

# **Information Technology Leadership Academy 21 (ITLA21)**

## **Business Process Modeling (BPM) Readiness Guide**



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## Revision History

Revision #	Date of Release	Owner	Summary of Changes
Version 1.0	05/16/2014	Harriet Miller	First Release

To get all of the ITLA 21 project documents, on both Business Process Modeling and Organizational Change Management see <http://www.cio.ca.gov/opd/itla/itla-21.html>

## About the Authors

The Information Technology Leadership Academy is a year-long program for state Information Technology (IT) managers with a focus on developing leadership skills.

Participants in the academy are selected candidates from state agencies and departments that work in information technology programs. Ideal candidates for acceptance into this program are individuals with a vision for enterprise-wide thinking, strong potential for career advancement, and experience carrying out their organization's vision and mission.

The academic delivery model includes traditional classroom sessions, group discussions, expert speakers, and real life scenarios in which managers address real world problems with realistic solutions. Classes are taught by private instructors, current IT managers and executives, and prior graduates. Each class develops a class project unique to that academy.

This Guide and the associated Quick Start Guide were prepared as a class project for ITLA 21.

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## Table of Contents

Revision History .....	ii
About the Authors .....	ii
1. Introduction .....	1
1.1 Purpose .....	1
1.2 Benefits of Using this Guide.....	1
2. Planning for BPM .....	2
2.1.1 Project Management Definition.....	2
2.1.2 Project Management Benefits .....	2
2.1.3 Project Management References.....	2
2.2 Time Commitment.....	3
2.2.1 Dedicated Team .....	3
2.2.2 Schedule .....	3
2.3 Success Factors and Measures .....	3
2.3.1 Success Factors.....	4
2.3.2 Success Measures.....	7
2.4 Mandates.....	8
3. Assessing an Organization’s Readiness for BPM.....	9
3.1 Identify the BPM Journey .....	9
3.2 Evaluate the Corporate Culture and Enterprise Style.....	9
3.3 Understand Project Roles and Skills .....	10
3.3.1 Skills and Competencies.....	10
3.3.2 Understanding BPM Roles and Skills.....	11
3.4 Get the Right Fit for the Executive Sponsor.....	12
3.4.1 Identify, Document and Understand Target System(s) and Processes.....	12
3.4.2 Acquire BPM Knowledge and Apply Standards.....	12
3.4.3 Get Executive and Stakeholder Support .....	13
3.4.4 Ensure Resources Are Available .....	13
3.4.5 Define the Communication and Change Management Strategy .....	13
4. BPM Basics .....	14
4.1 What is BPM?.....	14
4.2 Business Process Modeling Methodology .....	14
4.2.1 Methodology Overview.....	14

4.2.2	Don't Obsess Over Method Selection .....	17
4.2.3	Make the Choice.....	17
4.3	Business Process Granularity .....	18
4.4	Basic Notation Concepts .....	18
4.4.1	Flow Objects .....	19
4.4.2	Connecting Objects .....	20
4.4.3	Swimlanes.....	21
4.4.4	Artifacts .....	23
4.5	BPM Model Example.....	25
4.6	Business Process Management Lifecycle.....	27
4.7	Know When to Stop Modeling.....	28
5.	As-Is Process Modeling, Step-by-Step .....	29
5.1	Identify the Process .....	29
5.2	Plan and Schedule Resources .....	29
5.3	Select a Technique .....	29
5.4	Focus Group Modeling.....	30
5.5	Individual Interviews.....	30
5.6	Document As-Is Processes and Improvement Opportunities.....	31
5.6.1	How to Document a Process .....	34
5.6.2	Review the Model .....	35
6.	Business Process Modeling Templates .....	36
6.1	Business Area Process Template .....	36
6.2	Business Process Model Template .....	36
6.3	Useful References for Further Reading .....	36
6.3.1	Available Training .....	36
7.	Potential Pitfalls When Working on BPM .....	37
7.1	Lack of Executive Support and Governance .....	37
7.2	Lack of Qualified Modelers .....	37
7.3	Lack of Qualified Subject Matter Experts (SME).....	37
7.4	SME Disagreement.....	37
7.5	Lack of User Acceptance of How the Process is Modeled .....	37
7.6	BPM Notation Selection.....	38
7.7	Too Much Detail.....	38
7.8	Faulty Swim Lane Usage .....	38

7.9	Business Process Modeling Not Linked to Critical Business Need or Issue .....	38
7.10	Hidden Processes .....	38
7.11	Cross-organizational Communication.....	38
7.12	Accepting Changes to the Models .....	39
8.	Escalation and Decision Making Process .....	40
9.	Business Process Modeling Glossary .....	42
	Appendix 1: Business Process Area Template .....	49
	Appendix 2: Business Process Model Template .....	53
	Appendix 3: Sample As-Is Vendor Management Process .....	54
	Appendix 4: Sample To-Be Purchasing Process .....	55
	Appendix 5: BPM Skills.....	56
	Skill No. 1 — Building the BPM Business Case and Vision.....	56
	Skill No. 2 — Project Management .....	56
	Skill No. 3 — Identification of Organizational Structure and Culture .....	57
	Skill No. 4 — Communication.....	57
	Skill No. 5 — Organizational Change Techniques.....	57
	Skill No. 6 — Business Process Discovery.....	57
	Skill No. 7 — Business Process Modeling, Analysis and Design .....	58
	Skill No. 8 — Business Process Governance and Managing Process Policies.....	58
	Skill No. 9 — Process Performance Management.....	58
	Skill No. 10 — Constructing a BPM Methodology Toolbox.....	58
	Skill No. 11 — Solution Architecture and Design .....	58
	Skill No. 12 — BPM Technology Product Knowledge .....	59
	Skill No. 13 — Agile and Model-Driven Application Development (AD).....	59
	Skill No. 14 — Business Process Optimization and Simulation .....	59
	Skill No. 15 — User Experience Design.....	59

**Tables**

Table 1: Elements of Project Management .....	4
Table 2: Evaluation of a Modeling Tool .....	5
Table 3: Evaluation of Modeling Methodology .....	5
Table 4: Evaluation of Modeling Techniques.....	5
Table 5: Evaluation of Executive Management Support.....	6
Table 6: Evaluation of Information Resources.....	6

Table 7: Evaluation of Modeler Expertise .....	7
Table 8: Evaluation of Model Quality .....	7
Table 9: Evaluation of User Satisfaction .....	7
Table 10: Evaluation of Individual Impacts .....	8
Table 11: Evaluation of Process Impacts .....	8
Table 12: Evaluation of Model Use .....	8
Table 13: Description of BPM Competency Levels .....	10
Table 14: Summary of Available BPM Methodologies .....	16
Table 15: Business Process Granularity Model .....	18
Table 16: Flow Objects .....	19
Table 17: Connecting Objects .....	20
Table 18: Swimlanes .....	21
Table 19: Artifacts .....	23
Table 20: Example of a Graphical Notation Elements Key .....	24

## Figures

Figure 1: Process Modeling Success Factors .....	4
Figure 2: BPM Maturity Model: Phases of Maturity .....	9
Figure 3: Best Practices to Establish a Toolbox BPM Methodology .....	15
Figure 4: Example of a Simple Business Process .....	21
Figure 5: Example of a Segment of a Process with More Details .....	21
Figure 6: Example of a Business Process Document with Pools .....	22
Figure 7: Example of a Segment of a Process with Lanes .....	23
Figure 8: Example of a Segment of a Process with Data Objects, Groups, and Annotations .....	25
Figure 9: Simple Business Process Model .....	26
Figure 10: Business Process Management Lifecycle .....	27
Figure 11: As-Is Modeling Process .....	29
Figure 12: Initial and Final Event Notation .....	32
Figure 13: Activities .....	32
Figure 14: Connections .....	32
Figure 15: Add Swimlanes .....	33
Figure 16: Add Conditions .....	33
Figure 17: Add Decisions and Merges .....	34

## 1. Introduction

This Business Process Modeling (BPM) Readiness Guide and the associated Quick Start Guide are resources for California's departments to help their workforce prepare for business process re-engineering. Business Process Modeling (BPM) is a methodology to identify and document a visual illustration of your organization's current business processes. BPM is done as part of good business, and not just because of a new project or system re-design. Documenting business processes is valuable. It provides a path to process and program improvements, increases efficiency in day to day operations, educates staff and advances understanding of the business, which allows your team members to better serve the people of the State of California.

A Business Process Model is a diagram representing a sequence of activities. A model documents an organization's As-Is business processes to create a baseline for process improvements. This is a necessary step in order to migrate from current processes to future To Be processes. For example, the transition to the Financial Information System for California (FI\$Cal), which affects all California departments, requires business process re-engineering.

This guide provides a repeatable process to conduct analysis of As-Is business processes. Specifically, this guide provides departments with the information and templates necessary to:

- Understand and put into practice a business process modeling methodology
- Use a business process modeling methodology to identify As Is processes

### 1.1 Purpose

This guide helps California's departments to identify, document, and align their pre-migration As-Is business processes to new To-Be processes. A single, structured BPM approach greatly assists individual departments to a more efficient transition.

### 1.2 Benefits of Using this Guide

- Helps you standardize your methodology to identify and document existing processes
- Provides recommendations to prepare departments to transition to new systems
- Depicts ways of reducing duplication of effort
- Provides a repeatable process to document, improve and maintain business processes
- As you repeat the process of modeling, you get better at it, and gain a deeper understanding of the methods and benefits of business process modeling
- Articulates how to present process information in a consistent manner
- Explains how to identify business processes impacted by new systems
- Reduces confusion about business process modeling and mitigates the risk of transitioning to new processes and/or systems

## 2. Planning for BPM

As your journey to model your business processes begins, it is important to approach it as a project and plan early. Planning is the process to establish project management, identify roles and responsibilities, make time commitments, set time tables, identify success matrices, and review mandates. Planning is vital. It helps to clarify and focus the project's development path and provides a logical framework within which a business can define and document business processes.

While project management success is to deliver on time and on budget, it also ensures the project delivers the expected results. Application of general project management techniques assists you to deliver a well-documented process and process analysis. In the State of California, we have an excellent tool at our disposal, the California Project Management Methodology (CA-PMM) (see section 2.1.3, Project Management References below). CA-PMM is the suggested method to manage a project within the state.

### 2.1.1 Project Management Definition

Project management is the discipline to plan, organize, motivate, and control resources to achieve specific goals. The first goal of project management is to achieve all of the project goals and objectives while honoring the project constraints. The primary constraints are scope, time, quality and budget. The secondary challenge is to optimize the allocation of necessary inputs and integrate them to meet pre-defined objectives.

### 2.1.2 Project Management Benefits

By applying the principles and practice of good project management, you are more likely to:

- Control scope creep and manage change
- Deliver project results on time and on budget
- Focus the project team on the solution
- Obtain project buy-in from different groups
- Define the critical path to optimally complete your project
- Provide a process for estimating project resources, time, and costs
- Communicate project progress, risks, and changes
- Reveal and explore project assumptions
- Prepare for unexpected project issues
- Document, transfer, and apply lessons learned

### 2.1.3 Project Management References

These references have more information on project management. Use them to increase your knowledge of project management and its application to BPM.

CIO Project Management Methodology (CA-PMM)

[http://www.cio.ca.gov/Government/IT\\_Policy/SIMM\\_17/index.html](http://www.cio.ca.gov/Government/IT_Policy/SIMM_17/index.html)

Project Management Institute (PMI)

<http://www.pmi.org>

## 2.2 Time Commitment

Time commitment is extremely important to the success of any project. It can be difficult to get enough dedicated staff time for the BPM effort. In most cases the business experts are busy doing the daily work. As difficult as it seems, it is important to set scheduled time aside to complete the modeling process.

If time is not dedicated to this effort, the models produced will be incomplete, unverified and prone to errors. A poor model introduces new process errors and creates more confusion than no model at all.

### 2.2.1 Dedicated Team

Any BPM project should have a dedicated team. The team members may belong to different groups or functions but are assigned to activities on the BPM project.

The team needs a balanced set of skills, especially if some team members are specialists.

Without balanced viewpoints, the project can suffer from missing requirements, details, sub-processes or user acceptance, resulting in incomplete processes.

The overall success of the BPM effort is directly related to the time dedicated.

### 2.2.2 Schedule

The schedule is the list of the BPM project's milestones, activities, and deliverables, with start and finish dates. Schedule elements are designed to closely relate to a Work Breakdown Structure (WBS). A WBS includes an effort estimate for each task and a resource list for each resource. If this information is not available, create it.

If the schedule dates do not have the approval of the people who are assigned to complete the work, the schedule will be inaccurate.

In order for a project schedule to be healthy, the following criteria must be met:

- The schedule must be continuously updated. Weekly updates are best.
- The remaining effort must be appropriately distributed among team members (taking vacations and other commitments into consideration).

## 2.3 Success Factors and Measures

The ability to measure success is key to any project. On the next page, Figure 1: Process Modeling Success Factors, shows possible factors that influence the likelihood of success in a BPM project. Every BPM effort is different, and yours may have other success factors not mentioned here.

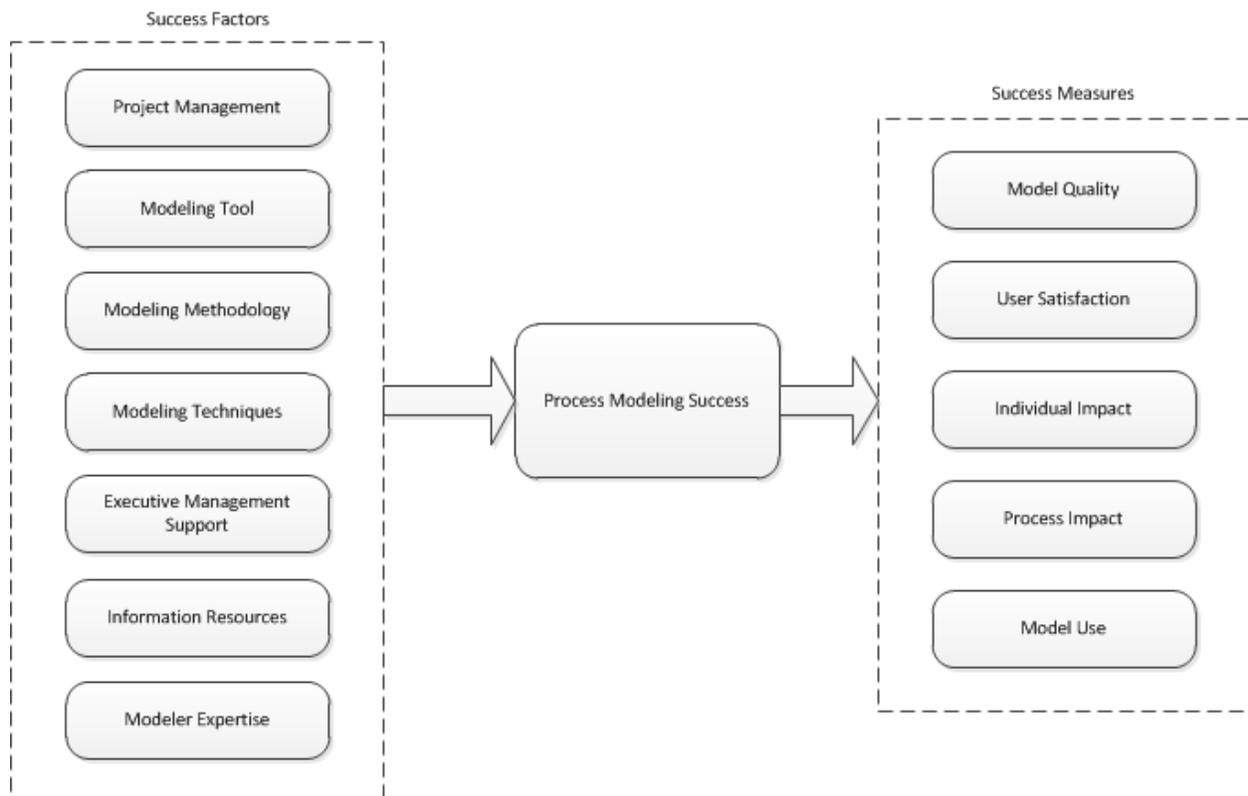


Figure 1: Process Modeling Success Factors

## 2.3.1 Success Factors

### 2.3.1.1 Project Management

**Project Management** is the management of activities and resources throughout all phases of the process modeling project.

Table 1: Elements of Project Management

Construct	Comments
Scope Defined	The scope has to be clearly defined, in terms of what processes to model and what level of detail.
Communication Management	There must be proper communication channels, to keep all project stakeholders informed about the project.
Time Management	The proper time scheduling techniques must be applied and adhered to.
Defined Objectives	The purpose of modeling must clearly be defined
Quality Management	There must be exit strategies and formalities to check the models and the information received to derive the models.
Knowledge Management	Information about the project must be shared among the team members effectively.

Construct	Comments
Project Manager Role	The project manager plays a vital role as a leader/champion and to make sure that all other project management activities are intact.

### 2.3.1.2 Modeling Tool

**A Modeling Tool** is a software application that facilitates the design, maintenance and distribution of the process models.

**Table 2: Evaluation of a Modeling Tool**

Construct	Comments
Easy to Use	The modeling tool is easy to use
Fit for Purpose	The modeling tool fits the purpose
User Friendly	The modeling tool is easy to use
Clear Instructions	The modeling tool has clear and concise instructions on how to use it.
Flexibility	The modeling tool should be flexible
Validation Checks	The modeling tool should have validation checks for layouts, syntax, etc...

**The Modeling Methodology** is a detailed set of instructions that describes and guides the process of modeling.

**Table 3: Evaluation of Modeling Methodology**

Construct	Comments
Clear Documentation	The modeling methodology should be clearly documented
Standardization	The modeling methodology should provide guidelines on how to maintain consistency among the models

### 2.3.1.3 Modeling Techniques

**Modeling Techniques** are a set of symbols and the related rules that specify the usage of the symbols.

**Table 4: Evaluation of Modeling Techniques**

Construct	Comments
Clear Notations	The symbols used should have clear meaning
Flexibility	The symbols should be flexible, that allows the modelers to adopt them for different purposes.

#### 2.3.1.4 Executive Management Support

**Executive Management Support** includes the involvement and participation of senior and executive management, and their ongoing commitment and willingness to devote the necessary resources and time to the BPM project.

**Table 5: Evaluation of Executive Management Support**

Construct	Comments
Relevant Resources	Management must provide relevant resources for the modeling activities.
Awareness of the Benefits of Process Modeling	Management must be aware of the benefits that can be obtained through process modeling
Support to Make Decisions	Management must participate in the decision making activities.
Participation	Management must participate in the overall process modeling activities.

#### 2.3.1.5 Information Resources

**Information Resources** is the information available about the people and processes to conduct and complete modeling.

**Table 6: Evaluation of Information Resources**

Construct	Comments
Stakeholders Review Models	Must have suitable process stakeholders to review the models.
Stakeholders Available for Interviews	Must have suitable process stakeholders to be interviewed and to gather relevant details of the processes.
Information Available through Documentation	The assistance of existing documentation to provide the needed details about the processes.
Stakeholders are Competent	Must have suitable process stakeholders to speak that are competent in the processes being modeled.
Correct Information is Accessible	Must have access to relevant information.
Relevant Skills to Gather Data	Modelers must have the relevant skills to gather from the business experts and to document the information correctly

#### 2.3.1.6 Modeler Expertise

**Modeler Expertise** is the skills and knowledge that the modelers must have in order to conduct a successful process modeling initiative. A modeling project that lacks modeling expertise

**Table 7: Evaluation of Modeler Expertise**

Construct	Comments
Knowledge on Process	Modelers should have knowledge on the actual business process.
Tool Knowledge	Modeler should have knowledge on the utilization of the tool being leveraged to accomplish the modeling.
Flexibility	Modeler should be able to change direction if the modeling leads them that way.
Interpersonal Skills	Modeler should have good interpersonal skills to be able to extract the information needed from the business experts
Experience	Modeler should have prior modeling experience or education.
Understanding of Modeling Purpose	Modeler should clearly understand the purpose of modeling
Methodological Knowledge	Modeler should have knowledge on the methodology and the techniques used.

## 2.3.2 Success Measures

### 2.3.2.1 Model Quality

**Model Quality** is the extent to which all essential features of a process model are present.

**Table 8: Evaluation of Model Quality**

Construct	Comments
Relevant to Needs	The models produced must be relevant to the intended purpose of the modeling.
Clearly Represents the Process	The models must clearly represent the actual processes.

### 2.3.2.2 User Satisfaction

**User Satisfaction** is the satisfaction that the users have towards the derived process models.

**Table 9: Evaluation of User Satisfaction**

Construct	Comments
Meets Specifications	The models have met the needs of the organization.
Information Satisfaction	Satisfaction with the information derived through the models
Overall Satisfaction	Users are generally pleased with the process models

### 2.3.2.3 Individual Impacts

**Individual Impacts:** How the process modeling has influenced the process stakeholders.

**Table 10: Evaluation of Individual Impacts**

Construct	Comments
Understanding	The modeling process has increased an individual's understanding of the business processes.

#### 2.3.2.4 Process Impacts

**Process Impacts:** The effects of process modeling on the performance of the process and the quality of the output.

**Table 11: Evaluation of Process Impacts**

Construct	Comments
Organization-Wide Understanding	The business process models have increased the understanding about business processes organization-wide.
Process Change Interviews	The business process modeling supports a positive business process change.

#### 2.3.2.5 Model Use

**Model Use** is how useful the model is to the organization, and the extent of its use.

**Table 12: Evaluation of Model Use**

Construct	Comments
Extent of Use	Model in wide use through the organization.
Value of Model	Model has produced value to the process reengineering effort.

## 2.4 Mandates

In many cases, mandates dictate how and why you perform a given business process. Mandates can come from different sources. Some examples are: legislation at the state or federal level, control agencies, and executive action. As you move through BPM, it is imperative that you know or have the experts on hand who know the mandates affecting these processes, and the specific requirements detailed in the mandate.

Identify and gain access to those expert individuals in the business process you are modeling. Work with these individuals to identify all mandates that pertain to the business process to ensure that you are meeting them.

All mandates that have been identified should be referenced to and documented within the BPM tool.

### 3. Assessing an Organization’s Readiness for BPM

First, acknowledge this is a journey, not a one-time, quick-fix, follow-the-formula technique. Enterprise-wide adoption of BPM is difficult to achieve; however, the payoff can be significant. Use the following points to determine organizational readiness for BPM and get the effort off to the right start.

#### 3.1 Identify the BPM Journey

A graphic maturity model helps to get an idea of where the organization is currently in the BPM journey. See Figure 2, below. The BPM Maturity Model shows the six phases of BPM maturity. It helps define maturity by visually depicting the steps that need to happen to accomplish BPM goals. This snapshot shows the whole scope of business process modeling improvement over time. It allows you to determine the maturity of your organization, and what the organization needs to do to increase BPM maturity.

Initially, the maturity model is used to determine the organization's current state of maturity. Most California state agencies are in the early stages. Organizations in the early stages of maturity need to provide education about what a process is and provide training in process modeling.

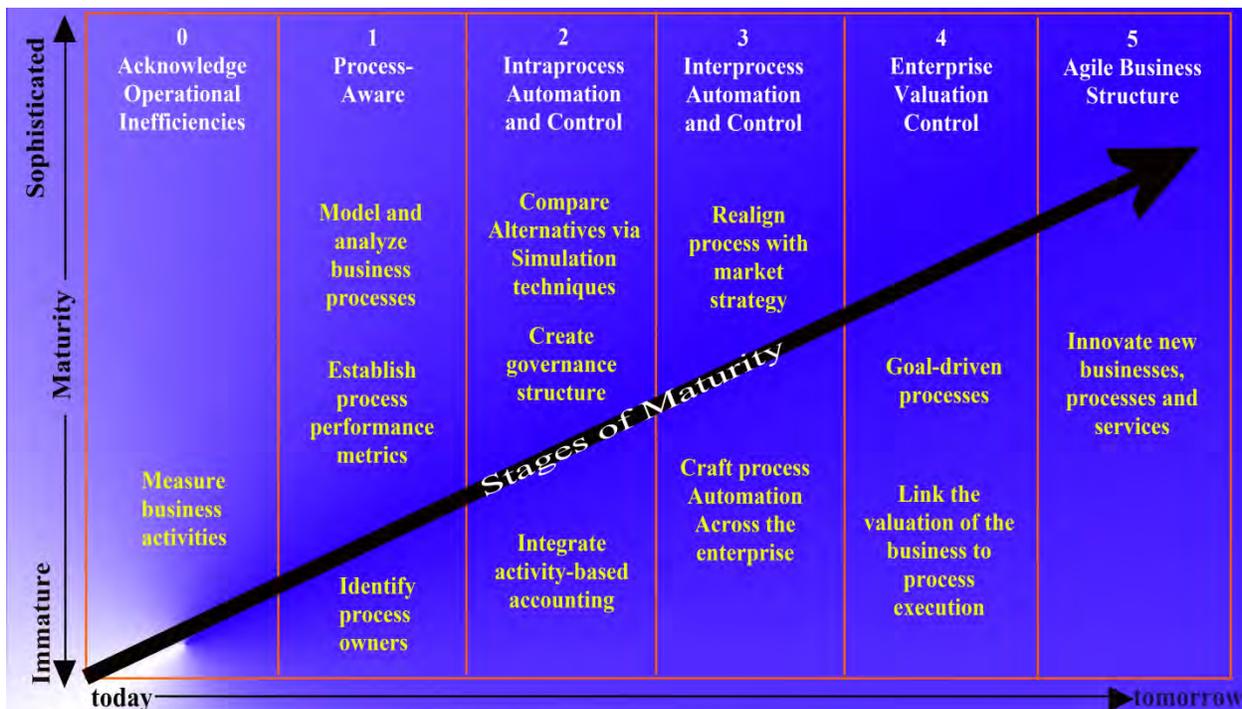


Figure 2: BPM Maturity Model: Phases of Maturity

#### 3.2 Evaluate the Corporate Culture and Enterprise Style

The enterprise culture is important because BPM efforts can result in significant changes. Organizational culture determines how well and quickly a change will be accepted. It also determines how quickly the organization will benefit from the change. Meaningful results help

convince the organization the changes are worth the efforts. Organizational culture is the people side to business process modeling. One practical way to approach enterprise cultural evaluation is to utilize an Enterprise Personality Profile (EPP) method. EPP analysis is an aid to effective strategic planning and personnel policy. Conduct an assessment to define how an enterprise behaves, why it behaves a certain way and what the implications are of the behavior.

### 3.3 Understand Project Roles and Skills

The basis to determine the necessary project roles and skills is to assess both maturity and culture. The roles needed for your BPM project range from the "enabler" ( project manager) and the "driver" (the executive sponsor), down through the various project staff necessary to perform the discovery, modeling, analysis, and evaluation.

The number of staff necessary and their appropriate skill levels is determined by the size and scope of the BPM projects.

Stability of key project members for the project duration is important. Having same the BPM project leader and executive sponsor for the project duration provides the continuity required when moving into later phases of the project.

#### 3.3.1 Skills and Competencies

To build a successful BPM team you need to first define the right balance of transformational, operational and technical skills and competencies.

BPM requires three critical competencies:

1. Transformational competence – supports BPM execution
2. Operational competence – identifies what has to change and how
3. Technical competence – enables this change to be achieved

Table 13, below, describes the expertise that is shown at basic, intermediate and advanced levels in these competencies.

**Table 13: Description of BPM Competency Levels**

	<b>Basic Competency Includes Knowledge of:</b>	<b>Intermediate Competency Includes Knowledge of:</b>	<b>Advanced Competency Includes Knowledge of:</b>
<b>Transformational</b>	Communications Business case justifications Quick-win planning	Facilitation and negotiation Organizational and change management Stakeholder impact analysis Process governance Project management	Multi-stakeholder communication Translation of business strategy into process outcomes Organization design Evolution of projects into programs

	<b>Basic Competency Includes Knowledge of:</b>	<b>Intermediate Competency Includes Knowledge of:</b>	<b>Advanced Competency Includes Knowledge of:</b>
<b>Operational</b>	As-Is process discovery and modeling To-Be process modeling and iterations Identification of key performance indicators (KPIs)	Process benchmarking Creation of process artifacts Planning, coordinating and documenting To-Be processes Negotiating and establishing process governance policies BPM methodologies	To-Be process scenario simulation Translation of business strategy into process outcomes Project portfolio management Continuous process improvement
<b>Technical</b>	Understanding of systems impacted by the business process Identification of application requirements Model-driven application development Service Oriented Architecture, business intelligence, workflow	Solution architecture Management of process artifacts Agile software development Data architecture User experience design	Predictive analytics Mobile applications Optimization and simulation Dynamic BPM/goal-driven process expertise Social BPM skills

These skills help define the goals of BPM and motivate people to change. They play a key role in establishing a vision of "what's in it for me" (WiiFM) for each stakeholder. These can be rolled up into the skills described in Appendix 5: BPM Skills, below on page 56.

### 3.3.2 Understanding BPM Roles and Skills

As explained, many different skills are needed to assess processes. Additionally, resources are required to provide skills in organizational readiness (change management, communication and training), continuous measurement and to provide ongoing project management skills.

The descriptions below are role-based versus job-based — meaning that one person may fill multiple roles at the onset.

Your team should, at the minimum, include the following roles:

- Executive / Management:** Executive sponsorship is the single most important element required for successful BPM governance. This person is the visionary leader; and uses their transformational skills and influence to drive change in your organization.
- Project Manager:** The project manager should have experience working with others in a project setting. They are responsible to ensure the work gets done on time, all issues are resolved, and the project achieves its goals.
- Modeler (Process Documenter):** This role should have significant experience and/or training in developing business process models including: context diagrams, Business

Process Modeling Notation (BPMN), and workflow management. They are the writer and facilitator and are responsible to gain consensus amongst the team.

- **Business Subject Matter Experts (SME):** This role needs individuals who can serve as experts in a particular program or area of the process. They are responsible for accuracy of the business processes being presented and modeled.

Your team may also include the following roles:

- **Business Process Owner:** The business process owner takes responsibility for owning that process now and as it continually improves. They should be thoroughly familiar with the process, open to making further changes to it as needed, and able to influence others to accept change. The business process owner also needs to understand the principles of effective process design, be able to track the new process's performance using metrics, and maintain documents related to the process.
- **Technology Expert:** Technology plays a role in most processes. An expert in the technology is required for technology-based business process transitions. They are responsible to provide technology solutions to business processes.

### 3.4 Get the Right Fit for the Executive Sponsor

Every project starts with assumptions in place. It is critical to identify and document as many assumptions as you can identify. Assumptions exist at the highest levels and at the lowest levels of granularity. All need to be documented.

Assumption documentation and management helps your BPM effort to be successful. Ignoring assumptions does not make them go away. Any undocumented assumptions add an unknown level of risk to the modeling process.

Some preparation is necessary before BPM takes place. If the statements below are not true for your organization, you need to include them in your plan and ensure they occur before the main BPM effort gets underway.

#### 3.4.1 Identify, Document and Understand Target System(s) and Processes

- All in scope systems and processes have been or will be identified, documented and agreed upon
- All key stakeholders understand the system scope and process scope
- The As-Is process inputs, outputs, and exceptions have been or will be identified, documented and agreed upon
- The As-Is system and process capacity is understood
- If any problems exist with the As-Is system and processes, they have been or will be tracked and noted for future reference in the To-Be process reengineering phases
- All current As-Is process documentation has been or will be identified and is available for reference

#### 3.4.2 Acquire BPM Knowledge and Apply Standards

- The BPM Team possesses or will possess basic knowledge about BPM methodologies and practices.

- A BPMN standard has been or will be selected. *Preferably use the same standard as used in your To-Be models.*
- The selected BPMN standard is understood, enforced and followed by all modelers.

### 3.4.3 Get Executive and Stakeholder Support

- Executive and/or senior management provide sponsorship and support to this BPM effort.
- Stakeholder visions, goals and objectives have been or will be clearly defined.
- The BPM Team has the appropriate amount of approval authority to make necessary process decisions within the scope of the effort.
- A project 'Kick-off' meeting has, or will, occur to demonstrate management support, discuss key milestones, and declare desired management outcomes.

### 3.4.4 Ensure Resources Are Available

- Appropriate resources for the BPM Team have been approved and dedicated to the effort, including, but not limited to these roles:
  - Project Manager
  - Business Process Owner - for each identified process
  - Business SMEs - for each identified process
  - Technology Expert
  - Modeler

*\*Note: for smaller efforts, individuals identified for the roles previously listed may have more than one role.*

- A project plan has been or will be completed and approved.
- Adequate time is built into the project plan for necessary tasks and deliverables. For example, pre-planning, resource identification, team assembly, analysis and documentation of current As-Is processes, etc.

### 3.4.5 Define the Communication and Change Management Strategy

- A communication and change management methodology has been or will be agreed upon and adopted for the migration project.
- A communication plan has been or will be documented.
- All (internal/external) audiences have been or will be identified.
- The communication content, method/channel and frequency have been or will be defined for the appropriate audience.

**Note: Organizations needing assistance with their change management strategy should consult ITLA 21's Organizational Change Management Readiness Guide found at:**

**<http://www.cio.ca.gov/opd/itla/itla-21.html>**

## **4. BPM Basics**

### **4.1 What is BPM?**

A business process model is a diagram representing a sequence of activities. It depicts events, actions and links or connection points, in the sequence from end to end. BPM documents an organization's current (or As-Is) processes to create a baseline for process improvements. This is a necessary step in order to migrate from current processes to future (To-Be) processes.

### **4.2 Business Process Modeling Methodology**

There are many different methods to model business processes. Models developed using one methodology look very different from the same process modeled in a different methodology. It is recommended that an organization pick one methodology and apply it to all processes. A confusing variety of notation can result from use of multiple methodologies.

Activity-oriented process modeling covers a related set of activities performed for a specific purpose; a set of ordered steps to reach a goal. Example: Department X sends a reimbursement form to an employee to complete and send back, the employee sends the form back, and Department X processes the form and provides the employee with a check (the goal).

This Guide covers the activity-oriented business process model.

Every business process model should include both the visual (diagram) and the text behind the diagram in a narrative format.

#### **4.2.1 Methodology Overview**

A process improvement or BPM methodology is a repeatable approach that guides you through the following activities to get to a business outcome:

- Identify which processes you have, the role that they play and their interactions
- Evaluate and understanding the processes
- Determine their value and performance
- Decide which processes need to be improved and which can stay As-Is
- Work out what to change and how to change it
- Influence the actors in the process or those affected by the process (make the change work for and with people)
- Determine technology requirements and how to implement
- Ensure the process improvement is accepted and becomes the standard
- Assign ownership for process change, performance and output
- Prove the process change made has had the desired effect

Methodologies differ in their guidance and the types of business outcomes they deliver. Methodologies give direction, save time, prevent "reinvention of the wheel," and improve the quality and impact of the change, as well as ultimately make the process improvement program, its champions and the organization a success.

Industry leaders define "BPM methodologies" as an established set of practices, procedures, tools and rules used to deliver corporate objectives through a structured set of working methods. To see real benefit from a methodology, it must be repeatable and reusable.

This outlines best practices to help you establish a BPM methodology and enable business process owners to understand which methodologies best fit their business objectives (see Figure 3, below).

Practices needed to establish a BPM Methodology Toolbox	1. Understand which BPM methodologies are available
	2. Select or develop a best fit methodology to meet each need
	3. Collect methodologies in your BPM toolbox
	4. Use and promote the BPM toolbox to deliver success oriented results

**Figure 3: Best Practices to Establish a Toolbox BPM Methodology**

A methodology is not a "silver bullet"; there is no one-size-fits-all methodology applicable to all situations. A methodology does not guarantee success, but improves the likelihood of success. Methodologies also are not "plug and play"; they are tools that must be learned, used and practiced. They require skill in their application, as well as care and maintenance in their upkeep. They also require effort and commitment. Methodologies can be complex to learn and execute. In addition, some practitioners can be too rigorous in applying methods. They miss an opportunity to deliver a quick project win or may undermine other useful results of process improvement.

Organizations adopt BPM for different reasons and to achieve various results, so it should be no surprise that a one-size-fits-all approach often doesn't work. This reality sometimes forces BPM professionals to draw on methods from several methodologies. If you cannot find a single methodology that meets your needs you can define a selection of the appropriate best-fit methodologies for your situation, ensure there is no notation overlap or confusion and use it consistently.

**Table 14: Summary of Available BPM Methodologies**

BPM Methodology Name	Description of BPM	Methodology References
Six Sigma	Six Sigma seeks to improve process outcomes by establishing acceptable levels for defects and modifying processes until the defect level is achieved.	"Six Sigma: Strategy for Quality and Customer Satisfaction"
Lean Thinking	Lean is a systematic, enterprise wide approach to eliminating waste and adding value for the customer.	"Implementing Lean in IT" J. Liker, "The Toyota Way: 14 Management Principles From the World's Greatest Manufacturer," McGraw-Hill, 2004
Lean Six Sigma	This is a blended methodology that incorporates the principles of lean and Six Sigma to mitigate the weaknesses inherent in both methodologies if applied individually. It focuses on reducing waste and variation to add customer value.	"Opening the BPM Methodology Toolbox: Lean Six Sigma" J. Morgan and M. Brenig-Jones, "Lean Six Sigma for Dummies," Wiley-Blackwell, 2009
Kaizen	Kaizen means "continuous improvement" in Japanese. Its core principle is that small changes should be made by all employees with the aim of improving overall organizational performance.	"Opening the BPM Methodology Toolbox: Kaizen" M. Imai, "Gemba Kaizen: A Commonsense, Low-Cost Approach to Management," McGraw-Hill, 1997
Rummler-Brache Group	Famous for its swim lane diagrams (aka Rummler-Brache diagrams), Rummler-Brache methodology focuses on process redesign, process management and performance improvement.	Rummler-Brache Group G.A. Rummler, A. Ramias and R. A. Rummler, "White Space Revisited: Creating Value Through Process," Pfeiffer (John Wiley & Sons), 2010.
Business Process Re-engineering	Business process reengineering advocates the idea of starting again with processes to invent a better way of getting work done via those processes. It is associated with Michael Hammer's quote, "Don't Automate, Obliterate."	Hammer and Company <a href="http://www.hammerandco.com/">http://www.hammerandco.com/</a> M. Hammer and J. Champy, "Reengineering the Corporation: A Manifesto for Business Revolution," HarperBusiness, 2001.
ITIL	The popular Information Technology Infrastructure Library (ITIL) can be used as a basis for IT process improvement and can aid a BPM implementation.	The Official ITIL Website <a href="http://www.itil-officialsite.com/">http://www.itil-officialsite.com/</a> J. Dugmore and S. Lacy, "A Manager's Guide to Service Management," BSI Standards, 2004.

BPM Methodology Name	Description of BPM	Methodology References
Balanced Scorecard	The balanced scorecard is a broadly adopted performance management system that improves the realization of strategic objectives. This is designed to help business process directors determine the role of the balanced scorecard in BPM, And its relationship to other methodologies.	"Opening the BPM Methodology Toolbox: The Balanced Scorecard" R.S. Kaplan and D.P. Norton, "The Balanced Scorecard—Measures That Drive Performance," Harvard Business Review, 1992.

#### 4.2.2 Don't Obsess Over Method Selection

Don't obsess over the choice of BPM methods; focus on the best method to deliver your business outcomes. For example, try to consider questions like the following:

- Who is the audience for your process models? The selected methodology should be understood by the intended audience.
- Are there multiple audiences with multiple needs?
- What information is needed by each audience? Do the process models provide the needed information?
- Will multiple improvement projects that are run concurrently all use the same methodology? (recommended)

An organization establishes a methodology toolbox by thinking about and answering questions like these, and by articulating which methods should be used for which type of activity.

#### 4.2.3 Make the Choice

The next step is to select the right BPM methodology to deliver BPM project goals. The chosen methodology should provide:

- A repeatable core set of processes to follow for delivering improvement
- Suitable methods for training and educating the staff who are championing, using and affected by the methodology
- A suite of case study examples or other knowledge transfer methods to help you learn from past initiatives and projects, and to understand the benefits, risks and costs of implementation
- A set of templates to help build deliverables quickly (and enable reuse)
- The flexibility to customize the methodology or elements of it, allowing you to fit it to the needs of your organization and to interface with any existing methodologies and processes

Remember that a full BPM methodology toolbox is not necessary from the start to achieve measurable results. More tools can be added, and current tools can be modified or even dropped as your organization's maturity progresses. Through this iterative learning process, build a methodology toolbox that best fits your organizational goals and BPM program objectives.

### 4.3 Business Process Granularity

Modeling often should be done at multiple levels of detail. The levels are different to accommodate different audiences and their specific needs. Levels include:

- **High Granularity (using collapsed sub-processes)** – Depicts a coarse level of the process (not much detail), which is usually good for project managers and high-level management.
- **Fine Granularity (using expanded sub-processes)** – Depicts the details of the process, which is useful for analysts, developers, testers, architects, etc.

It is recommended to start with “High Granularity” and only move to “Fine Granularity” when the “High Granularity” processes are well defined.

Table 15, below, is the basic business process granularity model citing various levels of business process.

**Table 15: Business Process Granularity Model**

Level 1 – Business Process (High Granularity)	This is the level of process documentation with a broad scope and the least amount of detail. Sub-processes are indicated but not detailed. This level is useful for showing interactions between processes and making process comparisons. This level does not provide enough detail for making process improvements.
Level 2 – Major processes	This level represents a group of processes which belong to a similar area of authority and responsibility but deal with different aspects of the Level 1 business process. It can be used when investigating where a processes passes work to a different organization.
Level 3 – Business Sub Process	This level shows sub processes in some detail. These business sub processes can be further decomposed into activities.
Level 4 – Business Process Activities (Fine Granularity)	An activity is the smallest part of the business process related to basic business functions. Activities are performed by employees who are hired by the organization for their specialized knowledge and skills. This level contains the most process detail and is the most useful for analyzing processes and suggesting improvements.

### 4.4 Basic Notation Concepts

A successful business model captures the noteworthy events, inputs, resources, and outputs associated with a given business process. A business process model should define, at a minimum, the following elements:

- The goal of the process
- Specific inputs and outputs
- Resources consumed
- Activities and the order in which they are performed
- Significant events that drive or affect the process

A Business Process Document (BPD) is the documentation of a collection of interrelated tasks, which accomplish a particular goal. It captures the procedures that your business uses from technical and operational levels.

BPDs help you to:

- Introduce the process and outline its purpose, goal, and outcomes.
- Identify the fundamental assumptions behind this process. For example, what assumptions does the process audience have in relation to this process and how does the process support those assumptions?
- Identify where and how the process interfaces with other processes or whether it is a component or sub-components of other processes
- Identify process activities, including inputs and outputs, decision points and user activity
- Identify data to be collected, such as reports, forms, and policies
- Identify reporting requirements associated with the performance of the process and the format it must be delivered in
- Identify the audience, role, and individuals who will use the process definition, and the responsibilities of these roles

A BPD contains one or more process models. These model elements are easy to distinguish from each other and use shapes that are familiar to most analysts. For more complex processes, additional information can be added to the basic categories of elements without dramatically changing the basic look-and-feel of the diagram. The four basic elements used here are:

- Flow Objects
- Connecting Objects
- Swimlanes
- Artifacts

Below are explanations of how to use each of these types of notations.

#### 4.4.1 Flow Objects

Use only three Flow Objects so that modelers do not have to learn and recognize a large number of different shapes. The three core Flow Objects are:

**Table 16: Flow Objects**

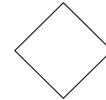
<b>Event</b>	<p>An Event is represented by a circle and is something that “happens” during the course of a business process. Events affect the flow of the process and usually have a cause (trigger) or an impact (result). Event notations are circles with open centers. You can add markers to the circles to note the triggers or results. There are three basic types of Events, based on when they affect the flow: Start, Intermediate, and End.</p>	
<b>Activity</b>	<p>An Activity is represented by a rounded-corner rectangle. Activities can be Tasks or Sub-Processes.</p>	

Distinguish Sub-Processes with a small plus sign in the bottom center of the shape.



**Gateway (Decision)**

A Gateway is represented by the familiar diamond shape and is used to show divergence and convergence of the work flow when it has multiple paths. It is used as a decision point, as well as for the forking, merging, and joining of paths.



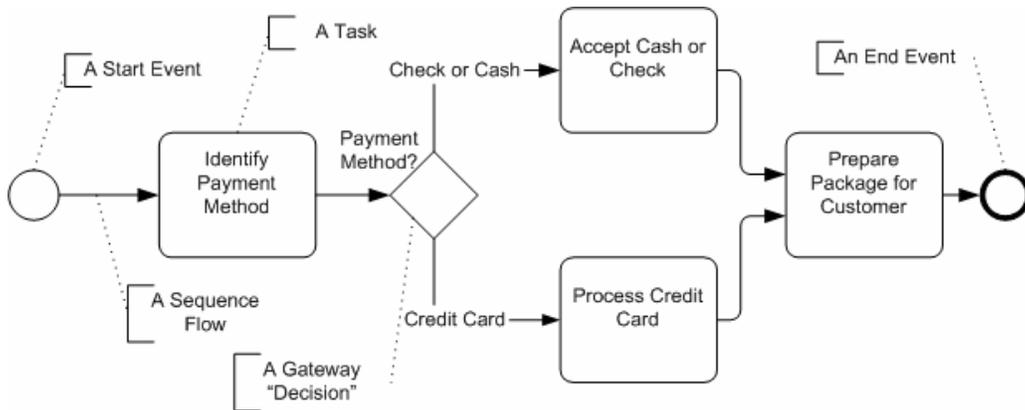
**4.4.2 Connecting Objects**

Connect Flow Objects together in a diagram to create the basic skeletal structure of a business process. There are three Objects that provide the connecting function. These connectors are:

**Table 17: Connecting Objects**

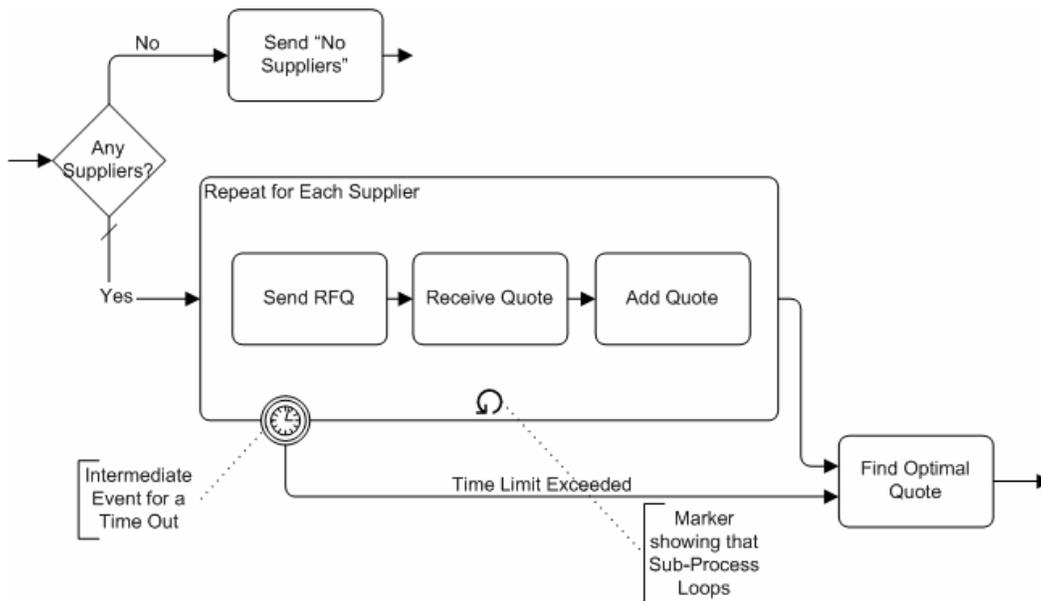
<b>Sequence Flow</b>	A Sequence Flow is represented by a solid line with a solid arrowhead and is used to show the order (the sequence) that activities are performed in a process.	
<b>Message Flow</b>	A Message Flow is represented by a dashed line with an open arrowhead and is used to show the flow of messages between two separate process roles that send and receive them. Two separate pools in the diagram represent two participants.	
<b>Association</b>	An Association is represented by a dotted line with a line arrowhead and is used to associate data, text, and other artifacts with flow objects. Use Associations to show the inputs and outputs of activities.	

These core elements and connectors provide the ability to easily create basic, understandable diagrams. Basic diagrams are useful for modelers who require or desire a low level of model precision for documentation and communication purposes, (see Figure 1).



**Figure 4: Example of a Simple Business Process**

Modelers who require a higher level of precision in process models subject to detailed analysis or managed by a Business Process Management System (BPMS), can add additional details to the core elements and shown through internal markers (see Figure 5, below).



**Figure 5: Example of a Segment of a Process with More Details**

**4.4.3 Swimlanes**

Many process modeling methodologies use the concept of swimlanes as a way to organize activities into separate visual categories for different functional capabilities or responsibilities. The two types of swimlane objects used here are:

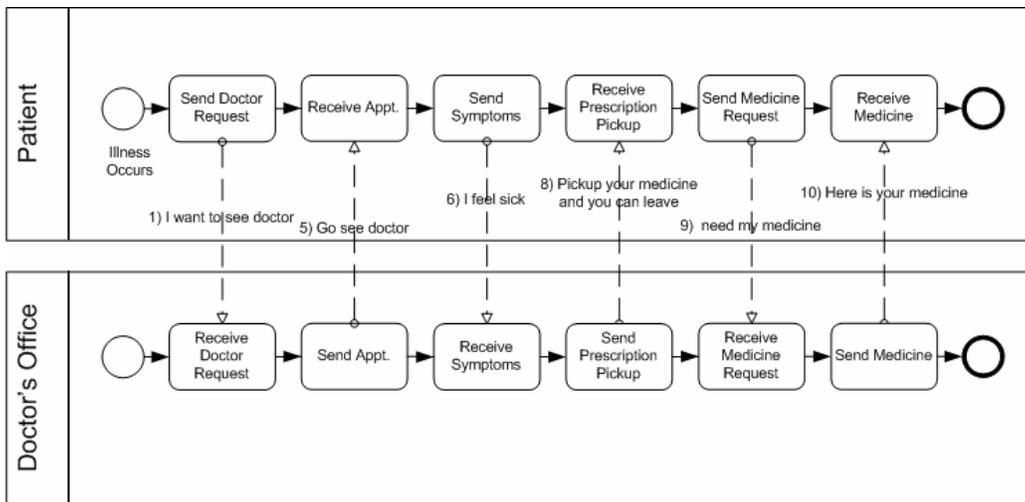
**Table 18: Swimlanes**

<b>Pool</b>	A Pool defines activities designated for a single participant.	<div style="border: 1px solid black; padding: 5px; width: fit-content;">Name</div>
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**Lane** A Lane is a sub-partition within a Pool and extends the entire length of the Pool, either vertically or horizontally. Lanes are used to organize and categorize activities.



Pools are used when the diagram involves two separate business entities or participants (see Figure 6, below). The activities within separate pools represent self-contained processes. As a result, the sequence flow may not cross the boundary of a pool. Message Flow is the usual connector between two pools (or objects within the pools), showing communication between two participants.



**Figure 6: Example of a Business Process Document with Pools**

Lanes are often used to separate activities associated with a specific function or role (see Figure 7, below). Sequence Flow may cross the boundaries of lanes within a pool, but Message Flow may not be used between Flow Objects in lanes of the same pool.

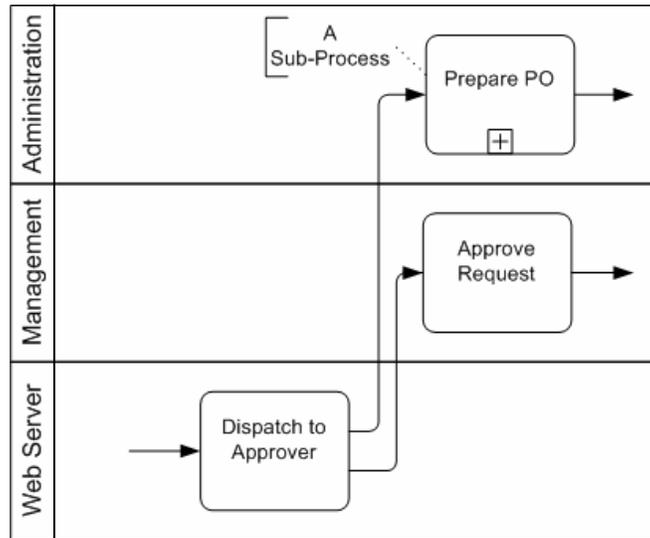


Figure 7: Example of a Segment of a Process with Lanes

4.4.4 Artifacts

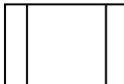
Any number of artifacts can be added to a diagram as appropriate in the context of the business processes being modeled. There are three types of artifacts used here:

Table 19: Artifacts

<b>Data Object</b>	Data Objects show how data is required or produced by activities. They are connected to activities through associations.	
<b>Group</b>	A Group is represented by a rounded corner rectangle drawn with a dashed line. A grouping can be used for documentation or analysis purposes, but does not affect the Sequence Flow.	
<b>Annotation</b>	Annotations are a mechanism for a modeler to provide additional text information for the reader.	

Modelers can create their own types of artifacts, which add more details about how the process is performed. Custom artifacts are often used to show the inputs and outputs of activities in the process. However, the basic structure of the process, as determined by the activities, gateways, and Sequence Flow, are not changed by the addition of artifacts in the diagram.

**Table 20: Example of a Graphical Notation Elements Key**

Symbol	Name	Definition
	Events	An event kicks off a process flow, happens during a process flow, or ends a process flow.
	Connector	On/Off page connectors are used to avoid complex overlapping connector lines or to continue a process on a subsequent page. Label connectors with UPPERCASE letters
	Sequence Flow	Used to illustrate the different actions that can occur during a process.
	Association	Used to illustrate association lines to and from data objects and processes.
	Message Flow	Used to attach a data object to a Sequence or Message flow.
	Manual Task	A manual task is work that an organization performs which is done outside of a computer system.
	System Task	A system task is work that an organization performs done by a system or application (not manual).
	Batch Process	Represents the execution of a series of programs ("jobs") on a computer without manual intervention.
	Gateway	Shows a decision point, such as yes/no. Each path emerging from the diamond is labeled with one of the possible answers
	Interface	Data communication going from one electronic system to another.
	Input Documents	A paper document (or email) used for entering data in the process. For electronic data, use the interface symbol.
	Output Documentation	An electronic document that is created by the process and can be printed (e.g. reports).
	Group	Groups are used to highlight certain sections of a diagram without adding additional constraints for performance, as a Sub-Process would.
	Swimlanes - Pool	Pools represent Participants in an interactive (B2B) Business Process Diagram

Symbol	Name	Definition
	Swimlanes - Lane	Lanes represent sub-partitions for the objects within a Pool

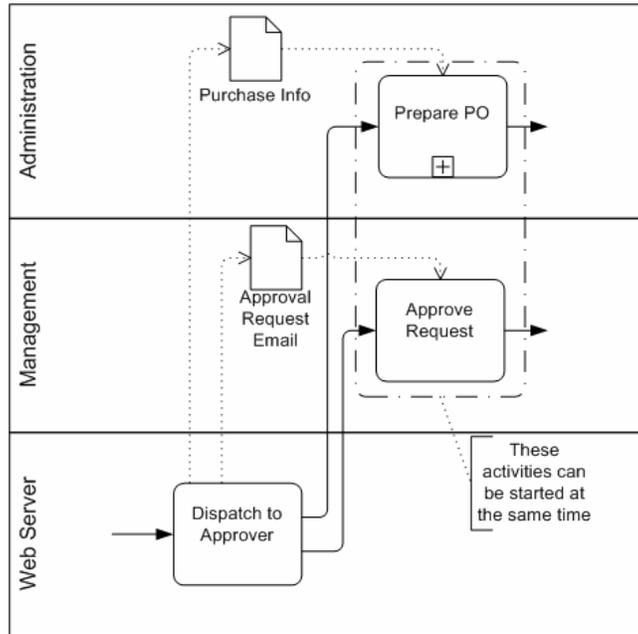
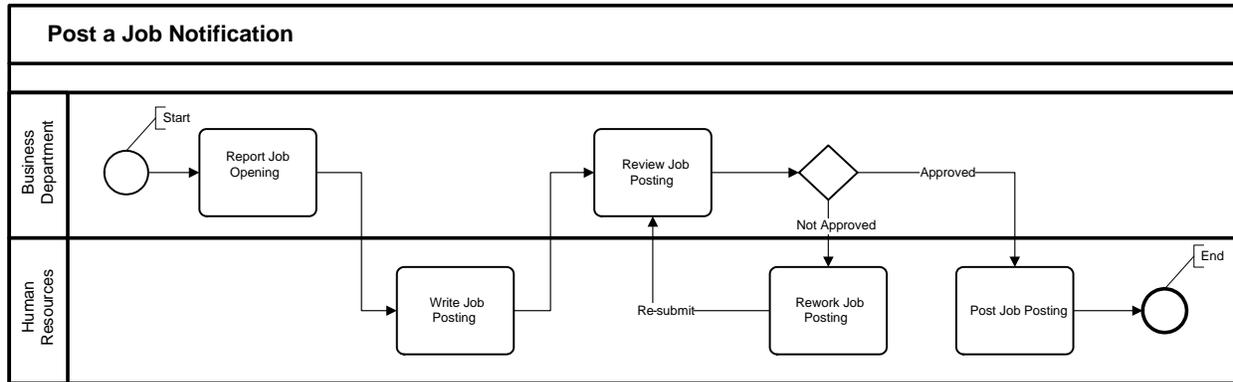


Figure 8: Example of a Segment of a Process with Data Objects, Groups, and Annotations

#### 4.5 BPM Model Example

The following shows how to create organized, readable, well-structured diagrams. By following a few guidelines, diagrams can be understood by any business user, process improvement team, stakeholders, etc. The following example illustrates the basic BPM flow of posting a job (see Figure 9, below) which can be understood by most users who have been exposed to any kind of BPM or flowchart.

To start, consider a simple BPM model of posting a job which can be understood by people who are familiar with any kind of process modeling. See Figure 9, below.



**Figure 9: Simple Business Process Model**

A business department and the human resources department are involved in the process “Post a Job”. The process starts when an employee is required. The business department reports this job need. Then the human resources department writes a job posting. The business department reviews this job posting.

At this point, there are two possibilities: Either the job posting is okay, or it is not okay. If it is not okay, it is reworked by the human resources department. This is once more followed by the business department reviewing the job posting. Again, the result can be okay or not okay. Thus, it can happen that the job posting needs to be reviewed multiple times. If it is okay, it is published by the human resources department, and the end of the process is reached.

In reality, the process for creating and publishing a job posting can be longer and more complex. This example is a simplification in order to show a small and easily understandable model to explain the different BPMN elements.

#### 4.6 Business Process Management Lifecycle

Bringing a new business process to life, modifying or optimizing an existing business process, and continually improving a business process all involve a similar set of phases and activities. The business process lifecycle visually depicts this ongoing circle of these activities (see Figure 10, below).

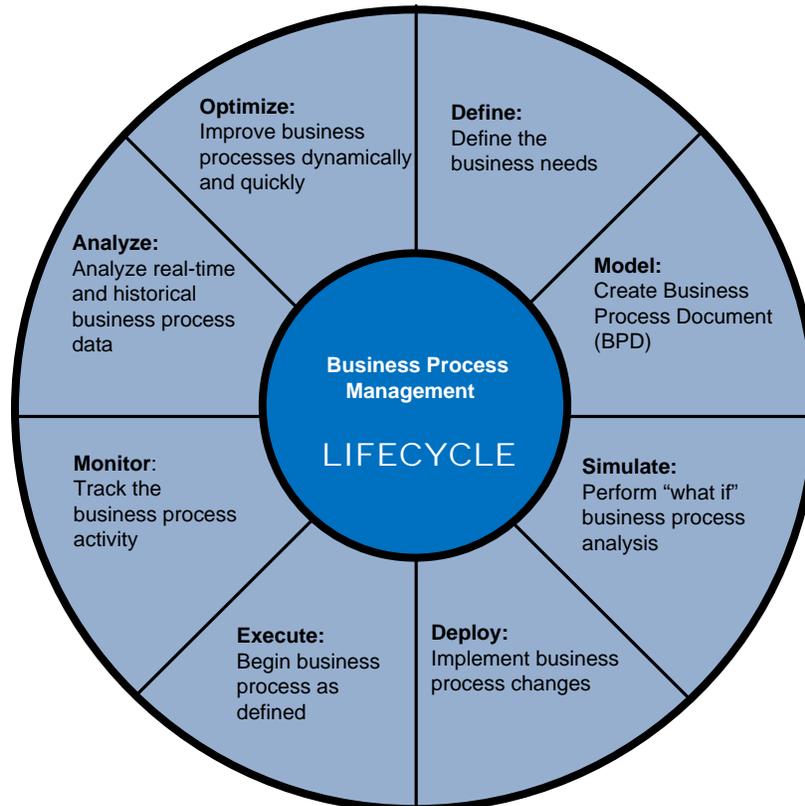


Figure 10: Business Process Management Lifecycle

#### **4.7 Know When to Stop Modeling**

It is not necessary to model every detail of the As-Is business process. Stop at the level where the workflow is generally accurate to achieve the following:

- Understand the root cause of the problems
- Understand why the process behaves the way it does
- Begin getting irrelevant detail in the model

Once there is enough detail in the As-Is to model into the new To-Be process, you are finished.

Remember this:

***Map What Actually Happens, Not What You Think Happens, or Should Happen***

## 5. As-Is Process Modeling, Step-by-Step

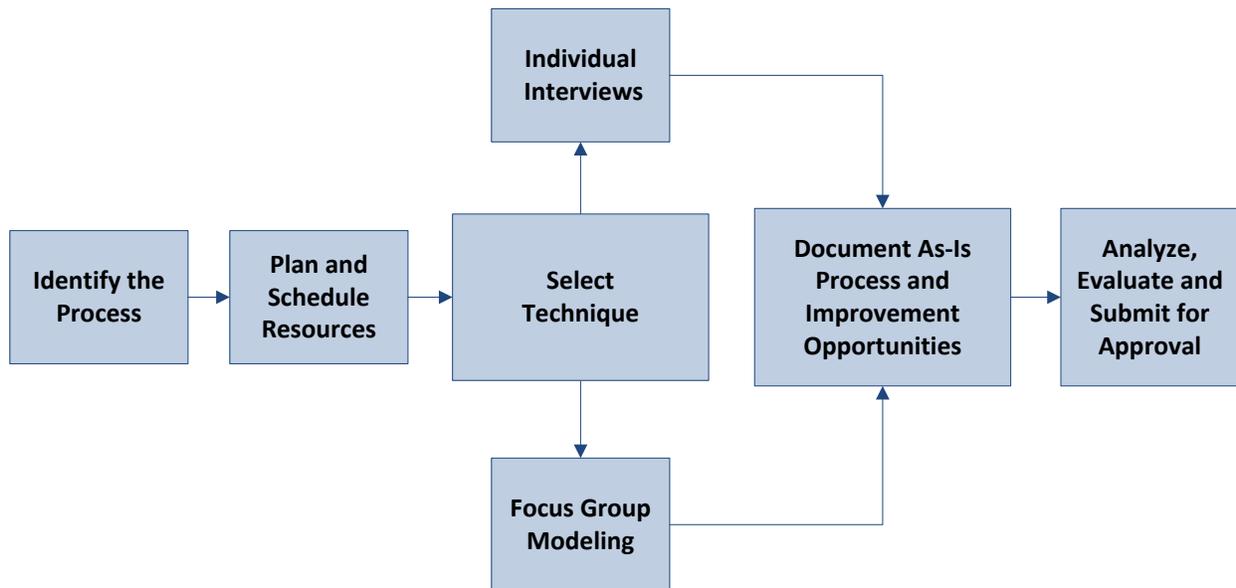


Figure 11: As-Is Modeling Process

### 5.1 Identify the Process

Identify the process necessary to carry out the task you are creating the business process model for. This helps create an organized process model for better flow and comprehension.

### 5.2 Plan and Schedule Resources

Here are some systems and role questions that you need to ask after you have identified your process.

Plan:

- Who and what systems are involved in the process?
  - Use roles rather than a job titles to help to shift emphasis from a functional to process mindset
  - System names are what staff and customers in the organization use

Schedule:

- Who is involved in the process and what role will they play?
  - Develop a list of tasks, people responsible and time required

### 5.3 Select a Technique

Relevant information is gathered from all sources:

- Select a modeling technique (BPMN 2.0)
- Prepare for process interviews – focus group/individual

- Review any existing process documentation/models:
  - Previous modeling efforts
  - Organizational charts
  - Job descriptions
  - System/application documentation
- Documentation can help you identify the process experts
- Keep in mind that actual processes likely have no resemblance to documentation or Standard Operating Procedures (SOP)

#### **5.4 Focus Group Modeling**

- Start with a group interview to get an overall picture and interactions between roles, users and systems
- Follow up group interviews with individual interviews to get more detail

#### **5.5 Individual Interviews**

Individual interviews should be conducted in the order the roles appear on the process model. Prior to interview process you should explain to the participants the reasons why the process is being modeled, the objectives and scope of the effort; the benefit of the process models being created and what you expect to accomplish in the interview.

During the interview provide a current process model and obtain agreement on scope. Confine the interview questions/discussion to the roles in the process being modeled (usually you are only interested in a small portion of the person's entire job).

It is important to find out:

- Roles from whom the person receives input
- Roles to whom the person gives output
- Input tasks and output tasks (when does the person first become involved and when are they finished)
- Tasks performed (including decisions in sequence)
- Touch points to other processes
- Process walk through in a chronological order
- Identify every task and decision

Thing to keep in mind:

- Avoid jargon - the process model must be able to communicate to people in other functional areas.
- Model the official way - if there are enough differences, then people need to see the official way so they can see what deficiencies are causing people to vary from the process.
- Display the model as it emerges from the discussion. Use flip charts, a white board, post-it notes or other similar techniques to gather and elicit information.

## 5.6 Document As-Is Processes and Improvement Opportunities

Relevant information is gathered from all sources in order to define the logical flow of the process by identifying the sequence need to perform the process in order to accomplish the business tasks. Order of operations is critical to successful business process modeling.

Discuss and document the business process in which you are creating the process model for. This allows you to have a full comprehension of every single step involved in the task you are building the process model for.

When modeling the process be sure to capture all the activities that transform the inputs and outputs. Also, when modeling the process be sure to model the ACTUAL process the way it occurs today and not the way it should occur (the ideal process or any process improvements); or the formally documented process – the way the Standard Operating Procedures (SOP) says it happens.

Make sure you consider the following:

- What major activities occur in this process?
- Where do decisions need to be made, or approvals occur before the next step?
- What causes extra work or rework in this process?
- Are there places where more than one method is occurring?
- What factors inhibit process members from performing well?

List each step on its own in some sort of process capturing technique (e.g., Post-It, flip chart, whiteboard diagram, etc.) and work down vertically.

As-Is sequencing and responsibility:

- Arrange the steps in the order in which they occur
- Place each step under the role (primary responsibility) for accomplishing it
- Rearrange steps and players as needed, until they accurately show how the process flows

You need to classify your process parameters which are the current status of a process under control. An example of this would be the temperature of a furnace. The current temperature is called the process variable, while the desired temperature is known as the set-point. These two ranges (current temperature and desired temperature) are the process parameters.

Classify process parameters:

- Classify Inputs into the following categories:
  - **N** = Noise Factors – Uncontrollable factors in the process
  - **C** = Controllable Factors – Process factors that can be changed to see the effect on product characteristics.
  - **S** = Standard Operating Procedures – A procedure is used to define and run those factors.
  - **Cr** = Critical Factors – Important factors that determines the outcome
- Show total time as Value Add and Non Value Add (NVA) percentages for the entire process

Developing an As-Is process model:

- Assign the correct flowchart symbols to each step
- Review the process flow

- Add any missing steps that you identify in the review/validation
- Reorder steps if needed
- Show the flow of activity between steps with arrows
- Show shared responsibility for a step with circles and lines
- Notate any important information

Begin your process model with an initial event and finish it with a final event:



**Figure 12: Initial and Final Event Notation**

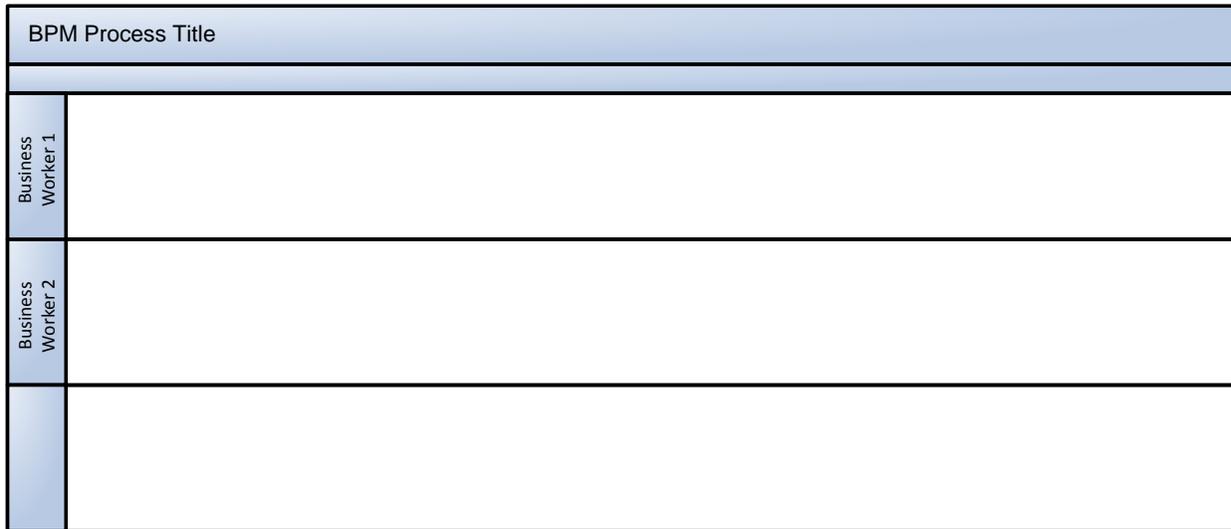
Add activities for each process that is performed as part of the group process. A process can be thought of as 'one person doing one thing at one time'. It is also a complete set of steps from the start of the process to the end of the process performed over a short period of time with no large time gaps. These steps are modeled at a lower level. Name each activity starting with an active verb:

**Figure 13: Activities**

Connect activities together with control flows (transition or flow lines to show the order in which the activities will take place).

**Figure 14: Connections**

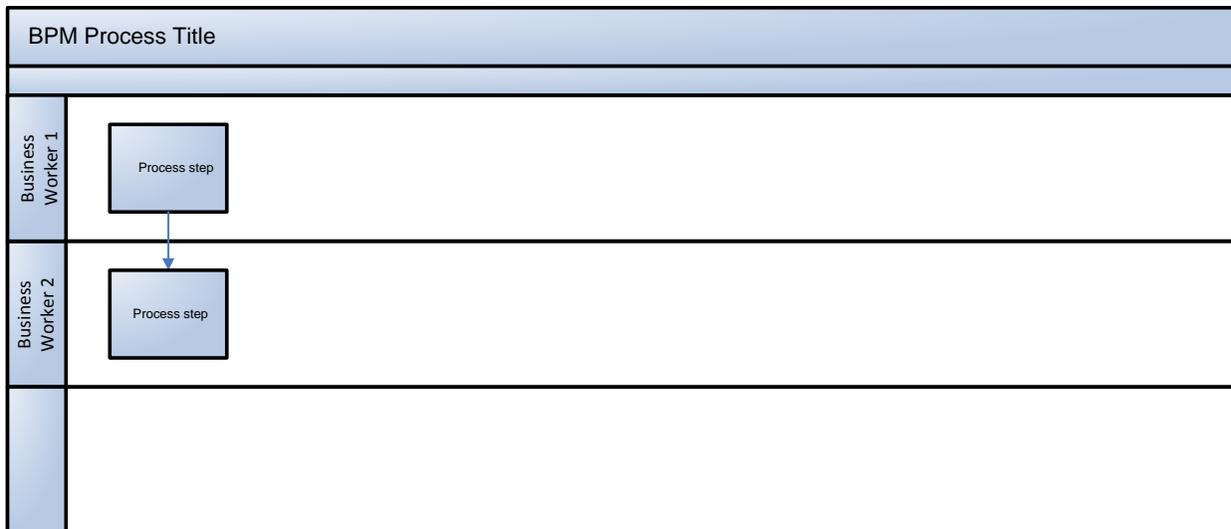
Create swimlanes with the names of the roles or system that performs the activities. Move the activities into the swimlanes to allocate responsibility for performing the activity to the business worker.



**Figure 15: Add Swimlanes**

*\*Note: that the names of these worker roles are not be the names of the individuals who perform the activities but the name of the role that they take on in doing so.*

Add conditions to control flows to signify the business event that defines the start of the next process and the business outcome of the previous process. The conditions can also signify an event coming across the business boundary from a business actor and starting a business process or going across the business boundary from the business to a business actor. Use of conditions to show interaction with business actors negates the needs to show swimlanes and activities for business actors over whom the business has no direct control.



**Figure 16: Add Conditions**

If the order in which activities are executed depends upon conditions, add a decision to the diagram. There is normally one control flow going into the decision and more than one control flow coming out. Add non-overlapping conditions to the outgoing control flows to show under what conditions each path is taken. It should not be possible to take more than one path at any one time. If activities need to be executed concurrently, or if the order of execution is not important, use a fork instead of a decision. See Business Process Modeling Glossary starting on page 42 for more on forks and decisions.

It is acceptable to name a decision with a question and to define the conditions on the outgoing flows as the possible answers to the question.

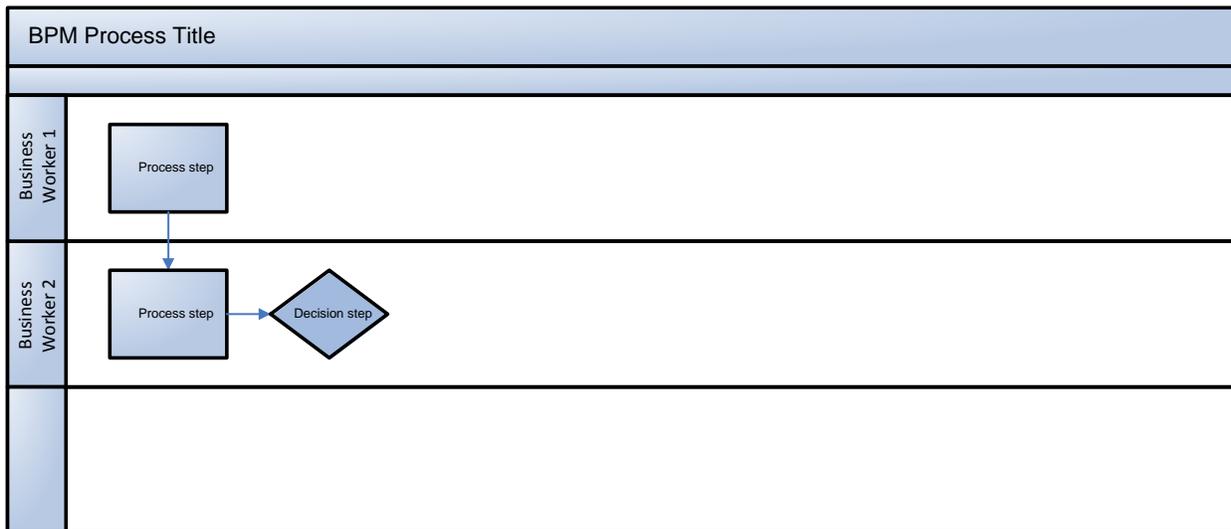


Figure 17: Add Decisions and Merges

### 5.6.1 How to Document a Process

Document a process by doing the following steps:

1. Create a process map.

The map shows the big picture of the process. The process includes sub-processes, or key components. It also shows how these sub-processes interact with each other.

2. Break down the big picture into sub-processes

Sub-processes are the key modules within process. Some sub-processes might relate to each other, but they might also have their own characteristics. Your granularity decisions (see page Business Process Granularity on page 18) govern the level of detail in your sub-process documentation.

3. Capture each activity or task

Activities or tasks are the fundamental blocks of sub-processes. Each task may involve a series of steps.

Identify and interview all individuals or groups involved in the process. In order to successfully document the activity or tasks, interview employees who perform the process frequently. Get them to show you what they do, as opposed to telling you. This last recommendation is important because it is easy to overlook or forget steps unless

actually doing it. Also, be sure to note any computer-related tasks they perform and get screenshots of the applications they use.

*Helpful Tips:*

1. Prioritize the processes to be documented:
  - Focus first on the ones that are most important to the organization
  - Focus on the processes that are broken vs. those that are working.
  - Other processes may have to be analyzed but having priorities ensures the most value is obtained from the work performed
2. Start with a simple process vs. a complex process:
  - Use the simple process to refine your skills at analyzing and documenting the processes and move to the more complex processes as time goes on
3. Identify the key players:
  - Make sure that those key to the process are involved. This helps ensure their opinions are sought out and received
4. Check your work
  - Show every step that adds value, moves the work along, or introduces delay
  - Model with little detail as possible and stop when process behavior is understood
  - Check viability at each new level
  - Identify critical results and/or milestones and avoid focusing on organizational structure, functions or jobs

### **5.6.2 Review the Model**

Once the model is complete and the textual aspects have been formalized and referenced back in the model, review the entire model, piece by piece with the representative stakeholder and SMEs. Check the model for clarity, consistency, completeness and ease of understanding.

Process model checks and balances:

- Are the symbols used correctly?
- Are business process steps clearly described?
- Does every path take you either back to or ahead to another step?
- Does the model accurately depict what really happens?
- Is the model labeled properly and provide a legend?

Think of all possible exceptions to the flow described and ask if it is worth adding more processes to handle the possible exception. Some possible exceptions are simply not worth documenting. Many times, it is a judgment call to decide whether to model it or not. Ask the stakeholder/SME if it has ever happened before or how often it has happened? If the occurrence of the exception is infrequent and the impact of it happening is low, then it probably isn't worth modeling. Is it possible to interpret any aspect of the model in more than one way? Is everyone clear when reading the model? Often this has to do either with a less than concise use of words or with words that are not properly defined either in the business (conceptual) data model or in a glossary. If a word is ambiguous, then the model will also be ambiguous.

Provide a single definition for ambiguous words to avoid confusion. Much confusion can be avoided by reviewing the model with a stakeholder/SME who has not been involved in creating it. If the stakeholder has to ask many questions in order to understand the model, then it is not easy to understand.

Is it possible to interpret any aspect of the model in more than one way? Often this has to do either with a less than concise use of words or with words that are not properly defined either in the business (conceptual) data model or in a glossary. If a word is ambiguous, then the model elements that names are also ambiguous. Provide a single definition for ambiguous words to avoid confusion.

Much confusion can be avoided by reviewing the model with a stakeholder/SME who has not been involved in creating it. If the stakeholder has to ask many questions in order to understand the model, then it is not easy to understand.

## **6. Business Process Modeling Templates**

### **6.1 Business Area Process Template**

Business Area Process templates help you capture the procedures that govern how an organization's business works from an operational level. The template in Appendix 1: Business Process Area Template on page 49 helps you document the essential details of your processes. It can be used to capture current As-Is processes, as well as update and maintain ongoing process innovation.

### **6.2 Business Process Model Template**

The Business Process Model template is used to document your process flow, related to the information in the Business Area Process Template. The Business Process Model template in Appendix 2: Business Process Model Template on page 53 can be used to illustrate the flow of a process using a simple flowchart template for Visio.

### **6.3 Useful References for Further Reading**

- Object Management Group - Business Process Model and Notation (BPMN) (<http://www.bpmn.org/>)
- Wikipedia - Business Process Model and Notation ([http://en.wikipedia.org/wiki/Business\\_Process\\_Model\\_and\\_Notation](http://en.wikipedia.org/wiki/Business_Process_Model_and_Notation))
- Business Process Management Institute - <http://www.bpminstitute.org/resources>

#### **6.3.1 Available Training**

For additional training and information regarding Business Process Modeling refer to the following resources .Training is recommended for anyone new to modeling business processes.

- Delphi Group ([www.delphigroup.com](http://www.delphigroup.com))
- Bizagi Elearning (<http://elearning.bizagi.com>)
- BPM Essentials ([www.bpmessentials.com](http://www.bpmessentials.com))

## **7. Potential Pitfalls When Working on BPM**

### **7.1 Lack of Executive Support and Governance**

Executive support is critical to the success of any migration. Executives demonstrate their support with resource commitment and approval of a structured BPM approach that documents As-Is processes. Without this support, the BPM effort is unable to obtain and retain key resources. To avoid redundant work, confusion and inefficiency, define Business Process Owners for all processes to be modeled prior to the start of a BPM effort. This also ensures final processes are supported. Make certain executives agree on the success criteria in advance so success is realized.

### **7.2 Lack of Qualified Modelers**

At least one dedicated resource is necessary for this effort. Ideally, more is preferred. These resources facilitate interviews and workshops and document processes into structured and appropriate models. Business process modeling requires specific skills, which are different from the business analyst, project manager, or subject matter expert classic profile. The dedicated resource needs to be familiar with the chosen BPM methodology and have the appropriate skillsets. Without this knowledge, the results may be inaccurate and unusable.

### **7.3 Lack of Qualified Subject Matter Experts (SME)**

Dedicated subject matter experts (SME), with current process knowledge are necessary to accurately and effectively document the As-Is process. This knowledge of the current process includes:

- What steps are taken
- What data is required
- What exceptions exist
- Who is involved
- What their roles are
- How other processes interrelate are key to the success of the modeling

Usually, no one person has all this information, and a team must be assembled to cover all areas. Availability and commitment of SMEs is critical, as changing key staff in the middle of the process greatly increases risk to the accuracy of the model and the project timeline.

### **7.4 SME Disagreement**

Even the best team of SMEs can differ in their understanding of business processes being modeled. Establish an escalation path for resolution of these differences.

### **7.5 Lack of User Acceptance of How the Process is Modeled**

Ensure the manner of how processes are defined, evaluated and modeled is intuitive, understood and well-accepted by your users.

## 7.6 BPM Notation Selection

There are several BPM notation options. Avoid non-standard BPM notation. Ideal model results are easily understood by staff. The finished models should expose every process step to allow each to be inspected and confirmed, or refuted independently.

## 7.7 Too Much Detail

Do not capture too much detail in As-Is BPM model development. SMEs tend to want to capture every detail from all scenarios, which leads to process over-analysis and collection of excessive associated data, which is wasted effort. The more detailed the model, the longer it takes to design, review, understand, and maintain. More than three levels of process modeling is unusual and not recommended. If the diagram is a complex maze of crossed lines and decisions, an accurate review by all parties is limited. Benefits of the project are also reduced when the model is unusable. Define an appropriate level of detail in light of the underlying objectives, and apply primary focus to capture critical process steps.

## 7.8 Faulty Swim Lane Usage

Swim Lane methodology is very useful in BPM, when used appropriately. This following is a list of suggestions to avoid common problems:

- Organize Swim Lane diagrams by process, not function
- Don't start drawing swim lanes too soon. A general understanding of the scope of the business process should be documented iteratively by the team using a mind model or other interactive method
- Identify everyone who plays a role in the workflow
- Don't confuse the As-Is with the "should-be" or "could-be"
- Depict diagrams in sequence of work, not the flow of data
- Use the templates provided in Appendix 1: Business Process Area Template on page 49 and Appendix 2: Business Process Model Template on page 53.

## 7.9 Business Process Modeling Not Linked to Critical Business Need or Issue

BPM should have a demonstrable connection (direct or indirect) to one or more critical business issues. If this connection is not emphasized, resources may expend effort on documenting unneeded processes.

## 7.10 Hidden Processes

There is risk of processes that may be "hidden" by organization structure, jobs, and systems. A process may not be seen as critical, but is critical for a dependent process. If all critical processes are not exposed and documented, risk of an incomplete and inaccurate model is introduced. In addition, inefficient staff resource usage and possibly last minute rush work may occur.

## 7.11 Cross-organizational Communication

Processes usually involve multiple:

- Organizations (companies, divisions, departments, etc.)

- Job functions
- Information systems

Where a process crosses organizational boundaries there is potential for details to be undocumented or “slip through the cracks.”

### **7.12 Accepting Changes to the Models**

Apply a process model change control structure. Ongoing changes to draft models are controlled by the Business Process Owner and the Business Process Modeling Lead. The BPM lead and team must always distinguish between changes that have no significant effect on the processes to be modeled, and those that represent major change in function. Model changes, especially later in the project, should occur with full team participation and consensus; otherwise the team wastes time in the development and review of multiple iterations with little improvement to the model.

## 8. Escalation and Decision Making Process

We recommend setting up the following framework to resolve any conflict among staff or managers while documenting As-Is and To-Be business processes.

- **Define Guiding Principles:** Organizations need to define their Guiding Principles in order to effectively evaluate options and make judgments in the best long term interest of the organization.

The Guiding Principles are core values that are deeply held. They establish how managers and staff act and influence the expectations of stakeholders. The principles guide and are fundamental to decision making processes. Effective management is a product of applying guiding principles to decision-making in ways that are appropriate, reasonable, and consistent.

- **Establish Executive Steering Committee:** To support strong decision making, we recommend establishment of an Executive Steering Committee.

A steering committee is a body within an enterprise whose purpose is to make strategic decisions concerning enterprise projects. Its members are the Executives of all business areas that are impacted by the project.

Any changes in As-Is or To-Be processes proposed by the SMEs or the process owners must get an approval from the members of steering committee. The committee assesses and accepts the changes by means of consensus. It also deals with coordination and coherence of processes with processes from other realized projects.

- **Escalation & Decision Making:** Using guiding principles, organizations should establish a formalized escalation process that drives decision-making down to the lowest appropriate level. Recommendations from the lowest level are sent to the Executive Steering Committee for a decision. There are many benefits of a formalized escalation process:

- Ensures the right people are engaged and informed
- Encourages decision making at the lowest level possible
- Raises awareness of recommended alternatives proposed by SMEs
- Documents decisions and allows for communication across the organization at all levels (critical)

The Executive Steering Committee is not involved in all decisions, but this process ensures that they are involved in contentious decisions that cannot be decided at a lower level.

A formal escalation process provides awareness at all levels, and shows the alternatives, pros and cons, and recommendations that go into decision-making.

Example: FI\$CAL-related guiding principles:

1. When functionality is available in both department and FI\$Cal systems, use FI\$Cal's functionality. Department systems will continue to be used if the necessary functionality is not available in FI\$Cal, or if there is a specific reason and an exemption has been granted by Steering Committee.

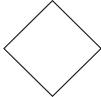
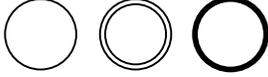
2. Where FISCal “best practices” are available, departments will consider them over current practices. If there is a specific reason the FISCal “best practices” cannot be used, the reason will be documented and escalated to the steering committee for a decision.

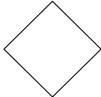
## 9. Business Process Modeling Glossary

Term	Acronym or Notation	Definition
Activity		A generic term for work that a company, organization, or customer performs via business processes. An activity is a description of a piece of work that forms one logical step within a process. An activity may be a manual activity, which does not support computer automation, or a workflow (automated) activity. An activity can be atomic or non-atomic (compound). The types of activities that are a part of a process model are: Process, Sub-Process, and Task. The Activity shape used in a process model is a rectangle, normally with rounded corners.
Architecture		A specification that identifies components and their associated functionality, describes connectivity of components, and describes the modeling of functionality onto components. Architectures can be of different types, e.g., hardware, software, or system, and can be domain-specific, e.g., networking
Artifact		A graphical object that provides supporting information about the process or elements within the process. However, it does not directly affect the flow of the Process. BPMN has standardized the shape of a Data Object. Other examples of Artifacts include critical success factors and milestones.
Associate		To match a case or document with an entity.
Association		A dotted graphical line in a process model that indicates the association of information and Artifacts with Flow Objects. Text and graphical non-Flow Objects can be associated with the Flow Objects and Flow.
Business Model		A framework for creating economic, social, and/or other forms of value. How you would want your business to operate from a high level perspective.
Business Objective		The objective of a business process, or of the business as a whole. Business objectives support the business vision, provide guidance for the IT strategy, and are often supported by IT services.
Business Process	BP	A collection of related, structured activities that produce a specific service or product (serve a particular goal) for a particular customer or customers. It often can be visualized with a flowchart as a sequence of activities. There are 3 types of business processes: Management, Core (Operational), and Support.

Term	Acronym or Notation	Definition
Business Process Change		A change to a Business Process that adds, removes, or modifies a step in the process flow; and/or adds or removes consumers of the Business Process, and/or adds, removes, or modifies enterprise business rules used by the Business Process (e.g. add, delete, change, Workbaskets, Assignment SLAs, validation rules, calculation rules, change urgency).
Business Process Improvement	BPI	Business Process Improvement is a systematic approach to help any organization optimize its underlying processes to achieve more efficient results.
Business Process Management	BPM	A strategy for managing and improving the performance of a business through continuous optimization of business processes. BPM is a closed-loop cycle of modeling, execution, and measurement. This includes the methods, techniques, and tools used to design, enact, control, and analyze operational business processes involving people, systems, applications, data, and organizations.
Business Process Management Lifecycle		<p>A closed-loop cycle with 8 stages used for continuous business process improvement. The eight stages of the BPM lifecycle are:</p> <p>Define: determine the business needs</p> <p>Model: create graphical business process depictions</p> <p>Simulate: perform what if business process analysis</p> <p>Deploy: implement business process changes</p> <p>Execute: begin business processes as defined</p> <p>Monitor: track real-time business processes activity</p> <p>Analyze: analyze real-time and historical business process data</p> <p>Optimize: adjust business processes dynamically and quickly</p>
Business Process Management Methodology		A method an organization uses to manage its business processes. BPM methodology requires focus at the enterprise level on the: Way people in the organization think: thoughts, expectations, and conclusions, of the members of the organization; Norms: often referred to as corporate culture, the standards, models, and patterns which guide behavior; Systems and processes: processes and technologies used to do business.
Business Process Management Suite	BPMS	A software set facilitating all aspects of business process management, including process design, workflow, applications, integration, and activity monitoring for both system and human-centric environments.
Business Process Model		A process model used to capture, design, simulate, and optimize business processes used by the business.

Term	Acronym or Notation	Definition
Business Process Modeling		Creating integrated graphical models representative of system and human processes used to capture, design, simulate, and optimize business processes.
Business Process Modeling Notation	BPMN	A standardized graphical notation for drawing business processes in a workflow, facilitating improved communication and portability of process models.
Business Process Owner		Person who has the ultimate responsibility for the performance of a business process in realizing its objectives measured by key process indicators, and has the authority and ability to authorize necessary changes, while following policy.
Business Process Owners Committee	BPOC	The BPOC ensures core business process changes align with the enterprise business needs. This includes assessing business needs and business processes, evaluating business process changes, modeling business processes to predict outcomes, simulating what-if analysis, and validating outcomes.
Business Process Ownership Library (sometimes Business Process Ownership Repository)		The Business Process Ownership Library is a listing of all core business processes and core business sub-processes and the owners of those processes. It distinguishes if the process is an enterprise or local process. (Ideally this also includes all support business processes and owners names.)
Business Process Reengineering	BPR	Business process reengineering (BPR) is the analysis and redesign of workflow within and between enterprises.
Business Rule		<ol style="list-style-type: none"> <li>1. A statement that defines or constrains some aspect of the business. It is intended to assert business structure or to control or influence the behavior of the business. (States when something can or cannot be done.)</li> <li>2. The formal codification of business policies and actions into prescriptive operational practices that are externalized from and maintained independently of application code.</li> </ol>
Communication		The exchange of thoughts, messages, or info, as by speech, writing, signals, or behavior.
Core Business Process	CBP	<p>A.k.a. Operational Business Process.</p> <ol style="list-style-type: none"> <li>1. A process directly involved in the essential objective of the organization. A core business processes constitute the core business and create the primary value chain.</li> <li>2. A business process which is vital and immediately affects the day to day running of the business.</li> </ol>
Cross Functional Flowchart		A cross functional flowchart or deployment flowchart is a business process modeling tool used to articulate the steps and stakeholders of a given process.

Term	Acronym or Notation	Definition
Customer		<p>A person, group, organization or system who uses (or consumes) a product or service to achieve a desired outcome. A customer can be internal or external to an organization, but is often external.</p> <p>Also can be known as a “user.”</p>
Decision (also Gateway)		<p>Locations within a business process where the Sequence Flow can take two or more alternative paths. This is basically the ‘fork in the road’ for a process. For a given performance (or instance) of the process, only one of the forks can be taken.</p>
Enterprise		<p>An Enterprise is an organization supporting a defined business scope and mission. An enterprise is comprised of interdependent resources (people, organizations, and technology) that should coordinate their functions and share information in support of a common mission (or set of related missions).</p>
Enterprise Business Process		<p>A Business Process that is common, used throughout the enterprise by more than one group, and centrally managed. Examples include: Filing Assistance, Correspondence Process, and Noticing.</p>
Event		<p>An event is something that happens during a business process that affects the flow of the process in some way and usually has a trigger and/or result. They can start, delay, interrupt, or end the flow of the process. It could be a start or a completion point, a timer, or a message. An event is basically something that has a cause or a trigger and then has some impact or result. The three types of Events are: Start Events, Intermediate Events, and End Events. The Event shape used in a process model is a circle.</p>
Framework		<p>A set of assumptions, concepts, values, and practices that constitutes a way of viewing reality.</p>
Function		<ol style="list-style-type: none"> <li>1. A group of processes that together support one aspect of furthering the mission of the enterprise.</li> <li>2. The action for which a person or thing is particularly fitted or employed.</li> <li>3. A major work element that accomplishes the mission or business of an organization such as accounting, marketing, etc.</li> </ol> <p>A sub-function is defined as a component of a function such as accounts receivable, accounts payable, etc. within the accounting function.</p>

Term	Acronym or Notation	Definition
Gateway (also Decision)		<p>A process modeling element that is used to control how Sequence Flows interact as they converge and diverge within a process, a decision point. Gateways are used to implement decisions that affect the Sequence Flow path through the process. The Gateway shape used in a process model is a diamond.</p>
Governance		<ol style="list-style-type: none"> <li>1. A framework for decision and accountability that produces desirable outcomes within the organization. The governance framework determines the what, who, and how of enterprise decision-making.</li> <li>2. A set of policies, roles, responsibilities, and processes that set the way an organization is directed, administered and controlled or a framework for decision and accountability that produces desirable outcomes within the organization.</li> </ol>
Guideline		<p>Governance: Statements of direction or desired future state.</p>
Issue		<p>An important topic or problem for debate or discussion.</p>
Key Performance Indicators	KPI	<ol style="list-style-type: none"> <li>1. Financial and non-financial metrics used to help an organization define and measure progress toward organizational goals.</li> <li>2. Any set of financial or non-financial metrics that can be measured to quantify business performance.</li> </ol>
Message Flow		<p>A dashed graphical line in a process model that indicates the flow of messages between participating layers in a process.</p>
Methodology		<ol style="list-style-type: none"> <li>1. A set or system of methods, principles, and rules for regulating a given discipline, as in the arts or sciences.</li> <li>2. Computing Dictionary: An organized, documented set of procedures and guidelines for one or more phases of the software life cycle, such as analysis or design.</li> </ol>
		<p>Many methodologies include a diagramming notation for documenting the results of the procedure; a step-by-step cookbook approach for carrying out the procedure; and an objective (ideally quantified) set of criteria for determining whether the results of the procedure are of acceptable quality.</p>
Metric		<p>Defines what is to be measured. The use of metrics allows us to deliver periodic quantitative and qualitative analyses to gauge the impact and effectiveness of architecture efforts.</p>
Modeling		<p>Modeling is the identification and documenting of a set of processes (usually of the same nature) that are classified together into a model. Process modeling is a description of a process in a visual representation that accurately depicts the process flow.</p>
Process Flow		<p>A method of visually documenting the stages involved in performing a certain business procedure.</p>

Term	Acronym or Notation	Definition
Process Management		Whatever the process may be, process management means confirming that procedures are in place to ensure staff execute critical activities required to improve productivity and guarantee a level of control to best manage the organization. The particular process is almost irrelevant because every process should be managed in essentially the same way.
Process Model		A graphical representation for how a set of activities should operate in a flow and sequence in order to regularly achieve desired outcomes. A process model depicts the events that trigger action and the sequences of steps and the business rules used in and between those steps to support decision-making and execution flow.
Process Modeling		Creating integrated graphical models representative of business, system, and human processes used to capture, design, simulate, and optimize processes.
Process Owner		The individual who has responsibility for process performance and resources, and who provides support, resources, and functional expertise to projects. The process owner is accountable for implementing process improvements.
Role		A defined responsibility, along with its authority and accountability, given to an employee to complete a function or task. A role is distinct from an employee's job, title or position, since an employee with the same title may be given different roles.
Sequence Flow		In a process model, a solid graphical line that indicates the order activities are performed in a Process Flow.
Sub Process		A process that is enacted or called from another (initiating) process (or sub process), which forms part of the overall (initiating) process. Multiple levels of sub process may be supported.
Subject Matter Expert	SME	A SME is a designated person who serves as an expert in a particular program or technical area. SMEs are aware of the impact and influence of BPM on the enterprise.

Term	Acronym or Notation	Definition
Swimlane		<p>A visual mechanism used in a process flow diagram that depict what or who is working on a particular subset of a process and for organizing and categorizing activities, based on cross functional flowcharting, and in BPMN consist of two types:</p> <ul style="list-style-type: none"> <li>a. Pool- Represents major participants in a process, typically separating different organizations. A pool contains one or more lanes (like a real swimming pool). A pool can be open (i.e., showing internal detail) when it is depicted as a large rectangle showing one or more lanes, or collapsed (i.e., hiding internal detail) when it is depicted as an empty rectangle stretching the width or height of the diagram.</li> <li>b. Lane- Used to organize and categorize activities within a pool according to function or role, and depicted as a rectangle stretching the width or height of the pool. A lane contains the Flow Objects, Connecting Objects and Artifacts.</li> </ul>
Task		Unit of work in an activity within a process.
User		A person, group, organization or system who uses (or consumes) a product or service to achieve a desired outcome. Also can be known as a “customer.”
Workflow		Orchestrated and repeatable patterns of business activity enabled by the systematic organization of resources into processes that transform materials, provide services, or process information.

## Appendix 1: Business Process Area Template

### Introduction:

(Insert a brief summary of the procedure. No more than three to four sentences.)

### Purpose:

(Clearly state the goal/objective of the procedure.)

### Authority:

- Citations for Government Code
- Civil Code
- SAM references
- (Usually presented in a bulleted format)

### Roles

- Accounting HQ, Analysts
- Accounting HQ, Supervisor

### Frequency

- Daily

## Procedure Steps

(These steps start at the first step and flow logically to the next step until the activity is complete.)

For example, here are the procedural steps for **Editing Journal Entries Activity**:

Sep #	Activity Name	Description	System
1	Access the GL Module	Open GL Module and Select Journal Entries. <insert screenshot here>	Legacy Accounting Application
2	Edit Journal Entry	Select Edit JEs. <insert screenshot here>	Legacy Accounting Application
3	Add Journal Entry	Click on the white page icon to add a Journal Entry. <insert screenshot here>	Legacy Accounting Application
4	Enter Journal Entry Data	Enter the JE Information: Fiscal Period = Use current date Fiscal year = Always current year (i.e. 2013) JE Date = Use current date JE Description = Replenishment Claim + Claim Schedule # <insert screenshot here>	Legacy Accounting Application

Sep #	Activity Name	Description	System
5	Enter Line Items	<p>Check the circle button "Vendor from AP"</p> <p><i>Debit Side:</i></p> <p>Acct # = REVF1111111111111111 (RF Cash in Transit)  DR = Total of CS  CR = 0  Description = CS# (CSxxxxxx)</p> <p><i>Credit Side:</i></p> <p>Acct # =  REVF9999999999999999 (GEN) + (RT)  REVF8888888888888888 (TRAVEL)  DR = 0  CR = Amount of RF check (written on Claim Schedule)</p> <p>Description = CS#, Check # (CS555555, 66666666)  Obj/Emp/Vendor (F1) = Vendor # (written on Claim Schedule) is entered in this field for the Credit entries.</p> <p>Continue to enter all checks on the credit side until it is complete.  When complete, DR must = CR. Save.</p> <p>&lt;insert screenshot here&gt;</p>	Legacy Accounting Application
6	Stamp Claim Schedule	<p>Stamp the claim schedule with completion grid  Initial, date, and write down Batch/Journal No. (see Legacy Accounting Application)  &lt;insert screenshot here&gt;</p>	Legacy Accounting Application
7	Run Proof List	<p>Click on Proof List.  &lt;insert screenshot here&gt;</p>	Legacy Accounting Application
8	Enter Journal Entry Print Detail	<p>Enter the Fiscal Period and JE No., all other items should be marked as shown. Click on the green diskette icon.  &lt;insert screenshot here&gt;</p>	Legacy Accounting Application

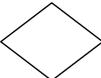
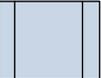
Sep #	Activity Name	Description	System
9	Submit for Review	<p>JE Proof List and supporting documents will be submitted to the Supervisor for review.</p> <p>Example: Journal Entry Proof List</p> <p><i>&lt;insert screenshot here&gt;</i></p>	Legacy Accounting Application
10	Select Commit	<p>Once Review is complete the AP Supervisor will select Commit.</p> <p><i>&lt;insert screenshot here&gt;</i></p>	Legacy Accounting Application
11	Commit Journal Entry	<p>AP Supervisor selects corresponding JE No. and clicks on the green check mark icon. JE has been committed and documentation is returned to AP Analyst for filing.</p> <p><i>&lt;insert screenshot here&gt;</i></p>	Legacy Accounting Application

END

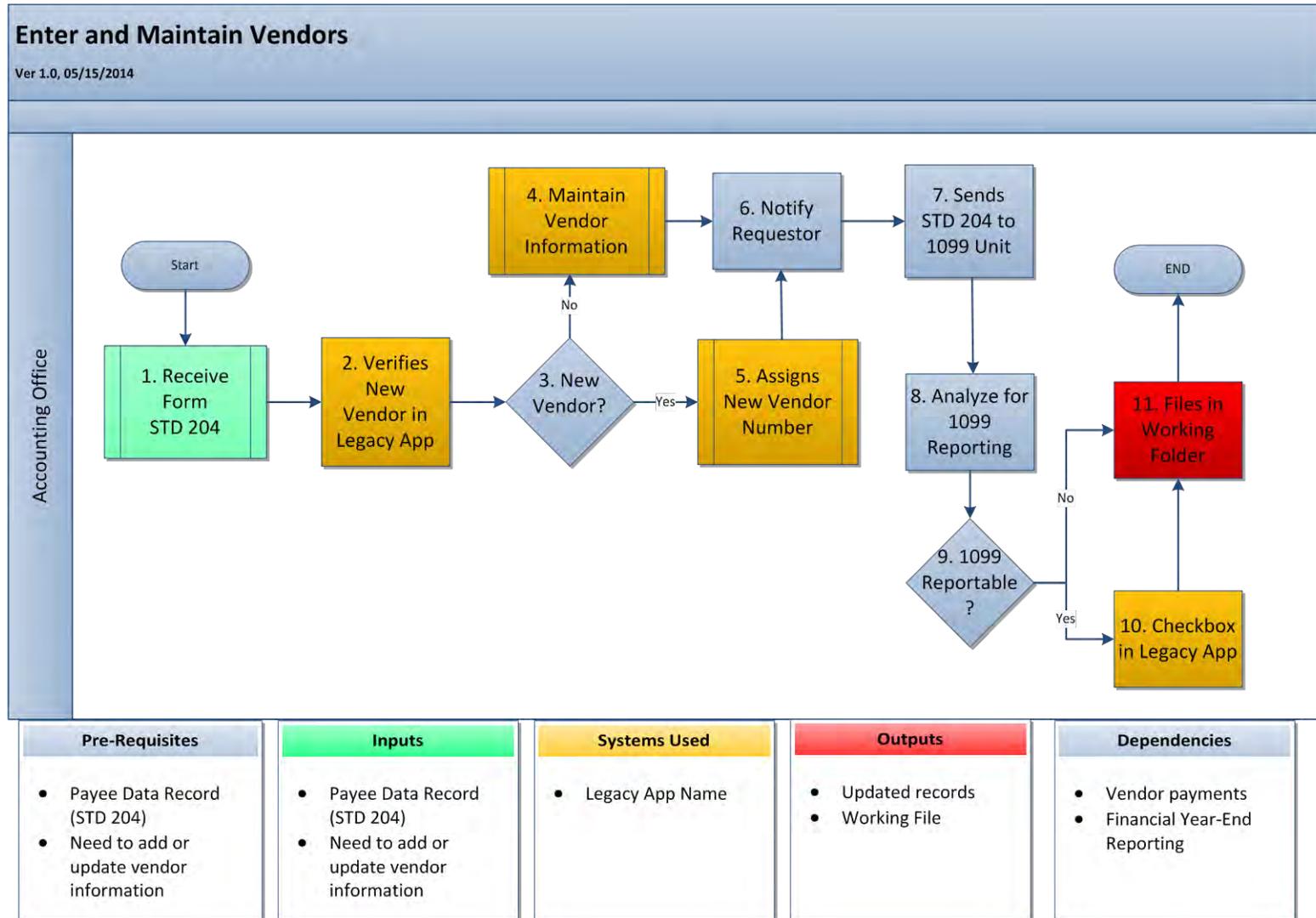
## Appendix 2: Business Process Model Template

<b>[Process Name]</b>	
[Entity, Actor, or Function]	
[Entity, Actor, or Function]	

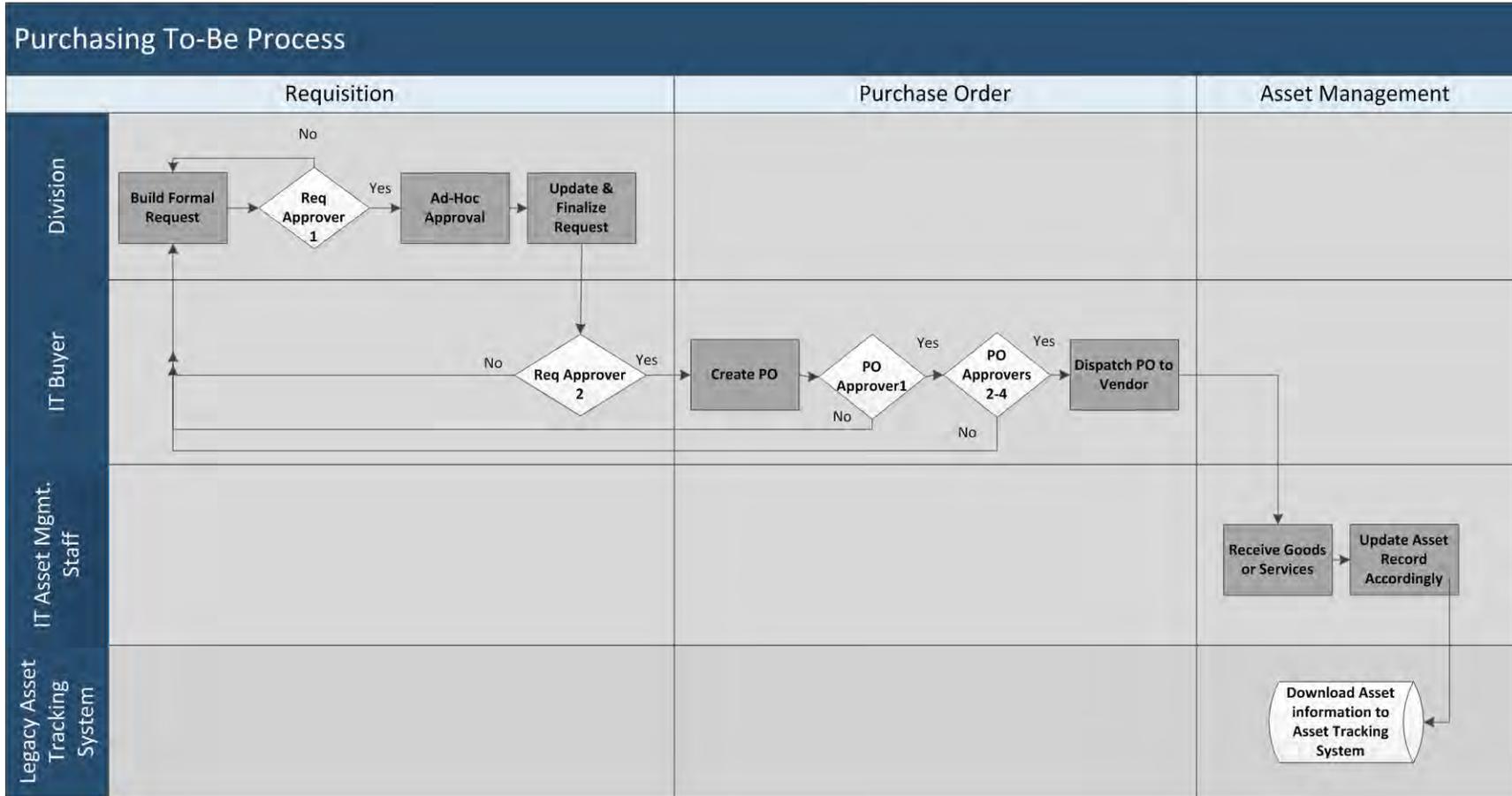
### Process Symbol Legend

 <p><b>Start/End</b> – Indicates points at which the process begins or ends. Does not represent any activity.</p>	 <p><b>Connector</b> – On/Off page connectors are used to avoid complex overlapping connector lines or to continue a process on a subsequent page. Connectors are labeled with UPPERCASE letters.</p>	 <p><b>Sequence Flow</b> – Used to illustrate the different actions that can occur during a process.</p>
 <p><b>Decision</b> – Shows a decision point, such as yes/no. Each path emerging from the diamond is labeled with one of the possible answers.</p>	 <p><b>Interface</b> – Data conversion from one electronic system to another.</p>	 <p><b>Association</b> – Used to illustrate association lines to and from data objects and processes.</p>
 <p><b>System Task</b> – Represents an individual step or task that is performed by a system or application.</p>	 <p><b>Batch Process</b> – Represents the execution of a series of programs ("jobs") on a computer without manual intervention.</p>	 <p><b>Message Flow</b> – Used to attach a data object to a Sequence or Message flow.</p>
 <p><b>Input Documents</b> – A paper document (or email) that is used for entering data in the process. For electronic data the <b>Interface</b> symbol will be used.</p>	 <p><b>Output Documentation</b> – An electronic document that is created by the process and can be printed (e.g. reports).</p>	 <p><b>Group</b> – Used to highlight certain sections of a diagram without adding additional constraints for performance, as a Sub-Process would.</p>

### Appendix 3: Sample As-Is Vendor Management Process



### Appendix 4: Sample To-Be Purchasing Process



## Appendix 5: BPM Skills

A general overview of the skills required for BPM roles critical to BPM success, and is defined in three categories transformational, operational and technical:

1. Transformational skills – include communication, facilitation, negotiation and stakeholder analysis, as well as linking strategy to process change.
2. Operational skills – include process methodologies (like lean Six Sigma), process discovery and modeling for As-Is and To-Be, identifying performance indicators or metrics, benchmarking and simulation.
3. Technical skills – include the system and information impacts of process change, modeling languages like Business Process Model and Notation (BPMN), process modeling tools, solution architecture, process repository tools, and process optimization and simulation.

These skills help define the goals of BPM and motivate people to change. They play a key role in establishing a vision of "what's in it for me" (WiiFM) for each stakeholder. These can be rolled up into the following 15 skills:

### Skill No. 1 — Building the BPM Business Case and Vision

**Description:** The ability to clearly articulate the business strategy and relate the outcomes of a BPM project to that strategy. This requires an understanding of daily operations and their end-to-end process metrics, and the ability to turn this information into a compelling business case for BPM.

**Responsibilities:** Use existing strategy documents or interview executives to articulate your organization's business strategy. Align a BPM project's charter with this strategy. Identify desired business outcomes and construct a business case to fund specific BPM projects.

**Sources:** Finance directors, directors of strategic planning, business unit (BU) managers, business executives, business managers, program managers and enterprise/business architects.

### Skill No. 2 — Project Management

**Description:** The application of knowledge, skills, tools and techniques to project activities to meet project requirements.

**Responsibility:** Project managers are responsible for balancing a BPM project's time, cost and resource constraints against desired business outcomes and alerting the process owner to problems. The project manager works with the process owner to select a "build to last" or "build for change" approach, and should also work closely with the enterprise PMO to share knowledge and experience on project delivery and benefits.

**Source:** Program managers, Project Management Office staff and project managers.

**Skill No. 3 — Identification of Organizational Structure and Culture**

**Description:** The ability to understand organizational structure, culture and politics and drive cultural change. This is critical because most organizations still focus on improving the performance of individual functions instead of cross-functional processes.

**Responsibility:** Identify your organization's culture, understanding that different business units may have different cultures or enterprise personality types. Determine the functional vs. process focus of your organization, and identify the influencers and decision makers in formal and informal roles.

**Sources:** Business executives, business managers, program managers and Human Resources (HR) executives.

**Skill No. 4 — Communication**

**Description:** The ability to use different mediums to communicate to different stakeholders "what's in it for them" if they participate in BPM projects. This is critical for getting projects approved, keeping BPM initiatives going and driving the right behavior from stakeholders.

**Responsibility:** Develop a communication plan that includes regular, strategic communication of BPM goals, benefits and successes. Educate employees on BPM to gain their support, focusing on "what's in it for me?" scenarios.

**Sources:** Business executives, business managers, program managers and HR executives.

**Skill No. 5 — Organizational Change Techniques**

**Description:** An understanding of, and the ability to apply, organizational change techniques. BPM changes how people work, so it is critical to overcome resistance to change.

**Responsibility:** Evaluate the magnitude of change BPM will bring, and conduct an impact analysis to determine how it will affect stakeholders. Assess whether the organization's culture can handle high-magnitude change, and modify change techniques accordingly.

**Sources:** Organizational change management specialists, management consultants, business managers, program/project managers, business executives and HR executives.

**Skill No. 6 — Business Process Discovery**

**Description:** The ability to identify formal and informal business processes in an organization, or across multiple ones (part of determining the As-Is state).

**Responsibility:** Identify the "pain points" in your organization, and focus on processes contributing to those points. Interview stakeholders on how the work in each process is really done, and capture useful undocumented information, and document discovered processes to guide process best practices, or use discovery results to identify areas for improvement.

**Sources:** Business analysts, enterprise architects, subject matter experts (SMEs), BU managers, stakeholders/end users and internal auditors.

**Skill No. 7 — Business Process Modeling, Analysis and Design**

**Description:** The ability to visually depict and examine process models, based on information gathered from business process discovery. These models provide visibility into processes (a key tenet of BPM) and enable a process change's impact to be modeled and analyzed before implementing it.

**Responsibility:** Use process modeling and analysis to better understand how a process works and where pain points lie. This enables redesign and impact analyses to be conducted before new process designs are implemented.

**Sources:** Business analysts, enterprise architects, SMEs and internal auditors.

**Skill No. 8 — Business Process Governance and Managing Process Policies**

**Description:** The ability to outline who is accountable and responsible for process change, to establish guidelines for what constitutes valuable process change, and to choose incentives and drive management processes that guide stakeholder behavior and enforce policy execution.

**Responsibility:** Build and modify the process governance model as BPM competencies mature and stakeholder reach widens.

**Sources:** Finance directors, directors of strategic planning, BU managers and internal auditors.

**Skill No. 9 — Process Performance Management**

**Description:** The ability to oversee process input and output. This should be strongly linked to business performance management, and can be supplemented with predictive analytics to seek patterns in such data.

**Responsibility:** Use performance management information to identify where processes are underperforming. These pain points are candidates for BPM projects, and also highlight process governance issues where decisions on metrics may be needed.

**Sources:** Finance directors, directors of strategic planning, BU managers, customers and suppliers.

**Skill No. 10 — Constructing a BPM Methodology Toolbox**

**Description:** Applying a "BPM methodology toolbox" that is, taking methods from several process methodologies to come up with a set that best suits the needs of a particular BPM project.

**Responsibility:** Select a group of BPM methodologies that are a good fit to the goals of your BPM program. Establish methodology toolboxes for individual BPM projects where more customized approaches are needed.

**Sources:** Six Sigma experts, external consultants, SMEs and business process analysts.

**Skill No. 11 — Solution Architecture and Design**

**Description:** The ability to realize the business goals of the BPM project through the organization's business, information and technical architectures.

**Responsibility:** Identify process artifacts, and design a relevant solution. Choose the appropriate solution development life cycle according to the rate of process change needed. Create and manage a repository of reusable process artifacts.

**Sources:** Business process architects, enterprise architects and solution architects.

### **Skill No. 12 — BPM Technology Product Knowledge**

**Description:** An understanding of BPM technology products in the market; including business process modeling and business rule management tools, as well as BPM suites and the ability to determine which are best suited to specific BPM needs.

**Responsibility:** Use BPM technologies to construct and sustain process-centric solutions that integrate with existing applications to support the work of organizations in improving their processes.

**Sources:** Enterprise architects, solution architects, data architects, business analysts, technology specialists and purchasing/procurement specialists.

### **Skill No. 13 — Agile and Model-Driven Application Development (AD)**

**Description:** The ability to engage in collaborative and cooperative practices that enable continuous AD with a "build for change" mentality, and to combine AD methods; such as agile, scrum, service-oriented architecture (SOA) and model-driven AD; with BPM methodologies.

**Responsibility:** Blended teams involving business and IT use the model-driven capabilities of BPM platforms, such as BPMS, to capture requirements and iterate toward an optimal process.

**Sources:** Solution architects, ScrumMasters, SOA developers, enterprise architects and business analysts.

### **Skill No. 14 — Business Process Optimization and Simulation**

**Description:** The ability to use the simple "what if" simulation capabilities in BPMSs, or the advanced ones in optimization and simulation tools, and to construct sophisticated models and scenarios to test assumptions and uncover relationships between entities.

**Responsibility:** Use business process simulation tools when designing a process to evaluate the impact of the change on the efficiency and effectiveness. For example, did the change reduce the process cost or improve its speed? Advanced practitioners can use simulation to explore future target states.

**Sources:** Business analysts, enterprise architects, technology specialists, data architects and statisticians

### **Skill No. 15 — User Experience Design**

**Description:** Analyzing how users interact with a process to complete tasks, and considering this interaction in process design. This requires designing process interactions to support both formal and informal work practices.

**Responsibility:** Use contextual inquiry to capture informal processes and work practices that users might follow. Such practices might not be formally recognized, but could greatly improve user interactions with a particular process.

**Sources:** Usability Analyst

These are the BPM roles that encompass the key skills needed to instill the process discipline, as well as, to execute process improvement work as a team.