Why Work with Process Templates

Mark von Rosing, Maria Hove, Henrik von Scheel, Ulrik Foldager

INTRODUCTION

In the Business Process Management (BPM) Ontology and Semantics chapter, we provided you with a detailed and extensive description of the concept of ontology and semantics: what they are, what their purpose is, and perhaps most importantly of all, how to use them effectively in the BPM way of thinking, the BPM way of working, and the BPM way of modeling.

Although we see an immense amount of literature on the adoption and implementation of BPM in a rapidly growing market, what surprises us is the low level of maturity of standards in terms of consistent and integrated templates to describe process. Because we see this as one of the main reasons for high-cost and low-value creation around process analysis, process mapping, process documentation, and process governance, we have chosen to focus in this chapter on process templates.

The chapter will specify what process templates are, the relationship between BPM ontology and semantics and how it links directly to the concept of templates, why they are needed, where they can be applied, and the benefits of applying them.

We believe that the principles of process templates are relevant to any organization, independent of industry, business model, or operating model.

THE RELATIONSHIP BETWEEN BUSINESS PROCESS MANAGEMENT ONTOLOGY AND PROCESS TEMPLATES

When an organization decides to make use of ontology and semantics to lay the foundation of what we call "process things," it is done for a vast variety of purposes (we will be naming a few of them throughout this chapter), but the most important one is that once you have established a specific and clear definition for a meta object, for example, this definition will be available to all relevant employees across organizational boundaries of the enterprise after it has been documented and published for use. This means that a common understanding and consensus has been reached within the organization for what name a particular meta object has for whenever you are referring to that particular meta object. Of course, this makes it a lot more practical for organizations to handle objects in the bigger picture: not just for documenting, but also for using them when modeling, engineering, and architecting process concepts and solutions, regardless of the business unit and/or business requirement. In the sense of semantics, then, it allows you to accurately describe how a particular object relates to another

particular object (regardless of object type or hierarchical location). This has to be defined as well, of course, but just like the ontology definitions, an organization must also reach a common understanding and consensus in semantic relationships regarding how exactly each object relates to another. This is meticulous work and takes time and effort, but it is nevertheless extremely important to avoid common pitfalls.

Thus, we know what to call a particular object. In our case, we choose to use the driver meta object (through the creation of our ontology), and we know how the driver meta object relates to a business process meta object (because we have also defined a set of semantics that accurately describe how they influence and relate to each other). If we would then create a process template in which the relationship to a value driver is relevant, we would be able to use the business process meta object and place it in the process template, for both information and documentation purposes, as well as the ability to relate it to other aspects further on. We would most likely be identifying and listing (for example, in columns in an Excel spreadsheet) values such as the name of each business process meta object, where it is located, what resources it uses, etc. Maps are always used within the concept of the BPM way of thinking, which is the starting point, and where the conceptual aspects are covered. With this planner's view we generate and describe business concepts, document important and essential information regarding the business, and create a general overview of more or less anything of importance.

Continuing from this path, we would next create a process matrix for the purpose of relating the value driver meta object (in a row next to the columns in the Excel spreadsheet) to the relevant business process meta object. Matrices are almost always created within the concept of the BPM way of working, because here we begin to actually take action and relate objects to each other. Keep in mind that whenever you are creating a matrix, you are actively using the information provided to you through the previous creation of a process map. The map provides you with the information you need to create an efficient process matrix. By creating a process matrix, we then allow ourselves to identify directly and accurately which kind of value driver (whether internal or external) has an impact on the business process (regardless of impact type, although it has to carry some importance because we expect to note down information that affects the business somehow, and bearing that in mind that it is therefore worth documenting) on the business processes of the organization (regardless of business unit). Not only do we describe which value driver affects which business process, we can also identify exactly how the value driver affects the business process, where the impact occurs, what the consequences are, and who is responsible (role object) and who is accountable (owner object) for acting upon this knowledge.

Last but not least, we could—if deemed necessary and/or beneficial—create a process model to build a visual representation of how these value drivers would affect the business processes of the organization. Process models, as the name implies, are mostly used within the concept of the BPM way of modeling. Here we visually illustrate behaviors, relationships, connectivity, location, function, and purpose. Keep in mind, however, that a model always makes use of both the process map and the process matrix. The map and the matrix are your source of information; the model is how you would visualize this information.

As you can see, this is why the BPM ontology and semantics have real business value, because you have put down definitions of *what* (ontology) the objects are and *how* (semantics) they relate to other objects. As you can imagine, this is an essential piece of information for any process expert (process modeler), process engineer, and/or process architect in daily work. This is also the foundation and the reason why our process templates are 100% standardized and integrated with each other, enabling the ability to share process objects across various process templates.

WHAT ARE PROCESS TEMPLATES?

A process template is a documentation product such as a process map, process matrix, or process model. Process templates are created to describe some aspect of a process, a process landscape, process flow, process solution, or state. In enterprise architecture, these would be called artifacts. Templates enable the capture and relation of objects within the same template or across multiple templates, each of which promotes its own view. Process templates enable the capture and relation of process-centric objects within the same template or across multiple templates, each of which promotes its own view of a process.

The purpose of having process templates that address the various process concepts is to set out or describe how to organize and structure the viewpoints and process objects associated with the various disciplines and bring them together to create a common understanding. Standard process templates are important because they establish the elements of the artifacts, i.e., the relevant process objects to be addressed when the template is used.

Within the set of templates presented in this chapter, each template is part of an overarching ontological and semantically based specification that ensures that all of the objects are appropriately related. Reuse of the content of one process template or view for another is therefore ensured. Without this standardization and integration, the process templates create more work and cost, and are actually of little value. What many practitioners and organizations do not realize is the importance of having such integration and standardization across the landscape of this work, and therefore the value of the result.

Years of research in the Global University Alliance[1] have identified the semantic relations of the various process objects and how they can be applied within different contexts. These relationships are built into the process templates, e.g., process maps, process matrices, and/or process models.

PROCESS MAPS

A process map is intended to be an accurate list and representation of a set of decomposed and/or composed process objects. The purpose of this map is to inventory and create a list of all processes in the enterprise.

The content of a process map is based on which objects/elements can be related so the columns of the map conform to the semantic rules within the context in which they are being used.

This list helps us to understand the breadth of functionality provided by each of the processes. It will also provide a centralized and official overview and record of the key processes in the enterprise, each situated within the specific process area and process group in which it participates as well as linking in the channel, stakeholder, owner, and role/resource (including the manager) involved. Table 1 is an example of such a process map.

Members of the BPM team carry out the tasks necessary to complete the process map in the manner described in Table 2.

Mapping a process enables the following, among others:

- Identify relevant processes, including the name of the process
- Specify a unique process identifying number or ID
- Specify the level of process detail (see process levels in process tagging chapter)
- Link the involved business units and stakeholders to the relevant process
- Detail the process owners, in terms of which process is owned by whom
- Other process roles involved this can include:
  - Process roles

Table 1 *Example of a Process Map*

Process#	What Specification:					Who Specification:			
	Business Process area	Process Groups	Business Process	Process Steps	Process Activities	Stakeholder Involved	Process Owner	Managers Involved	Roles/Resources Involved
#									

Table 2 *Example of How a Process Map is Based on Semantic Rules and Tasks*

The "what" specification: Identify, select, and categorize the business processes.	
Rules	Process relates directly to business construct, i.e., when collecting the inventory of processes within a sliver or slice of the enterprise
Tasks	• Identify and categorize the process areas related to the business areas or the end-to-end flow areas. • Specify and categorize the process groups based on the related business groups or the end-to-end flow groups. • Select, label, and categorize the business processes according to the groups. • Spot the process steps related to the business process. • Identify the process activities related to the process steps and business processes.
The "who" specification: Identify the relevant stakeholder, owners, and managers involved.	
Rules	Process relates directly to role and to resource (stakeholder) and owners, i.e., when collecting the inventory of processes related to a community within the enterprise
Tasks	• Identify and categorize the stakeholders linked to the business processes. • Specify the business process owners and categorize them according to their business process ownership. • Spot and categorize the business process-related managers. • Recognize, classify, and label the roles/resources of the business processes.

- Process approver, in terms of who approves the process and or the work
- Process checker, in terms of who checks the work

As we have already mentioned, the above reasons determine the design and content of what is within such a process map and therefore how such a process map looks.

PROCESS MATRIX

Process matrices show the relationship between two specific sets of decomposed (broken down) objects in a process-centric context. The core idea of the process matrices is that they each consist of a set of process objects that semantically have primary and therefore direct natural relations to each other. The result is that these are always in the form of two lists (a row and a column) in which the process objects with which they share a relationship are each rated according to them within the body of the matrix. Within the process matrix, this allows one to relate the unfamiliar to the familiar, thus connecting process objects in the different layers (composition).

Table 3 is a process matrix illustrating the columns of the process map combined with performance indicators. Using this template would result in the content of every column having a minimum of one process indicator.

The process-performance indicator matrix's capture should be based on enterprise modeling and architecture rules outlined in Table 2. In addition to those rules and tasks, the rules and tasks outlined in Table 4 are applied when completing Table 3.

Reasons for creating process matrices can include:

1. Link processes to business goals and strategy
2. Create value-oriented process relations
3. Relate business competencies and processes
4. Understand the end-to-end process flow
5. Identify process problems and pain points—fixing a defective or inefficient process
6. Specify which business objects, information objects, and or data objects are involved

Table 3 *Example of a Process Matrix Showing How Processes Relates to Performance Indicators*

	Indicators Process Number	What Specification:			Who/Whose Specification:			
		Business Process	Process Steps	Process Activities	Stakeholder Involved	Process Owner	Managers Involved	Roles/ Resource Involved
Performance Indicator 1	#							
Performance Indicator 2	#							
Performance Indicator N	#							

Table 4 *Relationship of Process Objects to Performance Indicators and Tasks Associated With It*	
Performance Indicator: A metric used by an enterprise to indicate its overall success or the success of a particular area in which it is engaged.	
Rules Tasks	(D) Process relates to performance (performance indicator). • Associate and tie the performance indicator(s) to the business processes. • Associate and tie the performance indicator(s) to the process steps of the business process. • Associate and tie the performance indicator(s) to the process activities of the business process. • Associate and tie the performance indicator(s) to the stakeholders involved in the business process. • Associate and tie the performance indicator(s) to the process owners of the business process. • Associate and tie the performance indicator(s) to the managers involved in the business process. • Associate and tie the performance indicator(s) to the roles/resources involved in the business process.

7. Connect performance indictors to processes
8. Improve the operating model
9. Reduce process cost
10. Associate relevant rules to the processes
11. Identify and relate compliance aspects
12. Process automation
13. Process measurements and reporting as part of the organizational analytics and decision making
14. Service model improvement

As we have mentioned, these reasons determine the design and content of what is within such a process matrix and therefore how such a process matrix should look. For example, reporting would require process matrices with the following relations: other relations' performance indicators (measures), business goals, and who would receive what report.

PROCESS MODEL

Once information has been collected and organized in the process maps and/or process matrices, a process model may be crafted to enable the complex set of resulting 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 process templates enable the practitioner to work and model with the process objects throughout all aspects of the enterprise (business, application, and technology) with more confidence in the completeness and alignment of their information. Their semantic relations and connection are governed not only by the
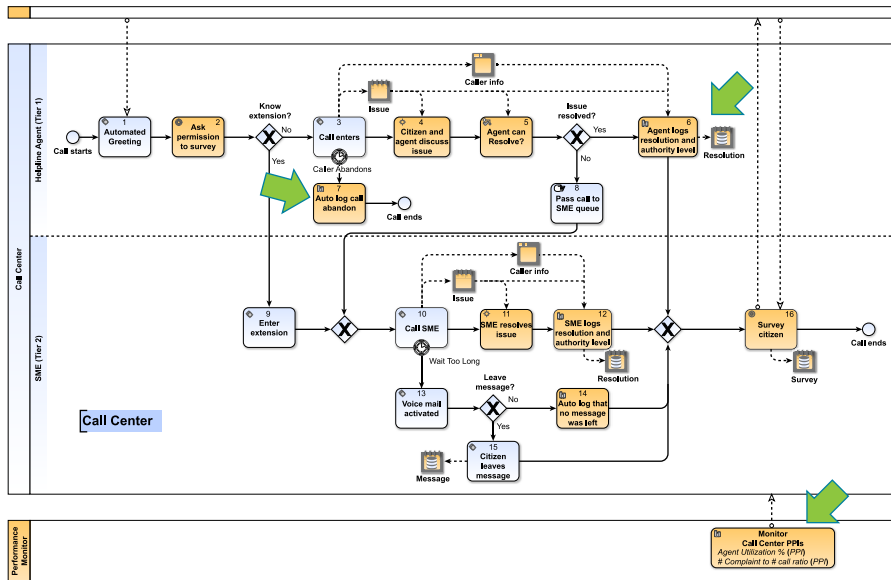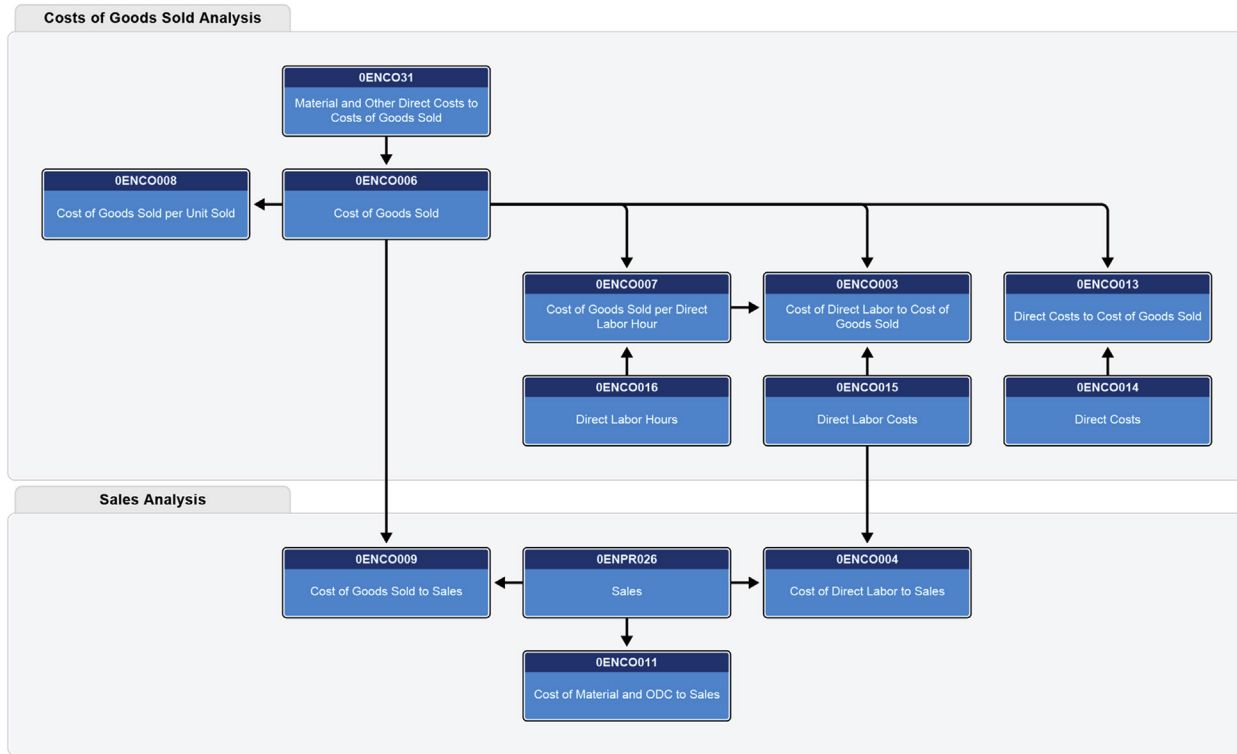
FIGURE 1

Example of process model, with measurements and reports specified within notations (Example modeled in iGrafx®).

objects, but also by the process modeling rules and tasks, which ensure how and where the process templates interlink and share common process objects.

An example of such a process model is illustrated in Figure 1, which demonstrates processes, roles involved, interactions, data aspects, and measurements and reporting aspects.

In this example, through a process such as described in Table 1, the stakeholders, managers, and owners identified in the process map are related to the performance indicators through the process matrix (Table 3). If such a vertical alignment of measurements across levels is ignored, it is possible that activities or processes will be measured in ways that do not contribute to the overall success of the organization. The danger to an organization might even be that the performance indicators could lead to conflicts in strategy or value creation. Together, the process map in Table 1 and process matrix in Table 3 and the process model in Figure 1 provide a good example of how it is possible to relate the relevant process information.

The process maps, process matrices, and process models that specify the semantic relations in this illustration are just examples. As such, they do not show all possible relations that exist. Other views of other information are possible. We could, for example, choose to organize this same information by processes, measurements, or the data involved. An example of an alternative view is found in Figure 2, in which the sales call center from Figure 1 shows a sales analysis and a cost of goods sold analysis by process.

Costs of Goods Sold Analysis

| 0ENCO31 |
| Material and Other Direct Costs to Costs of Goods Sold |

| 0ENCO008 | | 0ENCO006 |
| Cost of Goods Sold per Unit Sold | | Cost of Goods Sold |

| 0ENCO007 | 0ENCO003 | 0ENCO013 |
| Cost of Goods Sold per Direct Labor Hour | Cost of Direct Labor to Cost of Goods Sold | Direct Costs to Cost of Goods Sold |

| 0ENCO016 | 0ENCO015 | 0ENCO014 |
| Direct Labor Hours | Direct Labor Costs | Direct Costs |

Sales Analysis

| 0ENCO009 | 0ENPR026 | 0ENCO004 |
| Cost of Goods Sold to Sales | Sales | Cost of Direct Labor to Sales |

| 0ENCO011 |
| Cost of Material and ODC to Sales |

((O))LEADing Practice Measurement Reference Content [#LEAD-ES20014PG]

FIGURE 2

Example of automated process measure, e.g., SAP system measurement with the relevant processes, data object queries, transaction codes, and process flow relations. [2]

THE MOST COMMON PROCESS TEMPLATES

As we have just explained, the process templates consist of process maps, matrices, and models that capture the relevant process elements (meta objects). Each of these process templates is based on a specific view with particular stakeholder concerns, to enable process identification, creation, and realization in achieving the outlined needs and wants. For this, the process templates identify the relevant stakeholders, their requirements and concerns, the process descriptions and their semantic rationale, and the corresponding tasks to the specific views and viewpoints. Each of these process templates is thereby built to support a particular need and want.

Figure 3 illustrates an overview of the most common process templates. All of the process templates listed are fully integrated and standardized, enabling full reusability of shared aspects between process templates, where 1 in Figure 3 shows the objects in the process maps, 2 shows the objects in the process matrices, and 3 shows those of the process models. The specific process templates therefore not only show which objects are within what template, specifying whether it is a map, matrix, or model, it furthermore shows where the object of one template can be reused in another: where the objects have and should be integrated and standardized, because they are the same. That most organizations do not have such integrated and standardized process templates is the single source of the high costs of modeling, engineering, and architecture and the low maturity of output.

BENEFITS OF PROCESS TEMPLATES

One of the strangest things we have heard is that "real process experts do not use templates," or "templates are a substitute for a real subject matter experts." However, we have learned through hard experience that there are times when using one is not only the most appropriate choice, but frequently the sole choice that addresses the problem. Some benefits to using process templates are that:

- They ensure consistency with project artifacts
- All subject matter experts work in a standardized way
- They ensuring cross-integration of templates
- They save time with templates
- They are reusable
- They enable better governance
- They are less expensive
- They are faster to populate across various teams
- They develop routine
- They maintain consistency among various team members and artifacts
- They immediately lift the artifacts to maturity level 3 and 4
- They develop a standard in your BPM Center of Excellence (CoE)
- If you are a non-designer, use templates to give a more professional edge to your own marketing materials.
- They get things done faster

Process Objects	FD	VMG	Rq	ST	S	BSC	Pe	MR	BC	Rev	Co	Op	I	Ro	O	OC	Ob	WF	Ru	RS	SC	CS	P	BPMN	Se	A	AS	AR	AM	AI	Asc	C	D	Pl
Templates																																		
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		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		2,3					1,2,3	2										
Business Process	2		1,2	1,2,3					2	2	2	1						2,3	2,3	2	2	2,3	1,2,3	2,3	2	2								
Process Step			2,3							2	2							2,3	2,3				1,2,3	3	2	2								
Process Activity			2,3							2	2							2,3	2,3				1,2,3	3	2	2								
Events			2,3																2,3	2	2	2	2,3	3	2			2,3						
Gateways			2,3																2,3				2,3	3	2			2,3						
Object (Business & Information & Data)			2,3										1,2,3				1,2	1,2,3	2,3				2,3	2,3	2,3									
Process Flow (incl. Input/output)			2,3							3	3						2	1,2,3					3	3	2,3		2			3	2,3			
Process Roles			2,3					1,2,3	2				1,2			2,3							2,3	2,3	1,2								1	1
Process Rules			2,3																1,2,3				2,3	2,3					2,3			1,2		
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	1,2,3	2,3		2,3	2,3	1,2,3	1,2	1,2	2,3			1,2								1,2,3	2,3	2,3									

1 = Map   2 = Matrix   3 = Model

FIGURE 3

The most common process templates.[3]

- They maintain artifact consistency
- They simplify updates and changes
- Process templates can be used by the various people who work with processes, i.e., process experts, process engineers, and process architects. As a matter of fact, aspects of the templates can be reused across the various process roles.
- There are many ways to personalize them without sacrificing the benefits and consistency of the process templates. If your team has unusual needs, you can customize a process template and then create the BPM project.

Remember that the process templates we have illustrated are designed based on a complete view of the enterprise semantics and are therefore fully integrated and standardized with each other. This means that we know which aspects of one process template can be reused in another template. A further advantage is that the process templates are designed to meet the needs of most process experts/teams in many different settings and to be fully integrated into the BPM lifecycle, BPM roles, BPM governance, and BPM change management. Working with the various process templates we present in this book is a smart idea and will lift your maturity and save significant amounts of time and money.

CONCLUSION

In this chapter, we have focused on process templates and why they are important within organizations working with their processes. The subject is therefore relevant for BPM CoE, BPM teams, process experts, and other subject matter experts working with processes.

We covered what process templates are, how they can be used, and where they can or should be applied to draw on the ontology and semantic-based process relations standardized to ensure reusability and replication of success in outlining the correct connection points based on a common relationship pattern of the process objects.

We furthermore detailed the differences between process templates in terms of process maps, process matrices, and process models, and ended with the benefits and value of process templates.

We showed that by using process templates to manage the different kinds of highly connected information and relations the process creation is ensured and that:

- The process map (which lists the various related objects to capture the decomposed unrelated objects) is a critical design tool
- The process matrix (which is composed in terms of relating specific objects together) provides the continuity for and interconnection between a process map (a representation of decomposed and/or composed objects)
- A process model (a representation of interconnected and related objects) is critical to integrating and standardizing the process templates and tools of the practitioner.

Furthermore, it is an essential part of supporting, integrating, and standardizing the practitioner's way of thinking, working, and modeling.

As already shown, the illustrated process map, process matrices, and process models and the specification of semantic relations are just examples. Because they were examples, not all possible relations were specified. However, all of the possible relationships for the various process templates will be illustrated with detailed examples in the various chapters across Volumes 1 and 2 of *The Complete Business Process Handbook*.

End Notes

1. http://www.globaluniversityalliance.net/.
2. Enterprise Cost Model, LEADing Practice Measurement Reference Content [#LEAD-ES20014PG].
3. Common Process Templates Overview, LEADing Practice Business Process Reference Content [#LEAD-ES20005BP].