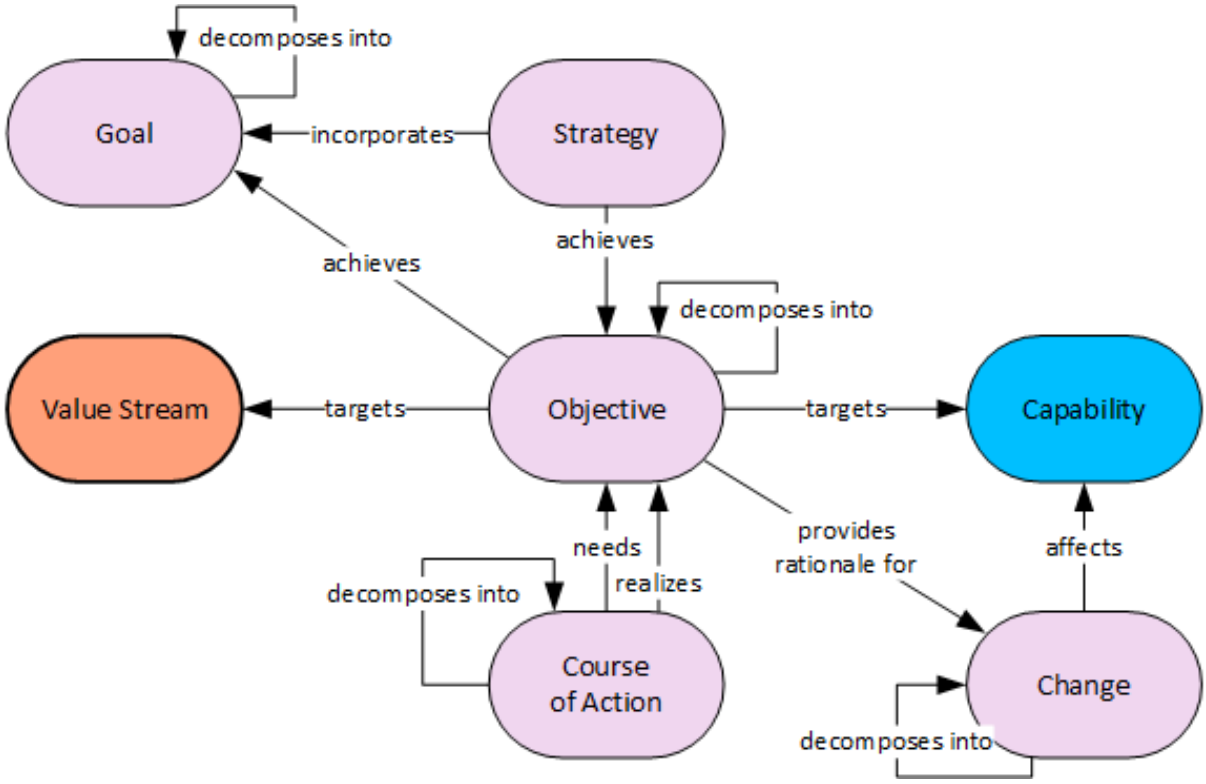

Figure 21: Strategy Associations

One or more objectives relate to a strategy. To create strategies, organizations pursues objectives that are decomposed into lower-level objectives then put into the objective map — a tree-like hierarchy illustrating their relationship and contribution to strategy execution.

A course of action implements a strategy resulting in the realization of the objectives associated with the strategy. In some circumstances, objectives have pre- and post-conditions that need to be satisfied before starting another course of action. Objectives can depend on each other and can be decomposed into lower levels. The business architecture practitioner documents the rationale behind changes made to a capability in the course of action chain, including the justification for the change.

A summary of the strategy domain is as follows:

- Strategy's association with objective highlights whether the objectives link to one or more strategies (where there is no freestanding objective)
- Change is associated with an objective to highlight the rationale and related change impact of that objective
- Connecting course of action with objective identifies the actions to be taken to achieve that objective
- Decompose the course of action and objective if feasible
- Decomposing a course of action into lower-level courses of action accommodates coarse grain to fine grain perspectives on actions to be performed to meet an objective at multiple levels

5.6.1 STRATEGY CROSS-MAPPING

- Cross-mapping strategy to capability identifies the capabilities impacted by strategy, which could be further decomposed by the objectives achieved with that strategy
- Cross-mapping changes to capability highlights the behavioral impacts or improvements to be associated with one or more capability instances
- Cross-mapping strategy to value stream identifies the value-related impacts or improvements that this strategy will deliver within a value stream

5.6.2 STRATEGY EXAMPLE

Figure 22 provides an example of the relationships between an objective and its impact points, and includes the goal being met as well as the corresponding course of action, KPI, and the value stream and capability impact points.

Strategy Impact Analysis Template					
Goal	**Objective**	**KPI Metric**	**Course of Action**	**Value Stream Impacts**	**Capability Impacts**
Ensure that shipments arrive intact	Reduce lost shipment items when shipments break apart in transit to .05%	Lost Shipment Item Percentage	Consolidate shipment item tracking across business units and partners	Send Shipment	Shipment Item Definition Shipment Item Access Management Shipment Item/Location Matching Shipment Item/Conveyor Matching Shipment Item/Partner Matching

Figure 22: Strategy to Value Stream and Capability Impact Tracking

This example illustrates where a goal of ensuring that shipments arrive intact is realized by a clearly stated objective, and a KPI stating that lost shipment items (in scenarios where a shipment is inadvertently separated) is reduced to .05% of the time. The course of action (to consolidate shipment item tracking across business units and partners) points to the capabilities that focus on shipment item tracking (shown on the far right of the table) along with the targeted value stream.

Organizations would, based on this analysis, examine the effectiveness and related metrics associated with each of these capabilities across every business unit and partner instance. The metamodel provides the underlying tracking mechanism for many such business scenarios and allows organizations to scale this analysis to fully define the scope and related investment impacts of various business goals and objectives.

5.7 Initiative

Initiatives represent the execution of strategy. Initiatives are the choices an organization has made to achieve the objectives of a strategy.

An initiative is often known as a program, project, or portfolio, and responsibility for execution often lies with a Project Management Office (PMO). Those responsibilities typically include coordinating program and project planning, prioritization, implementation, tracking, and monitoring. Monitoring is concerned with assessing how well an organization is delivering its milestones across the initiatives in a portfolio. Organizations often track performance against plans using tools such as the Balance Scorecard.[11]

The operational role of the PMO is an essential function but covers only one piece of the process of governing initiatives. Though doing things right by being efficient is crucial, what if the initiative fails to do the right thing? It will not be effective**.** Only effective initiatives will deliver the strategy. Measuring efficiency, the focus of project management and agile development methods, is relatively easy. Measuring effectiveness, the focus of business architecture, is much more challenging.

A strategy defines the objective to be achieved by one or more initiatives, where initiative is a type of course of action. A business unit sponsors, executes, and/or funds an initiative. Conversely, an initiative would logically impact one or more business units.

Initiatives impact a value stream stage because value items are a logical focal point for initiative investments. Initiatives also target value stream stages as a way of rapidly filtering initiative-impacted capabilities that enable that value stream stage and contribute to related value items. Finally, highlighting value stream stage impacts points to the participating stakeholders affected by an initiative. These stakeholders, in turn, become targets for improving how they engage in value delivery, the roles they play, and the automation they require, along with the requirements to be communicated to deployment teams.

Figure 23 summarizes the impacts between an initiative and business unit, objective, course of action, value stream stage, and capability.

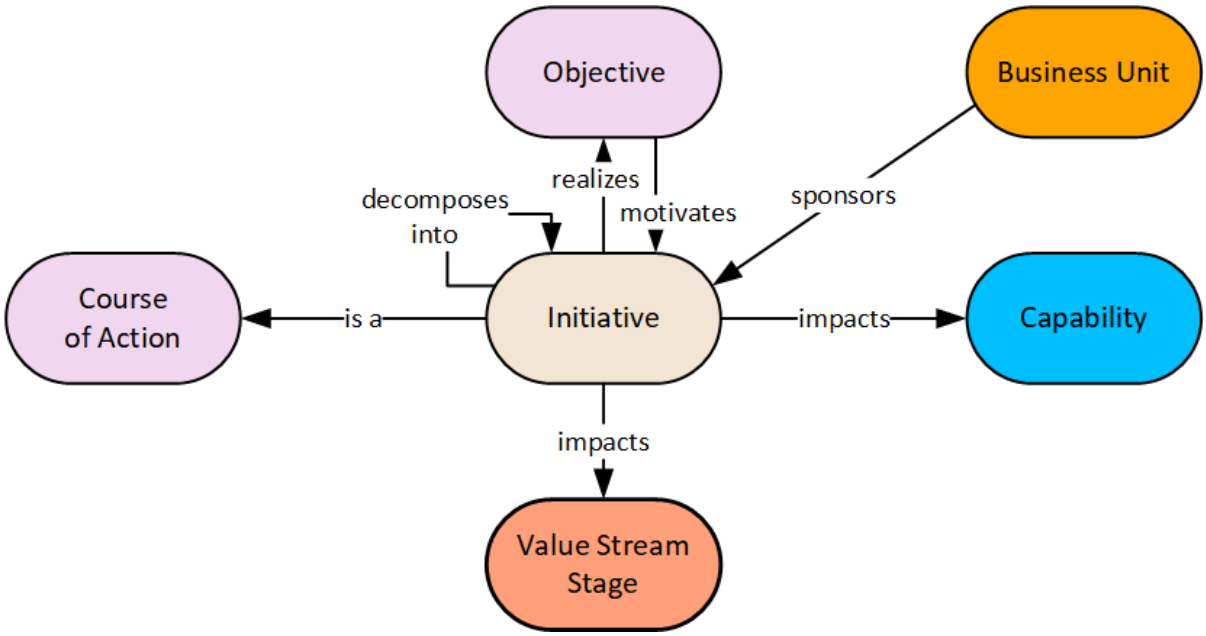

Figure 23: Initiative Associations

In practice, a business unit with a set of objectives would target a given initiative. The initiative, in turn, would affect changes to behaviors associated with capability instances for that business unit. Initial impact assessments typically target the value stream stages, which can then be used to highlight relevant enabling capabilities for those value stream stages.

5.7.1 INITIATIVE CROSS-MAPPING

Associating initiatives with value stream stages and corresponding capabilities they impact, objectives they satisfy, and business units that sponsor them provide a direct link between strategy and execution. Cross-mappings include:

- Cross-mapping between initiative and value stream stage highlights which value stream stage is impacted by an initiative and indirectly which initiative delivers the value item
- Cross-mapping between initiative and objective highlights which objective is realized by and motivates which initiatives and, as initiative is a type of course of action, which initiative groups the course of action
- Cross-mapping between initiative and capability highlights which capability is impacted by an initiative
- Cross-mapping between initiative and business unit highlights which business unit sponsors or executes that initiative and which initiative impacts which business unit

5.7.2 INITIATIVE EXAMPLE

Initiatives deliver one or more business objectives, often funded by a particular business unit. The objective or objectives to be realized by an initiative would target the impacted value stream stages and capabilities necessary to impact change. Figure 24 depicts an example of a transportation company initiative along with the related business impacts.

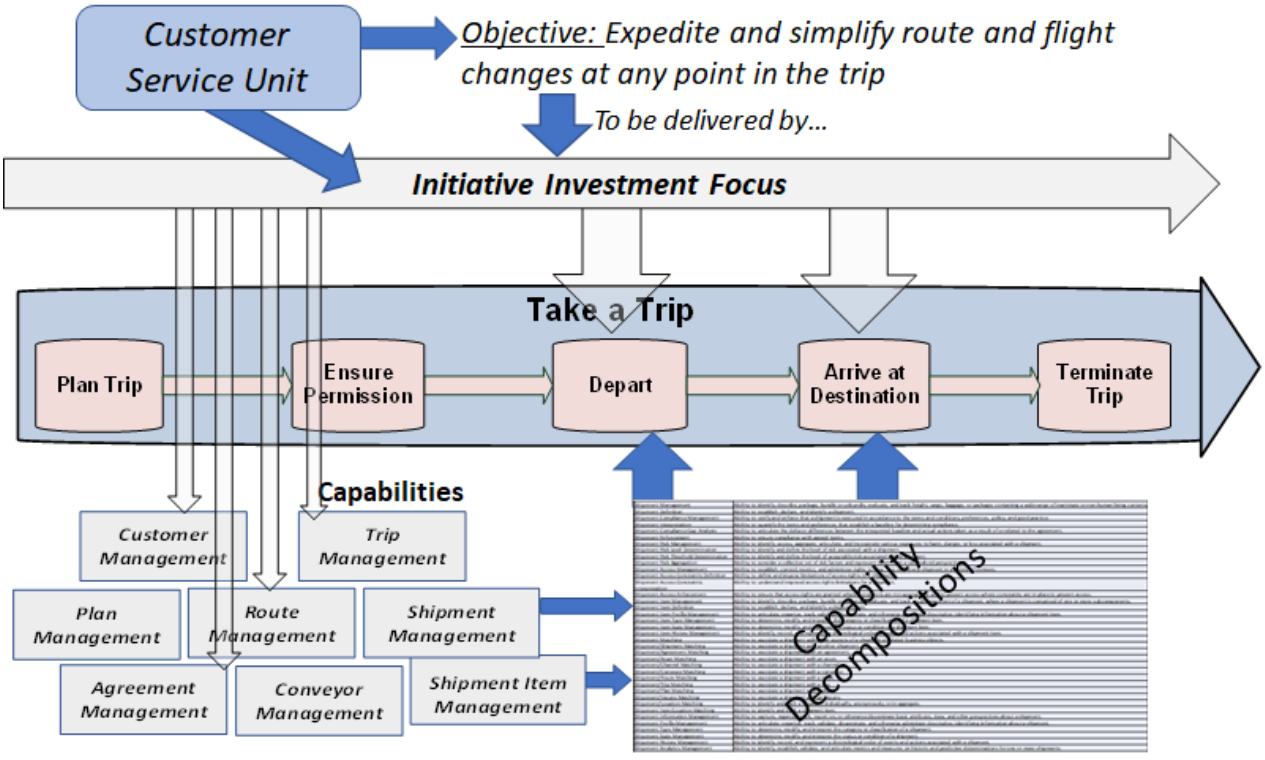

Figure 24: Initiative Mapping to Business Unit, Objective, Value Stream Stage, and Capability

In this example, the Customer Service business unit is seeking to expedite and simplify the ability to change a trip route and flight through any channel, at any point in a trip. Based on this objective, the value stream provides an insight into the two value stream stages, Depart and Arrive at Destination, where the customer engages throughout the life of one-way, multi-stopover, or multi-destination trip. A program planning team would then identify the enabling capabilities for these value stream stages to highlight the capability-related investments for that initiative. These capabilities include Agreement Management, Trip Management, Customer Management, and Route Management. The capabilities will rematch the customer to a conveyor, meaning that conveyor information is used to reroute the customer to an alternative route and flight.

5.8 Policy

Policy can play a vital role in doing business in many organizations, especially in highly regulated areas like banking or the public sector. Policy is categorized into internal and external policies as follows.

1. Internal policies are set and maintained by an enterprise's internal organizational structures. These are usually not dependent on sources outside an enterprise.
2. External policies are mostly edicts that must be implemented and complied to, such as a regulation, an industry praxis, or a commercial agreement. Non-compliance is usually associated with some damage to the reputation or finances of the business.

Conformance to external and internal policies is controlled by a governance process.

Figure 25 highlights the relationships between policy and stakeholder, capability, objective, and business unit.

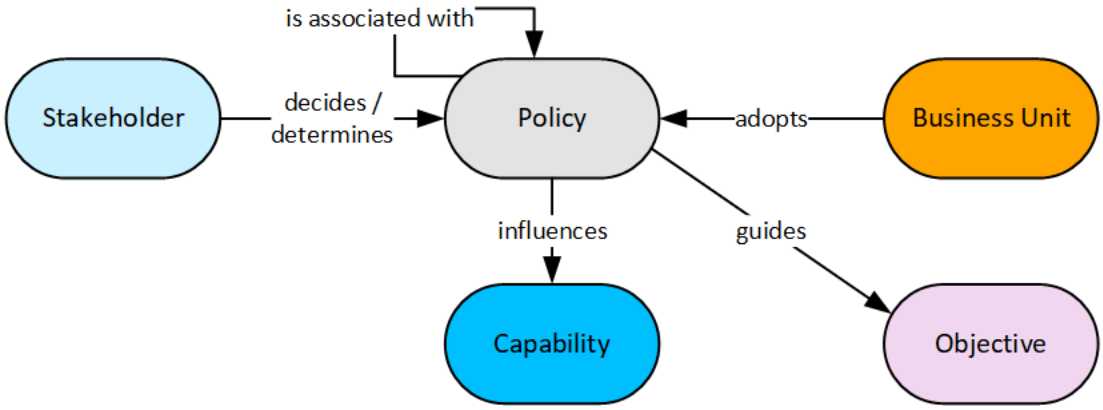

Figure 25: Policy Associations

The "policy is associated with a policy" relationship depicts a derivative relationship. For example, an organization may establish a set of internal policies associated with federal regulations, treaties, or statutes, each of which is also a policy. An internal rule may be associated with these external policies to identify the lineage between, for example, a statute and the internal rules meant to comply with that statute.

5.8.1 POLICY CROSS-MAPPING

Associating policies with the business units that adopt them, the capability they influence, the stakeholders responsible for them, and objectives they guide ensures that policy impacts are highlighted for business leaders. These associations include:

- Cross-mapping between policy and business unit highlights which business unit adopts which policy
- Cross-mapping between policy and capability highlights which policy influences which capability
- Cross-mapping of policy and stakeholder highlights which stakeholder decides or determines which policy
- Cross-mapping policy and objective highlights which policy guides which objective

5.8.2 POLICY EXAMPLE

Policy mapping connects legal, regulatory, or corporate policies with potential commitments and liabilities that organizations must incorporate into their investment model. The example in figure 26 depicts three internal policies concerned with changes to travel industry regulations.

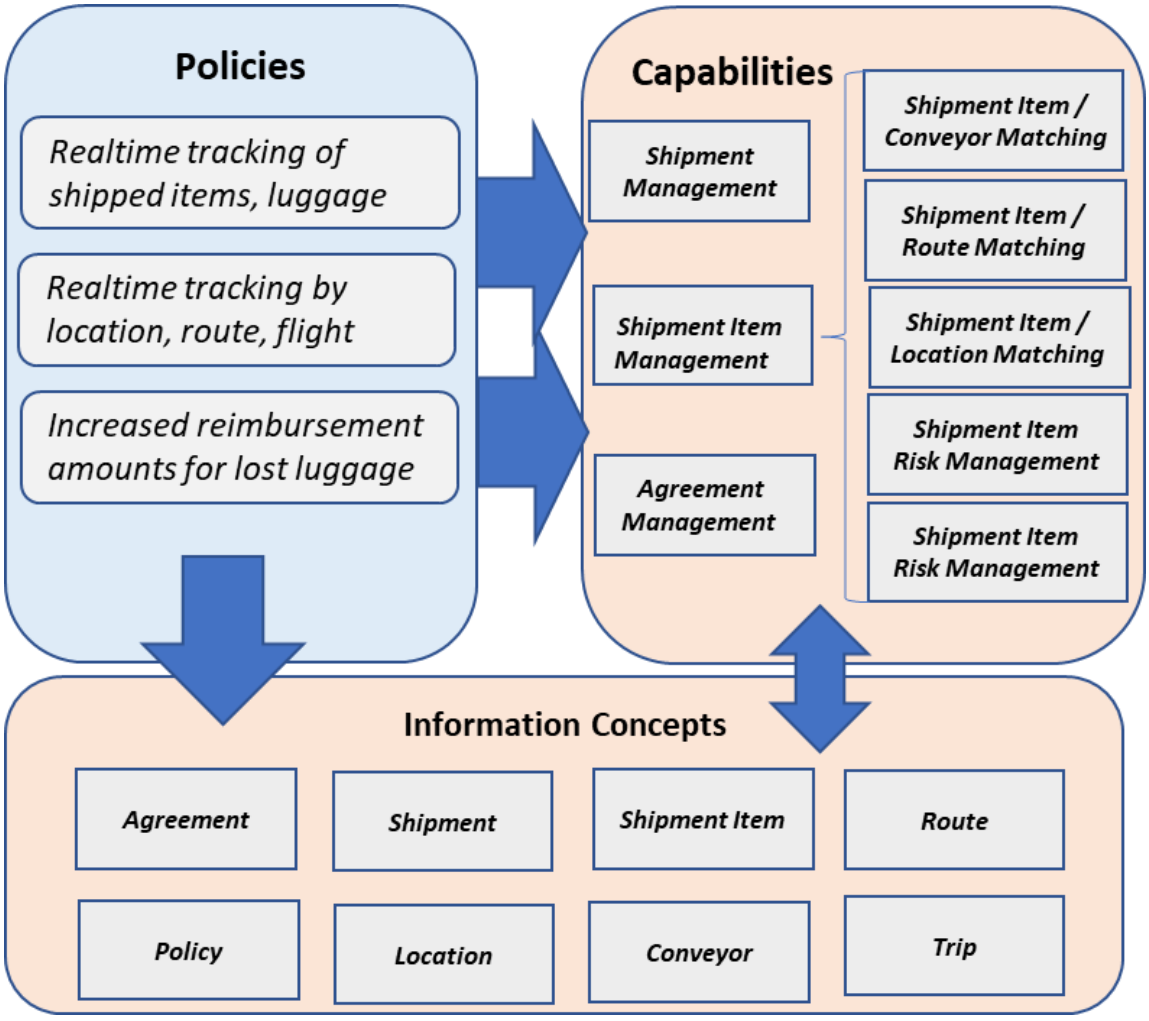

Figure 26: Policy Mapping Scenario Example

Using policy mapping, an organization can target the capabilities impacted by those policies as well as the impacted information concepts used and modified by those capabilities. For example, a policy associated with tracking individual pieces of luggage impacts the Shipment Item Management capability and the information used by that capability. Capabilities directly impacted include Shipment Item Management, Shipment Item/Conveyor Matching, Shipment Item/Route Matching, Shipment Item/Location Matching, and Shipment Item History Management. The policy may also call for resetting acceptable levels of risk for a shipment item, impacting Shipment Item Risk Management. A second policy increasing reimbursement amount exposure to the company for lost luggage would directly impact the Agreement Management capability.

Once a set of policies are traced to the impacted capabilities and information concepts, impact assessment teams can identify the impacts on value streams enabled by those capabilities, business units associated with instances of these capabilities, impacted stakeholders associated with those value streams and business units, systems that automate those capabilities, and data representing the impacted information concepts.

5.9 Product

From the customer perspective, product is the overall experience provided by the combination of goods and services to satisfy that customer's needs. As a reminder, customer in business architecture always refers to the external customer and is represented as a stakeholder category in a stakeholder map.

A product may be accompanied by entitlements, such as installation, warranties, or other services provided through a product lifecycle – some of which last many years beyond the purchase date. An organization must, therefore, have specific capabilities to provide the product along with capabilities to offer those after-sales entitlements.

Products may belong to a product line with similar characteristics or that target a particular buyer. But, in the same way that companies may outsource some of their capabilities, so too can they outsource the supply of products, with companies increasingly selling products that they do not manufacture themselves.

For example, many consumers purchasing a product over the Internet see the ability to deliver a shipment as an entitlement. The customer's experience will be defined by the sum of the organization's capability outcomes. It answers the question of how well capabilities work individually and together in an orchestrated delivery of value.

By incorporating these product concepts into business architecture through product mapping, there are several benefits for a business, particularly for companies that are product-focused. Visibility of the product ecosystem provides clarity when considering how well-supported, delivered, or aligned the products and product lines are.

Product maps provide the basis for further cross-mapping with other business architecture domains. For example, product mapping allows the business to investigate not only the relationships between products and product lines, but also to see which products are delivering the most value to customers. Understanding these relationships can support businesses in making the right investment decisions when targeting new markets and segments. Product mapping provides a focus for reviewing and optimizing sales and service value streams, such as product design and creation.

Business architecture provides a framework for formalizing product management and provides visibility into complex products and product lines, as well as critical capability dependencies and an organizational perspective. This increased visibility also offers a view of value, initiative, and strategy mapping that may not otherwise exist.

The product mappings shown in figure 27 enable an organization to validate the ability to roll out a new product based on existing capabilities, to highlight underperforming products and related underperforming capabilities, and to target investments for improving existing products and deploying new products.

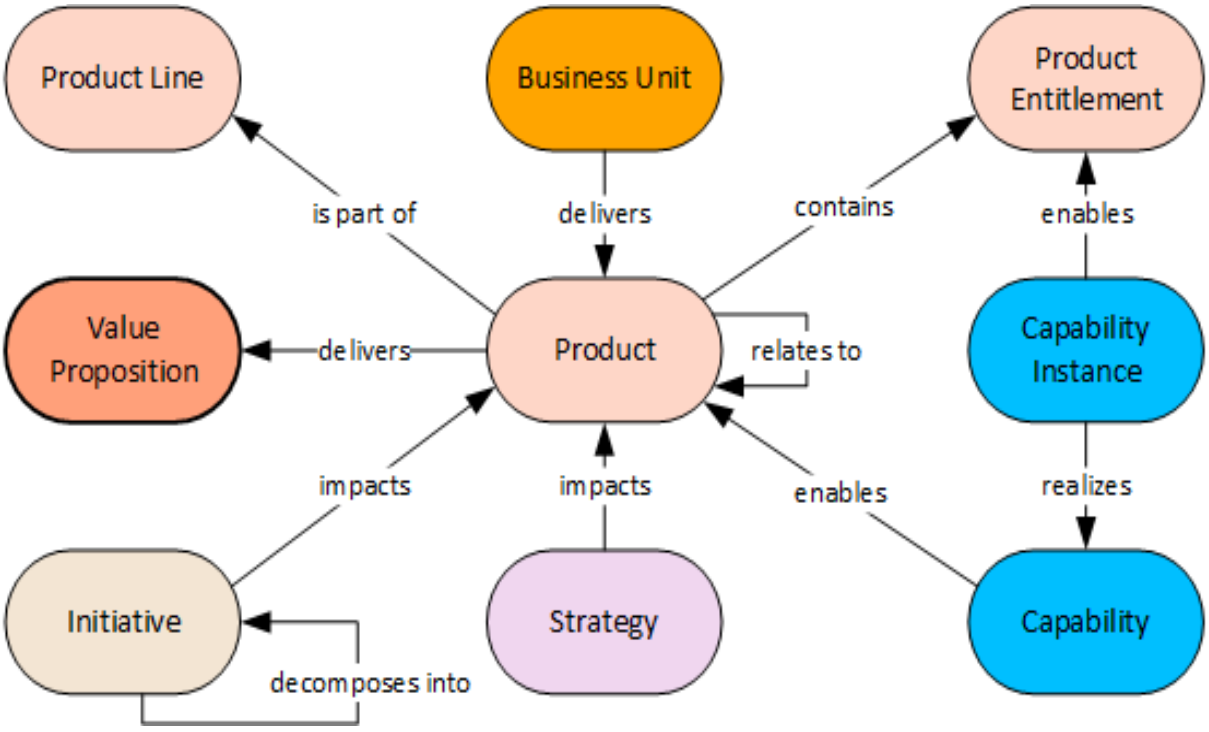

Figure 27: Product Associations

Two product mapping relationships are of particular importance. The “relates to” association between product and product indicates which product complements, is like, or bundles another product. The association between product and product entitlement highlights the specific customer commitments that a customer is entitled to under the terms of a given product. A product can be part of a product line, which can be represented in the business architecture.

One final point to note in figure 27 is that product delivers value propositions for customers, which places context around prioritizing product investments based on the customer value delivered.

5.9.1 PRODUCT CROSS-MAPPING

The following product domain cross-mapping provides insight and context for product-based investments, targeted at improving the customer experience while streamlining product delivery and performance.

- Cross-mapping between product and capability highlights which capability enables which product
- Cross-mapping between product and organization highlights which business unit is responsible for providing and delivering a given product
- Cross-mapping between product and strategy highlights which strategy impacts a given product
- Cross-mapping between product and initiative highlights which initiative impacts a given product or products
- Cross-mapping between capability instance and product entitlement clarifies and highlights the capability instances needed to enable a given product entitlement

5.9.2 PRODUCT EXAMPLE

Product mapping has many uses, one of which is new product planning. When a new product is proposed by marketing or a product management team, a rapid assessment of the impacts, viability, costs, risks, and other considerations associated with that product is warranted.

Figure 28 highlights an example of product-to-capability mapping. This example considers an airline that, working with its partners, is seeking to offer its customers a full-service travel package. The package would include airfare, hotel reservations, and a car rental. While the hotel and car rental would be provided through partners, the airline must still accommodate the full-service package: flight, hotel, and vehicle reservations; overall pricing; and other options through its portal. This is a new offering for the airline, and they want to perform an impact analysis for what it would take to launch this package.

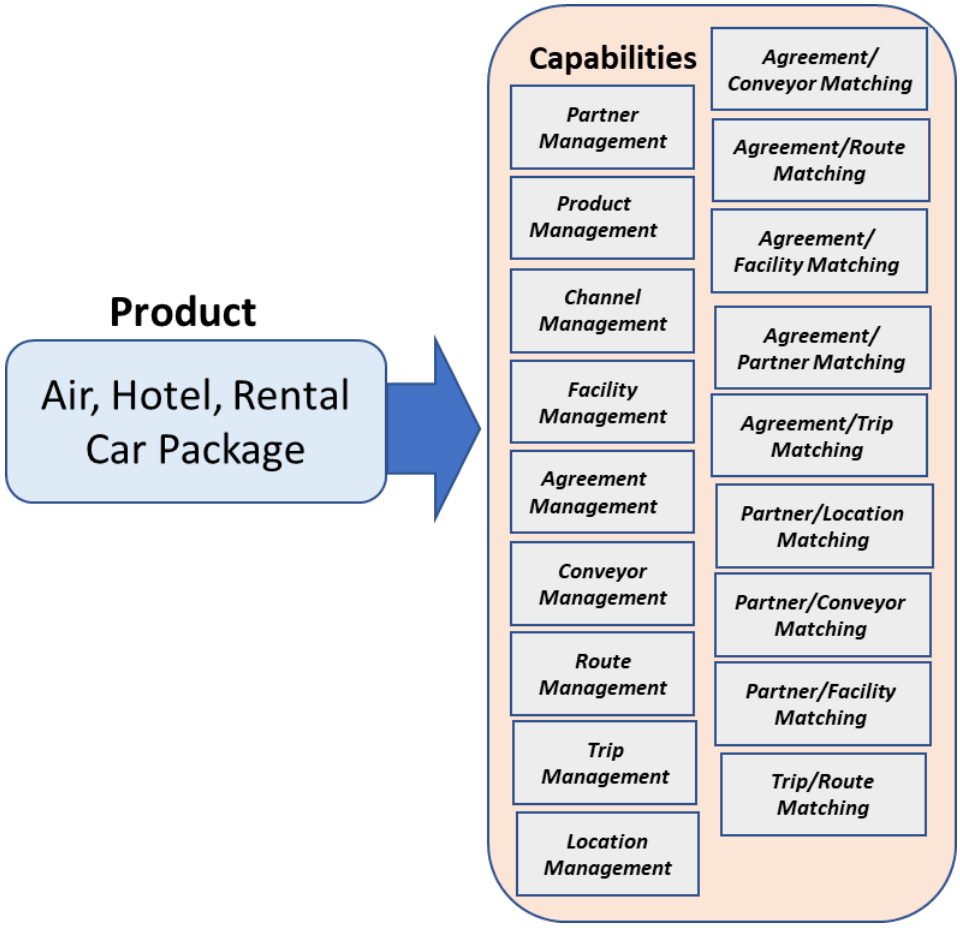

Figure 28: Product Mapping Scenario Example

Figure 28 highlights some of the capabilities involved in the assessment. An agreement would need to reference the flights, routes, hotel reservations, along with car rental times, locations, and commitments. These are addressed via Agreement Matching capabilities. In addition, the airline would require Conveyor Management to be expanded to vehicle tracking and Facility Management to be expanded to hotel properties. Partner relationships via Partner Management would also be required.

The impact analysis is the first step in pointing to the work to be done to deploy such a product offering to the airline's customers. Secondary analysis would look at specific instances, partner relationships, policy impacts, information impacts, and technology impacts associated with these capabilities. In this way, product mapping provides a way to quickly incorporate business architecture into marketing, product planning, and related activities at a company.

6. INTERDISCIPLINARY ALIGNMENT

Interdisciplinary alignment expands the knowledgebase to include non-business architecture perspectives. This whitepaper incorporates three interdisciplinary practices: requirements alignment; customer experience design alignment; and business process alignment. Future versions will consider and incorporate additional interdisciplinary practice representations as practices demand. Note that this section establishes these relationships based on a proxy concept, which means that a minimalistic approach has been applied to represent an interdisciplinary practice, thereby avoiding the introduction of any terminology that is not generally accepted for that practice.

In addition, no attempt was made to decompose an interdisciplinary practice beyond what was needed to add the practice and corresponding relationships to the metamodel. Requirement, for example, is simply inserted into the model and associated with business architecture domains that would be useful or informative in the practice of requirements definition and management.

6.1 Requirements Alignment

Business requirements are the core expressions for describing what a business needs or wants to deliver to improve value to its customers and to other stakeholders. While requirements analysis and requirements management are the purview of business analysis rather than business architecture, requirements do have important linkages to business architecture. For the purposes of this discussion, a requirement is “a condition needed by a stakeholder to solve a problem or achieve an objective”. Requirements are a direct result of the desire to satisfy an objective, which is a quantifiable, measurable result that defines a strategy.

A business architecture-based approach to requirements management and development allows for increased clarity of purpose, design, context, and scope, which is accomplished via a progression of mappings that define strategy, stakeholder value delivery, and what an organization does in the form of capabilities. The business architecture framework facilitates the alignment of requirements under initiatives with a clear lineage to this progression of mappings.

Requirement scope should be unambiguous about what value is being delivered to which stakeholders and the capabilities it seeks to improve in order to improve value delivery. Requirements also have secondary relationships. For example, a requirement’s impact on information concepts can be determined through capability linkage. The overall context for defining requirements is framed by value streams, which provide a perspective on the work being performed, the participating stakeholder impacted, and capability outcome and behavior improvements targeted. Requirements also align to a given business unit defined in an organization map.

Figure 29 defines the immediate relationships between business requirement and the business architecture domains that frame scope or are impacted by that requirement. It highlights the relevant relationships between requirement and various business architecture domains as follows:

- Requirement relates to requirement, where a dependency or other relationship may exist, such as an epic decomposing into a user story
- Requirement fulfills an objective where one-to-many requirements may need to be met to fulfill an objective

- Requirement is framed by a value stream stage, which provides enabling capability and participating stakeholder context
- Requirement impacts a capability behavior, where that behavior may apply to the capability in general or to a specific instance of a capability
- Requirement targets a stakeholder, which provides requirements definition context, such as a user being the target of a user story
- Requirement belongs to an initiative, which may be a program, project, sprint, or other endeavor based on the particular methodology in use

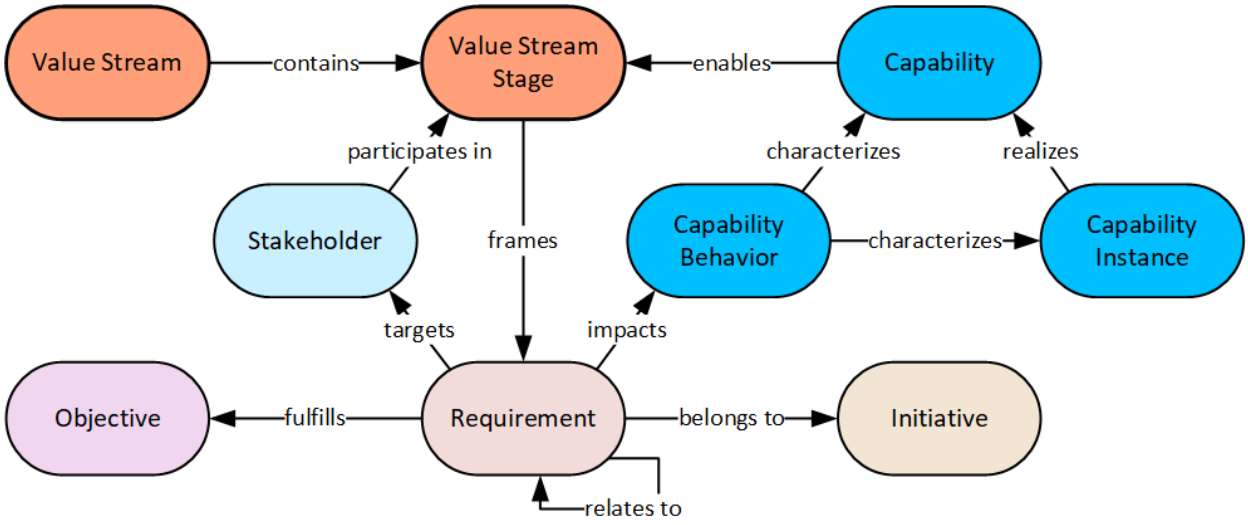

Figure 29: Business Architecture / Business Requirement Associations

6.1.1 Requirements / Business Architecture Usage Example

An example of how these relationships might look in practice uses the Transport Shipment stage of the Send Shipment value stream. The Transport Shipment value stream stage is where all shipment items are tracked and ultimately delivered to their destination. The shipment is not considered delivered until all items are delivered, meaning work continues in this stage until the state of the shipment is set to delivered, which requires the state of all shipment items be in a delivered state.

As a rule, this works well, except when a shipment breaks apart unexpectedly and unintentionally in transit, but the individual items must still be delivered. There are likely many capabilities involved in this scenario, including those that associate a shipment item to a route, facility, or a conveyor, but the one selected for this example is Shipment Item/Location Matching. The thinking is that if this capability could produce reliable outcomes for each shipment item on demand, the whereabouts of the item could be readily determined.

However, this capability relies on certain information concepts, such as the conveyor or conveyors it is on or the facility it is in. The example in figure 30 shows the objective driving the work, the value stream stage framing the situation, the capability and behavior targeted, and the stakeholder involved. The Shipping Improvement Initiative is the overall initiative under which this work is funded.

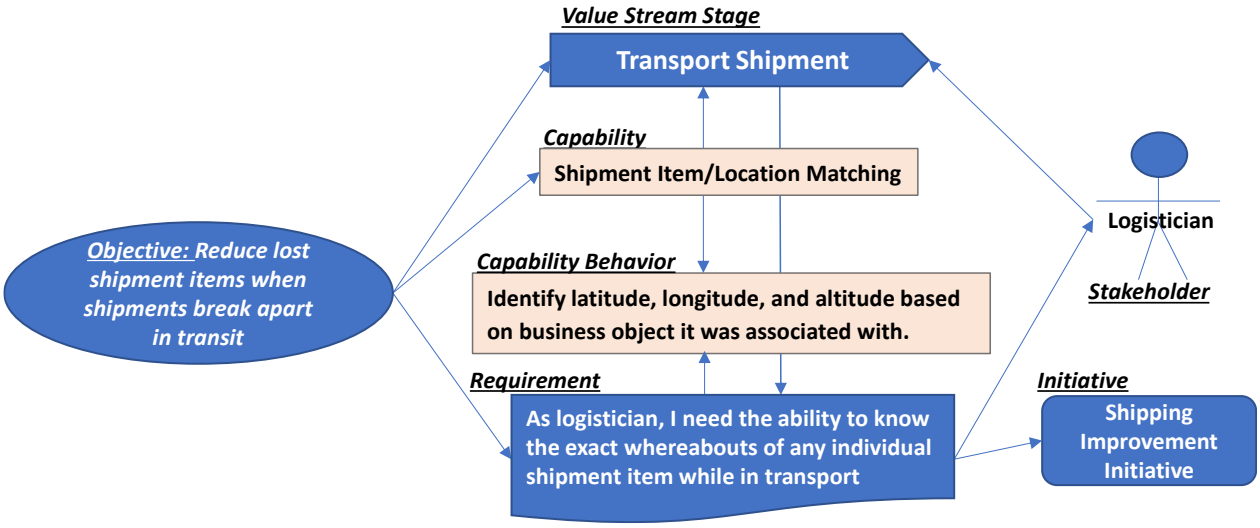

Figure 30: Requirements Alignment Scenario Example

The value of mapping the above and many more requirements to the various business architecture domains improves the framing of scope, helps determine change impacts, and promotes future reuse of a requirement in a different context. Harvesting requirements from the knowledgebase can reduce the level of effort on future initiatives while providing context for historical initiatives. In the example, the requirement and the reference to the requirement become permanent fixtures in the business ecosystem, with full traceability back to where it was initiated, the impacts it had, and under which initiative it was satisfied. The example may be expanded to include information concepts for which there are gaps by connecting them to impacted capabilities. The bottom line is that in the absence of business architecture, this context is missing and often vague, which can lead to unclear and unrealistic requirements that will fail to result in viable business solutions.

6.2 Customer Experience Design Alignment

Figure 2 showed two sides of the value proposition, with one side focused on value creation and the other side focused on value consumption. Value consumption is the viewpoint of the benefitting stakeholder, which in the context of customer experience is the customer. This section discusses customer journey mapping alignment to value streams, along with additional insights into how this alignment perspective further informs value consumption and how to improve it.

Customer experience design is a holistic and strategic discipline that looks at the experience customers have across every touchpoint of an organization's brand. The customer journey, which frames the customer experience, has its own unique purpose, methods, roles, artifacts, and domains that can be aligned to business architecture. The perspective of the customer experience is called customer journey. The intent of depicting the customer journey is to design and improve the experiences that customers have as they interact with the business ecosystem. The customer journey provides insights into the needs and outcomes for each customer or customer segment.

Customer segments are defined in the business architecture stakeholder map, where the customer category decomposes into discrete stakeholders. These customer segments trigger one or more value streams, seeking value across various stages of the value stream. Customer journeys are decomposed into or contain customer journey stages. The main association, therefore, between business architecture and customer journey focuses on stakeholder and value stream. Figure 31 depicts the association between business architecture to the left and the customer journey to the right.

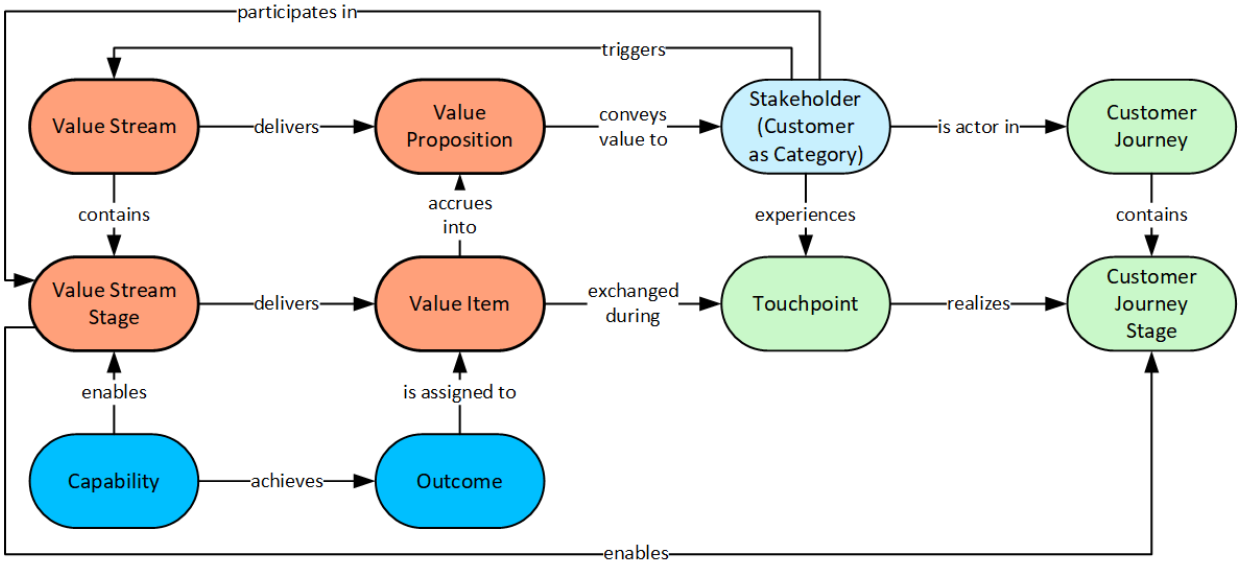

Figure 31: Customer Journey / Business Architecture Relationships

The mappings shown in figure 31 are established to create a direct correspondence between the value items produced from a value stream stage and the customer experience. Specifically:

- A value stream delivers a value proposition
- Value stream stages deliver one or more value items, which accrue to deliver the value proposition
- Each value stream stage enables a customer journey stage
- Capabilities, which enable value stream stages, achieve discrete outcomes that are assigned to value items that are delivered by that value stream stage
- Stakeholders, which typically include multiple customer types, trigger value streams and participate in value stream stages, along with other participating stakeholders
- Value items are exchanged during a customer journey via touchpoints

A formal mapping of customer experience design on the right-hand side of the figure depicts the customer journey decomposed into customer journey stages. In these journey stages, the customer, one of multiple stakeholder categories possible in an ecosystem, has certain experiences that are realized as interactions between the customer and the organization. The model uses stakeholders so that it can also be used to reflect the experience of a partner or an internal stakeholder. A touchpoint is a way in which a customer interacts with an organization, either in physical or digital format. Examples include an advertisement, brochure, or salesperson contact.[12] Customer journey maps and value streams may be used independently, with or without touchpoints.

6.2.1 Customer Experience and Value Consumption

Mapping a value stream to a customer journey map provides additional insights into value consumption that can help enhance the customer experience. Figure 32 depicts this additional perspective using the association of customer journey touchpoint to value item, as reflected in the view introduced in figure 9. It depicts a situation where the value item called "routing option selected" is exchanged with a touchpoint that the customer journey stage incorporates into the customer experience. The touchpoint is the experience of the customer feeling assured that the desired route for their trip is available and has been mapped out accordingly to satisfy their needs. A capability called Route Management, which enables the value stream stage Plan Trip, delivers an outcome called, "route fixed", which changes the state of the route business object from "undetermined" to "fixed".

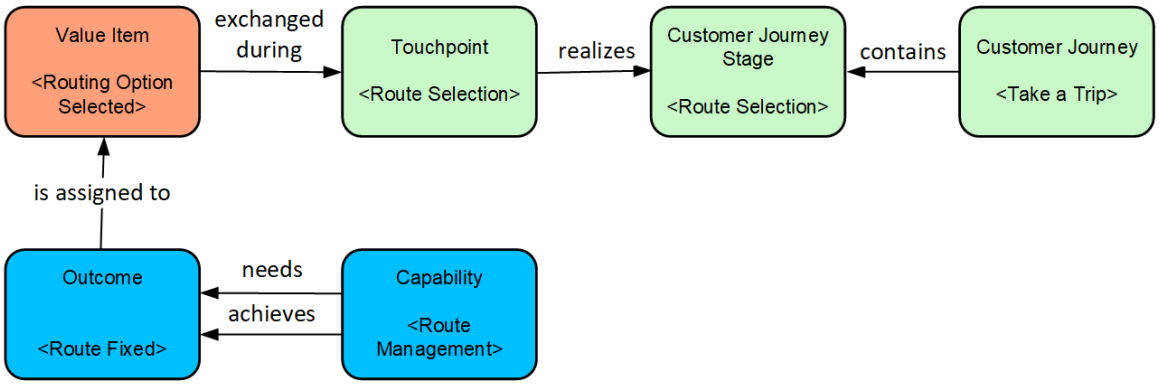

Figure 32: Customer Journey / Business Architecture Relationships

6.2.2 Customer Experience / Business Architecture Usage Example

Figure 33 depicts the Take a Trip value stream, and shows the customer journey stage that corresponds to the value stream stage. For example, the journey stage of Use Product corresponds to each stage in the Take a Trip value stream, because the customer is essentially using the automotive product as well as the digital products depicted in the table. Each of these digital products is meant to further the customer experience along their journey.

Take a Trip	Plan Trip	Prepare for Trip	Depart Location	Arrive Destination	Terminate Trip
Customer Journey Stage	Use Product	Use Product	Use Product	Use Product	Use Product
Key Stakeholders	Customer (Driver)	Customer (Driver, Passenger), Help Personnel	Customer (Driver, Passenger), Help Personnel	Customer (Driver, Passenger), Help Personnel	Customer (Driver), Help Personnel
Product	Mapping Tool	Vehicle, Mapping Tool, Fuel Buddy	Vehicle, Navigation Tool, Fuel Buddy, Mapping Tool, Entertainment Tool	Vehicle, Navigation Tool, Fuel Buddy, Mapping Tool, Entertainment Tool	Vehicle, Navigation Tool, Mapping Tool
Product Entitlements (delivering services)	Flexible Map	Connected Customer, On Demand Access, Navigation, Fuel Options	Connected Customer, On Demand Access, Navigation, Fuel Options, Entertainment Options	Connected Customer, On Demand Access, Navigation, Fuel Options, Entertainment Options	Connected Customer, On Demand Access, Navigation
Enabling Capabilities	Plan Management, Trip Management, Location Management, Route Management, Network Management, Material Management	Trip Management, Location Management, Route Management, Vehicle Management, Network Management, Material Management	Trip Management, Location Management, Route Management, Vehicle Management, Network Management, Material Management	Trip Management, Location Management, Route Management, Vehicle Management, Network Management, Material Management	Trip Management, Location Management, Route Management, Vehicle Management, Network Management, Material Management

Figure 33: Take a Trip Value Stream Mapped to Customer Journey Stages, Stakeholders, Products, Product Entitlements, and Enabling Capabilities[13]

Showing the additional associations between the customer journey stages and the business architecture offers further insights into how to improve the customer experience. One type of touchpoint is product entitlement, a formal domain element as defined in figure 27, that represents services delivered in context of a given product. For example, in the third stage, Depart Location, a number of product entitlements are shown that include navigation, fuel options, and entertainment. These entitlements, which are formally mapped in the business architecture metamodel, are capability-enabled. If an entitlement is underperforming, then the capabilities that enable it become a key focal point for investment.

Another important point highlighted by figure 33 is that different customer segments may appear within a value stream as participating stakeholders, even if that customer segment did not trigger the value stream. For example, value stream stages 2-4 show Passenger as a participating stakeholder, where Passenger along with Driver are subsets of the customer stakeholder category in the stakeholder map. Automotive companies recognize Passenger as well as Driver as customers, since customer is defined as any stakeholder "benefitting from the organization's products and services". Therefore, the customer experience tracked against this value stream can explicitly consider the experience of two customer segments – the Driver and the Passenger – whereby each of these customer segments may derive unique value from a given value stream stage.

6.3 Business Process Alignment

Business process has multiple associations to business architecture as viewed through relationships to value streams, value stream stages, capabilities, and corresponding outcomes. These relationships are shown in figure 34.

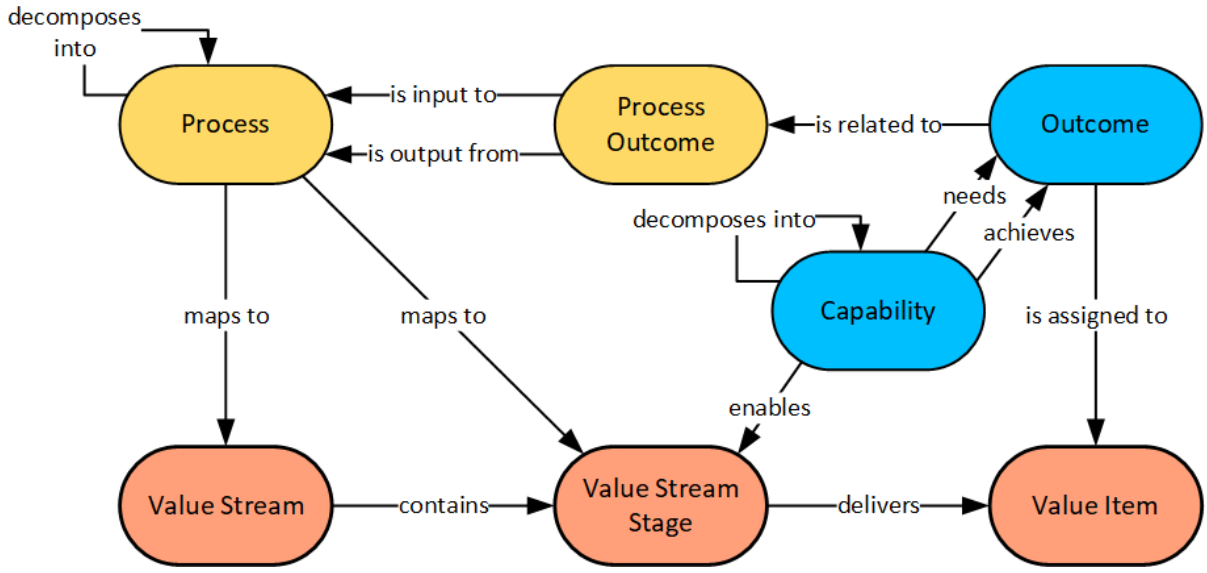

Figure 34: Business Architecture and Business Process Relationships

Process mappings to value stream and capability accommodate multiple process modeling schools of thought. For example, some methodologies apply the concept of a high-level process, which typically omits details associated with Supplier, Input, Process, Output, and Customer (i.e., SIPOC). High-level processes decompose into lower-level elements, such as *Subprocess* or (atomic) *Activity*. The "process decomposes into process" relationship accommodates process elaboration through decomposition.

A high-level process, often viewed from a top-down perspective, may be associated with one or more value streams. From a bottom-up perspective, a process maps to one or more value stream stages. The model in figure 34 accommodates both high-level and low-level mapping practices, as well as those falling along a hierarchical spectrum. Any given process may have a many-to-many relationship to value streams and value stream stages, as shown in the "maps to" relationship.

Capability similarly accommodates elaboration through decomposition, whereby a given capability decomposes into more fine-grained capabilities. Capability principles, structure, and performance remain consistent at every level of hierarchical decomposition. As highlighted in figure 11, capability is characterized by capability behavior, which also characterizes the behavior of capability instances, which in turn represents an implementation of that capability. The relationships shown in figure 34 connect capability with the value stream stage that it enables and the outcome it produces. Lower-level capabilities enable increasingly fine-grained analyses and produce increasingly fine-grained outcomes. These outcomes contribute to or are assigned to value items associated with that value stream stage.

Process outcome is a realized aspect of an outcome, achieved or needed by a capability, that corresponds to an input to or an output from a specific process. Process outcome is understandable only in relation to the process it refers to in context of a given capability outcome. For example, one can have definitions of structure, format, and state that provide more behavioral information, which aligns well with process-related inputs and outputs. Outcomes produced by a capability, however, endure without reliance on such context, relying instead on a given implementation of that capability instance and related behavior. Figure 34 highlights this overall perspective by depicting an outcome produced by a capability as being "related to" a process outcome, which provides context to a corresponding process.

6.3.1 Business Process / Business Architecture Usage Example

Figure 35 depicts the Take a Trip value stream and related stages, along with the relationships between those stages and corresponding processes. Processes are shown as yellow rectangles. For example, a process called "Change Traveler Trip Arrangements" maps to the Ensure Permission, Depart, and Arrive at Destination value stream stages. This process, along with several additional processes that one might consider to be a common sequence, maps to the Depart stage, providing a more comprehensive association between process and value stream stage than would be seen in practice.

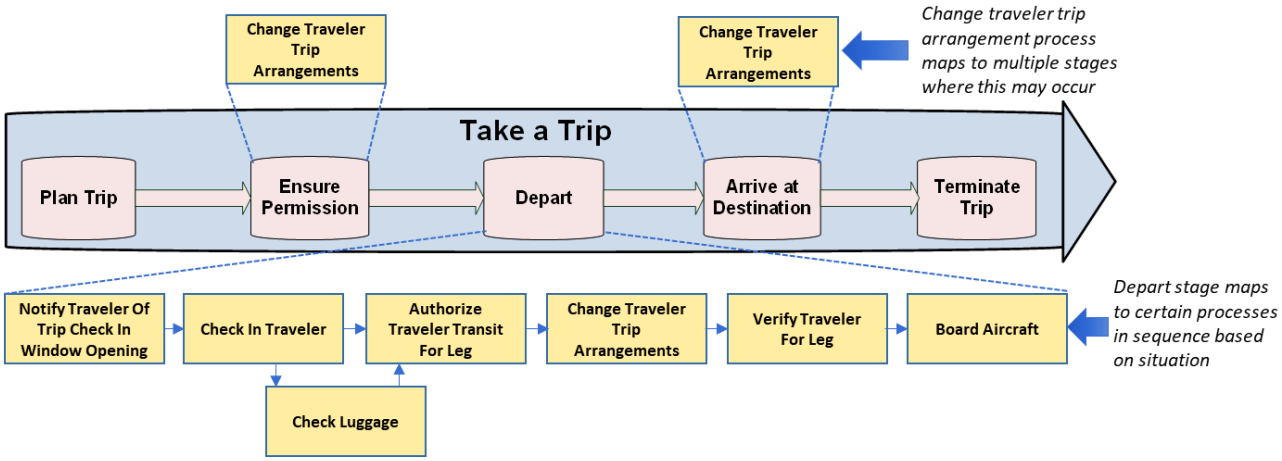

Figure 35: Transportation Example for Business Architecture / Business Process Alignment[14]

With figure 34 as the model perspective and figure 35 showing a real-world situation, figure 36 provides an example of how to interpret the model in a real-world example.

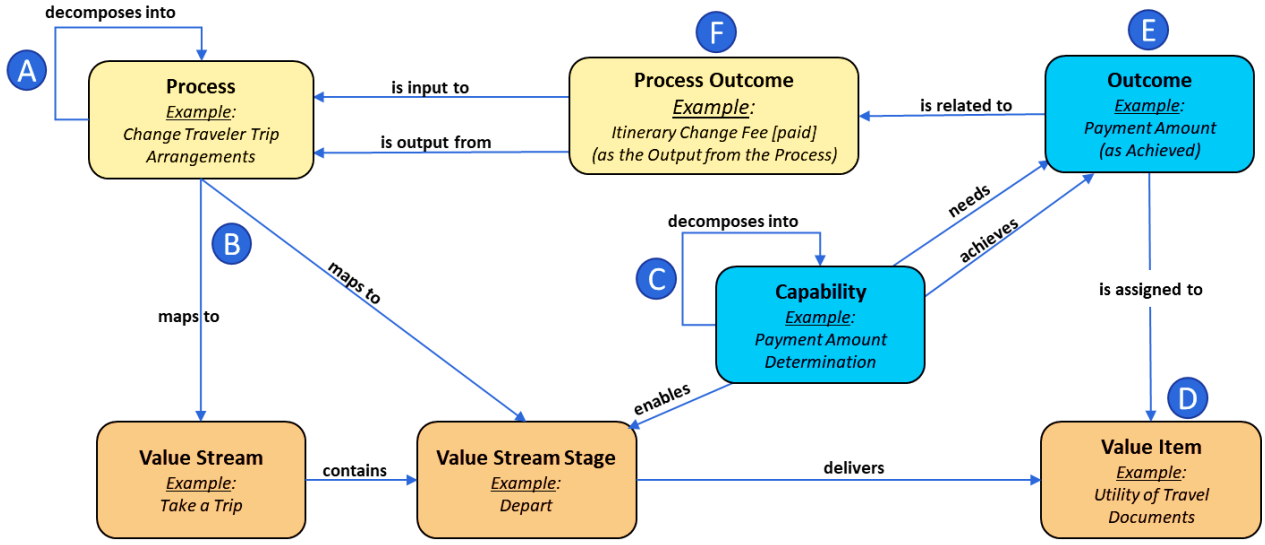

Figure 36: Transportation Example: Mapping Business Architecture to Business Process

Here, a process (A) called "Change Traveler Trip Arrangements" has a relationship (B) to the Take a Trip value stream and, more specifically, to the Depart value stream stage. While this process has a relationship to three value stream stages (Ensure Permission, Depart, and Arrive at Destination), only one stage is shown in figure 36 for example purposes. The Depart stage has an enabling capability (C) called Payment Amount Determination, which enables the Depart stage in part by producing an outcome (E) called Payment Amount. This outcome is assigned to a value item (D) "Utility of Travel Documents" delivered by the value stream Depart stage. This outcome, in turn, is related to a process outcome (F) called "Itinerary Change Fee", which shows as being "Paid". This change fee is then used as an input to and an output from the "Change Traveler Trip Arrangements" process (A). The specific output or input relationship would be determined through a more detailed analysis of the role the process plays in various situations.

A more user-friendly example of the scenario is provided in figure 37.

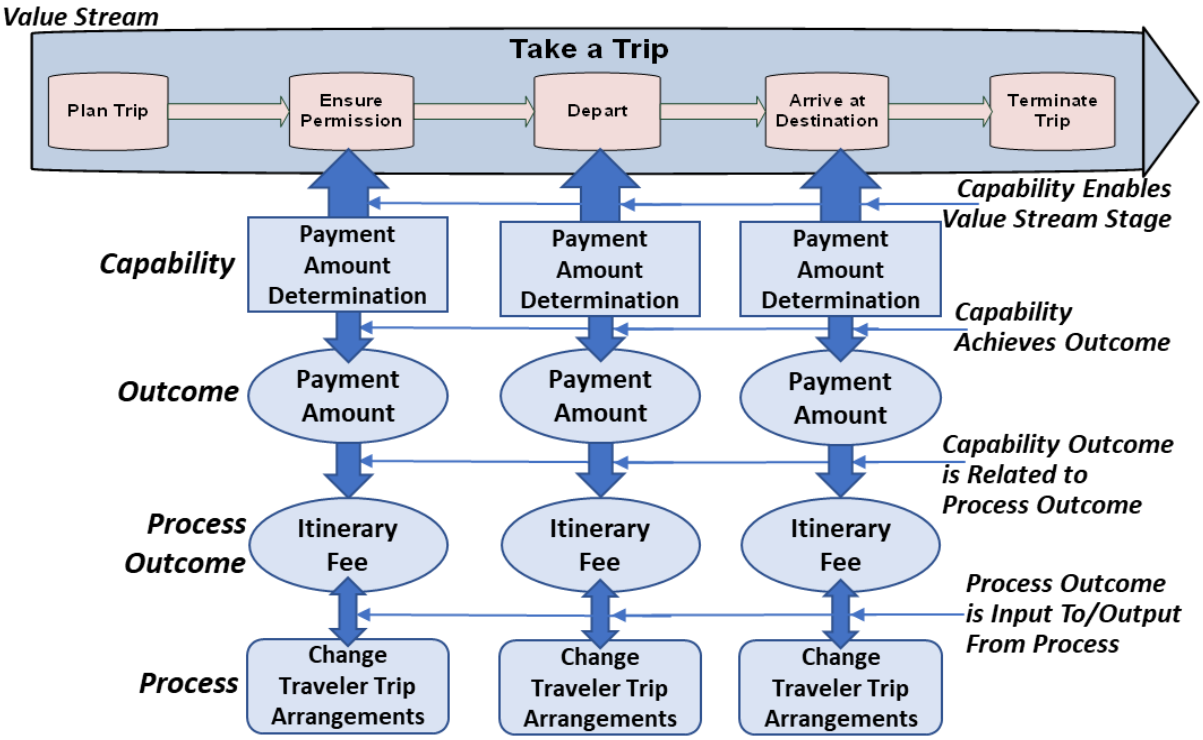

Figure 37: Take a Trip Value Stream, Stages, Enabling Capability, and Process Relationships

Figure 37 represents a layperson's view of what is shown in figure 35. From a practical perspective, a team would work from a high-level perspective and drill down to the more granular relationships shown herein. For example, it may satisfy impact analysis or planning needs to simply associate the processes previously shown in figure 35 with related value streams and corresponding stages. However, a business analysis or implementation team may find it opportunistic to track enabling capabilities and outcomes to corresponding process outcomes and related processes. The degree of granularity specified and corresponding effort needed to produce these mappings as depicted in the metamodel should be driven by the needs of those engaged in working with these artifacts.

7. SUMMARY

Business architecture is an abstraction of real-world things described in a business model. To ensure that all participants understand and share the same mental model of that business requires a rationalized and clearly defined vocabulary, a value delivery model, and related perspectives. A metamodel, or model of a model, defines the comprehensive set of domains, the underlying domain relationships, and usage rules for defining the model of a business.

There is more to the practice of business architecture than providing this model of the business; modeling results must be made accessible and framed by specific business scenarios to solve the challenges at hand. Meeting this overall goal requires storing the business domains and associations in a readily accessible business architecture knowledgebase while maintaining the integrity of modeled domains and relationships. To organize the business architecture knowledgebase, a comprehensive representation of an organization is separated into ten domains: four core domains and six extended domains. Information about the business is modeled along these domains in blueprints or maps. Relationships among the domains are organized in cross-mappings to answer multidimensional questions from business professionals, who range from strategic planners to design and solution deployment teams.

Business architecture focuses on the value for a consumer or customer from an outside-in perspective of the value provider. This perspective enables the viewing of customer value delivery and all the work associated with improving upon that value delivery to be viewed from an ecosystem-wide perspective across business units, partners, and related perspectives.

Value, capability, information, and organizational domains work in lockstep to deliver customer value. Value streams define what stages are necessary to achieve the consumer value proposition. Value stream stages are enabled by capabilities, which in turn are delivered by business units, which are part of an organization (the value provider). Information is closely aligned to capabilities that require and modify that information. Cross-mapping capabilities to value streams and business units is a powerful means for targeting and improving organizational weaknesses, capitalizing on opportunities, dealing with threats, and maximizing organizational strengths.

The remaining extended business architecture domains include stakeholder, strategy, initiative, policy, product, and metrics. Stakeholder mapping organizes all stakeholders into what would typically be categorized as customers, partners, and human resources, any one of which may trigger and/or participate in a value stream. Value stream connects stakeholder to value proposition, frames the impacts of strategic objectives, aligns capabilities that enable value delivery, and, by extension, identifies the participation of business units and partners and highlights the role of information in value delivery.

Strategy mapping enables business objectives to target one or more business units, impacted capabilities, or one or more value streams. The ability to view strategic impacts across these domains broadens the focus of strategic planning and impact analysis, shifting the focus from a single business unit onto the organization, and ensuring that the scope of any investment is clearly defined and attainable. Once a strategy is defined and validated for impacts, the scope of initiatives (programs and projects) may be established with clarity and confidence.

Policy mapping ensures that the impacts of legislation, statutes, treaties, and regulations are considered at every stage of strategic planning and execution.

Product is the overall experience from the customer's perspective and is defined as a combination of goods and services provided to that customer to deliver value. Cross-mapping product to business unit, capability, strategy, and initiative opens interesting options for identifying new business opportunities.

Metrics, while not covered explicitly in this whitepaper, are integral to the use of business architecture and are context dependent. A populated knowledgebase that is structured using the business architecture metamodel serves as a rich environment from which a wide variety of metrics may be derived.

Modeling an organization using business architecture is a multidimensional, multidisciplined effort that evolves over time based on the priorities of a given organization, ensuring that tools, techniques, and human skills are maximized for success. Although it is possible to set up the knowledgebase with spreadsheets, scaling such a knowledgebase for anything other than a simple and very small enterprise is impractical. The use of a modeling tool that can capture, store, cross-map, and provide access to the business architecture is highly recommended to support scalability. A variety of tool vendors can enable the knowledgebase views defined in this whitepaper.

Organizations can jumpstart their business architecture mapping efforts using industry reference models available from the Business Architecture Guild®. It is important to recognize that what some metamodels represent in abstract metamodel form is best incorporated into an instance of an actual model, which is ideally based on an industry reference model. Incorporation and exclusion of domains in the business architecture metamodel are restricted to domains that have direct relationships to one of two abstract topics: capability and value. For example, some metamodels capture the concept of "location" when location would be one of many business objects in a business architecture reference model that would be captured and managed in a business architecture knowledgebase. In each capability map and organization map, location would have dozens of relationships to everything from asset, material, facility, and product, to policy, route, and geographic border. Therefore, location and similar objects are best defined in an instance of a business architecture and not within the underlying knowledgebase metamodel.

Using reference models as a baseline or starting point enables organizations to move through the startup phase of business architecture in a very short period of time. All reference models are designed and mapped to align to the formal cross-mapping domain structures described herein. Using the formally defined business architecture framework, business architecture knowledgebase, and the metamodel defined in this whitepaper will allow organizations to launch and maximize the value of a business architecture practice more quickly and effectively.

GLOSSARY OF TERMS

The following glossary provides definitions for certain terms used in the Metamodel Guide. The terms are drawn from the *BIZBOK® Guide*, Appendix A: Glossary.[15] For missing terms, check the *BIZBOK® Guide*, Appendix A: Glossary

Business Ecosystem

One or more legal entities, in whole or in part, that exist as an integrated community of individuals and assets, or aggregations thereof, interacting as a cohesive whole toward a common mission or purpose.

Business Object

A representation of a thing, including at least its business name and definition, attributes, behavior, relationships and constraints, which may represent (for example) a person, place, or concept.

Business Process

A series of logically related activities or tasks (such as planning, production, or sales) performed together to produce a defined set of results.[16]

Business Unit

A logical element or segment of a company (such as Accounting, Production, or Marketing) representing a specific business function and a definite place on the organizational chart under the domain of a manager. Also called Department, Division, or Functional Area.

Capability

A particular ability or capacity that a business may possess or exchange to achieve a specific purpose or outcome.

Capability Behavior

The way in which a capability acts or conducts itself in certain circumstances or instances.

Capability Instance

A specific realization of a capability, as it exists or is envisioned to exist, in the context of a given business unit or another situational context.

Customer Segment

A grouping of customers based on certain shared characteristics.

Goal

An end toward which effort is or should be directed.[17]

Information Concept

The way to represent business terms and semantics within the context of business architecture.

Initiative

A course of action that is being executed or has been selected for execution.

Knowledgebase

A combination of process, structure, and a logical warehouse for capturing, assimilating, viewing, and sharing a wide range of information that can be used to inform business strategy, optimize business planning through execution, and guide transformation efforts.

Metamodel

The abstract syntax of a class of models.

Model

A visual and/or data representation of a real-world thing or category of real-world things.

Objective

A quantitative, measurable result that defines strategy.

Organization

A social unit of people, systematically structured and managed to meet a need or to pursue collective goals on a continuing basis.

Outcome

An end-result or final product that is a consequence of an event, action, or a series of events and actions.

Policy

A course or principle of action adopted or proposed by a government, party, business, or individual.

Process Outcome

A realized aspect of an outcome, achieved or needed by a capability, that corresponds to an output or an input to a specific process, in context of the same value stream stage.

Product
The overall experience provided by the combination of goods and services to satisfy the customer's needs.

Requirement
A condition needed by a stakeholder to solve a problem or achieve an objective.

Stakeholder
An internal or external individual or organization with a vested interest in achieving value through a particular outcome.

Strategy
The pattern or plan that integrates an organization’s major goals, policies, and action sequences into a cohesive whole.

Touchpoint
A way in which a customer interacts with an organization, either in physical or digital format.

Value Item
The judgment of worth, made by an individual or organization, attached to something tangible or intangible, and attained in the course of a particular interaction with one or more parties.

Value Proposition
An innovation, service, or feature intended to make a company, product, or service attractive to customers or related stakeholders.

Value Stream
An end-to-end collection of activities that create a result for a customer, who may be the ultimate customer or an internal end-user of the value stream.

Value Stream Stage
A distinct, identifiable phase or step within a value stream that has a unique name, entrance criteria, exit criteria, and identifiable participating stakeholders.

CHANGE LOG (VERSION 3.0)

1. Section 5.1
    a. Figure 6 replaced with better organized overview
    b. Explanation why missing lower-level relationships are not added
2. Figure 7.a and text added to explain reading legend for relationship notation
3. Figure 14
    a. Stakeholder category inserted in Diagram
    b. Second line after Figure 14 text “and defined by a stakeholder” deleted
4. Section 5.4.1
    a. 2nd bullet point reference to stakeholder category in line 1 and 3 inserted
5. Section 5.6
    a. 2nd and 3rd paragraphs rearranged to explain roles of stakeholders.
6. In section 5.6, figure 19 was updated as follows:
    a. Stakeholder category inserted and associated to stakeholder and information concept
    b. Added association between stakeholder category and stakeholder
    c. Added association between stakeholder category and information concept
7. Section 5.6.1
    a. New bullet point about stakeholder category
    b. 3rd bullet point punctuation corrected
    c. 4th bullet point is new
    d. 6th bullet point is new
8. Section 5.7
    a. Last line of 1st paragraph a reference to Section 5.7.1 inserted
9. Figure 21
    a. Recursive relations in diagram added for goal, objective, course of action, and change
    b. 1st paragraph text aligned to diagram
    c. 2nd paragraph “and can be decomposed into lower levels” added
10. Section 5.10
    a. First paragraph highlights that customer is external
11. Section 6.1
    a. 2nd line “in order to” changed to “to”
    b. 4th line of paragraph changed “final destination” to “destination”
12. Section 7.
    a. Last paragraph last line “launch and maximize the value of a business architecture practice quickly and effectively.” text added

ABOUT THE BUSINESS ARCHITECTURE GUILD®

The Business Architecture Guild® is an international, not-for-profit, member-driven professional association that provides valuable resources to business architecture practitioners and others interested in the profession. Formed in 2010, the Guild's primary purpose is to promote best practices and expand the knowledgebase of the business architecture discipline. The Guild is the source for *A Guide to Business Architecture Body of Knowledge®* (*BIZBOK® Guide*), the go-to guide for business architecture practitioners and other professionals seeking to leverage the discipline, and home of the Certified Business Architect® (CBA®) certification program.

The Guild is active in industry standards programs and partners with related professional associations to further its purpose. In addition to the *BIZBOK® Guide*, the Guild offers a Business Architecture Maturity Model® (BAMM®), Business Architecture Tool Evaluator™, and business architecture reference models for various industry sectors, which include financial services, healthcare, insurance, government, manufacturing, telecommunications, transportation, and common industry reference model. All Guild-produced content, including the industry reference models, is developed by its members. In addition to these resources, the Guild has a vendor partner program, a Guild Accredited Training Partner® (GATP®) program, and an academic program.

For more information and more details, visit www.businessarchitectureguild.org.

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