ArchiMate 3 Core Framework

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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
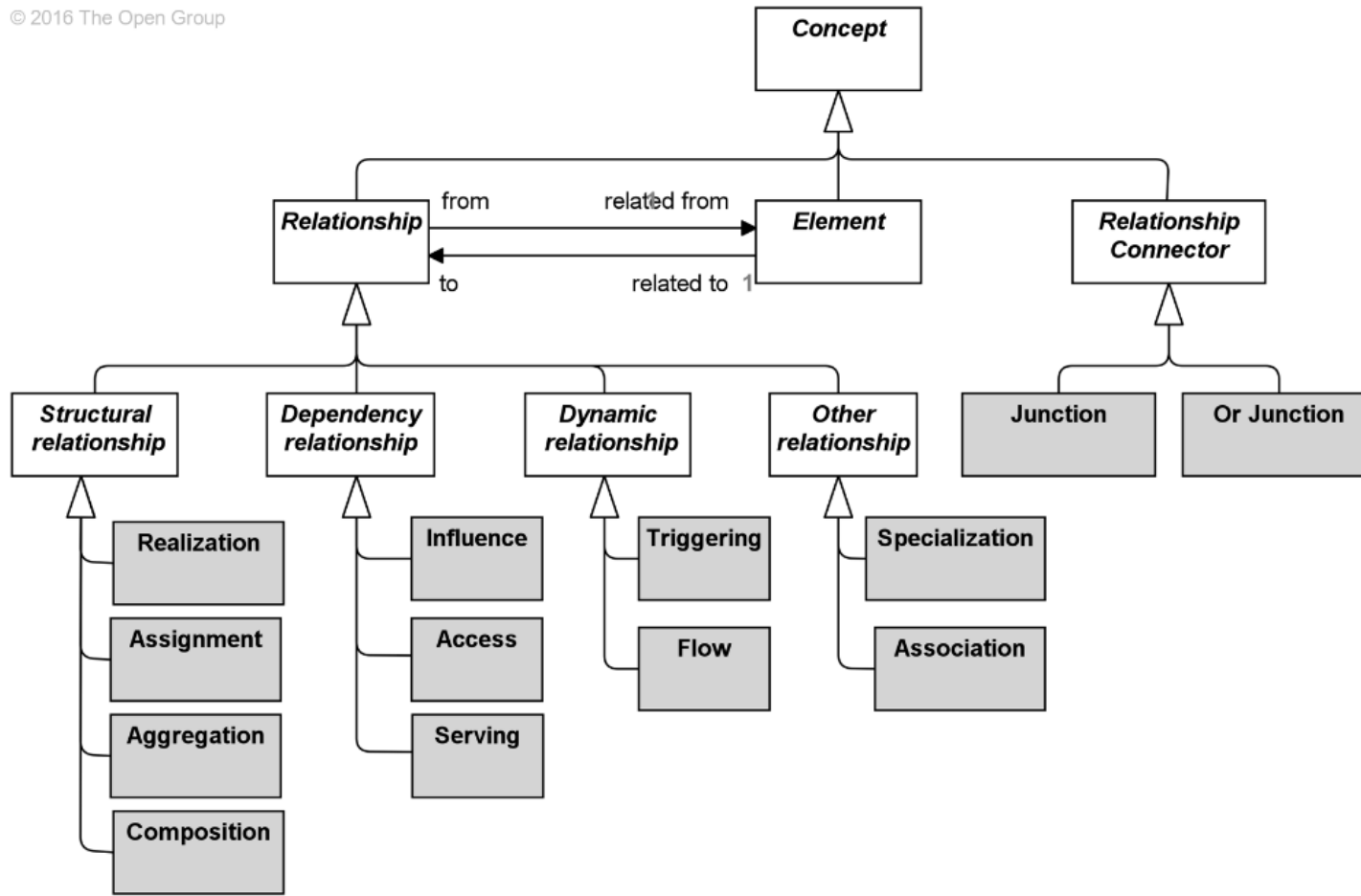
The ArchiMate Framework

This presentation gives an overview of the elements of the ArchiMate Core Framework (Business, Application, Technology) and the Physical Layer

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	Passive structure	Behavior	Active structure	Motivation
Strategy				
Business				
Application				
Technology				
Physical				
Implementation & Migration				

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ArchiMate 3 - Core

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Relationships

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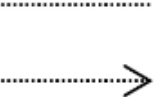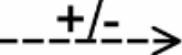
Relationships

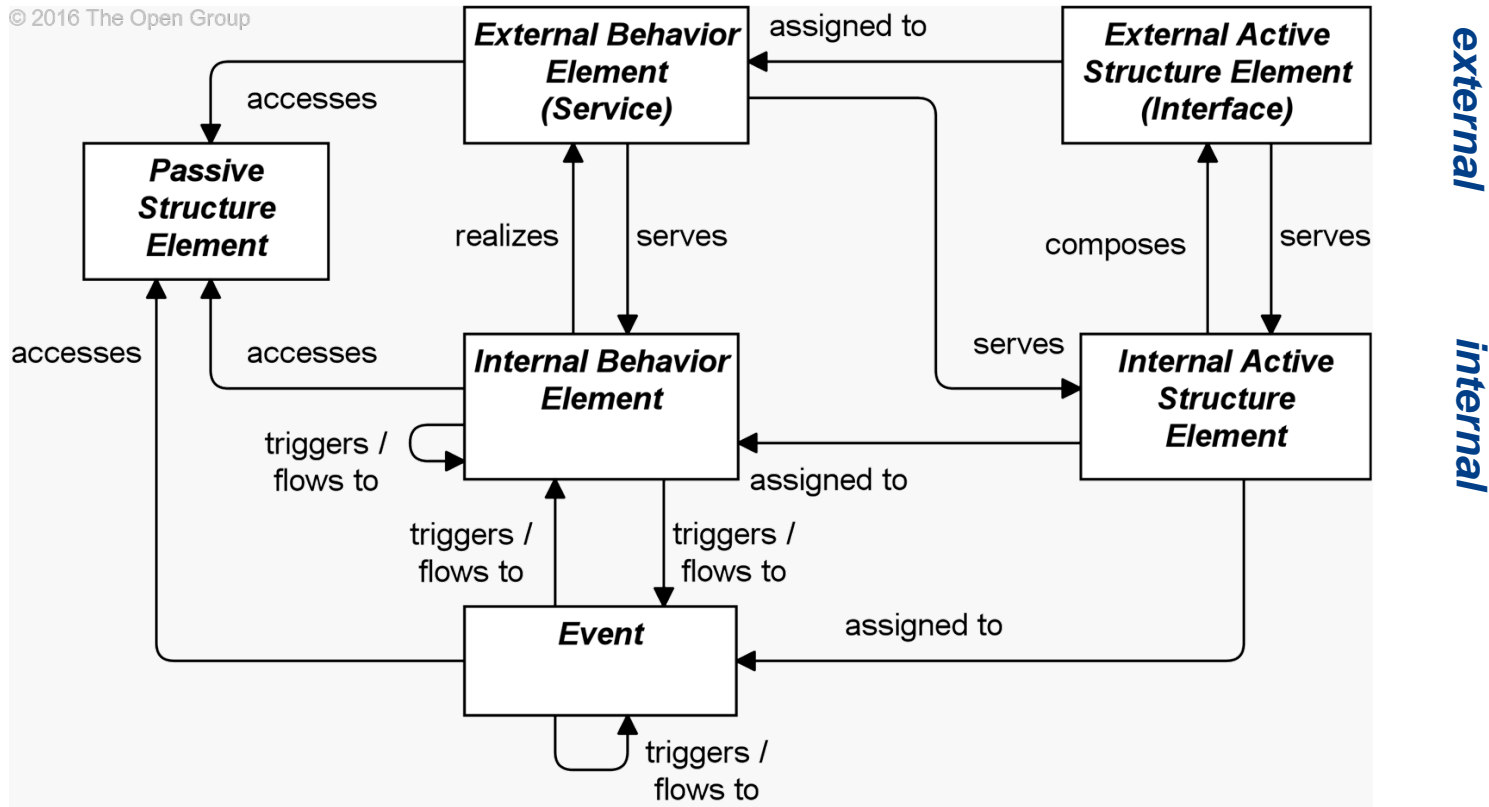| Structural Relationships		Notation
Composition	Indicates that an element consists of one or more other elements.	◆———
Aggregation	Indicates that an element groups a number of other elements.	◇———
Assignment	Expresses the allocation of responsibility, performance of behavior, or execution.	●———▶
Realization	Indicates that an entity plays a critical role in the creation, achievement, sustenance, or operation of a more abstract entity.	┈┈┈▷

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Relationships

Dependency Relationships		Notation
Serving	Models that an element provides its functionality to another element.	⟶
Access	Models the ability of behavior and active structure elements to observe or act upon passive structure elements.	·······→ ←·······→
Influence	Models that an element affects the implementation or achievement of some motivation element.	_ _+/-_→

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Relationships

Dynamic Relationships		Notation
Triggering	Describes a temporal or causal relationship between elements.	——————▶
Flow	Transfer from one element to another.	- - - - - -▶
Other Relationships		**Notation**
Specialization	Indicates that an element is a particular kind of another element.	————▷
Association	Models an unspecified relationship, or one that is not represented by another ArchiMate relationship.	————
Junction	Used to connect relationships of the same type.	● ○ (And) Junction Or Junction

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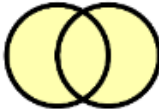ArchiMate 3 - Core

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Core Concepts and Relations

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Passive structure

Behavior

Active structure

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Business Layer Metamodel

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external

internal

Passive structure

Behavior

Active structure

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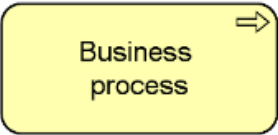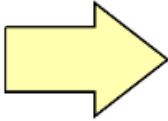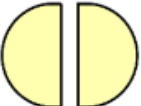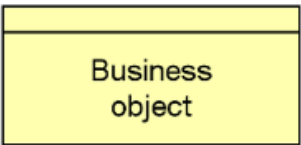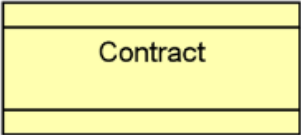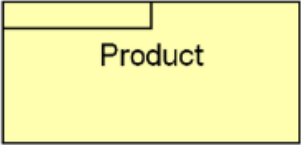
Business Layer Concepts (I)

Element	Description	Notation
Business actor	A business entity that is capable of performing behavior.	Business actor
Business role	The responsibility for performing specific behavior, to which an actor can be assigned, or the part an actor plays in a particular action or event.	Business role
Business collaboration	An aggregate of two or more business internal active structure elements that work together to perform collective behavior.	Business collaboration
Business interface	A point of access where a business service is made available to the environment.	Business interface

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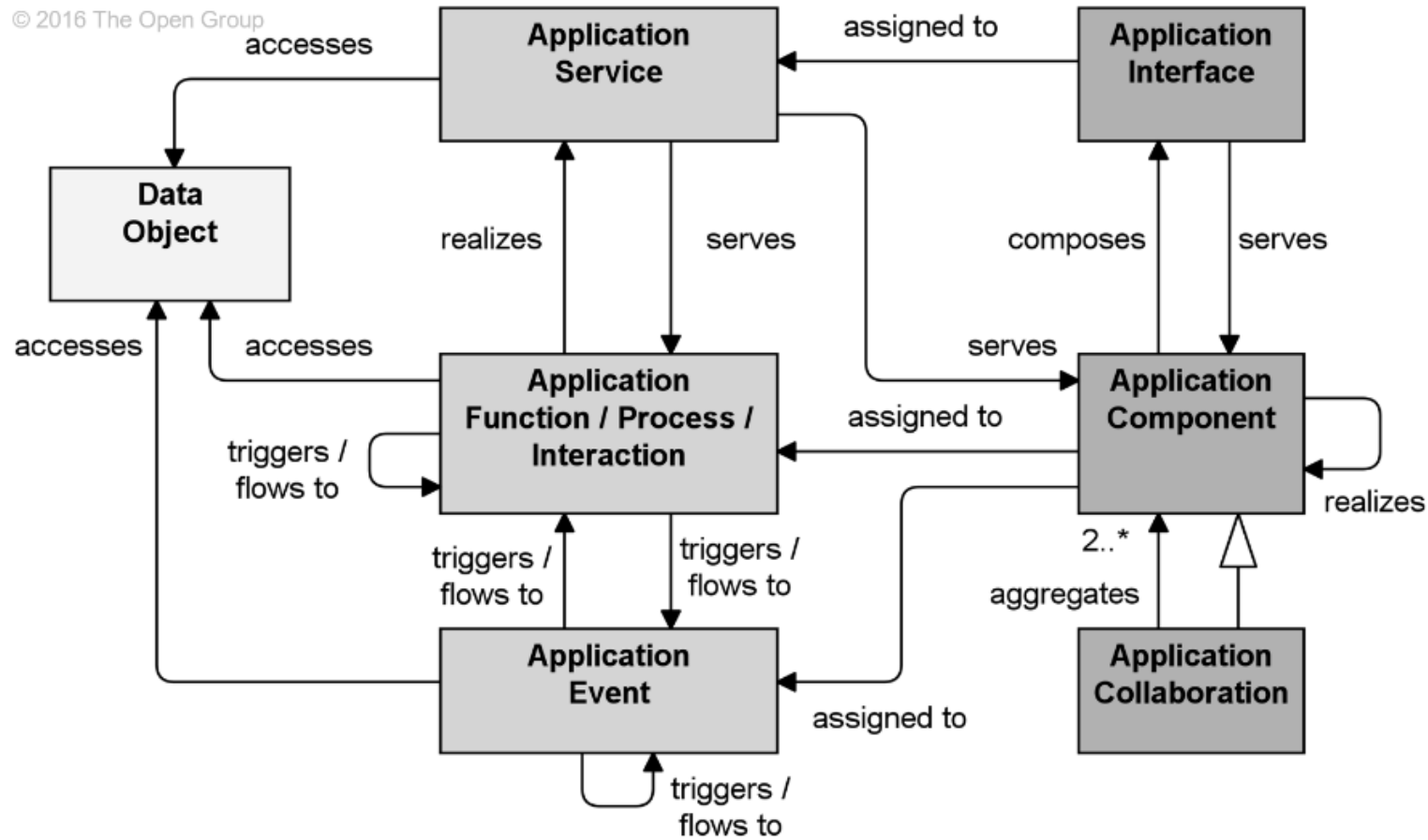
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Business Layer Concepts (II)

Business process	A sequence of business behaviors that achieves a specific outcome such as a defined set of products or business services.	
Business function	A collection of business behavior based on a chosen set of criteria (typically required business resources and/or competences), closely aligned to an organization, but not necessarily explicitly governed by the organization.	
Business interaction	A unit of collective business behavior performed by (a collaboration of) two or more business roles.	
Business event	A business behavior element that denotes an organizational state change. It may originate from and be resolved inside or outside the organization.	
Business service	An explicitly defined exposed business behavior.	

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Business Layer Concepts (III)

Business object	A concept used within a particular business domain.	Business object
Contract	A formal or informal specification of an agreement between a provider and a consumer that specifies the rights and obligations associated with a product and establishes functional and non-functional parameters for interaction.	Contract
Representation	A perceptible form of the information carried by a business object.	Representation
Product	A coherent collection of services and/or passive structure elements, accompanied by a contract/set of agreements, which is offered as a whole to (internal or external) customers.	Product

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Application Layer Metamodel

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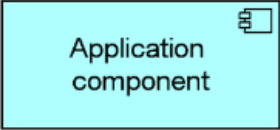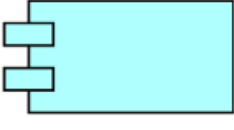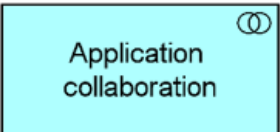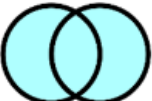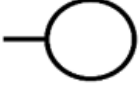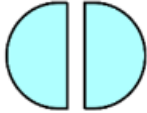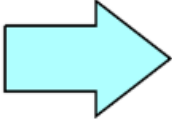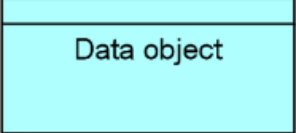
Passive structure   **Behavior**   **Active structure**

external   *internal*

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Application Layer Concepts (I)

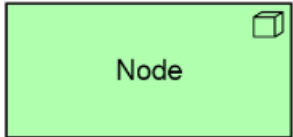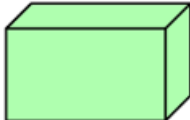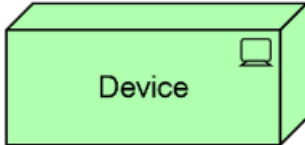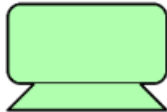| Element	Definition	Notation
Application component	An encapsulation of application functionality aligned to implementation structure, which is modular and replaceable. It encapsulates its behavior and data, exposes services, and makes them available through interfaces.	
Application collaboration	An aggregate of two or more application components that work together to perform collective application behavior.	
Application interface	A point of access where application services are made available to a user, another application component, or a node.	
Application function	Automated behavior that can be performed by an application component.	

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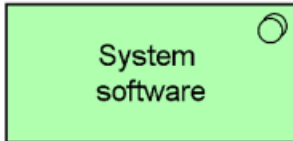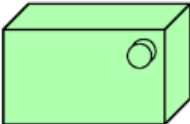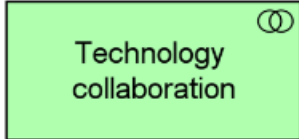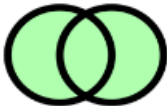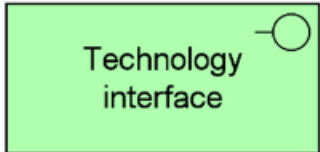
Application Layer Concepts (II)

Application interaction	A unit of collective application behavior performed by (a collaboration of) two or more application components.	
Application process	A sequence of application behaviors that achieves a specific outcome.	
Application event	An application behavior element that denotes a state change.	
Application service	An explicitly defined exposed application behavior.	
Data object	Data structured for automated processing.	

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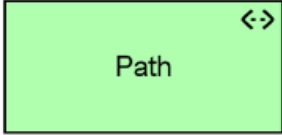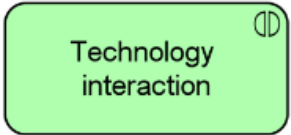
Technology Layer Metamodel

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external

internal

Passive structure

Behavior

Active structure

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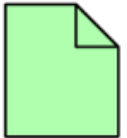
Technology Layer Concepts (I)

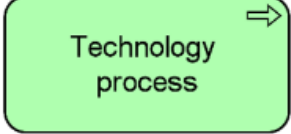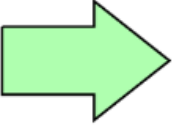| Element	Definition	Notation
Node	A computational or physical resource that hosts, manipulates, or interacts with other computational or physical resources.	Node
Device	A physical IT resource upon which system software and artifacts may be stored or deployed for execution.	Device
System software	Software that provides or contributes to an environment for storing, executing, and using software or data deployed within it.	System software
Technology collaboration	An aggregate of two or more nodes that work together to perform collective technology behavior.	Technology collaboration
Technology interface	A point of access where technology services offered by a node can be accessed.	Technology interface

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Technology Layer Concepts (II)

Path	A link between two or more nodes, through which these nodes can exchange data or material.	Path ⟨•⟩ ◀- - -▶
Communication network	A set of structures and behaviors that connects computer systems or other electronic devices for transmission, routing, and reception of data or data-based communications such as voice and video.	Communication Network ◀—▶
Technology function	A collection of technology behavior that can be performed by a node.	Technology function
Technology process	A sequence of technology behaviors that achieves a specific outcome.	Technology process ⇒
Technology interaction	A unit of collective technology behavior performed by (a collaboration of) two or more nodes.	Technology interaction

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Technology Layer Concepts (III)

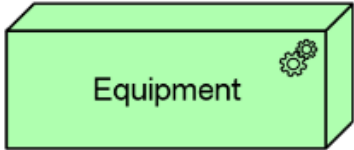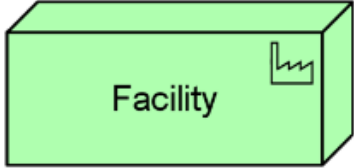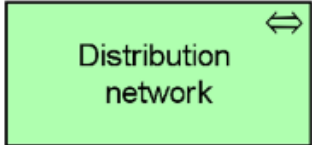|		
Technology event	A technology behavior element that denotes a state change.	Technology event
Technology service	An explicitly defined exposed technology behavior.	Technology service
Technology object	A passive element that is used or produced by technology behavior.	Abstract element
Artifact	A piece of data that is used or produced in a software development process, or by deployment and operation of a system.	Artifact

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Physical Elements Metamodel

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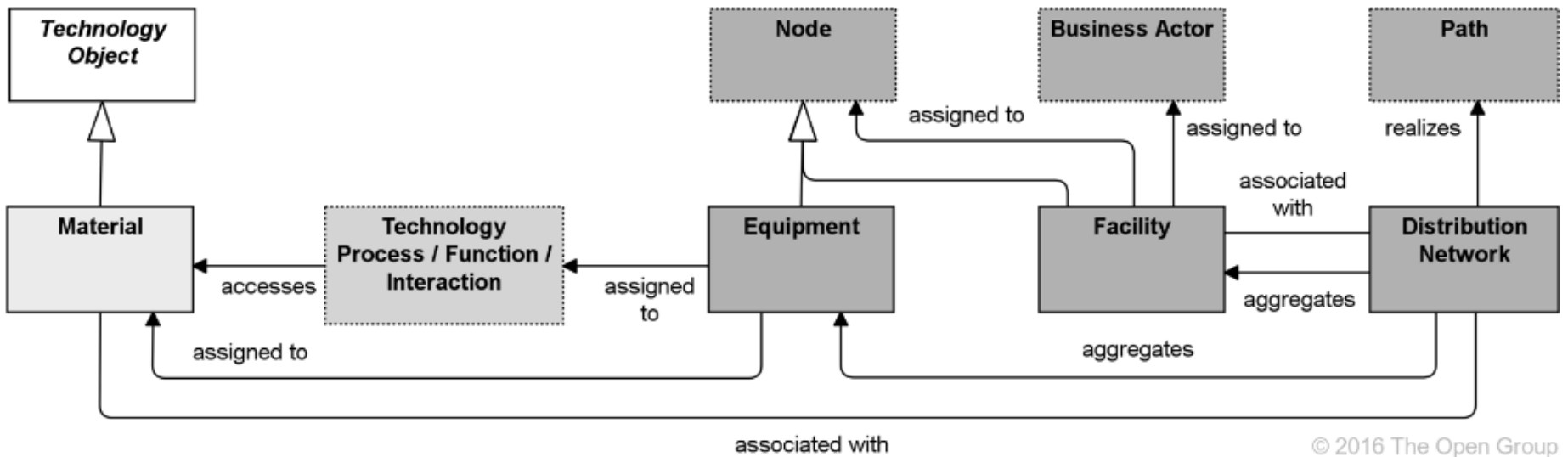
Physical Elements

Element	Definition	Notation
Equipment	One or more physical machines, tools, or instruments that can create, use, store, move, or transform materials.	Equipment
Facility	a physical structure or environment.	Facility
Distribution network	A physical network used to transport materials or energy.	Distribution network
Material	Tangible physical matter or physical elements.	Material

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