ArchiMate Motivation and Strategy

Knut Hinkelmann
# Motivation and Strategy in ArchiMate

The Motivation aspect and the Strategy layer together correspond to what is covered by the OMG Business Motivation Model.

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Passive structure</th>
<th>Behavior</th>
<th>Active structure</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
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<td>Application</td>
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<td>Technology</td>
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<td>Physical</td>
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<tr>
<td>Implementation &amp; Migration</td>
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</tbody>
</table>
Motivation and Strategy Elements Metamodel

Motivation Elements

- Active Structure Element
  - Stakeholder
    - Meaning
    - Value
    - Assessment
  - Goal
    - Driver

Strategy Elements

- Outcome realizes
- Principle realizes
- Requirement realizes
- Constraint

Course of Action realizes / influences
Capability
Resource

Triggers / flows to / serves
Motivation Elements
Motivation Elements Metamodel

Active Structure Element

Stakeholder

Motivation Element

Meaning

Value

Driver

Assessment

Goal

Outcome

Principle

Requirement

Constraint

ArchiMate 3, section 6.1
# Motivation Elements (I) – Drivers and Assessments

<table>
<thead>
<tr>
<th>Element</th>
<th>Definition</th>
<th>Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder</td>
<td>The role of an individual, team, or organization (or classes thereof) that represents their interests in the outcome of the architecture.</td>
<td><img src="image" alt="Stakeholder" /></td>
</tr>
<tr>
<td>Driver</td>
<td>An external or internal condition that motivates an organization to define its goals and implement the changes necessary to achieve them.</td>
<td><img src="image" alt="Driver" /></td>
</tr>
<tr>
<td>Assessment</td>
<td>The result of an analysis of the state of affairs of the enterprise with respect to some driver.</td>
<td><img src="image" alt="Assessment" /></td>
</tr>
</tbody>
</table>
Drivers

- Drivers are usually associated with a stakeholder
- Often called “concerns”
- Examples
  - Internal drivers: Customer satisfaction and Profitability
  - External drivers: economic changes or changing legislation.
- The name of a driver should preferably be a noun.
Assessment

- An assessment may reveal strengths, weaknesses, opportunities, or threats for some area of interest.
  - **External driver** can be assessed as
    - *Opportunity* – favorable (positive)
    - *Thread* – unfavorable (negative)
  - **Internal driver** can be assessed as
    - *Strength* – favorable (positive)
    - *Weakness* – unfavorable (negative)

- Strengths and opportunities may be translated directly into goals
- Weaknesses and threats can be considered as problems that need to be addressed by goals that “negate” the weaknesses and threats
Example: Stakeholders, Drivers, Assessment

Chief Marketing Officer (CMO) → Market Share

Chief Executive Officer (CEO) → Profitability

Chief Financial Officer (CFO) → Profitability

Market Share → Market Share Is Declining

Profitability → Profitability Is Declining

Revenue → Revenue Is Declining

Costs → Cost Of Acquiring New Customers Is Increasing

Competitors Are Including Advanced Features In Their Service Models → Discounts Provided To Remain Competitive

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ArchiMate 3, section 6.2.4
## Motivation Elements (II): Goal, Outcome, Principle, Requirement, Constraint

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal</td>
<td>A high-level statement of intent, direction, or desired end state for an organization and its stakeholders.</td>
<td><img src="image" alt="Goal" /></td>
</tr>
<tr>
<td>Outcome</td>
<td>An end result that has been achieved.</td>
<td><img src="image" alt="Outcome" /></td>
</tr>
<tr>
<td>Principle</td>
<td>A qualitative statement of intent that should be met by the architecture.</td>
<td><img src="image" alt="Principle" /></td>
</tr>
<tr>
<td>Requirement</td>
<td>A statement of need that must be met by the architecture.</td>
<td><img src="image" alt="Requirement" /></td>
</tr>
<tr>
<td>Constraint</td>
<td>A factor that prevents or obstructs the realization of goals.</td>
<td><img src="image" alt="Constraint" /></td>
</tr>
</tbody>
</table>

*ArchiMate 3, section 6.5*
Goals

- Goals are typically used to measure success of an organization.

- Examples of Goals:
  - To increase profit, to reduce waiting times at the helpdesk, or to introduce online portfolio management.

- Goals are generally expressed using qualitative words; e.g., “increase”, “improve”, or “easier”.

- It is very common to associate concrete outcomes with goals.
Outcome

- Outcomes are end results
  - Goals or requirements are often formulated in terms of outcomes that should be realized.
  - Capabilities are designed to achieve such outcomes.
- Outcomes are tangible, possibly quantitative, and time-related.
- Outcome names should consist of a noun identifying the end result followed by a past-tense verb or adjective indicating that the result has been achieved, e.g.
  - “First-place ranking achieved”
  - “2015 quarterly profits rose 10% year over year beginning in Q3”
Principles, Requirements, Constraints

- **Principles** are *normative guidelines*. A principle defines a general property that applies to any system in a certain context.
  
  - Example: The principle “Data should be stored only once” represents a means to achieve the goal of “Data consistency”.

- Principles are broader in scope and more abstract than requirements.

- A **requirement** defines a property that applies to a specific system.
  
  - Example: the requirement “Use a single CRM system” conforms to the aforementioned principle in the context of the management of customer data.

- In contrast to a requirement, a **constraint** does not prescribe some intended functionality, but imposes a restriction on the way a system may be realized.
Example: Goal, Outcome, Principle, Requirement, Constraint

- Improve Profitability of Service Offering
- Increased Profit
- Increased Revenue
- Increased Market Share
- Reduced Cost of Customer Acquisition
- Serve Customers Whenever They Need Our Help
- Serve Customers Wherever They Are
- Mobile Applications Shall Run on All Popular Mobile Platforms
- Services Shall Be Accessible Through Mobile Browsers
- Mobile Applications Shall Be Built with Cross-Platform Frameworks
- Respond to Changing Customer Needs, Preferences, and Expectations Quickly and Efficiently

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Motivation Elements (III) – Meaning and Value

<table>
<thead>
<tr>
<th>Meaning</th>
<th>The knowledge or expertise present in, or the interpretation given to, a core element in a particular context.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>The relative worth, utility, or importance of a core element or an outcome.</td>
</tr>
</tbody>
</table>
Example: Meaning and Value

- Insurer
- Customer
- Cost Efficiency
- Being Informed
- Peace of Mind
  - Certainty
- Push Notification
- Message
  - Confirmation Of Receipt Message
  - Review Complete Message
  - Payment Complete Message
  - Claim Has Been Received
  - Claim Review Complete
  - Claim Has Been Paid

ArchiMate 3, section 6.4.3
Relationships between Motivation and Core Elements

![Diagram showing relationships between Stakeholder, Value, Meaning, Requirement, Business Actor, and Structure Element/Behavior Element (except Stakeholder)]
Strategy Elements
Strategy Elements Metamodel

ArchiMate 3, section 7.1
Why are IT Projects not successful?

- Many IT projects are less than successful even though the actual IT implementation was brilliant
  - associated management tasks (e.g. personnel training) were not satisfactorily addressed by the enterprise architects and planners
  - IT projects are often described in terms of technical deliverables not as business outcomes
    - difficult for business to appreciate what was being delivered
    - often IT architects lost sight of the ultimate business goal.

TOGAF 9, chapter 32; http://pubs.opengroup.org/architecture/togaf9-doc/arch/chap32.html
Capability-Based Planning

- Capability-based planning is a business planning technique that focuses on *business outcomes*.
  - It is business-driven and business-led
  - It combines the efforts of all lines of business to achieve the desired capability

- It links …
  - *IT vision, architectures and implementation* with
  - *corporate strategy and line of business plans*
Capability-Based Planning as Key for successful Business-IT Alignment

■ All of the architectures are *expressed in terms of business outcomes and value* rather than in IT terms.
  ◆ Example: Setting up a data center is really about consolidating corporate data and providing the related services

■ Lead enterprise architects will find themselves
  ◆ involved *IT architecture tasks* as well as
  ◆ associated *other management tasks* (business process re-engineering, personnel training, support training etc.)

TOGAF 9, chapter 32; http://pubs.opengroup.org/architecture/togaf9-doc/arch/chap32.html
## Strategy Elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Description</th>
<th>Notation</th>
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<tbody>
<tr>
<td>Resource</td>
<td>An asset owned or controlled by an individual or organization.</td>
<td><img src="image" alt="Resource" /></td>
</tr>
<tr>
<td>Capability</td>
<td>An ability that an active structure element, such as an organization, person, or system, possesses.</td>
<td><img src="image" alt="Capability" /></td>
</tr>
<tr>
<td>Course of action</td>
<td>An approach or plan for configuring some capabilities and resources of the enterprise, undertaken to achieve a goal.</td>
<td><img src="image" alt="Course of action" /></td>
</tr>
</tbody>
</table>

- All behavior elements can realize capabilities
- All structure elements can realize resource
Capabilities

- Long-term goals and strategies are often described on a high abstraction level and are not directly implementable.

- Capabilities help to reduce this gap by focusing on business outcomes.
  - They provide a high-level view of the current and desired abilities of an organization
  - They are realized by various elements (people, processes, systems, and so on) that can be described, designed, and implemented using Enterprise Architecture approaches.

- Capabilities are expressed in general and high-level terms and are typically realized by a combination of organization, people, processes, information, and technology

ArchiMate 3, section 7.3.1
Porter’s Value Chain
Example of a Capability Map

Inspired by Panorama360 reference model

Lankhorst, 6 Capabilities of the Adaptive Enterprise
Resources

- Resources often considered, together with capabilities, to be sources of competitive advantage for organizations.
- Resources are analyzed in terms of strengths and weaknesses.
- Resources can be classified into:
  - tangible assets
    - financial assets, e.g., cash, securities, borrowing capacity
    - physical assets, e.g., plant, equipment, land, mineral reserves
  - intangible assets
    - technology; e.g., patents, copyrights, trade secrets
    - reputation; e.g., brand, relationships; culture
  - human assets
    - skills/know-how, capacity for communication and collaboration, motivation

ArchiMate 3, section 7.2
Course of Action: Strategy or Tactic

- A course of action represents what an enterprise has decided to do.
- Courses of action can be categorized as strategies and tactics.
- It is not possible to make a hard distinction between the two, but
  - strategies tend to be long-term and fairly broad in scope
  - tactics tend to be shorter-term and narrower in scope.
Example

Increase Profit

Decrease Costs

Decreased Costs

Operational Excellence

Centralize IT Systems

IT Management & Operations

Human Resources

IT Resources

Increase Revenue

Loss of Customers

Standardize Products

Product Management

Archimate 3, section 7.4
Relationships between Strategy Elements and Motivation and Core Elements

Motivation Elements
- Outcome
  - Course of Action
    - Realizes / Influences
    - Resource
      - Requirements
        - Realizes / Influences

Strategy Elements
- Capability
  - Realizes
    - Internal Behavior Element
    - External Behavior Element
    - Active Structure Element
    - Passive Structure Element
    - Composite Element
      - Composes
      - Aggregates

Core Elements
- ArchiMate 3, section 7.6

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Reference

- The ArchiMate 3 specification is available at http://pubs.opengroup.org/architecture/archimate3-doc/

- It is referenced in this presentation as ArchiMate 3