Knut Hinkelmann, Source: ArchiMate 3 – Chapters 14 and 15

View, Viewpoints and Customization in ArchiMate

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Architecture Views and Viewpoints

- Not everyone is interested in everything.
- Views and Viewpoints are a means to specify which part of an Architecture Description is of relevance
  - *View*: Part of an architecture description that
    - addresses a set of related *Concerns*
    - and is tailored for specific *Stakeholders*
  - *Viewpoint* specifies a view
    - prescribes the concepts, models, analysis techniques, and visualizations that are provided by the view
    - a characterisation of stakeholders and their concerns

A *view* is what you see and
a *viewpoint* is where you are looking from

Stakeholder and Concerns

- *Stakeholders* are individuals, groups or organizations holding concerns for the System, i.e.
  - **Examples of Stakeholders**: business analyst, CEO, CIO, CxO, business architect, information architect, application architect, enterprise architect, process manager, product manager, auditor, …
- A *Concern* is any interest in the system, i.e. the objective for which a model is used
  - **Examples of Concerns**: optimisation, efficiency, quality of service, automation, agility, behavior, customer experience, flexibility, maintainability, regulatory compliance, security.

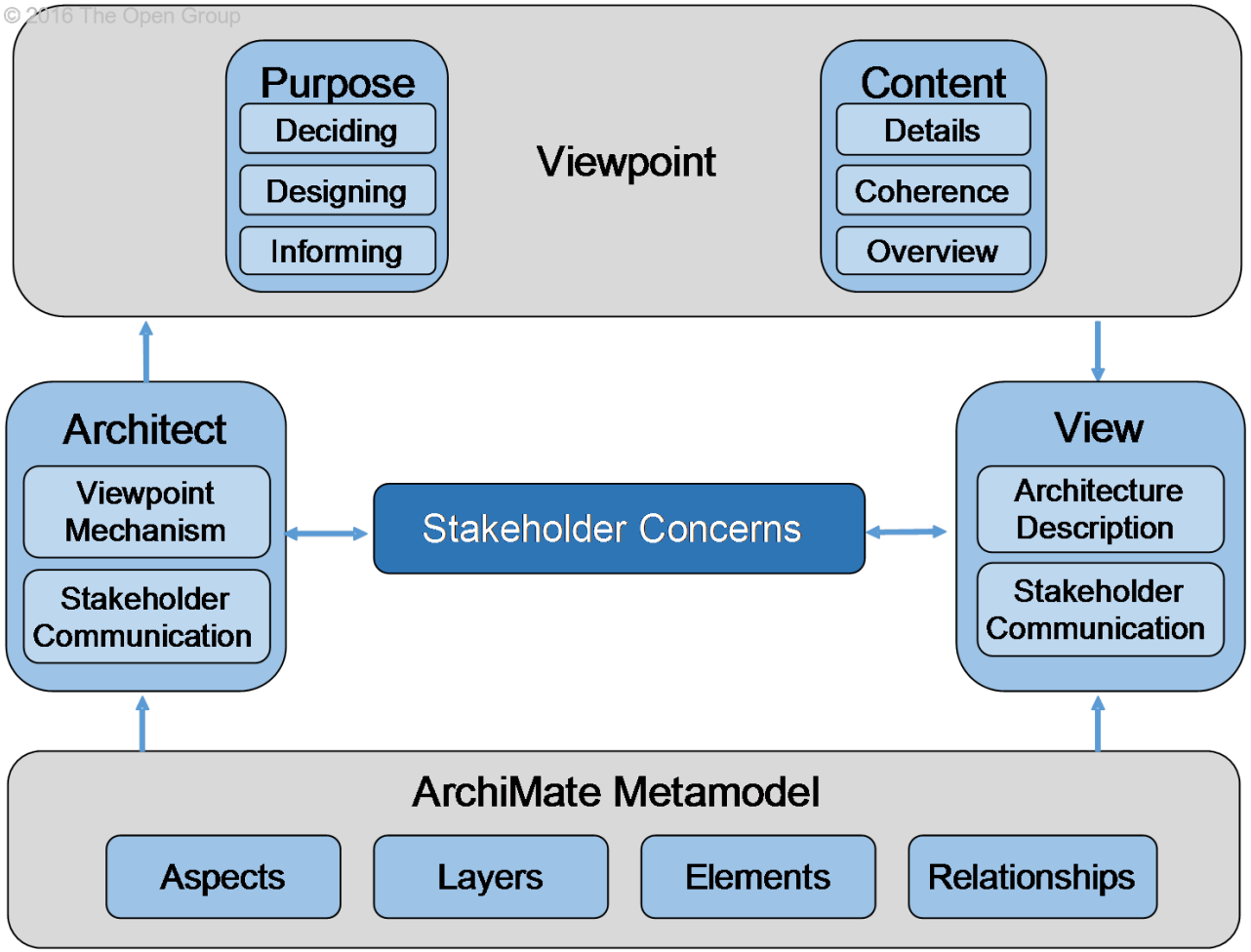
Views and Viewpoints in ArchiMate

- In ArchiMate, architects and other stakeholders can define their own views on the enterprise architecture
- A viewpoint in ArchiMate is a selection of
  - a relevant subset of the ArchiMate concepts and their relationships
  - For each viewpoint one model kind exists
- A view is (a set of) models
  - representing a part of an architecture
  - using the concepts and relationships of the corresponding viewpoint

Comparison to Databases

- The concept of views is well-known from databases
  - A view is a subset of a database
  - A view can be characterized by a query
- Thus
  - a *query* corresponds to a *viewpoint*: it characterizes what should be in a view
  - an *answer* to a query corresponds to a *view*: it is a table, which represents the part of the databases specified by the query

Framing Stakeholder Concerns using the Viewpoint Mechanism



Two-Dimensional Classification of Enterprise Architecture Viewpoints

Purpose Dimension

Content Dimension

	Designing	Deciding	Informing
Details			
Coherence			
Overview			
	architect, software developer, business process designer	product manager, CIO, CEO	customer, employee, others

Two-Dimensional Classification of Enterprise Architecture Viewpoints

Purpose dimension:

***Designing*:** support architects and designers in the design process from initial sketch to detailed design. Typically, design viewpoints consist of diagrams, e.g. those used in UML.

***Deciding*:** assist managers in the process of decision-making by offering insight into cross-domain architecture relationships. Typical examples: cross-reference tables, landscape maps, lists, and reports.

***Informing*:** help to inform any stakeholder about the Enterprise Architecture, in order to achieve understanding, obtain commitment, and convince adversaries. Typical examples are illustrations, animations, cartoons, flyers, etc.

Content dimension:

select relevant aspects and layers from the ArchiMate Core Framework.

Details: one layer and one aspect. Typical stakeholders: a software engineer or a process owner responsible for one application/process.

***Coherence*:** multiple layers or multiple aspects. Enables to focus on architecture relationships like process-uses-system (multiple layer) or application-uses-object (multiple aspects). Typical stakeholders are operational managers responsible for a collection of IT services or business processes.

Overview: multiple layers and multiple aspects. Addressed to Enterprise Architects and decision-makers, such as CEOs and CIOs.

Creating an ArchiMate Viewpoint

- Creating an ArchiMate viewpoint consists of two steps:

1. Selecting a *subset of relevant concepts* (elements and relationships) from the ArchiMate metamodel that is needed to address the stakeholder's concerns.

2. Defining a *representation* to depict these concepts in a way that is understood by the stakeholders.

   This can be a diagram that uses standard or customized ArchiMate notation, a catalog of elements, a matrix showing the relationships between two groups of elements, or an entirely different visualization.

Customization in Archimate

- The ArchiMate language contains only the elements and relationships that are necessary for general architecture modeling.
- It can be customized for for specific usage like model-based performance or cost calculations, or to attach supplementary information (textual, numerical, etc.)
- Two ways to customize
  - Profiling
  - Specialization of eElements and relationship

Specialization of Elements and Relationships

- Specialization is a simple and powerful way to define new elements or relationships based on the existing ones.
- Specialized elements inherit the properties of their generalized elements
- New graphical notation could be introduced for a specialized concept, e.g., by adding or changing the icon.
- Specialization of elements and relationships allows organizations or individual users to customize the language to their own preferences and needs, while the underlying definition of the concepts is preserved

Examples of Specializations

Specializsation can be made for elements and relations on all layers

- A **Business Actor** could be
  - Individual
  - Organization Unit
- **Product** could be
  - Physical Product
  - Digital Product
- **Application Interface** coud be
  - Application-to-Application Interface
  - User Interface
- **Network** could be
  - WiFi Network
  - Wide Area Network
- **Equipment** could be
  - Vehicle
  - Train
- A **Goal** coud be
  - A Business Objective
  - A Control Object (for a risk)