



THE LEADING PRACTICE OPERATING REFERENCE CONTENT #LEAD-ES20012BC

An Operating Ontology & Operating Semantic Description, Views, Stakeholders
and Concerns

Version Status: LEAD 3.0

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1. Overview of the Operating Reference Content

Introduction

The LEADIng Practice Operating Reference Content provides operating ontology with its specific operating descriptions, semantic relations and correlations. It is based on a collection of best and leading practice around how to work with operating around enterprise modelling, enterprise engineering and enterprise architecture disciplines. The Operating Reference Content is therefore an essential part for any practitioner working with and around operating aspects. It provides a structural way of thinking, working, modelling, implementation and governance around operating definitions and how operating is applied within business functions, roles, competencies, process and cost. The Operating Reference Content also provides an overview of the key operating aspects of the organisation and how they relate to the various business aspects e.g. goal, requirement, owner, service, rules and compliance. The Operating Reference Content therefore provides a way of analysing, appraising, approximating, assessing and capturing operating related objects to enable innovation and transformation.

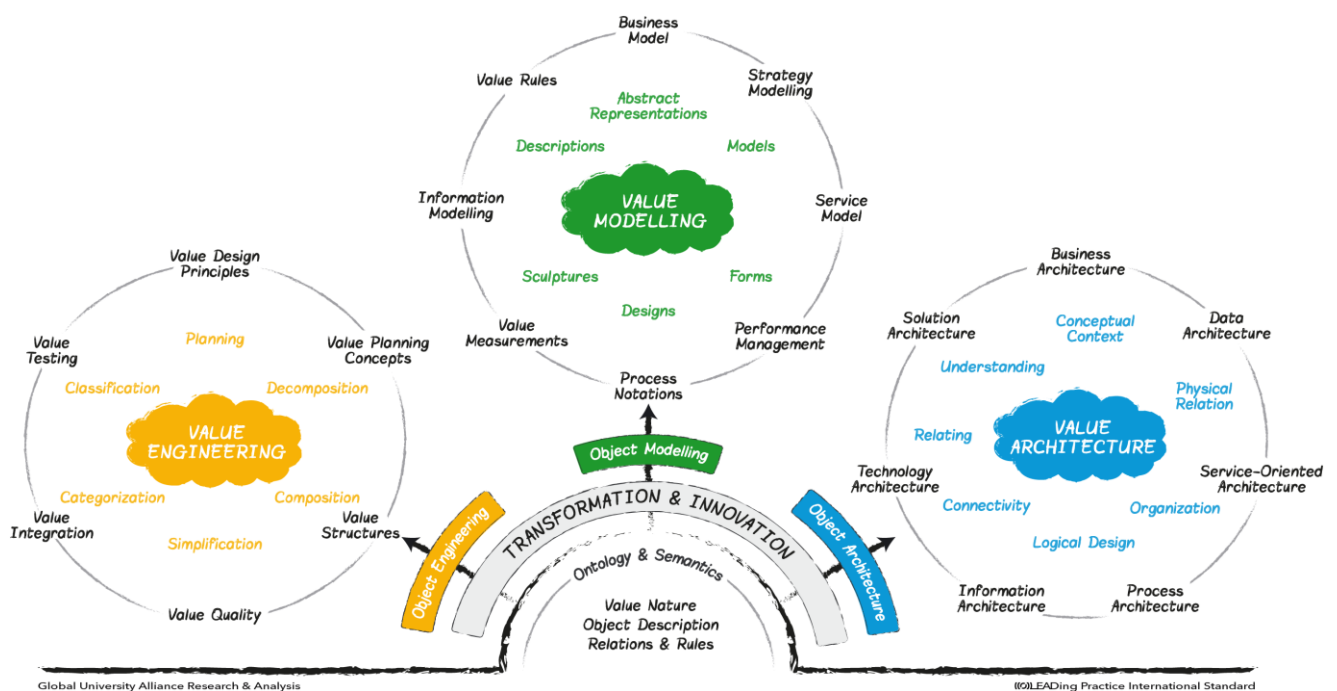


Figure 1) The Operating Objects are part of the many semantic relations between the enterprise engineering, enterprise modelling, and enterprise architecture enabling transformation and innovation.

Why to use the Operating Reference Content?

- It provides operating ontology with its specific operating descriptions, semantic relations and correlations.
- It defines how to organize and structure the viewpoints and objects associated with operating development and operating management.
- It offers established guiding principles for creating, interpreting, analysing and using operating objects within a particular domain and/or layers of an enterprise or an organization.
- Using the Operating Reference Content is done through a set of principles e.g. how and where can the operating objects be related (and where not).
- It is vendor neutral and agnostic and can therefore be used with most existing frameworks, methods and or approaches that have any of the meta-objects mentioned in this document.
- It has a structured repeatable pattern for operating related objects, structures as well as artefacts (the basis of our standards). The definition of a pattern used here is the description of the repeatable and mostly used/generic specifications and relations of a topic, not all theoretically possible specifications or relations.
- Use Operating Standards that increase the level of re-usability and replication.
- It has a fully integrated and standardized operating maps, matrices and models that allow for advanced ways of thinking, working, modelling, implementation and governance of the operations.

Meta-objects relevant to Operating aspects within the Templates

The following LEAD objects are the most relevant to operating aspects within the Operating Reference Content and its templates:

Organizational Construct	The components of the organization and how they are assembled.
Business Area	The highest level meaningful grouping of the activities of the enterprise.
Business Group	An aggregation within an enterprise which is within a Business Area.
Business Capability	An abstraction that represents the abilities and the quality of being capable, intellectually (logical) and or physically. It is an aptitude that may be developed to perform a particular function, process or service.
Business Function	A cluster of tasks creating a specific class of jobs.
Business Resource/Actor	A specific person, system or organization that initiates or interacts with the defined functions and activities. Actors may be internal or external to an organization.

Business Roles	A part that someone or something has in a particular defined function, activity or situation. A resource/actor may have a number of roles.
Competency Type (Diff, Comp, Non-Core)	The classification of competencies is into core-differentiated competencies, core competitive competencies or non-core competencies. Sorting the role played by each competency in the creation of value and in the execution of the enterprise's strategy.
Cost	The economic costs that a business incurs through its operations.
Cost Type (High, Mid, Low)	A classification of a set of costs, which can be uniquely identified by ranking and aggregating it.
Drivers (external & internal)	An external or internal factor which influences and pushes some aspect of an enterprise in a specific direction.
Driver Type: Value	A Categorization of the factors that advance action and principles toward a specific direction.
Value Indicator (Critical Success Factor)	A measure of the critical benefit or merit endeavours intended to be attained (and which is believed to be attainable) within an enterprise.
Value Expectation	The anticipated benefits that are of worth, importance, and significance to a specific stakeholder.
Driver Type: Performance	Those variables that are critical to develop the means and overall presentation of an enterprise.
Performance Indicator	A metric used by an enterprise, to assess its overall success or the success of a particular area in which it is engaged.
Mission	Describes the purpose and nature of all or part of the enterprise.
Goal (e.g. business, application, technology)	A desired result considered a part of the direction, aims, targets, and aspirations of the enterprise.
Business Measure	A number or quantity that records a directly observable value or performance, enabling a basis for comparison; a reference point against which other things can be evaluated
Business Competency	An integrated and holistic set of interconnected knowledge, skills, and abilities, related to a specific set of resources (including persons and organizations) that combined, enable the enterprise to act in a particular situation.
Competency Tier	The classification of competencies into the tiers: Strategic, Tactical or Operational.
Competency Nature	The categorization of the nature of the competencies into: simple, hybrid or complex.
Business Owner	A role performed by an actor with the rules, competencies and capabilities to take decisions for the part of enterprise the owner is responsible for.

Business Rule	A statement that defines or constrains some aspect of behaviour within the business and always resolves to either true or false.
Business Service	The externally visible ("logical") deed, or effort performed to satisfy a need or to fulfill a demand, meaningful to the environment.
Business Compliance	The process or tools for verifying adherence to rules and decisions.
Cost	The economic costs that a business incurs through its operations
Revenue	The realised income of an enterprise or part thereof.
Product	A result and output generated by the business. It has a combination of tangible and intangible attributes (features, functions, usage)
Contract	An agreement between two or more parties that establishes conditions for interaction.
Service Construct (setup and delivery)	The set up and arrangement, which creates, organizes and delivers the services.
Service Area	A high level, conceptual, aggregation of provided services.
Service Group	An aggregation of services based on a common factor or domain which exist within a common service area.
Business Service	The externally visible ("logical") deed, or effort performed to satisfy a need or to fulfil a demand, meaningful to the environment.
Service Tier (strategic, tactical, operational)	A classification of services which are ranked according to their tiers they belong to.
Service Nature	The categorization of the nature of the service into: simple, hybrid or complex.
Service Owner	A role performed by an actor with the rules, competencies and capabilities to take decisions for the service for which the owner is accountable for.
Process Area (categorization)	The highest level of an abstract categorization of processes.
Process Group (categorization)	A categorization and collection of processes into common groups.
Business Process	A set of structured activities or tasks, with logical behaviour that produce a specific service or product
Process Type (management, main & supporting)	A categorization of management, main & supporting process types based on the specific attributes of the process.
Process Tier	The classification of processes into the tiers: Strategic, Tactical or Operational.
Process Nature	The categorization of the nature of the process into: simple, hybrid or complex.

Process Owner	A role performed by an actor with the fitting rights, competencies, and capabilities to take decisions to ensure work is performed.
Application Owner	A role performed by an actor with the fitting rights, competencies, and capabilities to take decisions about the application components and modules the owner is responsible for.
Data Owner	A role performed by an actor with the rights, competencies, and capabilities to take decisions about the aspects of data for which the owner is responsible.
Platform Owner	A role performed by an actor with the fitting rights, competencies, and capabilities to take decisions about the platform devices the owner is responsible for.
Infrastructure Owner	A role performed by an actor with the rights, competencies, and capabilities to take decisions about the components within the infrastructure the owner is responsible for.

Figure 2: The 48 operating meta-objects.

The three main properties characterizing the Meta-Objects

In order to have a structured way of thinking, working and modelling within the Operating Reference Content, the three main properties characterizing the meta-object relevant to modelling and architecture principles are applied:

- **Identity:** the decomposed operating objects that distinguishes it from other meta-object areas.
- **State:** describes the purpose of the composed object.
- **Behaviour:** describes how the decomposed or composed objects can be used with other meta-object's relations across other modelling disciplines and architectural layers.

Operating Objects and their usage in the Operating Templates

The LEADIng practice templates consist of both maps, matrices and models that capture the meta-objects, which are instrumental and an essential part of the modelling, engineering and architecture. Each of these is based on a specific view, with particular stakeholder concern to enable operating identification, creation, and realization in achieving the outlined needs and wants. For this the LEADIng Practice templates identify the relevant stakeholders, their requirements and concerns, the operating object descriptions and their modelling and architecture rational, the corresponding rules, architecture views and viewpoints; each of these artefacts are built as templates to support a particular need and want.

Fully integrated and standardized application modelling and architecture templates enables the subject matter experts/practitioner to work and model with the meta-objects throughout all the architectural layers (business, application and technology) and this is one of the strengths of the LEAD standards. Not only are the objects governed by its connection modelling rules, but also how

kinds of products will it sell, which customers and segments will it serve through its competencies, which processes will be outsourced or handled in-house, which relationships will be most critical, what results are expected and how will decisions be made, and measured? Operating model focus is on e.g. standardize, optimize and automate, as much of the organisational effectiveness and efficiency that could be achieved have already been achieved. Outperformers use in downturns to rethink their operating model innovation in areas where our competition does not act or to respond to a different set of customer behaviours and market requirements. Often used during a downturn to reduce cost through new collaboration and partnership models and by reconfiguring the asset mix such as Partner operating Model, Global operating Centralized Model, Global operating de-centralized Model and Local operating Model.

Organisations that applied an Operating Model had typically a focus on the following main areas:

- Operating model operating, goals and objectives
- Development and transformation of operating model to ensure continuous consistency of core competitive and core-differentiating competencies.
- Process integration and standardization for a focused, responsive, flexible and robust operating model.
- The Owner responsibilities for standardizing & integrating the operating model of one's organisation
- Roles involved in the operating model concept and developments
- Business flow that needs to be standardized changed or optimized to support new operating model concept
- Media that will be involved in Operating Model development and delivery
- Channels that are needed in the wished Operating Model
- Technology adoption e.g. applications, data, platform and infrastructure, for the level of Enterprise Operating Model l integration, standardization, optimization and renewal
- Operating Model measurements, in terms of critical success factors and key performance indicators that are linked to the business operating
- Compliance to business regulations and laws
- Services delivered internal as well as external to partners, suppliers and customers around the new or transformed Operating Model initiative.
- Objects in terms of products, application or data that need to be standardized and or integrated
- Rules in terms of standards, guidelines and policies, which ensure the right monitoring, control and optimization initiatives.

Two examples of Operating Model innovation and transformation:

1) Today's Business Process Management (BPM) initiatives focus through the management of process and the individual activities both on the performance model, however the main focus is the operating model in terms of operating standardization, integration and optimization.

2) Operating Model initiatives are considered the easiest to perform, but they tend not to yield the most financial benefits, as the achieved time and cost savings are less defensible or lasting. This is due to that the operating model initiatives mostly focused around what they already do, however trying to do it better, faster and/or cheaper: (A) Product/ Operating asset developments, (B) Production innovations and (C) Optimization. Not realizing what they are doing or how they are doing it could be a part of their very issue and problem.

Operating can be **decomposed** into the following objects:

- Organizational Construct
- Competencies (Business Area and Group, Business Function, Business Capability)
- Resource/Actor (Business Resource)
- Role (Business Role)
- Cost (Cost Type, Cost Flow)
- Business Function

Way of Thinking around Operating aspects

The Way of Thinking around Operating disciplines is essential, as is the basis of the guiding principles around the Operating reference content. It provides a structural concept around strategic operating definitions e.g. wants, needs, identification, goals, issues and problems. The way of operating thinking furthermore postulates about what ought to be, including specifying the right operating abstraction level. The way of thinking does the following; it analyses, appraises, approximates, assesses and captures all relevant aspects of operating objects and artefacts; their idea, design, plan, scheme and structure. This is all done in order to understand the underlying operating concept, thought, view, vision as well as perspective, philosophy and belief.

The purpose of having a common way of thinking around operating concepts is to define how to organize and structure the viewpoints and operating objects associated with the various disciplines e.g. goals, requirements, business ownership, services, processes, rules, and compliance, applying the concepts. The operating reference concept has proven to help companies with some of the most common and complex advanced operating principles, dilemmas and challenges that companies have to confront today.

This includes, but is not limited to:

- What should be the right operating model in view of competitive market forces.
- The right interlinks between the operating model and the other important models such as the value model, business model, service model, and process model.
- Applying the right measurements (and reporting) to the operating model, also for decision-making.
- To analyse and develop the operating maturity levels and to create a operating development path
- Interlink the operating aspects to the innovation and transformation programs and projects.

What many organizations do not realize is that there is something common within all the mentioned areas where operating aspects need to be applied. The common things are the operating objects. We have through research and analysis identified the semantic relations of the various operating objects and how they can be applied within different disciplines. The relations of the operating objects is build into our operating templates e.g. operating maps, operating matrices and or operating models.

Usage of Operating Maps

An Operating Map is an accurate list and representation of the decomposed and/or composed Operating Objects. The purpose of this map is to identify and decompose a list of all the operations in the enterprise. This list helps to understand the breadth of functionality provided by the operations. It will also provide a centralized and official overview of the key operations in the organisation with their specific operating area and -group, channel, stakeholder, owner and role/resource (including manager).

The Operating Reference Content Architecture & Modelling Rules

The operating map should capture the key operations of the organisation and their specific competency aspects (business area, -group, capability, and -function), business resource, competency type (differentiated, competitive or non-core), business role, cost type, cost flow, and revenue.

Operating #	Where specification:		What/which specification:				Who/whom specification:	How specification:		
	Business Area	Business Group	Business Capability	Business Function	Business Resource	Competency Type (Differentiated, Competitive or Non-core)	Business Roles	Cost Type (High, Medium or Low)	Cost Flow (Including input/output)	Revenue

Figure 4: Operating with decomposed operating objects.

The operating map’s capturing should be based on enterprise modelling- and architecture rules and is related to LEAD tasks. Therefore for each individual column of the operating map their applicable decomposition- (D), primary- (P) and secondary (S) relationship related rules (Rule) as well as the related tasks (Task) are described below:

The ‘where’ specification in terms of which business area.	
Rules	(P) Operating relates to Competency (Business Area)
Tasks	<ul style="list-style-type: none"> Identify and categorize the different business areas.
The ‘where’ specification in terms of which business group.	
Rules	(P) Operating relates to Competency (Business Group).
Tasks	<ul style="list-style-type: none"> Identify and categorize the different business groups.
The ‘what/which’ specification in terms of which business capability.	
Rules	(P) Operating relates to Competency (Business Capability).
Tasks	<ul style="list-style-type: none"> Identify and categorize the business capabilities of the; <ol style="list-style-type: none"> Business areas & groups

	<ol style="list-style-type: none"> 2. Business functions 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners
The 'what/which' specification in terms of which business function.	
Rules	(P) Operating relates to Competency (Business Function)
Tasks	<ul style="list-style-type: none"> • Identify and categorize the business functions of the; <ol style="list-style-type: none"> 1. Business areas & groups 2. Business capabilities 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners

	16. Infrastructure owners
The 'what/which' specification in terms of which business resource.	
Rules	(P) Operating relates to Resource/Actor.
Tasks	<ul style="list-style-type: none"> • Identify and label resources and/or actors of the; <ol style="list-style-type: none"> 1. Business areas & groups 2. Capabilities & functions 3. Business roles & owners 5. Business competencies 6. Business rules & compliance 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners
The 'what/which' specification in terms of competency type (differentiated, competitive or non-core).	
Rules	(P) Operating relates to Competency (Competency Type)
Tasks	<ul style="list-style-type: none"> • Identify, classify and catalogue the; <ol style="list-style-type: none"> 1. Differentiating competencies 2. Competitive competencies 3. Non-core competencies of the; <ol style="list-style-type: none"> 1. Business areas & groups 2. Capabilities & functions 3. Business roles & owners 4. Resources/actors 6. Business rules & compliance

	<ul style="list-style-type: none"> 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners
The 'who/whom' specification in terms of which business roles.	
Rules	(P) Operating relates to Role (Business Role).
Tasks	<ul style="list-style-type: none"> • Label and sort business roles according to the; <ul style="list-style-type: none"> 1. Business areas 2. Business groups
The 'how' specification in terms of which cost type (high, medium or low).	
Rules	(P) Operating relates to Cost (Cost Type)
Tasks	<ul style="list-style-type: none"> • Identify and catalogue; <ul style="list-style-type: none"> 1. High Cost Types 2. Medium Cost Types 3. Low Cost Types within or around the; <ul style="list-style-type: none"> 1. Business areas & groups 2. Capabilities & functions 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups

	<ul style="list-style-type: none"> 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners
The 'how' specification in terms of which cost flow (including input/output).	
Rules	(P) Operating relates to Cost (Cost Flow)
Tasks	<ul style="list-style-type: none"> • Identify and catalog; <ul style="list-style-type: none"> 1. Cost Flow Input 2. Cost Flow Output within or around the; <ul style="list-style-type: none"> 1. Business areas & groups 2. Capabilities & functions 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners
The 'how' specification in terms of which revenue.	
Rules	Operating has a relationship to Revenue (Revenue is not a meta-model object).
Tasks	<ul style="list-style-type: none"> • Identify and catalogue the revenue within or around; <ul style="list-style-type: none"> 1. Business areas & groups

	<ol style="list-style-type: none">2. Capabilities & functions3. Business roles & owners4. Resources/actors5. Business competencies6. Business rules & compliance7. Operating construct8. Operating areas & groups9. Operating owners10. Process areas & groups11. Business processes12. Process owners13. Application/system owners14. Data owners15. Platform owners16. Infrastructure owners
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Figure 5: How operating is based on rules and relates to LEAD tasks.

Way of Working: Operating Matrix

The Operating Way of Working is critical discipline of translating both strategic planning and effective execution. Structure the arrangement of effort and work, by translating the “Way of Thinking” into a structural way of working. The Way of Working organizes, classifies, aligns, arranges, quantifies, recommends and selects the operating objects and with it the relevant operating template in a systemized and categorized way they need to be de-composed (broken down) or composed (related) together.

The Way of Working is where one defines the best suitable technique, manner, routine and method that will help the practitioner to ensure integrity, accuracy and completeness of each particular task related to the rule that ensures the right operating relation. The operating way of working is therefore a series of phases with a collection of activities that the user of the operating methods needs to follow and undertake in order to reach a specific goal/outcome. The below specified way of working therefore structures the practitioner’s techniques in applying the right semantic principles, rules, procedures and practices.

Usage of Operating Matrices

The Operating Matrices are a representation that accurately shows the relationship between specific decomposed and composed operating objects. The core idea of a the operating matrices is that they consists of the operating objects that have primary and thereby direct natural relations, these are always in a list form (row and columns) and the operating objects that need to be related to them. This is seen in the operating matrices as the cross product between the rows and columns. This allows within the operating matrix to relate the unfamiliar to the familiar operating objects in the different layers (composition), which represents the matrix diagram (rows and columns). These ontology and semantic based operating relations have been standardized to ensure reusability and replication of success in outlining the right connection points that is actually based on a common relationship pattern of the operating objects.

The Operating Reference Content Architecture & Modelling Rules

The operating matrix should capture the key operations of the organisation and their related operating area and -group, owner, requirement, goal, business rule, and business compliance. These are captured in separate matrixes as described below.

Operating-Service Area/-Group Matrix

This Matrix shows the columns of the operating map in combination with the service area and –group: which service area and group is the operation associated with.

	Where specification:			What/which specification:				Who/whom specification:	How specification:		
	Operating #	Business Area	Business Group	Business Capability	Business Function	Business Resource	Competency Type (Differentiated, Competitive or Non-core)	Business Roles	Cost Type (High, Medium or Low)	Cost Flow (Including input/output)	Revenue
Service Area/ Group 1	#										
Service Area/ Group 2	#										
Service Area/ Group N	#										

Figure 6: A matrix showing how operating relates to service area and -group.

The operating matrix’s capturing should be based on enterprise modelling- and architecture rules and is related to the LEAD tasks as described under the operating map. In addition to those rules and tasks, the following rules and tasks are related to the service area and –group.

The ‘what/which’ specification in terms of which service area and –group is the operation associated with.	
Rules	(S) Operating relates to Service (Service Construct; Setup and Delivery).
Tasks	<ul style="list-style-type: none"> • Associate and connect the; <ol style="list-style-type: none"> 1. Business groups 2. Capabilities & functions 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance 7. Service construct

	<p>8. Service areas & groups</p> <p>9. Service owners</p> <p>10. Process areas & groups</p> <p>11. Business processes</p> <p>12. Process owners</p> <p>13. Application/system owners</p> <p>14. Data owners</p> <p>15. Platform owners</p> <p>16. Infrastructure owners</p> <p>to each individual service area and -group.</p>
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Figure 7: A table showing how operating objects relates to service areas and -groups and the tasks associated with it.

Operating-Owner Matrix

This operating matrix shows the columns of the operating map in combination with the ownership: who is responsible for managing the operation.

	Where specification:			What/which specification:				Who/whom specification:	How specification:		
	Operating #	Business Area	Business Group	Business Capability	Business Function	Business Resource	Competency Type (Differentiated, Competitive or Non-core)	Business Roles	Cost Type (High, Medium or Low)	Cost Flow (Including input/output)	Revenue
Owner 1	#										
Owner 2	#										
Owner N	#										

Figure 8: A matrix showing how operating relates to owner.

The operating matrix's capturing should be based on enterprise modelling- and architecture rules and is related to the LEAD tasks as described under the operating map. In addition to those rules and tasks, the following rules and tasks are related to owner:

The 'who/whom' specification in terms of who is responsible for managing the operation.	
Rules	(P) Operating relates to Owner (Operating Owner, Process Owner, Application/System Owner, Data Owner, Platform owner, Infrastructure Owner).
Tasks	<ul style="list-style-type: none"> • Associate and connect the business areas to their related business owner. • Associate and connect the business groups to their related business owner. • Associate and connect the business capabilities to their related owner. • Associate and connect the business functions to their related business owner. • Associate and connect the business resources to their related owner. • Associate and connect the competency types to their related business owner. • Associate and connect the business roles to their related business owner. • Associate and connect the cost types to their related owner. • Associate and connect the cost flows to their related owner. • Associate and connect the Revenues to their related business requirements.

Figure 9: A table showing how operating objects relates to owner and the tasks associated with it.

Operating-Requirement Matrix

This matrix shows the columns of the operating map in combination with the requirement: what is required to run and maintain the operation.

	Where specification:			What/which specification:				Who/whom specification:	How specification:		
	Operating #	Business Area	Business Group	Business Capability	Business Function	Business Resource	Competency Type (Differentiated, Competitive or Non-core)	Business Roles	Cost Type (High, Medium or Low)	Cost Flow (Including input/output)	Revenue
Requirement 1	#										
Requirement 2	#										
Requirement N	#										

Figure 10: A matrix showing how operating relates to requirement.

The operating matrix's capturing should be based on enterprise modelling- and architecture rules and is related to the LEAD tasks as described under the operating map. In addition to those rules and tasks, the following rules and tasks are related to the requirement:

The 'what/which' specifications in terms of what are the requirements to run and maintain the operation.	
Rules	(S) Operating relates to Requirement.
Tasks	<ul style="list-style-type: none"> • Associate and connect the business areas to their related business requirements. • Associate and connect the business groups to their related business requirements. • Associate and connect the business capabilities to their related business requirements. • Associate and connect the business functions to their related business requirements. • Associate and connect the business resources to their related business requirements. • Associate and connect the competency types to their related business requirements. • Associate and connect the business roles to their related business requirements. • Associate and connect the cost types to their related business requirements. • Associate and connect the cost flows to their related business requirements. • Associate and connect the revenues to their related business requirements.

Figure 11: A table showing how operating objects relates to requirements and the tasks associated with it.

Operating-Goal Matrix

This Matrix shows the columns of the operating map in combination with the goal: what is the goal and purpose of the operation.

	Where specification:			What/which specification:				Who/whom specification:	How specification:		
	Operating #	Business Area	Business Group	Business Capability	Business Function	Business Resource	Competency Type (Differentiated, Competitive or Non-core)	Business Roles	Cost Type (High, Medium or Low)	Cost Flow (Including input/output)	Revenue
Goal 1	#										
Goal 2	#										

Goal N	#										
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Figure 12: A matrix showing how operating relates to goal.

The operating matrix's capturing should be based on enterprise modelling- and architecture rules and is related to the LEAD tasks as described under the operating map. In addition to those rules and tasks, the following rules and tasks are related to the goal:

The 'what/which' specification in terms of what is the goal and purpose of the operation.	
Rules	(S) Goal (e.g. Business, Application, Technology).
Tasks	<ul style="list-style-type: none"> • Associate and relate the business goals with the; <ol style="list-style-type: none"> 1. Business areas & groups 2. Capabilities & functions 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners • Associate and relate the application goals with the; <ol style="list-style-type: none"> 1. Business areas & groups 2. Capabilities & functions 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance

	<ul style="list-style-type: none"> 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners <ul style="list-style-type: none"> • Associate and relate the technology goals with the; <ul style="list-style-type: none"> 1. Business areas & groups 2. Capabilities & functions 3. Business roles & owners 4. Resources/actors 5. Business competencies 6. Business rules & compliance 7. Operating construct 8. Operating areas & groups 9. Operating owners 10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners
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Figure 13: A table showing how operating objects relates to goal and the tasks associated with it.

Operating-Business Rule Matrix

This Matrix shows the columns of the operating map in combination with the business rules: to which business rules does the operation have to adhere to.

	Where specification:			What/which specification:				Who/whom specification:	How specification:		
	Operating #	Business Area	Business Group	Business Capability	Business Function	Business Resource	Competency Type (Differentiated, Competitive or Non-core)	Business Roles	Cost Type (High, Medium or Low)	Cost Flow (Including input/output)	Revenue
Business Rule 1	#										
Business Rule 2	#										
Business Rule N	#										

Figure 14: A matrix showing how operating relates to business rule.

The operating matrix's capturing should be based on enterprise modelling- and architecture rules and is related to the LEAD tasks as described under the operating map. In addition to those rules and tasks, the following rules and tasks are related to business rule:

The 'what/which' specification in terms of which business rules does the operation has to adhere to.	
Rules	(S) Rules (Business Rules).
Tasks	<ul style="list-style-type: none"> Correlate and connect each business rule to the; <ol style="list-style-type: none"> Business areas & groups Capabilities & functions Business roles & owners Resources/actors Business competencies Business rules & compliance Operating construct Operating areas & groups Operating owners

	10. Process areas & groups 11. Business processes 12. Process owners 13. Application/system owners 14. Data owners 15. Platform owners 16. Infrastructure owners
--	--

Figure 15: A table showing how operating objects relates to business rule and the tasks associated with it.

Operating-Compliance Matrix

This Matrix shows the columns of the operating map in combination with the business compliance: to which business compliance requirements does the operation have to comply with.

	Where specification:		What/which specification:					Who/whom specification:	How specification:		
	Operating #	Business Area	Business Group	Business Capability	Business Function	Business Resource	Competency Type (Differentiated, Competitive or Non-core)	Business Roles	Cost Type (High, Medium or Low)	Cost Flow (Including input/output)	Revenue
Business Compliance item 1	#										
Business Compliance item 2	#										
Business Compliance item N	#										

Figure 14: A matrix showing how operating relates to business compliance.

The operating matrix's capturing should be based on enterprise modelling- and architecture rules and is related to the LEAD tasks as described under the operating map. In addition to those rules and tasks, the following rules and tasks are related to the business compliance:

The 'what/which' specification in terms of to which business compliance requirements the operation has to comply with.	
Rules	(S) Operating relates to Compliance (Business Compliance).
Tasks	<ul style="list-style-type: none"> Associate and connect business compliance to;

	<ol style="list-style-type: none">1. Business areas & groups2. Capabilities & functions3. Business roles & owners4. Resources/actors5. Business competencies6. Business rules & compliance7. Operating construct8. Operating areas & groups9. Operating owners10. Process areas & groups11. Business processes12. Process owners13. Application/system owners14. Data owners15. Platform owners16. Infrastructure owners
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Figure 17: A table showing how operating objects relates to business compliance and the tasks associated with it.

Roles involved

The following roles are involved in the definition and maintenance of the operating templates:

ENTERPRISE MODELLERS	ENTERPRISE ENGINEERS	ENTERPRISE ARCHITECTS
Business Analyst (P)	Operating Engineer (P)	Business Architect (P)
Process eXpert (P)	Technology Engineer (P)	Solution Architect (P)
Operating eXpert (P)	Process Engineer (P)	Operating Architect (P)
Information eXpert (S)	Test Engineer (P)	Data Architect (P)
Operating eXpert (P)	Quality Engineer (P)	Operating Architect (P)
Transformation eXpert (P)	Change Engineer (P)	Technology Architect (P)
	Software Engineer (P)	Process Architect (P)
	Enterprise Architect (P)	
		Information Architect (P)

(P) = Primary object/role

(S) = Secondary object/role

Way of Modelling around Operating aspects

The Operating Way of Modelling provides the means for the various practitioners working with operating aspects to assist them in defining the modelling principles required to make an objective assessment of the possible operating object relationships with other objects. It provides a uniform and formal description of the models where the operating objects and artefacts within one or more different types of models can be portrayed. The operating models are a representation that graphically represent and shows the operating relationship and the interconnection of specific composed objects and complies with a specific set of rules for what the graphical components mean, and how they are connected to the rest of the business. The key ideal of a operating model is that it is a representation, an illustration, of a composition of information intended to represent an aspect of an enterprise (e.g. business, application and/or technology), using a specific set of rules, which express a logic or grammar.

Each practitioner working with operating aspects has to be able to translate the “Way of Working” into a “Way of Modelling”, which for the most part include the following:

- **Expressiveness:** the degree to which a given modelling technique is able to denote the models of any number and kinds of layered domains (business, application and technology).
- **Arbitrariness:** the degree of freedom one has when decomposing and composing different models on the same domain.
- **Suitability:** the degree to which a given modelling technique is specifically tailored for a specific kind of wanted output/result.
- **Comprehensibility:** the ease of how the way of working and way of modelling techniques are understood by participants.
- **Coherence:** the degree to which the individual sub-models of a way of modelling constitute a whole.
- **Completeness:** the degree to which all-necessary concepts of the application domains are represented in the way of modelling.
- **Efficiency:** the degree to which the modelling steps (e.g. LEADIng Practice steps) use resources such as time and people.
- **Effectiveness:** the degree to which the modelling principles achieve its goals.
- **Audit:** the degree to which the end results of the models achieve its goals.

Based on already acquired information from the operating maps and/or a operating matrices (or both), a operating model is usually crafted to enable complex information to be used in different disciplines and within this to be communicated more easily to stakeholders, management and leadership. The fully integrated and standardized operating templates enable the practitioner to work and model with the operating objects throughout all the aspects of the enterprise (business, application and technology). Not only are the objects governed by its semantic relations and connection, also the specified operating modelling rules and tasks, which ensure how and where the operating templates interlink and share common operating objects is defined and standardized.

As we explore earlier is the operating matrix is the continuity of and interconnection between a operating map (a representation of decomposed and/or composed objects) and a operating model (a representation of interconnected and related objects). The operating maps, matrices and models are therefore used in the decomposition and composition work (within and throughout the layers).

By using the operating templates to manage the different kinds of highly connected information and relations, the operating creation is ensured. The operating map (which list the various related objects in order to capture the decomposed unrelated objects) is vital as well as the operating matrix (which composes in terms of relating specific objects together) and the operating model (which graphically represent the decomposed and composed objects) are both critical in integrating and standardizing the operating templates and tools of the practitioner. Furthermore, it is an essential part of supporting as well as integrating and standardizing the practitioner's Way of Thinking, Working and Modelling.

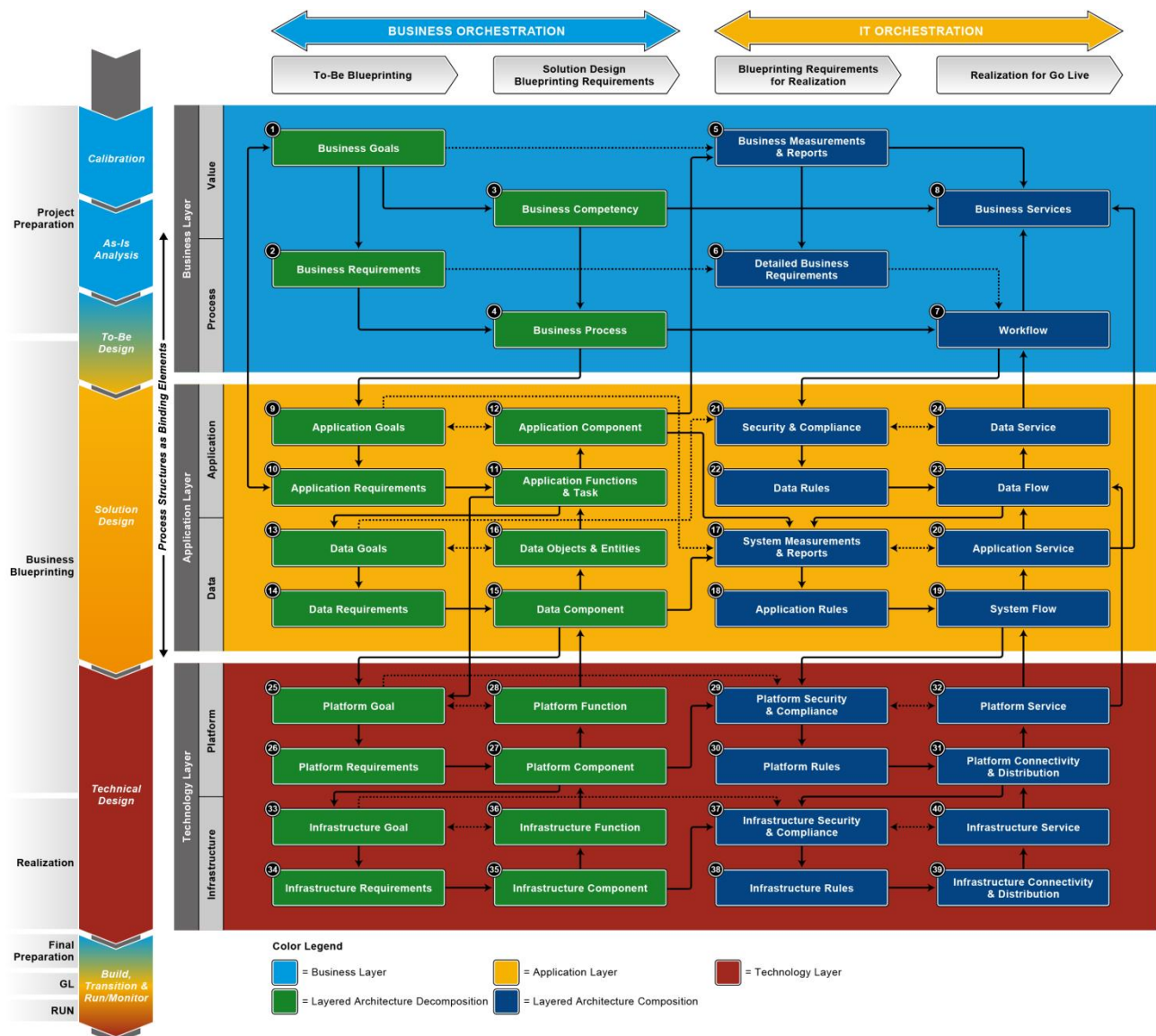
Last but not least, it ensures integration of the Enterprise Modelling and Enterprise Architecture objects and artefacts. Bringing an organization that uses the operating way of modelling templates to the highest maturity possible of working not only documented (level 3) or managed (level 4) but enabling optimization, governance and continuous improvement (level 5).

Way of Implementing

The Operating Reference Content's Way of Implementation combines the enterprise engineering, enterprise modelling and enterprise architecture principles in an order to apply the way of operating thinking, operating working and operating modelling into the physical and thereby the operating execution.

Most implementations fall short of transforming the business and creating real operating due to the fact that they automate the existing Way of Working around Operating concepts. Thereby actually reinforcing a siloed and ineffective way of automation. It is about the possibility to totally rethink the operating flow within the information flow, the service flow, the process flow as well as the measurement and reporting flow. It can fundamentally rethink and transform the different ways of working within an organization.

The Way of Operating Implementation has been developed as a fully integrated part of a Blueprinting and Implementation concept. In this way, the operating aspects can be integrated to any other engineering, modelling or architecture discipline e.g. process, service, application/software, data etc. With this the Way of Implementation provides a uniform and formal implementation concept of where the Operating meta-objects and artefacts can be used. By using decomposition and composition modelling techniques within the 40 steps of the Way of Implementation, the operating objects within the templates can be applied to the relevant subjects within the different layers (business, application or technology).



LEADing Practice Information & Technology Standard: Blueprinting Reference Content

Figure 20: A model showing the 40 Blueprinting & Implementation steps across the Business, Application and Technology Layer.

Example of the Business Layer where the Operating Objects are used or applied within the implementation steps:

Step 1: Operating Objects and the tasks to apply them within the Business Goals step:

- ✓ Matrix: Identify, associate and relate the internal and external **forces and drivers** impacting operating aspects (operating forces and drivers).
- ✓ Matrix: Associate and relate the different **goals** (business, application, technology) of the operations: 1. Business areas & groups, 2. Business capabilities & -functions, 3. Business roles & owners, 4. Resources/actors, 5. Business competencies, 6. Business rules & compliance, 7. Service construct, 8. Service areas & groups, 9. Service owners, 10. Process areas & groups, 11. Business processes, 12. Process owners, 13. Application/system owners, 14. Data owners, 15. Platform owners, 16. Infrastructure owners (Figure 13).

- ✓ Matrix: Identify and relate the operating related **objectives** (critical success factors, plan, forecast, budget).
- ✓ Identify, categorize and label the strategic, tactical and operational operating **performance** indicators (business performance indicators, key performance indicators, process performance indicators, service performance indicators).

Step 2: Operating Objects and the tasks to apply them within the Requirement step:

- ✓ Matrix: Associate and connect the business areas, business groups, business capabilities, business functions, business resources, competency types, business roles, cost types, cost flows and revenues, to their related **high-level requirement** (Figure 11).
- ✓ Matrix: Correlate and connect each high-level **business rules** to the operations: 1. Business areas & groups, 2. Business functions, 3. Business roles & owners, 4. Resources/actors, 5. Business competencies, 6. Business rules & compliance, 7. Service construct, 8. Service areas & groups, 9. Service owners, 10. Process areas & groups, 11. Business processes, 12. Process owners, 13. Application/system owners, 14. Data owners, 15. Platform owners, 16. Infrastructure owners (Figure 15).
- ✓ Matrix: Associate and connect high-level **business compliance** to the operations: 1. Business areas & groups, 2. Business functions, 3. Business roles & owners, 4. Resources/actors, 5. Business competencies, 6. Business rules & compliance, 7. Service construct, 8. Service areas & groups, 9. Service owners, 10. Process areas & groups, 11. Business processes, 12. Process owners, 13. Application/system owners, 14. Data owners, 15. Platform owners, 16. Infrastructure owners (Figure 17).

Step 3: Operating Objects and the tasks to apply them within the Business Competency step:

- ✓ Map: Identify and categorize the different **business areas and groups** of the operations (Figure 5).
- ✓ Map: Identify and categorize the different **business capabilities** of the operations: 1. Business areas & groups, 2. Business functions, 3. Business roles & owners, 4. Resources/actors, 5. Business competencies, 6. Business rules & compliance, 7. Service construct, 8. Service areas & groups, 9. Service owners, 10. Process areas & groups, 11. Business processes, 12. Process owners, 13. Application/system owners, 14. Data owners, 15. Platform owners, 16. Infrastructure owners (Figure 5).
- ✓ Map: Identify and categorize the **business functions** of the operations (1-16 as above) (Figure 5).
- ✓ Map: Identify label **resources and/or actors** of the operations (1-16 as above, excluding 4. Resources/actors) (Figure 5).
- ✓ Map: Identify, classify and catalogue the **competency type** (differentiating, competitive, non-core) for each operation (1-16 as above, excluding 5. Business competencies) (Figure 5).
- ✓ Map: Label and sort **business roles** according to the: 1. Business areas, 2. Business groups (Figure 5).
- ✓ Map: Identify and catalogue the **cost type** (high, medium, low) of the operations (1-16 as above) (Figure 5).
- ✓ Map: Identify and catalogue the **revenue** within or around the operations (1-16 as above) (Figure 5).

- ✓ Matrix: Associate and connect the business areas, business groups, business capabilities, business functions, business resources, competency types, business roles, cost types, cost flows and revenues to their related **business owner** (Figure 7).
- ✓ Model; Create an Operating Model to illustrate the relationship between **operating** and resource/actor, business roles, competency type, owner (business owner, service owner, process owner), and service construct.

Step 4: Operating Objects and the tasks to apply them within the Business process step:

- ✓ Matrix; Assure that the process related tasks of Step 1 – 3 above are complete and right, being the capturing per operating process of their related: goal, owner, rules, compliance, service, and requirement.
- ✓ Matrix: Classify these (operating) business processes to their core differentiating, core-competitive and or non-core business competency (based on step 3).
- ✓ Matrix: Classify these (operating) business processes in strategic, tactical and operational levels, and according to main, supporting or management process (supports analytical decision making).
- ✓ Matrix: Identify, categorize and label the performance indicators (KPI's and PPI's) to the operating business processes.

Step 5: Operating Objects and the tasks to apply them within the Measurement & reporting step:

- ✓ For each operating KPI, define the title, how it will be measured, and the target.
- ✓ Define the most critical operating reports and decision making flow
- ✓ Make the operating metric actionable and measurable.
- ✓ Connect the critical measurements metric to the bottom line.
- ✓ Specify the performance measurements tree that relate operating cockpits, dashboards and scorecards
- ✓ Link operating measures to Continuous Improvement, this includes to refine and set up a system of rewards for top performers or departments.
- ✓

Step 6: Operating Objects and the tasks to apply them within the Detailed Requirement step:

- ✓ Matrix: Associate and connect the business areas, business groups, business capabilities, business functions, business resources, competency types, business roles, cost types, cost flows and revenues to their related **detailed requirement** (Figure 11).
- ✓ Matrix: Correlate and connect detailed **business rules** to the operations: 1. Business areas & groups, 2. Business functions, 3. Business roles & owners, 4. Resources/actors, 5. Business competencies, 6. Business rules & compliance, 7. Operating construct, 8. Operating areas & groups, 9. Operating owners, 10. Process areas & groups, 11. Business processes, 12. Process owners, 13. Application/system owners, 14. Data owners, 15. Platform owners, 16. Infrastructure owners (Figure 15).
- ✓ Matrix: Associate and connect detailed **business compliance** to the operations: 1. Business areas & groups, 2. Business functions, 3. Business roles & owners, 4. Resources/actors, 5. Business competencies, 6. Business rules & compliance, 7. Operating construct, 8. Operating areas & groups, 9. Operating owners, 10. Process areas & groups, 11. Business processes, 12.

Process owners, 13. Application/system owners, 14. Data owners, 15. Platform owners, 16. Infrastructure owners (Figure 17).

Step 7: Operating Objects and the tasks to apply them within the Workflow step:

- ✓ Map: Identify and catalogue the **cost flow** (cost flow input, cost flow output) within or around the operations (1-16 as above) (Figure 5).
- ✓ Identify and categorize the **business, information and data objects** that are part of the operating flow, within the business workflows, service flows, process flows and information flows.

Step 8: Operating Objects and the tasks to apply them within the Business Service step:

- ✓ Matrix: Associate and connect the operations (1. Business groups, 2. Capabilities & functions, 3. Business roles & owners, 4. Resources/actors, 5. Business competencies, 6. Business rules & compliance, 7. Service construct, 8. Service areas & groups, 9. Service owners, 10. Process areas & groups, 11. Business processes, 12. Process owners, 13. Application/system owners, 14. Data owners, 15. Platform owners, 16. Infrastructure owners) to their individual **service area and group** (Figure 7).

Conclusion

While this document should be seen and used as a detailed description of how the operating reference content can be used, it does not have all aspects of the operating reference content and thereby its operating engineering, modelling and architecture content. It attempted to build a basis of a structured way of thinking, working, modelling and implementation of operating objects. It endeavoured to provide a standardized terminology, build common understanding and make available the standardized and integrated operating templates. Enabling practitioners to use the operating reference content to:

- Identify the relevant operating objects.
- Decompose the operating objects into the smallest parts that can, should and needs to be modelled, and then compose the operating objects entities before building them (through mapping, simulation and scenarios).
- Visualize and clarify operating object relationships with the operating artefacts by using maps, matrices and models (alternative representation of information).
- Reduce and/or enhance complexity of operating modelling, operating engineering and operating architecture principles applying the operating decomposition and composition standard (see Decomposition and Composition Reference Content)
- Model the relevant operating objects through the architectural layers (see Layered Architecture Reference Content).
- Adding Operating Requirements (see Requirement Reference Content)
- Provide a structured Operating Blueprinting and Implementation (see Blueprint & Implementation Reference Content).

For further learning around semantic object relations, decomposition and composition, layered modelling, engineering and architecture or how the operating reference content can be used within the other LEADIng Practice Reference Contents we refer both to the LEADIng Practice Body of Knowledge document as well as the other LEADIng Practice Enterprise Standards and their Reference Content on www.LEADIngPractice.com.

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