# THE LEADING PRACTICE

# PERFORMANCE REFERENCE CONTENT

# ES20012BC

A Performance Ontology & Performance Semantic Description, Views, Stakeholders and Concerns

Version Status: LEAD 3.0

# Contents

# Overview of the Performance Reference Content

## Introduction

The LEADing Practice Performance Reference Content provides performance ontology with its performance description, specific performance semantic relations and correlations. It is based on a collection of best and leading practice around how to work with performance within enterprise modelling, enterprise engineering and enterprise architecture disciplines. The Performance Reference Content is therefore and essential part for any practitioner working with and around performance aspects. It provides a structural way of thinking, working, modelling, implementation and governance around performance definitions, and how performance is applied within forces & drivers, processes, services and reporting The Performance Reference Content also provides an overview of the key performance aspects of the organisation and how they relate to the various business aspects e.g. owner, requirement, organizational construct, competencies, services and process. The Performance Reference Content therefore provides a way of analysing, appraising, approximating, assessing and capturing performance related objects to enable innovation and transformation.
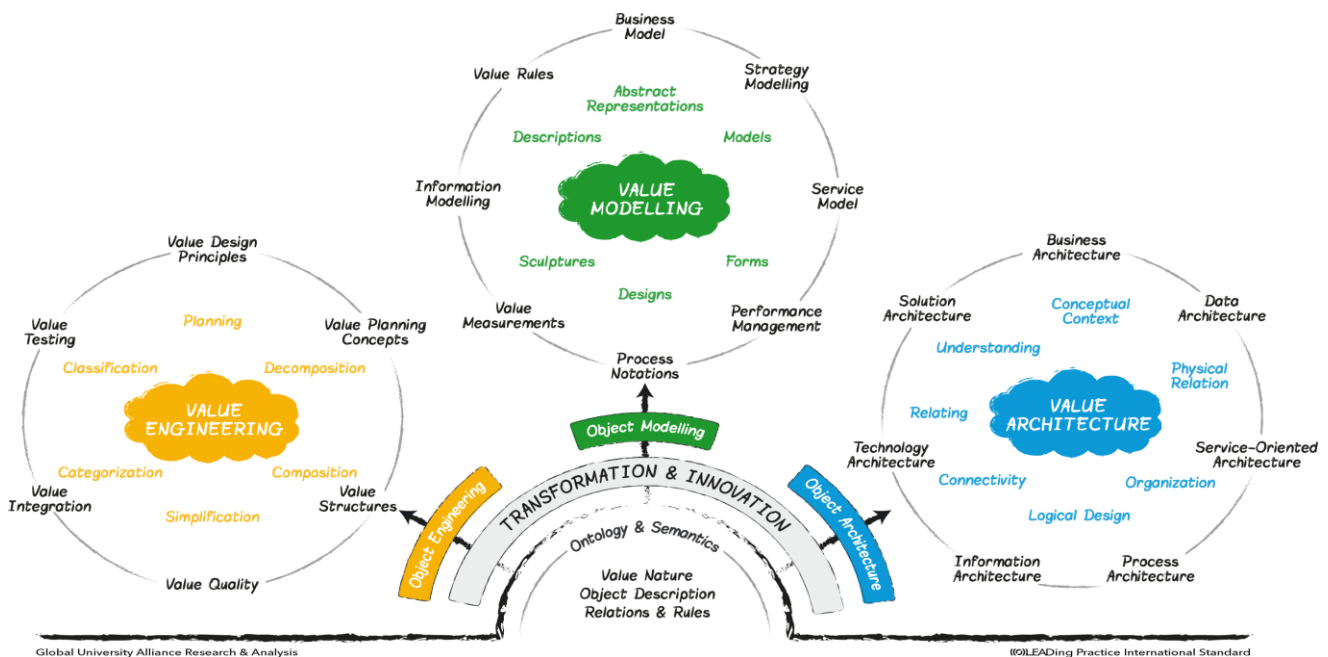


*Figure 1) The Performance Objects are one of the many semantic relations between the enterprise  engineering, enterprise modelling, and enterprise architecture enabling transformation and innovation.*

## Why use the Performance Reference Content?

- It provides performance ontology with its specific performance descriptions, semantic relations and correlations.

- It defines how to organize and structure the viewpoints and objects associated with performance engineering, performance modelling, and performance architecture.
- Established guiding principles for creating, interpreting, analysing and using performance objects within a particular domain and/or layers of an enterprise or an organization.
- Using the Performance Reference Content is done through a set of principles e.g. how and where can the performance 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 captured a repeatable pattern for performance 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.
- It has performance standards that increase the level of re-usability and replication for performance identification, performance planning, performance creation, and performance realization as well as performance management and performance governance.
- It has a fully integrated and standardized performance maps, matrices and models that allow for advanced ways of performance thinking, working, modelling and implementation.

## LEAD Objects relevant to Performance aspects within the Templates

The following LEAD objects are the most relevant to performance aspects within the

Performance Reference Content and its templates:

| Performance Indicator (business) Tier: Strategic, Tactical, or Operational | The classification of the metrics used by an enterprise as being Strategic, Tactical, or Operational in nature. |
|---|---|
| Performance Driver | Those variables that are critical to develop the means and overall presentation of an enterprise. |
| Organizational Construct | The components of the organization and how they are assembled. |
| Driver (internal & external) | 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 Factors) | A measure of the critical benefit or merit endeavours intended to be attained (and which is believed to be attainable) within an enterprise. |

| Value Type | A categorization of value objects into high, medium and low types based on the specific attributes of the value object. |
|---|---|
| Value Expectation | The anticipated benefits that are of worth, importance, and significance to a specific stakeholder. |
| Performance Expectation | The <desire for the> manner in which, or the efficiency with which, something reacts or fulfils its intended purpose as anticipated by a specific stakeholder. |
| 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. |
| Organizational Construct | The components of the organization and how they are assembled |
| Competency Tier | The classification of competencies into the tiers: Strategic, Tactical or Operational. |
| Location | A geographic space demarked by a closed set of connected lines which intersect through a series of points - The name of a location may be a facility, place or position. |
| Contract | An agreement between two or more parties that establishes conditions for interaction. |
| Product | A result and output generated by the business. It has a combination of tangible and intangible attributes (features, functions, usage) |
| 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 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. |
| 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. |
| Service Owner | A role performed by an actor with the rules, competencies and capabilities to take decisions for the service he for which the owner is accountable. |
| Service Tier | A classification of services which are ranked according to their tiers they belong to. |
| Service Measurement (Level Agreements) | The basis by which the enterprise evaluates or estimates the nature, quality, ability, or extent of the services. The commitments of a service are assessed. |
| Process Area (categorization) | The highest level of an abstract categorization of processes. |
| Process Group (categorization) | A categorization and collection of processes into common groups. |

| Process Measurement (PPI) | The basis by which the enterprise evaluates or estimates the nature, quality, ability, extent, as to whether a process or activity is performing as desired. |
|---|---|
| Process Owner | A role performed by an actor with the fitting rights, competencies, and capabilities to take decisions to ensure work is performed. |
| System Measurement | Measures that are defined and implementable within an application. |
| Application/System Report | Reports that are defined and implementable or implemented within or by an application. |
| 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. |

*Figure 2: The 31 performance meta-objects.*

## The three main properties characterizing the Meta-Objects

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

- **Identity:** the decomposed performance 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.
.

## Performance Objects and their usage in the Performance 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 performance identification, performance creation, and performance realization in achieving the outlined needs and wants. For this the LEADing Practice templates identify the relevant stakeholders, their requirements and their concerns, the performance 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 and where the templates interlink and share common objects is defined and standardized. The templates are ether maps, matrices and models. The maps are often in the form of a list and are a representation of the decomposed objects, while the matrices are the continuity of and interconnection between a map (a representation of decomposed objects) and a model (a representation of interconnected and related objects).

**LEAD TEMPLATES (MAPS, MATRICES AND MODELS)**

| LEAD Templates & LEAD Meta Object Relations | FD | VMG | Rq | ST | S | V | BSC | Pe | MR | BC | Rev | Co | Op | I | Ro | O | OC | WF | P | BPMN | Se | A | AS | AR | AM | C | D | DS | PL | PLS | IF | IFS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Drivers (external & internal) | 1,2,3 | 2.3 | 2 | 2 | 2 | 1.2 | | 2 | 2 | 2.3 | | | 2 | | | 2 | | | | | | | | | 2.3 | | | | | | | |
| Driver Type: Value | 1,2,3 | 2.3 | 1.2 | 2.3 | 2.3 | 1,2,3 | 2 | 1,2,3 | | 2 | 2 | | 2 | | | 2 | | | | | | | | | | | | | | | | |
| Value Indicator (Critical Success Factor) | | 2 | 2 | 1,2,3 | 1,2,3 | 2.3 | 2 | 2.3 | 2.3 | 2 | 2 | 2 | 2 | | | 2 | | | 2.3 | | 2 | | | | 2.3 | | | | | | | |
| Value Type (high, medium, low) | | 2 | 2 | 1.2 | 2 | 1,2,3 | 2 | 2 | 1,2,3 | | | 1,2,3 | 1,2,3 | | | | | | | | | | | | | | | | | | | |
| Value Expectation | 2 | | 1.2 | 1,2,3 | 2 | 1,2,3 | | 2 | 2 | 2.3 | 2 | 2 | 2 | | | 2 | | | 2.3 | | 2.3 | | | | | | | | | | | |
| Driver Type: Performance | 1,2,3 | 2.3 | | | | | 1,2,3 | 1,2,3 | 1,2,3 | 2.3 | 2 | 2 | 2 | 2.3 | | | | | 2.3 | | 2 | 2 | | 2.3 | | | | | | | | |
| Performance Indicator | | 2.3 | | | | | 1,2,3 | 1,2,3 | 1,2,3 | 2.3 | 2 | 2 | 2 | 2.3 | | | | | 2.3 | | 2 | 2 | | 2.3 | | | | | | | | |
| Performance Indicator Tier (strategic, tactical, operational) | | | | 1,2,3 | | | 2.3 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | | | | | | 2.3 | | 2.3 | | | | 2.3 | | | | | | | |
| Performance Expectation | | | 1.2 | 1,2,3 | | | 2 | 1,2,3 | 1.2 | 2.3 | | | 2 | | | 2 | | | 2.3 | | 2.3 | | | | | | | | | | | |
| Business measure | | 2.3 | | | 2 | | 1,2,3 | 1,2,3 | 1,2,3 | 2.3 | 2 | 2 | 2.3 | 2.3 | 2.3 | 2.3 | | | 2.3 | | 2 | 2 | | | | | | | | | | |
| Timing | 2 | 2 | 2 | | 2.3 | 2 | 2.3 | 1,2,3 | 1,2,3 | 2 | 2 | 2 | 2.3 | 2 | | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2.3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Qality | | | 2 | 2 | | 2 | | 2 | 2.3 | | | 2 | 2.3 | | | 2 | | | 2 | | 2 | | | | 2.3 | 2 | 2 | | | | | |
| Reporting | | | 1.2 | | | 2.3 | | 2.3 | 1,2,3 | 1,2,3 | 2 | | | 2 | | | | | 2 | | 2 | | | | | | | | | | | |
| Organizational Construct | | | 2.3 | | | | | | | 2 | | | | | | 2.3 | 2.3 | 1,2,3 | | | | | | | | | | | | | | |
| Business Area | 1.2 | 2 | 1.2 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 1.2 | | 2.3 | 2.3 | 1,2,3 | 2.3 | | | | | | | | | | | | | |
| Business Group | 1.2 | 2 | 1.2 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 1.2 | | 2.3 | 2.3 | 1,2,3 | 2.3 | | | | | | | | | | | | | |
| Competency Tier (strategic, tactical, operational) | | | | | | | | 2 | 1,2,3 | 1,2,3 | 2.3 | | | | | 1,3 | | | 1,2,3 | | 1,2,3 | | | | 2.3 | | | | | | | |
| Location | 2 | 1 | 1.2 | 1,2,3 | 2 | 2 | 2 | 1.2 | 2.3 | 1.2 | 1,2,3 | 1,2,3 | 1,2,3 | 2.3 | 1,2,3 | 2.3 | 1,2,3 | 2 | 1.2 | 3 | 2 | 2 | 2 | 2 | 2.3 | 2 | 2 | 2 | 2 | 2.3 | 1,2,3 | 2.3 |
| Contract | | | 1.2 | | 2 | | | 2 | 2.3 | | 2.3 | | 2 | 2 | 2 | 1,2,3 | | | | | | 2 | 2 | | 2.3 | 2 | 2 | | | | | |
| Product | 2 | 2 | 1.2 | 1.2 | 2 | 2 | 2.3 | 2.3 | 2.3 | 2 | 1,2,3 | 1,2,3 | 2 | 2 | 2 | 1,2,3 | | | | | 1,2,3 | 2 | 2 | | 2.3 | 2 | 2 | | 2 | 2 | | |
| Business Owner | 2 | 2 | 1.2 | 1,2,3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 2.3 | 1,2,3 | | 1.2 | 1.2 | | 2 | | | | | | 2.3 | | | | | | | |
| Service Area | 1.2 | 2 | 1.2 | 1,2,3 | 1,2,3 | | | 2.3 | 2.3 | | | | 2 | 2 | | 2.3 | 2.3 | 2.3 | 2.3 | | 1,2,3 | | | | | | | | | | | |
| Service Group | 1.2 | 2 | 1.2 | 1,2,3 | 1,2,3 | | | 2.3 | 2.3 | | | | 2 | 2 | | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 1,2,3 | | | | | | | | | | |
| Service Tier (strategic, tactical, operational) | | | | | | | | 1,2,3 | 1,2,3 | 2.3 | | | | | | 1,3 | | | | 2.3 | 2.3 | 1.2 | | | 2.3 | | | 2 | | 2 | | 2 |
| Service Measurement (SPI & SLA) | | | 2 | | | | | 2.3 | 1,2,3 | 1,2,3 | 2.3 | | | | | | | | | 2 | 2.3 | | | | | | | | | | | |
| Service Owner | 2 | 2 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 2.3 | | | 1.2 | | | | 2.3 | 1.2 | | | | | | | | | | | |
| Process Area (categorization) | 1.2 | 2 | 1.2 | 1,2,3 | 1,2,3 | | | 2.3 | 2.3 | 2 | | | 1 | | | 2.3 | 2.3 | 2.3 | 1,2,3 | 2 | | | | | | | | | | | | |
| Process Group (categorization) | 1.2 | 2 | 1.2 | 1,2,3 | 1,2,3 | | | 2.3 | 2.3 | 2 | | | 1 | | | 2.3 | 2.3 | 2.3 | 1,2,3 | 2 | | | | | | | | | | | | |
| Process Measurement (PPI) | | 2.3 | | | | | 2.3 | 1,2,3 | 1,2,3 | | 2.3 | 2.3 | | | | | | | 2 | 2.3 | | | | | | 1.2 | | | | | | |
| Process Owner | 2 | 2 | 1,2,3 | 2.3 | | | | 2.3 | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 2.3 | | | 1.2 | | 1,2,3 | 2.3 | 2.3 | | | | | | | | | | | |
| System Measurements | | 2.3 | | | | | 2.3 | 1,2,3 | 1,2,3 | | 2.3 | 2.3 | | | | | | | 2 | 2.3 | | 2 | | 2 | 2.3 | 2.3 | | | | | | |
| Application/System Reports | | 2.3 | | | | | | 1.2 | 2.3 | | | | | | | | | | | | | 2 | 2 | | 2 | 2 | 2 | | | | | |
| Application/System Owner | 2 | 2 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 2.3 | | | 1.2 | | | | | | 1 | 1.2 | 1,2,3 | 1,2,3 | 2.3 | | | | | | |
| Data Owner | 2 | 2 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 2.3 | | | 1.2 | | | | | | | | | 2.3 | | 2 | | | | | |
| Platform Owner | 2 | 2 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 2.3 | | | 1.2 | | | | | | | | | 2.3 | | | | 1.2 | 1 | | |
| Infrastructure Owner | 2 | 2 | 1,2,3 | 1,2,3 | 2.3 | | | 2.3 | 2.3 | 1,2,3 | 1.2 | 1.2 | 2.3 | | | 1.2 | | | | | | | | | 2.3 | | | | | | 1.2 | 1 |

LEADing Practice Performance Modelling Reference Content ((#LEAD-ES20012BC)     Legenda:  1 = Map   2 = Matrix   3 = Model

*Figure 3: The performance objects and their Maps, Matrices & Models*

The performance templates are ether maps, matrices and models. The maps are often in the form of a list and are a representation of the decomposed performance objects, while the matrices are the continuity of and interconnection between a map (a representation of decomposed objects) and a representation of interconnected and related objects. Models often show the graphical representation of the relations and connections. The maps, matrices and models are used in the decomposition and composition work within and throughout the layers. The specific templates do not only show which objects are within what template, thereby specifying if it is a map, matrix or model, it furthermore shows where the object of one template can be reused in another template.

# Performance specific aspects (e.g. Definition, Decomposition)

In the context of LEADing Practice modelling principles, performance indicators (PIs) typically refers to ether - organisational performance goals and thereby measures (e.g. business performance indicators or 'BPI's', and process performance indicators or 'PPI's'), personalized performance metrics (key performance indicators or 'KPI's') and benchmarks that drive the financial and operational success of the company. PI's are one of the 3-5 broad areas on which an organisation must focus in order to achieve its vision (the others are strategic business objectives or 'SBO's', BPIs, CSFs and possibly PPIs). A performance indicator may be a major performance that must be fixed before other goals can be achieved.

In the context of LEAD Meta Modelling principles, a performance indicator (PI), helps an organisation define and measure progress toward strategic, tactical or operational performance goals.

In terms of the LEAD way of thinking, to distinguish between other measurement metrics and performance metrics, organisations use the term Performance Indicators e.g. BPI, KPI and PPI. The only difference between other measurement metric and a performance indicator is that a PI in the case of a KPI or PPI can either be defined as a strategic, tactical or operational performance objective and therefore measure that defined target performance. A defined performance goal/result could be attached to multiple PIs or one PI could be attached to multidimensional goals (SBOs and CSFs). BPI, KPI and PPIs can be used by an organisation to evaluate its success or the success of a particular task or activity in which it is engaged. Once an organisation has defined its strategic business objectives (SBOs), its critical success factors (CSFs), it needs a way to define a detailed performance goals e.g. business performance indicator (BPI) and measure and display its operational progress and measurements e.g. KPIs and PPIs toward those goals. Performance indicators are those performance goals and measurements.

Summarizing what we have learned about BPI, KPI and PPI modelling, using the LEADing Practice and approach to choose and define BPI, KPI and PPIs one would do the following steps:

1) Identify the organisational SBOs.

2) Define the CSFs that are important to achieve the classified SBOs.

3) Then map the BPIs to the CSFs.

4) Select and identify the right KPIs to the CSFs .

5) Identify the accountability level to the KPIs (strategic, tactical or operational).

6) Group them into competency and business function (groups and subjects) e.g. sales, forecast, account management et cetera.

7) Identify the responsible e.g. CMO, Sales VP, Client Responsible etc.

8) Define associated and relation to each other e.g. what proceeds and follows

9) Identifying process performance indicators to the KPIs

10) Select the business process (BP) that should be measured.

11) Define performance requirements for the BPs.

12) Choose quantitative/qualitative measurement of the output/results and comparison with the KPI goals.

13) Sort BPI, KPI and PPI by multiple levels of reporting and specific report.

14) Classify if the KPI and PPIs is quantitative or qualitative.


Once the above steps are done one could further more:

15) Apply them to the organisations different performance management framework such as the balanced scorecard, BPM framework, LEAN approach et cetera.

15) Categorize the above according to value drivers (SBOs & CSFs) and or performance drivers (BPIs, KPIs & PPIs) in order to develop and link the Value Management framework and Performance Management framework for the organisation.

Performance can be **decomposed** into the following Objects:

- Performance Tier (Strategic, Tactical, Operational)
- Performance Driver
- Performance Indicator
    - Key Performance Indicator,
    - Process Performance Indicator,
    - Service Performance Indicator,
    - Business Performance Indicator.
- Reporting

# Way of Thinking around Performance aspects

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

The purpose of having a common way of thinking around performance concepts is to define how to organize and structure the viewpoints and performance objects associated with the various disciplines e.g. performance engineering, performance modelling and enterprise architecture applying the concepts. The performance reference concept has proven to help companies with some of the most common and complex advanced performance principles, dilemmas and challenges that companies has to confront today.

This includes, but is not limited to:

- Clearly defined goals (mission, vision, strategy) enable good performance definitions.
- Clearly defined roles and responsibilities also enable a good performance structure.
- To provide the right reporting of performance (right information, in the right form, and at the right time).
- The mapping of the business model domains with their performance requirements.
- Relate performance drivers to service model.
- Apply performance based process design.
- For decision-making, specify performance aspects in the measurements and reporting.
- All aspects of performance architecture and business architecture.
- Analyse and develop performance maturity levels and create a performance development path
- Interlink the performance 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 performance aspects need to be applied. The common things are the performance objects. We have through research and analysis identified the semantic relations of the various performance objects and how they can be applied within different disciplines. The relations of the performance objects are built into our performance templates e.g. performance maps, performance matrices and or performance models.

## Usage of Performance Maps

A Performance Map is an accurate list and representation of the decomposed and/or composed Performance Objects. Therefore the performance map provides an overview of

the key performance indicators (PI's) of the organisation and their specification like related strategic/tactical/operational level, performance driver, service measurements/-service level agreements, process measurements/PPI, and reporting. The performance maps are often portrayed in the form of a list, which can range from a simple row to a catalogue of performance objects. It has the purpose of building an inventory or index list of the performance objects that are to be decomposed and/or composed and thereby applied in the different layers (business, application and technology).

## The Performance Reference Content Architecture & Modelling Rules

The performance map should capture the key performance indicators (PI's) of the organisation and their aspects; type (strategic/tactical/operational), performance driver, service measurements (service level agreements), process measurements and reports.

| | What/Which specification: | | Where specification: | | Who/whom specification: |
|---|---|---|---|---|---|
| Performance # | Performance Indicator (Strategic/Tactical/Operational) | Performance Driver | Service Measurements (Service Level Agreements) | Process Measurements (PPI) | Reporting |
| | | | | | |
| | | | | | |
| | | | | | |

*Figure 4: Performance map with decomposed performance objects.*

The performance 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 performance 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 'what/which' specification in terms of which performance indicator (strategic, tactical, operational). | |
|---|---|
| Rules | (D) Performance relates to Performance Indicator Type. |
| Tasks | • Identify, categorize and label the Performance Indicators (KPI's);<br>1. Strategic Key Performance Indicators<br>2. Tactical Key Performance Indicators<br>3. Operational Key Performance Indicators |
| The 'what/which' specification in terms of which performance driver. | |

| Rules | (P) Performance relates to Forces & Drivers (Performance Driver). |
|---|---|
| Tasks | • Identify, categorize and label the Performance Drivers to the Performance Indicators. |
| The 'where' specification in terms of Service Measurements (Service Level Agreements). | |
| Rules | (P) Performance relates to Measurement (Service Measurement, Service Level Agreements). |
| Tasks | • Identify, categorize and label the service measurements (SLA's). |
| The 'where' specification in terms of Process Measurements (PPI's). | |
| Rules | (P) Performance relates to Measurement (Process Measurement). |
| Tasks | • Identify, categorize and label the process measurements (PPI's). |
| The 'who/whom' specification in terms of reporting. | |
| Rules | (S) Performance relates to Measurement & Reporting. |
| Tasks | • Identify which; <br> 1. Business owner <br> 2. Service owner <br> 3. Process owner <br> 4. Application/system owner <br> 5. Data owner <br> 6. Platform <br> 7. Infrastructure owner <br> has reporting functions |

*Figure 5: How performance is based on rules and relates to LEAD tasks.*

# Way of Working around Performance aspects

The Performance 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 performance objects and with it the relevant performance 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 performance relation. The performance way of working is therefore a series of phases with a collection of activities that the user of the performance 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 Performance Matrices

The Performance Matrices are a representation that accurately shows the relationship between specific decomposed and composed performance objects. The core idea of a the performance matrices is that they consists of the performance objects that have primary and thereby direct natural relations, these are always in a list form (row and columns) and the performance objects that need to be related to them. This is seen in the performance matrices as the cross product between the rows and columns. This allows within the performance matrix to relate the unfamiliar to the familiar performance objects in the different layers (composition), which represents the matrix diagram (rows and columns). These ontology and semantic based performance 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 performance objects.

## The Performance Reference Content Architecture & Modelling Rules

The Performance Matrix should capture the key Performance Indicators (PI's) of the organisation and their related owners, requirements business area and –group (competency), service area and –group, and process area and –group. These are captured in separate matrixes as described below.

## Performance-Owner Matrix

This matrix shows the columns of the performance map in combination with ownership: who is the owner of the performance parameters.

| | Performance # | What/which specification: | | Where specification: | | Who/whom specification: |
|---|---|---|---|---|---|---|
| | | Performance Indicator (Strategic/Tactical/Operational) | Performance Driver | Service Measurements (Service Level Agreements) | Process Measurements (PPI) | Reporting |
| Performance Owner 1 | # | | | | | |
| Performance Owner 2 | # | | | | | |
| Performance Owner N | # | | | | | |

*Figure 6: A matrix showing how performance relates to owner.*

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

| The 'who' specification in terms of who is the owner of the performance indicator. | |
|---|---|
| Rules | (S) Performance relates to Owner (Business-, Service-, Process-, Application/System-, Platform-, and Infrastructure Owner). |
| Tasks | • Associate and attach the strategic, tactical and operational (key) performance indicators to their applicable owner.<br><br>• Link and attach each strategic, tactical and operational performance driver to the related owner.<br><br>• Connect the service measurements (SLA's) to their applicable service owner.<br><br>• Connect the process measurements (PPI's) to their applicable process owner.<br><br>• Associate and link reporting with each of the different;<br><br>  1. Business owner<br><br>  2. Service owner<br><br>  3. Process owner<br><br>  4. Application/system owner<br><br>  5. Data owner<br><br>  6. Platform<br><br>  7. Infrastructure owner |

*Figure 7: A table showing how performance objects relate to owner and the tasks associated with it.*

## Performance-Requirement Matrix

This matrix shows the columns of the performance map in combination with requirement: what are the requirements for measuring and acting on the performance parameters.

| | Performance # | What/which specification: | | Where specification: | | Who/whom specification: |
|---|---|---|---|---|---|---|
| | | Performance Indicator (Strategic/Tactical/Operational) | Performance Driver | Service Measurements (Service Level Agreements) | Process Measurements (PPI) | Reporting |
| Requirement 1 | # | | | | | |
| Requirement 2 | # | | | | | |
| Requirement N | # | | | | | |

Figure 8: A matrix showing how performance relates to requirements.

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

| **Requirement:** A formal specification what the purpose and wanted attributes, capabilities, characteristics, or quality that is sought. | |
|---|---|
| Rules | (S) Performance relates to Requirements. |
| Tasks | • Associate and attach the strategic, tactical and operational (key) performance indicators to their applicable requirements.<br><br>• Link and attach each strategic, tactical and operational performance driver to the related requirements.<br><br>• Connect and tie the service measurements (SLA's) to their related requirements.<br><br>• Connect and tie the process measurements (PPI's) to their related requirements.<br><br>• Associate and link reporting with all the related performance requirements. |

Figure 9: A table showing how performance objects relate to requirements and the tasks associated with it.

# Performance-Business area/-group Matrix

This matrix shows the columns of the performance map in combination with the business area and -group: which business area and -group is the performance a part of.

| | Performance # | What/which specification: | | Where specification: | | Who/whom specification: |
|---|---|---|---|---|---|---|
| | | Performance Indicator (Strategic/Tactical/Operational) | Performance Driver | Service Measurements (Service Level Agreements) | Process Measurements (PPI) | Reporting |
| Business Area/Group 1 | # | | | | | |
| Business Area/Group 2 | # | | | | | |
| Business Area/Group N | # | | | | | |

Figure 10: A matrix showing how performance relates to business area and -group.

The performance matrix's capturing should be based on enterprise modelling- and architecture rules and is related to the LEAD tasks as described under the performance map. In addition to those rules and tasks, the following rules and tasks are related to business area and –group (competency):

| | |
|---|---|
| **Competency:** The classification of the business areas, groups and competencies role played in the creation of performance and in the execution of the enterprise's strategy. Whereas competencies are an integrated and holistic set of related 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. | |
| Rules | (S) Performance relates to Competency (Business Area and –Group). |
| Tasks | • Associate and attach the strategic, tactical and operational (key) performance indicators to their applicable business area/group.<br><br>• Link and attach each strategic, tactical and operational performance driver to the related business area/group.<br><br>• Connect and tie the service measurements (SLA's) to their related business area/group.<br><br>• Connect and tie the process measurements (PPI's) to their related business area/group.<br><br>• Associate and link reporting with all the related performance business area/group. |

*Figure 11: A table showing how performance objects relate to business area and -group and the tasks associated with it.*

## Performance-Service area/-group Matrix

This matrix shows the columns of the performance map in combination with service area- and group: the 'what/which' specification in terms of which service area and –group is the performance a part of.

| | Performance # | What/which specification: | | Where specification: | | Who/whom specification: |
|---|---|---|---|---|---|---|
| | | Performance Indicator (Strategic/Tactical/Operational) | Performance Driver | Service Measurements (Service Level Agreements) | Process Measurements (PPI) | Reporting |
| Service Area/Group 1 | # | | | | | |
| Service Area/Group 2 | # | | | | | |
| Service Area/Group N | # | | | | | |

Figure 12: A matrix showing how performance relates to service area and -group.

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

| **Service Area:** A high level, conceptual, aggregation of provided services. **Service Group:** An aggregation of services based on a common factor or domain that exist within a common service area. | |
|---|---|
| Rules | (S) Performance relates to Service (Service Area and –Group). |
| Tasks | • Associate and attach the strategic, tactical and operational (key) performance indicators to their applicable service area/group.<br><br>• Link and attach each strategic, tactical and operational performance driver to the related service area/group.<br><br>• Connect and tie the service measurements (SLA's) to their related service area/group.<br><br>• Connect and tie the process measurements (PPI's) to their related service area/group.<br><br>• Associate and link performance reports to their related service area/group. |

*Figure 13: A table showing how performance objects relate to service area and -group and the tasks associated with it.*

## Performance-Process area/-group Matrix

This matrix shows the columns of the performance map in combination with ownership: who is the owner of the performance parameters.

| | Performance # | What/which specification: | | Where specification: | | Who/whom specification: |
|---|---|---|---|---|---|---|
| | | Performance Indicator (Strategic/Tactical/Operational) | Performance Driver | Service Measurements (Service Level Agreements) | Process Measurements (PPI) | Reporting |
| Process Area/Group 1 | # | | | | | |
| Process Area/Group 2 | # | | | | | |
| Process Area/Group N | # | | | | | |

Figure 14: A matrix showing how performance relates to process area and -group.

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

| The 'what/which' specification in terms of which process area and –group is the performance a part of. | |
|---|---|
| Rules | (S) Performance relates to Process (Process Area and –Group). |
| Tasks | • Associate and attach the strategic, tactical and operational (key) performance indicators to their applicable process area/group.<br><br>• Link and attach each strategic, tactical and operational performance driver to the related process area/group.<br><br>• Connect and tie the service measurements (SLA's) to their related process area/group.<br><br>• Connect and tie the process measurements (PPI's) to their related process area/group.<br><br>• Associate and link performance reports to their related process area/group. |

*Figure 15: A table showing how performance objects relate to process area and -group and the tasks associated with it.*

# Way of Modelling around Performance aspects

The Performance Way of Modelling provides the means for the various practitioners working with performance aspects to assist them in defining the modelling principles required to make an objective assessment of the possible performance object relationships with other objects. It provides a uniform and formal description of the models where the performance objects and artefacts within one or more different types of models can be portrayed. The performance models are a representation that graphically represent and shows the performance 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 performance 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 performance 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 performance maps and/or a performance matrices (or both), a performance 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 performance templates enable the practitioner to work and model with the performance 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 performance modelling rules and tasks, which ensure how and where the performance templates interlink and share common performance objects is defined and standardized.

As we explore earlier is the performance matrix is the continuity of and interconnection between a performance map (a representation of decomposed and/or composed objects)

and a performance model (a representation of interconnected and related objects). The performance maps, matrices and models are therefore used in the decomposition and composition work (within and throughout the layers).

By using the performance templates to manage the different kinds of highly connected information and relations, the performance creation is ensured. The performance map (which list the various related objects in order to capture the decomposed unrelated objects) is vital as well as the performance matrix (which composes in terms of relating specific objects together) and the performance model (which graphically represent the decomposed and composed objects) are both critical in integrating and standardizing the performance 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 performance 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).

## Classification and Anatomy of the Key Performance Indicator (KPI)

The KPI code bar (see figure 12) is comprised of a set of categories, and is structured according to a layout of the following performance areas:

1. C-Level Strategy Mapping
2. Performance Model Imperative
3. Business Level Performance
4. Business Model Competency Area
5. Operational Business Competency
6. Performance-based Information Modelling
7. Performance Measurements
8. Performance based Service Design
9. Performance-based Process Design
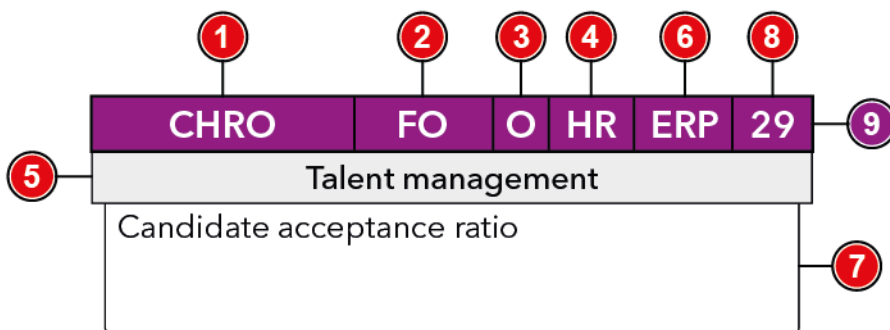


*Figure 12: LEADing Practice Key Performance Indicator (KPI) code bar.*

# 1: C-Level Strategy Mapping

The C-level mapping identifies for each C-level executive the unique and different value and/or performance drivers. The management of an organization's c-level value and/or performance drivers is one of the most challenging tasks; there is a general need for knowing exactly which strategy, performance and/or investments to prioritize in order to realize the most possible value for the business.

A candidate set of categories might be as follows:

- **CBDO** = Chief Business Development Officer
- **CCO** = Chief Channel Officer
- **CEO** = Chief Executive Officer
- **CEHO** = Chief Environment & Health Officer
- **CFO** = Chief Financial Officer
- **CHRO** = Chief Human Resources Officer
- **CIO** = Chief Information Officer
- **CMO** = Chief Marketing & Sales Officer
- **COO** = Chief Operations Officer
- **CPO** = Chief Procurement Officer
- **CSO** = Chief Strategy Officer
- **CTO** = Chief Technology Officer
- **CRDO** = Chief Research & Development Officer
- **CRSO** = Chief Risk & Security Officer

# 2: Performance Model Imperative

The four value imperatives – Focused, Responsive, Flexible and Robust – together provide direction for todays organizations as they target business innovation and/or transformation in different areas e.g. competencies, processes, services, etc. None of these imperatives are new by themselves, but indeed, companies have arguably been moving toward becoming more focused, responsive, flexible and robust for quite some time. Yet few companies know how to model and apply these concepts in all the different performance and value areas.

In order to innovate and transform ones organization, business area, department, product, service and/or operation, there is a need to enable one's performance model to be more:

- **RE** = Responsive: Provides real-time identification, analysis and reaction to outside drivers, actual opportunities and threats, in terms of one's service, revenue and performance model.
- **FO** = Focused: Enables differentiation and pursuit of LEADing Practices (differentiating practices), and thereby best-in-class competencies (capabilities and resources), for focusing on one's core differentiating and core competitive competencies.
- **FL** = Flexible: Creates business flexibility and asset advantage by matching one's cost model dynamically with the revenue model.
- **RO** = Robust: Reduces the impact of catastrophic change and supports long term survival by building redundancy throughout the performance and operating model.

# 3: Business Model Level

The business model level characterizes the scope of decision-making. Strategic decisions focus primarily upon overall strategy, business planning, forecasting, budgeting, direction and performance management, while tactical decisions are mainly about governance, monitoring, control, and managing business operations.

Operational decisions address the processing, delivery and execution of specific operations:
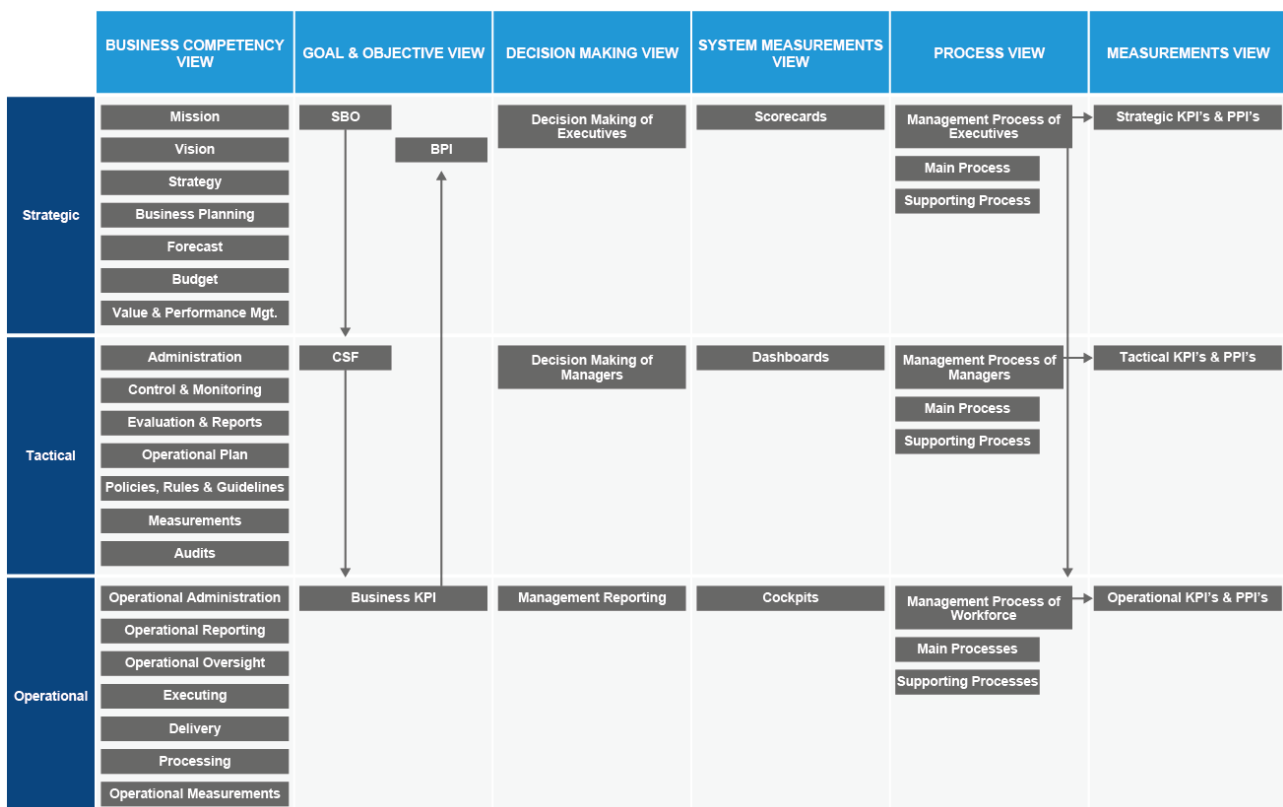
- **S** = Strategic
- **T** = Tactical
- **O** = Operational

| | BUSINESS COMPETENCY VIEW | GOAL & OBJECTIVE VIEW | DECISION MAKING VIEW | SYSTEM MEASUREMENTS VIEW | PROCESS VIEW | MEASUREMENTS VIEW |
|---|---|---|---|---|---|---|
| **Strategic** | Mission / Vision / Strategy / Business Planning / Forecast / Budget / Value & Performance Mgt. | SBO / BPI | Decision Making of Executives | Scorecards | Management Process of Executives / Main Process / Supporting Process | Strategic KPI's & PPI's |
| **Tactical** | Administration / Control & Monitoring / Evaluation & Reports / Operational Plan / Policies, Rules & Guidelines / Measurements / Audits | CSF | Decision Making of Managers | Dashboards | Management Process of Managers / Main Process / Supporting Process | Tactical KPI's & PPI's |
| **Operational** | Operational Administration / Operational Reporting / Operational Oversight / Executing / Delivery / Processing / Operational Measurements | Business KPI | Management Reporting | Cockpits | Management Process of Workforce / Main Processes / Supporting Processes | Operational KPI's & PPI's |

*Figure 13: Example of how business model levels relate to competencies, objectives, decision making, measurements and processes.*

# 4: Business Model Competency Area

Business competencies are defined as business areas with characteristic resources and capabilities. Performance- and value-tuning one's business areas remains a challenging modelling task, since a business model contains the structural overview of the business competency areas of an enterprise, a business unit, or even a specific line of business within a company.

Connecting the business competency areas with the SBO's and CSF's enables the organization to focus on creating business performance, improve service flow, and fine

tune performance, thus enabling the potential of gaining a competitive advantage on both the strategic, tactical and operational business level. It is therefore a powerful combination when changing existing business strategies, and when creating new business strategies and critical success factors to have a direct link to the business competency areas.

A generalized, candidate set of business competency areas for an organization might be as follows:

- **BD** = Business Development
- **DI** = Distribution
- **GA** = General Administration
- **HR** = Human Resource Management
- **IT** = Information Technology
- **MS** = Marketing, Sales & Service
- **OP** = Operations
- **OS** = Operations Support

## 5: Operational Business Competency

Business competencies can be categorized as either core differentiating competencies, core competitive competencies or non-core competencies. The identification of this competency categorization can help an organization to identify where differentiating leading practices and value concepts needs to be applied, and where Best Practices and Performance Management needs to be applied. Such a categorization is vital in order to know where one can standardize to improve the operating model, cut cost and increase the performance, and where to innovate to improve the service, revenue and value model of one's organization.

This principle is hardly understood by most enterprise architects using today's enterprise modelling techniques, and remains to be the single source for cost, performance and value difficulties today, and thereby TCO and ROI challenges. The operational business competencies are not only the interlink which connect business measurements, reporting and a company's activities; they represent an invaluable source, when automating them in systems, and furthermore when innovating and transforming one's performance, operating, cost, service, revenue, and/or value model.
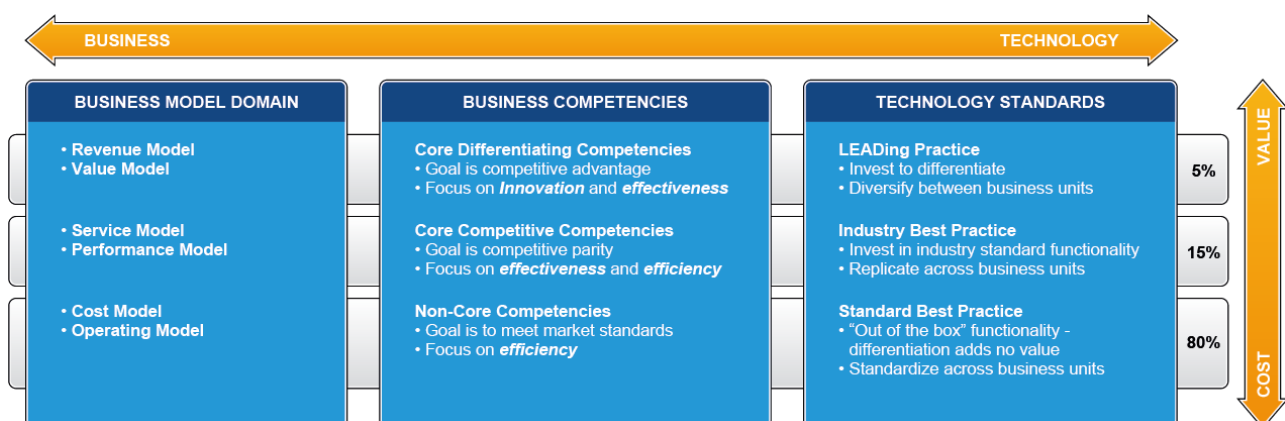
## 6: Performance-based Information Modelling

Long discussed, and even though expected by many business and IT organizations, Performance-based Information Modelling (PBIM) is something that many do not know how to really apply. It is about more than only mapping one's processes and then automating them, it is about realizing which areas create value and thereby need to have specific performance criteria, which business measurements exist in the particular area, and thereby need to be handled with different information modelling and automated principles. It is in this area that many organizations, when applying the principles wrong, destroy more value than they actually create. The starting point of PBIM is to identify firstly the value-goal aspect and thereby which SBO's, CSF's relate to the performance aspects e.g. KPI's in the various information systems.

While the information systems deployed by any organization will obviously vary, a candidate set of categories for an organization might be as follows:

- **CRM** = Customer Relationship Management
- **ERP** = Enterprise Resource Planning
- **NET** = SAP NetWeaver
- **PLM** = Product Lifecycle Management
- **SCM** = Supply Chain Management
- **SRM** = Supplier Relationship Management

Once the various application components are identified, one's application tasks, services and measurements need to be mapped and linked to scorecards, dashboards and cockpits according to their performance-based information.
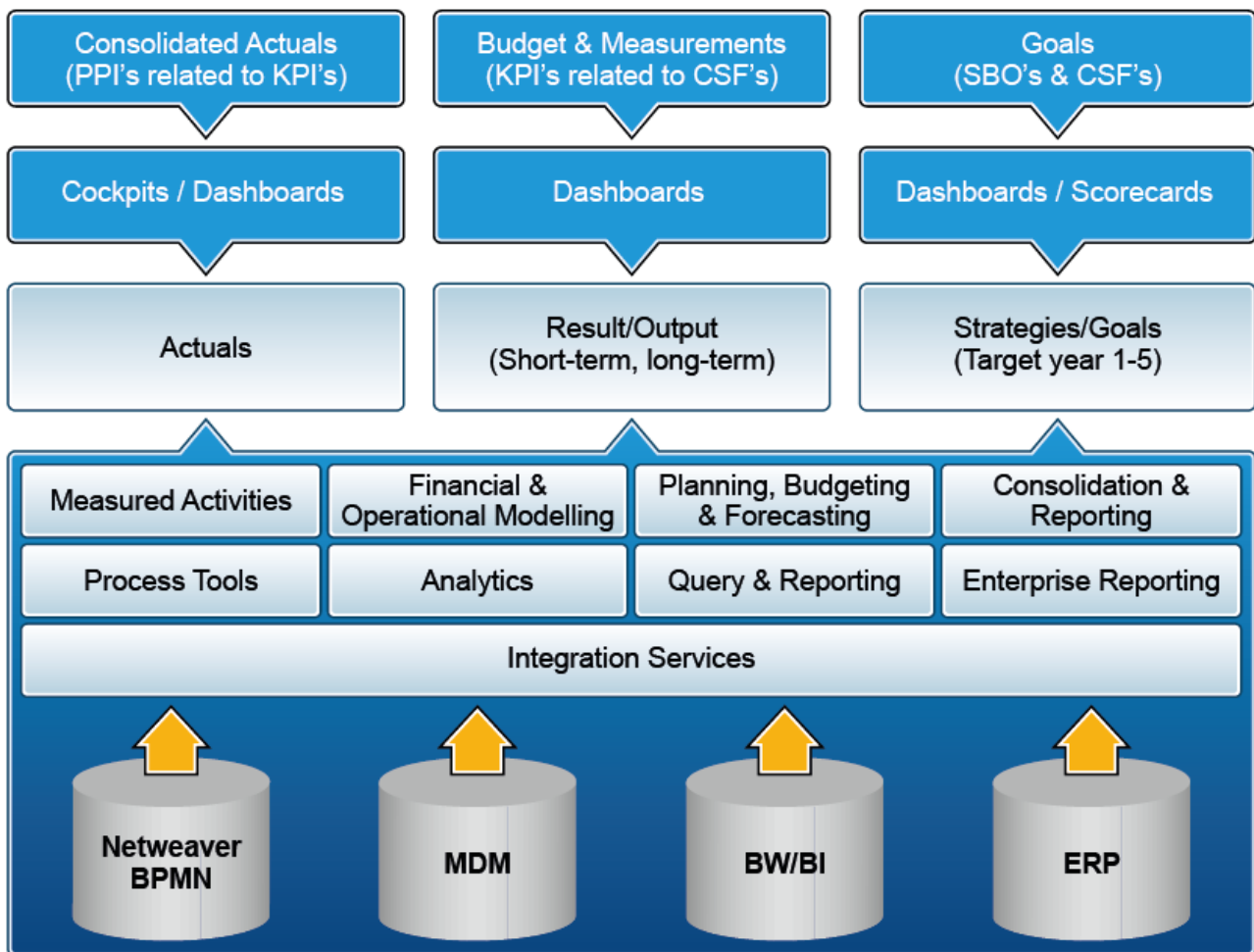
*Figure 15: Performance-based Information Modelling.*

## 7: Performance Measurements

Business measurements in terms of performance and value are the formal, information-based routines and procedures that managers (performance) and executives (value) use to maintain and/or alter patterns within organizational direction, services and/or activities. A typical business measurement helps organizations to periodically set their SBO's and CSF's with linked operational measurements (KPI's and PPI's) to provide input and feedback to decision makers in the progress of moving towards the previously defined strategic, tactical, and operational goals and objectives.

| ① INDICATOR | | ② INDICATOR NUMBER | ③ DEFINITION | | | | |
|---|---|---|---|---|---|---|---|
| Candidate Acceptance Ratio | | | Measures the share of accepted candidates in the overall number of proposed candidates | | | | |
| | | | Candidate Acceptance: Proposed candidates that are formally accepted by a customer | | | | |

**④ PERFORMANCE INDICATOR CATEGORY**

| ⑤ KEY PERFORMANCE INDICATOR (KPI) | | ⑥ PROCESS PERFORMANCE INDICATOR (PPI) | | | | |
|---|---|---|---|---|---|---|
| Financial | Operational | Time | Cost | Quality | Volume | Efficiency |
| | X | | | | | X |

| ⑦ RATIONALE | ⑧ TARGET GROUP(S) |
|---|---|
| Measures the efficiency of the candidate selection | Top Management |
| Enables decisions on necessary actions concerning the resource request process | Recruiting Managers |

| ⑨ CALCULATION | ⑩ PROCESS CONTACT | ⑪ APPLICATION CONTACT | ⑫ DATA CONTACT |
|---|---|---|---|
| Divide number of accepted candidates by overall number of proposed candidates | Process contact name | Application contact name | Data contact name |

| ⑬ DRILL-DOWN DIMENSIONS | ⑭ PROCESS(ES) ACTIVITY MEASURED | ⑮ SOURCE(S): Application Function, Task or Service |
|---|---|---|
| Regions | Resource request | IPP (SAP HR/Workforce Resource Management/Resourcing) |
| Divisions | | |

| ⑯ BUSINESS COMPETENCY | | ⑰ SERVICE TYPE | ⑱ SERVICE TIER |
|---|---|---|---|
| Business Competency | Operational Business Competency | 29 - Processing | Tier 1 - Simple Service |
| Recruitment | Talent management | | |

| ⑲ STRATEGY/GOAL CONNECTION | ⑳ CRITICAL SUCCESS FACTOR/OBJECTIVE CONNECTION |
|---|---|
| Improve Operational Excellence (SBO) | Improve ability to attract talent (Strategic CSF) |
| | Average time to recruit (Operational CSF) |

**Color Legend**
= Business Layer  = Process Layer  = Application Layer  = Data Layer

① **INDICATOR** Name of the performance indicator.
② **INDICATOR NUMBER** Number of the performance indicator.
③ **DEFINITION** Crystal clear definition of what the performance indicator is all about.
④ **PERFORMANCE INDICATOR CATEGORY** State whether the indicator is a Key Performance Indicator (KPI) or a Process Performance Indicator (PPI) and assign it to a category.
⑤ **KEY PERFORMANCE INDICATOR (KPI)** Assign the Key Performance Indicator (KPI) to a category (e.g. financial or operational).
⑥ **PROCESS PERFORMANCE INDICATOR (PPI)** Assign the Process Performance Indicator (PPI) to a category (e.g. time, cost, quality, volume or efficiency).
⑦ **RATIONALE** Concise rationale of why the indicator is necessary and how it can be used to support decisions.

⑧ **TARGET GROUPS(S)** Target group(s) to which the indicator will be reported.
⑨ **CALCULATION** Explanation of how this indicator is calculated (e.g. methodology, components, formula or data used).
⑩ **PROCESS CONTACT** Name of the owner of the process and the department.
⑪ **APPLICATION CONTACT** Name of the application contact and the department.
⑫ **DATA CONTACT** Name of the data contact and the department.
⑬ **DRILL-DOWN DIMENSIONS** Drill-down criteria by which this indicator can be detailed (e.g. by region, course type, etc.).
⑭ **PROCESS(ES) ACTIVITY MEASURED** Name of the process(es) activity that is measured.

⑮ **SOURCE(S): Application Function/Task/Service** Source from which the indicator can be taken.
⑯ **BUSINESS COMPETENCY** State the business competency and operational business competency that the KPI or PPI belongs to.
⑰ **SERVICE TYPE** The type of service that is part of the measurement.
⑱ **SERVICE TIER** The service tier of which the service type is a part of and belongs to.
⑲ **STRATEGY/GOAL CONNECTION** State the strategy and goal connection in which the performance indicator is a part of.
⑳ **CRITICAL SUCCESS FACTOR/OBJECTIVE CONNECTION** State the critical success factor and/or objective connection to which the performance indicator belongs.

*Figure 16: How to measure the performance and value against KPIs.*

## 8: Performance-based Service Design

Innovating and transforming one's Service Model to increase customer satisfaction and loyalty as well as to increase competitive advantage is for many organizations the performance creating and realization aspects that they need in order to differentiate in the market.

Business service types reflect what kind of service is provided to one or more services, and is consumed by another. By linking the service types and the service flow to one's value drivers (SBO's and CSF's) as well as performance drivers (KPI's), organizations can enable performance-based Service Modelling.

The following service types are used for the identification and the linkage to value and performance drivers:

Strategic Service Types:

- Strategy

- Plan
- Forecast
- Value Management
- Budget

Tactical Service Types:

- Strategic Advice
- Strategic Guidance & Compliance
- Monitoring
- Reporting
- Evaluation and/or Audit
- Policy
- Procedures
- Measurements
- Administration
- Communication
- Performance Management
- Risk Management

Operational Service Types:

- Operational Administration
- Issue Management
- Operational Planning
- Process Management
- Operational Monitoring
- Reporting
- Evaluation and/or Audit
- Measurements
- Procedures
- Operational Advice and/or Guidance
- Operational Guidance & Compliance
- Processing

# 9: Goal/Performance-based Process Design

Many organizations realize that traditional process design does not consider the performance or value aspects of one's organization. Too sadly, there are two huge enterprise modelling mistakes we encounter in most organizations:

1. Implementing best practice concepts where leading practices should have been applied.
2. Applying optimization principles where innovation principles should have been applied.

Both of these mistakes result in destroying value where value should have been identified, created, and realized. Executives that ask themselves what it takes to move from traditional process design to performance-based process design have to consider the role that value and performance plays in their processes, and also how and where to increase the performance. Too few enterprise modelling experts/architects realize that the ability to develop and achieve performance only bears fruit when there is a connection not only between the value drivers (SBO's and CSF's) and performance drivers (KPI's & PPI's), but also how the organization applies them to their competencies, processes, and activities.

The Performance-based Process Design links these factors and enables full performance identification, planning, creation, and governance:
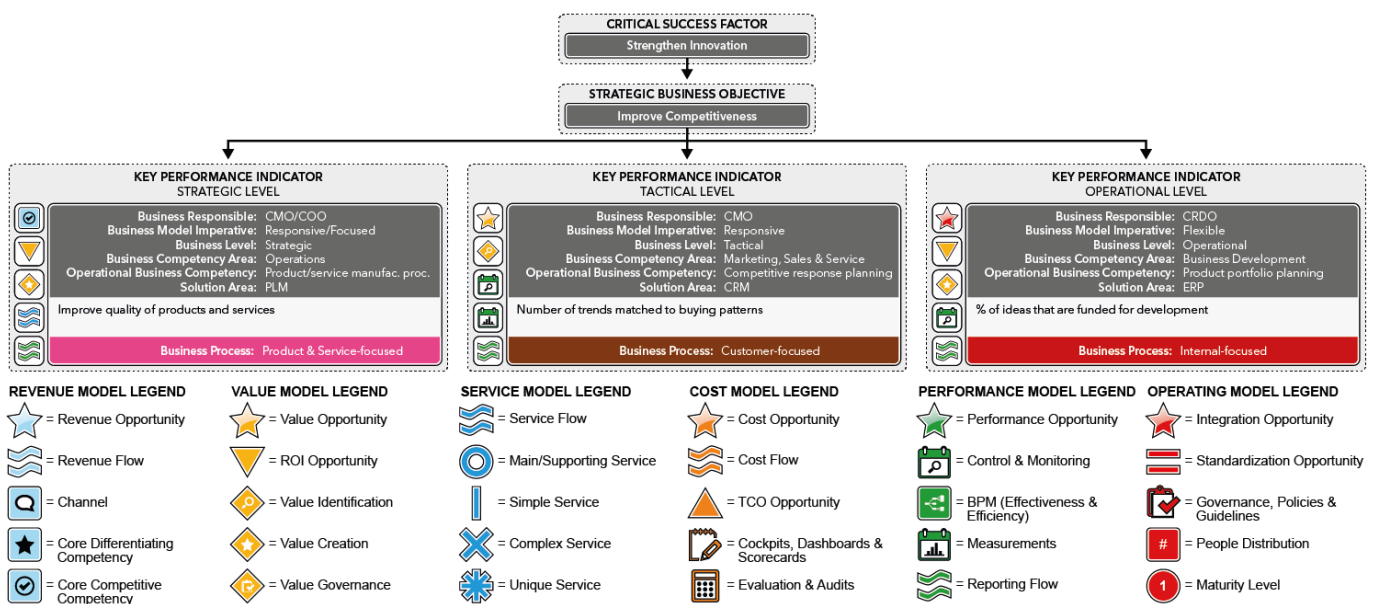


*Figure 17: Applying business model value drivers and performance drivers to the Key Performance Indicators for goal/performance-based process modelling.*

The color of the KPI code bar represents the main business process area of the KPI. In the example case (see figure 1 of chapter 4), the purple color represents an organization-focused business process.



*Figure 18: Color chart depicting the main business process areas.*

## Operating Model - the link between performance and Operational Business Competencies

An operating Model is defined by the operations of one's operational business competencies and therefore a operating model contains the view of the decomposed operational business competencies of an enterprise, a business unit, or even a specific Line of Business (LOB) within a company. The operational business model, and thereby its operational competencies, is an invaluable tool when developing KPI's for processes. It enables the management to focus on creating business performance, optimize processes and even gain a competitive advantage on both the strategic, tactical and operational business level. It is therefore a powerful combination when changing existing business strategies, and when creating new business strategies.
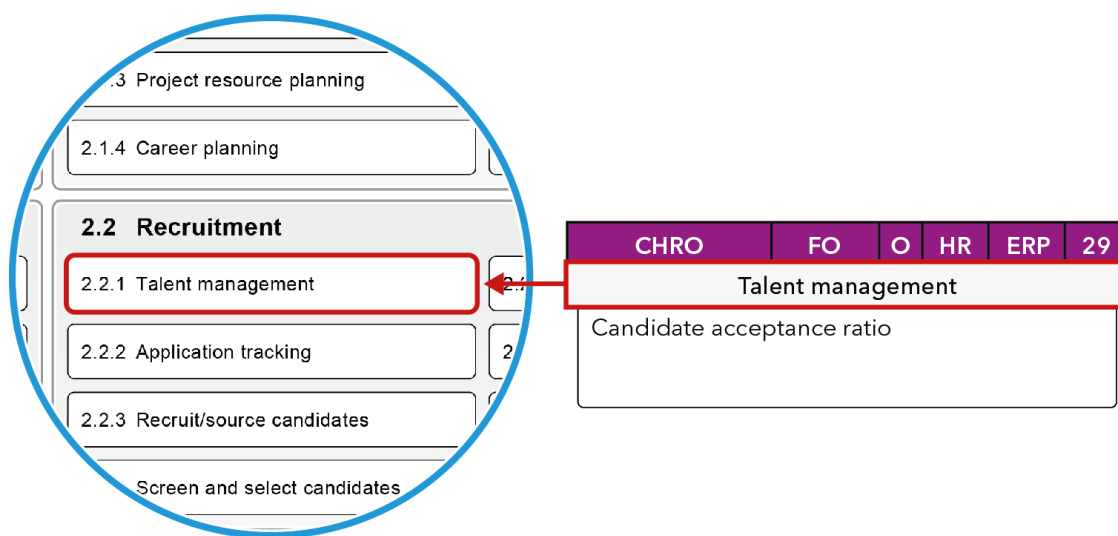


*Figure 19: An example of how a KPI is directly connected to an operational business competency.*

## Process Intelligence & Performance Indicators (KPI's)

Process Intelligence and performance indicators should always be an integrated and essential part of an operational business competency and its most important processes. Furthermore KPI's provide a way for the management to develop actionable metrics which connect to the bottom line, regardless of department. Good KPI's will be actionable and measurable with a direct relationship to profitability. It is also important to set clear targets and assign reporting accountability for each metric. Using this step-by-step approach will enable you to develop good and efficient KPI's for your organization:

1. Define the most critical decisions in your business.
2. Choose a metric related to customer service.
3. List the top four or five processes that are connected to the customer service metric.
4. Connect the metric to the bottom line.
5. Make the metric actionable and measurable.
6. For each KPI, define the title, how it will be measured in a process (PPIs), and the target.
7. Set up regular process intelligence reporting.

8.   Continue to refine and set up a system of rewards for top performers or departments.

Process Intelligence is a specific process performance concept that is based on the innovating and cutting-edge practices of combining performance, business intelligence, reporting, decision making and process principles. All to understand the link between performance and real time process execution. In terms of the Process Intelligence Way of Thinking, the overall objective is to use and improve monitoring as well as the the real time decision making and thereby value and performance aspects of an organization, when securing and  improving one's operation. In terms of the Process Intelligence Way of Working, it draws on both:

1)   Value Drivers, as a major source of information, and focuses on:
• Strategic linkage;
• Improving value management;
• Creating value measures;
• Improving customer service; and
• Producing enhanced value aspects in services and products.

The objective of link between value drivers and process intelligence, is to innovate and transform an organization's revenue, service and performance model as necessary to achieve strategic objectives. Thereby providing better insight into how process intelligence should be allocated to individual business areas, competencies, services, activities, products and/or customers, and is a critical aspect to the decision-making process. Process intelligence links performance aspects and expenses related to resources supplied to the companies process execution. Process Intelligence is then a way of measuring which of the organization's processes generate value.

Performance Drivers, as a major source of Process Intelligence, and focuses on:

• Increase operational oversight
• Improving performance;
• Reducing mistakes;
• Expand standardization
• Creating performance measures;
• Improving quality; and
• Producing process monitoring.

The objective to link performance drivers with process intelligence is to innovate and transform the organization's performance, cost and operating model.
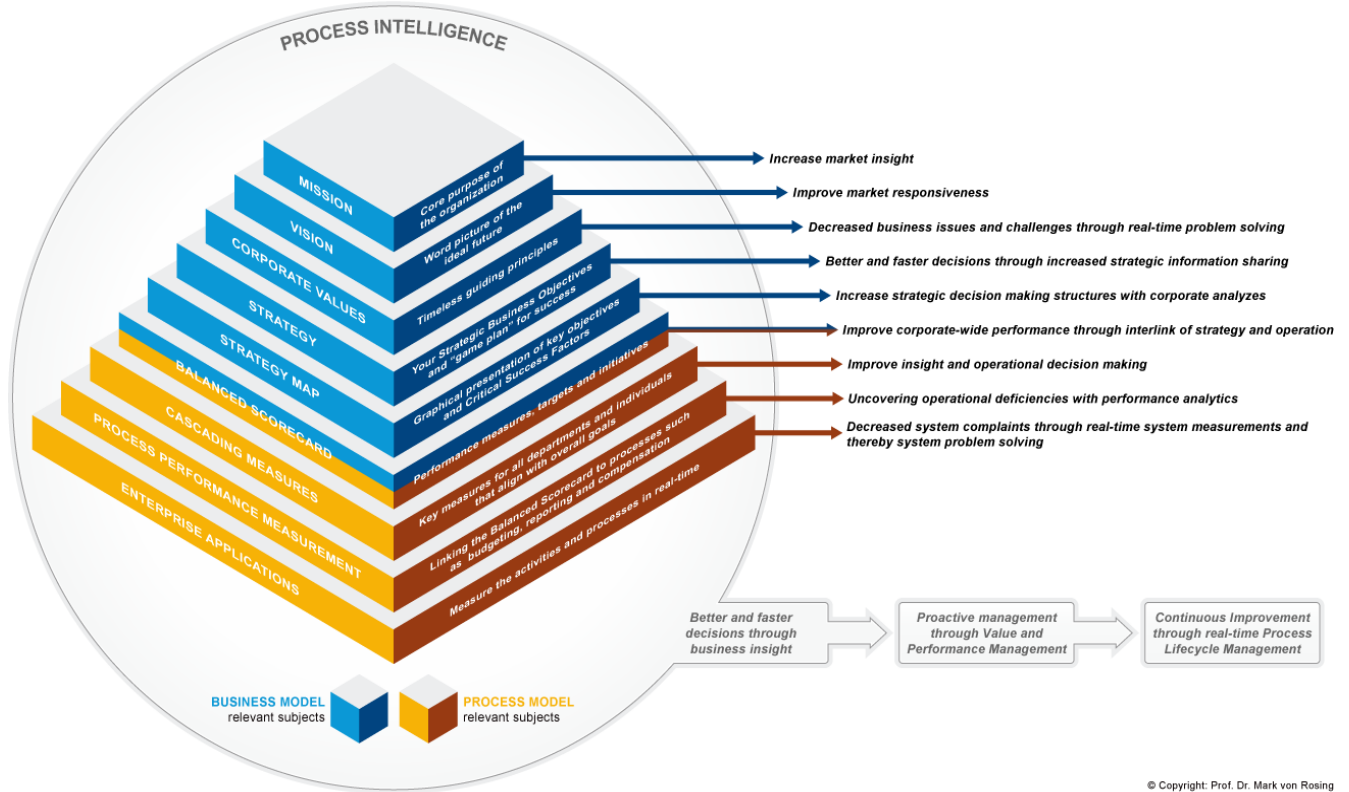


*Figure 19: An example of a performance-based costing model.*

# Way of Implementing

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

Most implementations fall short of transforming the business and creating real value due to the fact that they automate the existing Way of Working around performance concepts. Thereby actually reinforcing a siloed and ineffective way of automation. It is about the possibility to totally rethink the performance 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 Performance Implementation has been developed as a fully integrated part of a Blueprinting and Implementation concept. In this way, the performance 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 Performance meta-objects and artefacts can be used. By using decomposition and composition modelling techniques within the 40 steps of the Way of Implementation, the performance objects within the templates can be applied to the relevant subjects within the different layers (business, application or technology).
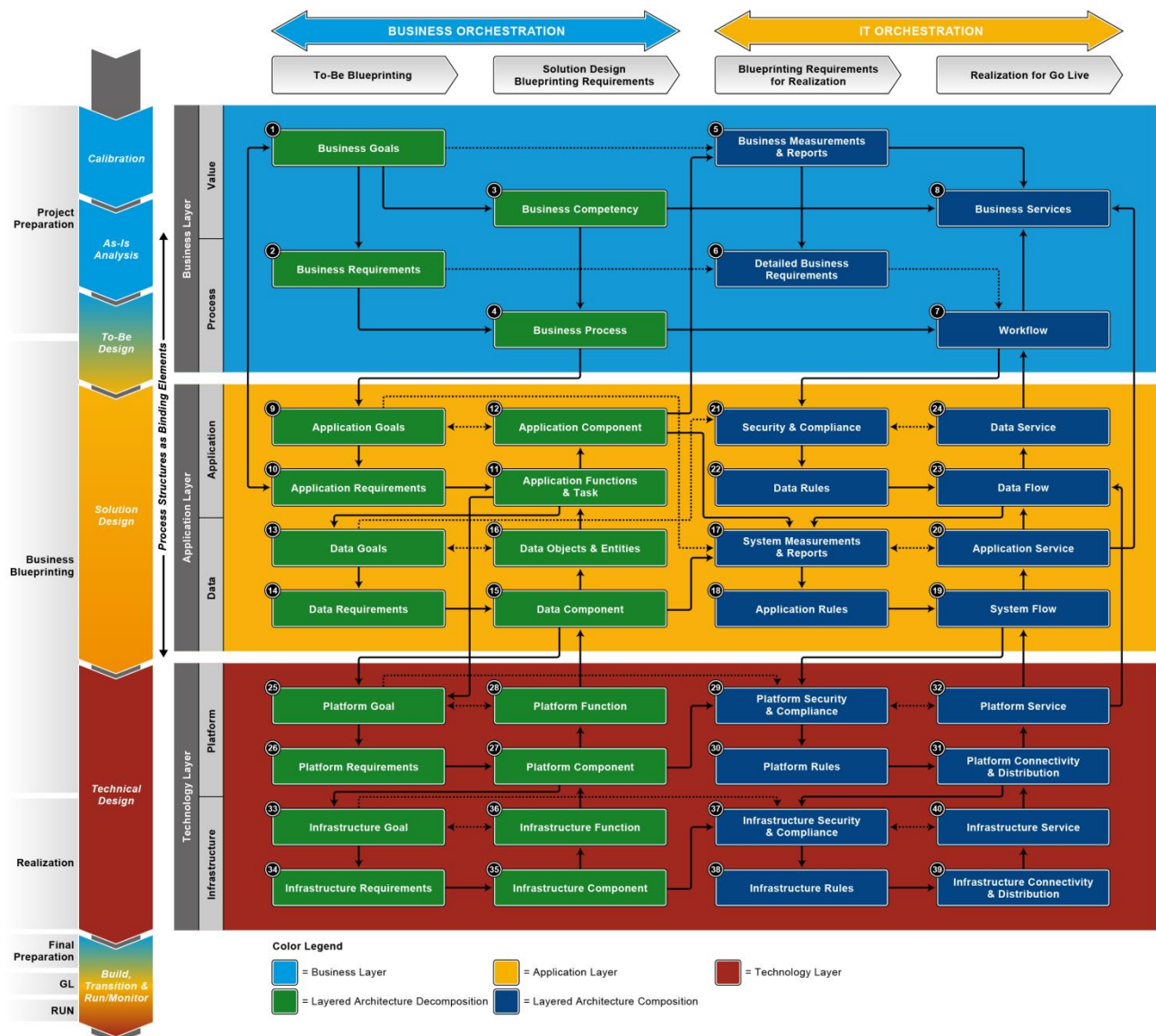
*Figure 20: A model showing the 40 Blueprinting & Implementation steps across the Business, Application and Technology Layer.*

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

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

- ✓ Map: Identify, categorize and label the **Performance Indicators** (KPI's): 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators (Figure 5).
- ✓ Matrix: Link and attach each **performance driver** to the: 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators (Figure 5).

- ✓ Model: Create a Performance Model that illustrates the connection of the **performance drivers** to each of the: 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators.

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

- ✓ Matrix: Associate and attach the strategic, tactical and operational (key) **performance indicators** to their applicable detailed requirements (Figure 9).
- ✓ Matrix: Link and attach each strategic, tactical and operational **performance drivers** to the related detailed requirements (Figure 9).
- ✓ Matrix: Connect and tie the **service measurements** (SLA's) to their related detailed requirements (Figure 9).
- ✓ Matrix: Connect and tie the **process measurements** (PPI's) to their related detailed requirements (Figure 9).
- ✓ Matrix: Associate and link **reporting** with all the related detailed performance requirements (Figure 9).

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

- ✓ Matrix: Associate and attach the strategic, tactical and operational (key) **performance indicators** to their applicable business area/group (Figure 11).
- ✓ Matrix: Link and attach each strategic, tactical and operational **performance drivers** to the related business area/group (Figure 11).
- ✓ Matrix: Connect and tie the **service measurements** (SLA's) to their related business area/group (Figure 11).
- ✓ Matrix: Connect and tie the **process measurements** (PPI's) to their related business area/group (Figure 11).
- ✓ Matrix: Associate and link **reporting** with all the related performance business area/group (Figure 11).
- ✓ Model: Create a Performance Model that illustrates the relationship between the business areas and groups and the **performance indicators**; 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators.

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

- ✓ Map: Identify, categorize and label the **process measurements** (PPI's) (Figure 5).
- ✓ Matrix: Associate and attach the strategic, tactical and operational key **performance indicators** to their applicable process area/group (Figure 15).
- ✓ Matrix: Link and attach each strategic, tactical and operational **performance drivers** to the related process area/group (Figure 15).

- ✓ Matrix: Connect and tie the **service measurements** (SLA's) to their related process area/group (Figure 15).
- ✓ Matrix: Connect and tie the **process measurements** (PPI's) to their related process area/group (Figure 15).
- ✓ Matrix: Associate and link **performance reports** to their related process area/group (Figure 15).
- ✓ Model: Create a Performance Model that illustrates the relationship between the process areas and groups and the **performance indicators**; 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators.

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

- ✓ Map: Identify, categorize and label the **system measurements**.
- ✓ Matrix: Connect the **system measurements** to the; 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators.
- ✓ Model: Create a **Performance Model** that illustrates the relationship between the system measurements and the; 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators.
- ✓ Map: Identify and relate the **reporting functions** per owner: 1. Business owner, 2. Service owner, 3. Process owner, 4. Application/system owner, 5. Data owner, 6. Platform owner, 7. Infrastructure owner (figure 5).
- ✓ Matrix: Identify and relate the **system/application reports** per owner: 1. Business owner, 2. Service owner, 3. Process owner, 4. Application/system owner, 5. Data owner, 6. Platform owner, 7. Infrastructure owner (figure 7).

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

- ✓ Matrix: Associate and attach the strategic, tactical and operational (key) **performance indicators** to their applicable detailed requirements (Figure 9).
- ✓ Matrix: Link and attach each strategic, tactical and operational **performance drivers** to the related detailed requirements (Figure 9).
- ✓ Matrix: Connect and tie the **service measurements** (SLA's, SPI's) to their related detailed requirements (Figure 9).
- ✓ Matrix: Connect and tie the **process measurements** (PPI's) to their related detailed requirements (Figure 9).
- ✓ Matrix: Associate and link **reporting** with all the related detailed performance requirements (Figure 9).

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

No applicable tasks.

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

- ✓ Map: Identify, categorize and label the **service measurements** (SLA's and SPI's) (Figure 5).
- ✓ Matrix: Associate and attach the strategic, tactical and operational (key) **performance indicators** to their applicable service area/group (Figure 13).
- ✓ Matrix: Link and attach each strategic, tactical and operational **performance drivers** to the related service area/group (Figure 13).
- ✓ Matrix: Connect and tie the **service measurements** (SLA's) to their related service area/group (Figure 13).
- ✓ Matrix: Connect and tie the **process measurements** (PPI's) to their related service area/group (Figure 13).
- ✓ Matrix: Associate and link **performance reports** to their related service area/group (Figure 13).
- ✓ Model: Create a Performance Model that illustrates the relationship between the service areas and groups and the **performance indicators**; 1. Strategic Key Performance Indicators, 2. Tactical Key Performance Indicators, 3. Operational Key Performance Indicators.

# Roles involved

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

| ENTERPRISE MODELLERS | ENTERPRISE ENGINEERS | ENTERPRISE ARCHITECTS |
|---|---|---|
| Business Analyst (P) | Value Engineer (P) | Business Architect (P) |
| Process eXpert (S) | Test Engineer (S) | Value Architect (S) |
| Value eXpert (S) | Software Engineer (P) | Service Architect (S) |
| Information eXpert (S) | Process Engineer (P) | Process Architect (S) |
| Service eXpert (S) | Change Engineer (P) | Enterprise Architect (S) |
| Transformation eXpert (P) | | Information Architect (S) |

(P) = Primary object/role
(S) = Secondary object/role

# Conclusion

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

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

Please be aware that while we are a Community Open Source with absolutely no cost associated around our Enterprise Standards and Reference Content our material is copyright, intellectual capital and trademark protected (WIPO- World Intellectual Property Organization where we have a global patent license). Limitations apply to the use/re-use as we only provide our community with open access to all material. If you are interested to use our material or want to join our community, please feel free to contact us. We in the LEADing Practice community with +3000 organizations as well as the Global University Alliance (our founders) with +300 Universities look forward, to you joining a whole new way of thinking, working, modelling and implementing performance objects.

# © Copyright note on Intellectual Capital: All rights reserved

LEADing Practice ApS respects the intellectual property of others, and we ask others to do the same. All information and materials contained in the LEAD frameworks, methods and approaches with associated tools and templates, such as maps, matrices and models is Intellectual Capital (IC) and Intellectual Property (IP) of LEADing Practice ApS and limitations apply to the reuse of this IC/IP. The intellectual Property Rights (IPR) consists of information, knowledge, objects, artefacts, experience, insight and/or ideas, that are structured to enable reuse to deliver value creation and realization.

The LEADing Practice ApS, often referred to as LEAD, intellectual capital is protected by law, including, but not limited to, internationally recognized United States and European Union IPR copyright law. Except as specifically indicated otherwise in writing, LEADing Practice ApS  is the owner of the copyright in the entire LEAD Frameworks content (including images, text and look and feel attributes) and LEADing Practice ApS reserves all rights in that regard. Use or misuse of the IPR, the trademarks, service mark or logos is expressly prohibited and may violate country, federal and state law.

LEADing Practice ApS  is an open architecture and community open source standard and therefore provides open access to all deliverables for certified LEAD practitioners, thereby ensuring that modelling principles are applied correctly. A open architecture and open standard community has been set in place to encourage sharing, learning and reuse of information and thereby increase knowledge among LEAD community practitioners, and with this ultimately improvement of one's project, engagement and the LEAD development.

Use of the LEAD Reference Content (including frameworks, methods and approaches) is restricted to certified LEAD community members in good practitioner standing, who are able to use these items solely for their non-commercial internal use. Legal access to the details of LEAD will be provided to you with your membership. Members are prohibited from sharing the LEAD material in its entirety with other parties who are not members of LEAD community since the concepts and models are protected by intellectual property rights.

## Guidelines for LEAD community members using the IPR material

As a LEAD member comes greater personal responsibility and the following intellectual property conditions apply:

- Can be used free of charge for LEAD certified practitioners.
- Cannot be share, copied or made available for non-community member, which are not LEAD certified practitioners.

When using any materials, it must include a source notice – either in an adjacent area or as a footnote – to indicate the source. The source should be specified the following way: "Source: A part of the LEAD Reference Content" (with an indication of which type of

Enterprise or Industry Standard it belongs to) and possibly indicate the LEAD work product family, such as "Part of the LEAD Process Reference Content".

- Cannot be systematically "given away" – do not download all our content and simply hand it over to other colleagues or clients that are not trained and certified.

To ensure correct usage, any company usage of the LEAD material e.g. templates and tools has to be tailored and agreed upon by LEADing Practice ApS . LEADing Practice ApS  may, in appropriate circumstances and at its discretion, terminate the access/accounts of users who infringe the intellectual property rights and pursue legal action.

## Guidelines for non-LEAD community members using the IPR material

The following conditions apply to use of the LEAD Intellectual Property for non-community members:

- Can be used free of charge for lecturing and research at any University and Business School

Material available at www.LEADingpractice.com can be used in a non-commercial way for knowledge sharing. When using any materials, it must include a source should be specified the following way: "Source: A part of the LEAD Reference Content" (with an indication of which type of Enterprise or Industry Standard it belongs to) and possibly indicate the LEAD work product family, such as "Part of the LEAD Process Reference Content".

## General guidelines that apply for all LEAD IPR material

- Any use of original texts, graphics, images, screen shots, and other materials from LEAD sources must be approved by LEADing Practice ApS.
- Any material cannot be generally distributed to colleagues, clients and or an undefined audience without written permission from LEADing Practice ApS.
- Cannot be altered or changed (the using company) in any way without explicit written permission from LEADing Practice ApS.

In most cases, the LEADing Practice ApS acts as a distribution channel for the Publisher and Authors of the material provided. LEADing Practice ApS  may, in appropriate circumstances of infringement of the intellectual property rights pursue legal action. For questions, please get in touch with us at info@LEADingPractice.com.