

# Department of Energy



Process Mapping Documentation  
Standards Instructions



# Process Mapping Documentation Standards Instructions

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# Process Mapping Documentation Standards Instructions

## I. Purpose

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A process is an end-to-end sequence of activities grouped to accomplish a specific objective. The purpose of the Process Mapping Documentation Standard Form and Content (F&C) is to provide a standard approach to facilitate the documentation of operational processes including maps, narratives and other supplemental information for each identified process. It should be the goal to complete the F&C as thoroughly as possible with the information available at the time of completion. The process map/documentation should be housed in a central location to allow for continuous update by appropriate officials with responsibility for the process. This document provides instructions for completing the standard form and content.

## II. Overview of Form and Content

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### A. Cover Page and Document Control/Approval

#### 1. Cover Page

The design of the document allows for one or multiple operational processes to be listed in one document. To assist in organization of the material, the cover page should include, as the title, the name of the operational process(es) documented within, in addition to the Business Process Cycle(s) and Business Process Name(s) that are related to the operational process. Additionally, the cover page should list the date the document was created and the date it was last updated (if applicable), the creator of the document, and the process owner(s) of the business process name(s) identified in the title, when available. Finally, if a business process improvement opportunity is identified in section A.3.c of the document, an 'X' should be checked next to the 'Y' indicating this. Otherwise, an 'X' should be checked next to the 'N'.

#### 2. Document Control/Approval

Due to the need to update the process documentation or add to the supplemental information, the Document Control and Approval tables provide an area to document the names of the individuals who made changes to the document and the subsequent approvers of the changes.

### B. Classification – Section I

This section links the operational process(es) being documented to the Department's standard Business Cycles and Business Processes<sup>1</sup>. An operational process may belong to multiple Business Cycles and Business Processes. Mark an 'X' in the "Appl" column (applicable) for each related Business Process.

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<sup>1</sup> Appendix B provides an example of Business Sub Processes linked to the related Business Process and Business Cycle. This example may provide assistance in determining the link between the operational process and the Business Process and Business Cycle.



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## C. Operational Process Documentation – Section II

This section is the essence of the Process Documentation. The template includes a small header (Section A) used to identify the Subject Matter Expert(s) and provide basic document control information (Created by, Updated by, Status of Process Map / Narrative). In addition, a description field is provided to briefly describe the purpose of the sub-process being documented.

### 1. Operational Process Map – Section A.1

A picture of the completed process map is to be inserted into this section. If the map is too large for the space provided, the map should be embedded into the section for ease in document management and delivery. If embedding is not possible, a hard copy can be attached. A guide to the symbols and structure to be used in the creation of the process maps is provided in Appendix A. The symbols provided are commonly used symbols in process mapping and are available in most mapping tools.

### 2. Operational Process Narrative – Section A.2

The Operational Process Narrative captures the process in a tabular format providing somewhat more detailed information in certain areas. The table consists of the following columns:

- Step # - The sequence in which the process flows;
- Name – The name of the activity being performed as listed in the Process Map;
- Description – The description of each activity;
- Role – The role responsible for each activity within a process (e.g A/P, Deputy Director, CFO). This is identified in the swimlane(s) on the Process Map;
- Automation – This denotes whether an activity is manual, partially automated, or fully automated;
- System – If the activity is denoted as being partially or fully automated, the name of the system is listed in this column;
- Ref# and Name (R/C/I/O) –Risks (R), controls (C), inputs (I), and/or outputs (O) identified in the process map should be briefly outlined in this column next to the step(s) they relate to using a Reference Number (R1, R2, etc for Risk and C1, C2, etc for Control) and a simple description. Further information is then provided in a table in section A.3.a Narrative Detail.



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## 3. Supplemental Documentation – Section A.3

These sub-sections – Narrative Detail, Documentation Related to Sub-Process, Business Process Improvement Opportunities – are to be completed when information is available.

### i. Narrative Detail – Section A.3.a

This section includes three tables for completion: Risks, Controls, and Inputs/Outputs. Each table requires the following information:

- Reference Number – This is the same as the Reference Number found in the Narrative Table;
- Name – This is the same as the Name found in the Narrative Table;
- Description – This is the description of the risk, control, and/or input/output;

The Risk table includes the following additional columns:

- Controls – If a control is identified for the risk, the Control Reference Number should be listed;
- Likelihood / Impact – These two columns are used the same way as the Likelihood / Impact columns in the PCS tool within the AART.
- Key Y/N – If a risk is considered to be key issue for the process, a 'Y' should be listed in this column.

The Control table includes the following additional columns:

- Control Type – Like the column in the PCS tool within the AART, this column should show whether a control is manual or automated;
- Control Frequency – Like the column in the PCS tool within the AART, this column should show the frequency at which the control is executed;
- Key Y/N – If a control is considered to be key for the process, a 'Y' should be listed in this column.

The Input/Output table includes the following additional columns:

- Frequency – This column should list how often the input/output is run, e.g. recurring, monthly, as needed.
- Source – This column should show where the input came from;
- Destination – This column should show where the output is going.

### ii. Documentation Related to Operational Process – Section A.3.b.

This section is to list any and all documentation that relates to the sub-process such as Training Guides, Policies and Procedures, Systems Documentation and/or other documentation not listed above.



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## iii. Business Process Improvement Opportunities – Section A.3.c.

This section can be used during the Remediation of processes. It provides sub-sections to house further information regarding the improvement opportunities for the process itself, systems the process utilizes, procedures, training and communications, and other areas.

## D. Roles and Organization – Section 3.0

The final section in the Form and Content provides a table to document the Roles identified in the Narrative and Process Map Swimlanes and link the Role to the part of the DOE Organization conducting the process. If an organization chart is available representing the identified DOE Organizations, it should be included in the document.



**Appendix A: Guide to Symbols and Structure for Process Mapping**

**Symbols**

Symbol	Description	Notes
	Process or Sub-process	Typically at a high level, may include both automated and manual sub-process/activities in its decomposition. Include the hierarchy number and process name in box.
	Automated sub-process/activity	Include the hierarchy number and process name in box.
	Manual sub-process/activity	Include the hierarchy number and process name in box.
	Terminator	
	Page Connector	Needs a unique reference which can be a file name or numbering scheme.
	Decision Points	Add a description or the decision that is made below or within the drawing
	And Split	
	Or Split	
	Join	
	Risk	n= unique ID of risk referenced in the table
	Control - Effective	n= unique ID of control referenced in the table (ID in the table does not differentiate between ineffective and effective or missing).
	Control - Ineffective	n= unique ID of control referenced in the table (ID in the table does not differentiate between ineffective and effective or missing).
	Control - Missing Control	n= unique ID of control referenced in the table (ID in the table does not differentiate between ineffective and effective or missing).
	Report	
	Interface File	
	Input Forms	

Risk & Control Symbols should be placed next to or between applicable process boxes



**Process / Sub-process**

- Automated
- Manual

**Flow**

- Connectors
- Decisions
- Split / Joins

**Risk & Controls**

- Effective
- Ineffective
- Missing

**Inputs / Outputs**

- Reports
- Interface Files
- Input Forms

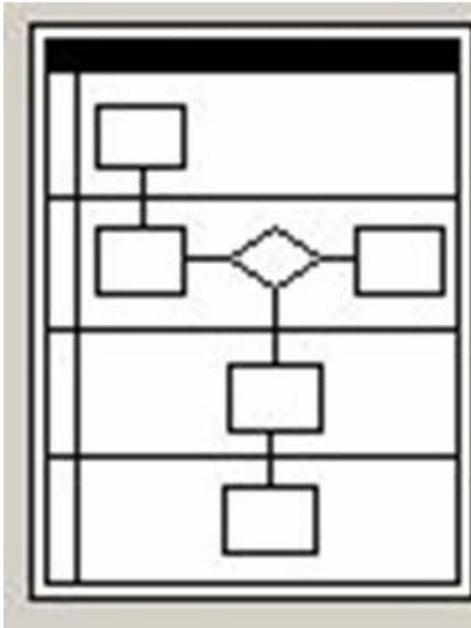


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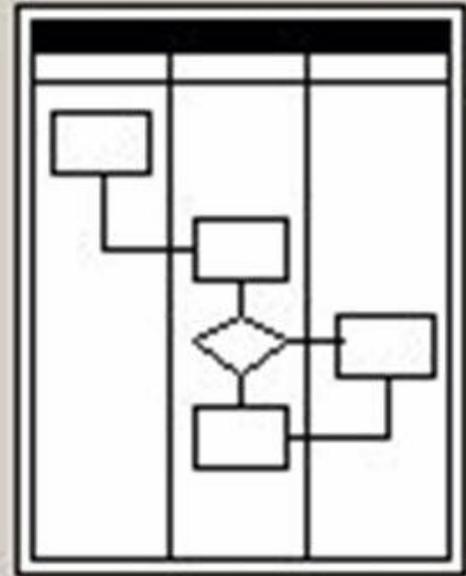
## Structure – Swimlanes

Swimlanes can be oriented either Horizontal or Vertical:

### Horizontal



### Vertical



Each swimlane represents a role involved the process being documented. The activities or steps for that role should be located within the role's swimlane.



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## Appendix B: DOE Process Classification

This spreadsheet should be used as a guide to assist in the classification of the operational process to a related Business Cycle and Business Process. It is not required to link the operational process to the example Business Sub-process level at this time.

Business Cycle	Business Process	Business Sub-Processes - Example
<b>1.0 B2C</b>	1.1 General Ledger Management	1.1.1 Account Definition
		1.1.2 Transaction Definition
		1.1.3 Upward/Downward Spending Adjustments
		1.1.4 Analysis & Reconciliation
		1.1.5 Period Maintenance & Closing
	1.2 Funds Management	1.2.1 Budget Planning
		1.2.2 Budget Preparation
		1.2.3 Budget Authority (ex Funds Allocation)
		1.2.4 Funds Distribution
		1.2.5 Funds Control
		1.2.6 Funds Status
	1.3 Funds Balance With Treasury (FBWT)	1.3.1 Treasury Information Maintenance
		1.3.2 Payment Confirmation
		1.3.3 Reconciliation & Reporting
	1.4 Cost Management	1.4.1 Cost Setup & Accumulation
		1.4.2 Cost Distribution
	1.5 Insurance	1.5.1 Pre-Event
		1.5.2 Post-Event
		1.5.3 Operations
	1.6 Grants	1.6.1 Commitments
		1.6.2 Decommitments
		1.6.3 Obligations
		1.6.4 Payments
		1.6.5 Cost Accruals
		1.6.6 Interest Collectors
		1.6.7 Closeout
	1.7 Loans	1.7.1 Lender Management
		1.7.2 Portfolio Management
1.7.3 Guarantee Extension & Maintenance		
1.7.4 Delinquent Debt Collection		
1.7.5 Treasury Cross Servicing		
1.7.6 Loan Extension		
1.7.7 Account Servicing		
<b>2.0 P2P</b>	2.1 Acquisition	2.1.1 Funds Certification
		2.1.2 Obligations
		2.1.3 De-Obligations
		2.1.4 Payment
		2.1.5 Closeout
		2.1.6 MicroPurchase with Purchase Card
	2.2 Inventory Management	2.2.1 Acquisitiuon



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	2.3 Payable Management	2.2.2 Control	
		2.2.3 Disposition	
		2.3.1 Payee Information Maintenance	
		2.3.2 Invoicing	
		2.3.3 Accounts Payable	
		2.3.4 Disbursing	
	2.4 Travel	2.3.5 Payment Follow up	
		2.4.1 Authorization	
		2.4.2 Advances	
		2.4.3 Vouchers	
		2.4.4 Local Travel	
		2.4.5 Non-Federal Sponsored Travel	
	<b>3.0 Q2C</b>	3.1 Revenue	2.4.6 Temporary / Permanent Change of Station
			3.1.1 Bill Generation
3.1.2 Transaction Validation			
3.1.3 Collection			
3.1.4 Deposit Account			
3.1.5 Revenue Recognition			
3.2 Receivable Management		3.1.6 Revenue Estimation	
		3.2.1 Customer Information Maintenance	
		3.2.2 Receivable Establishment	
		3.2.3 Debt Management	
<b>4.0 P2A</b>	4.1 Project Cost Management	3.2.4 Collections & Offset	
		4.1.1 Cost Setup & Accumulation	
	4.2 Property Management	4.1.2 Cost Distribution	
		4.2.1 Acquiring & Receiving	
	4.3 Seized Property Management	4.2.2 Managing & Accounting	
		4.3.1 Seizure	
		4.3.2 Custody	
		4.3.3 Forfeiture	
	<b>5.0 ERM</b>	5.1 Human Resources	4.3.4 Disposition
			5.1.1 Position Management & Classification
5.1.2 Recruitment & Staffing			
5.1.3 Personnel Action Administration			
5.1.4 Labor Management & Employee Relations			
5.2 Payroll		5.1.5 Work Force Development	
		5.2.1 Time & Attendance Processing	
		5.2.2 Leave Processing	
		5.2.3 Pay Processing	
5.3 Benefits		5.2.4 Labor Cost & Distribution	
		5.3.1 Benefits Administration	
		5.3.2 Claims Acceptance & Tracking	
		5.3.3 Claims Processing	
		5.3.4 Benefit Payment Administration	
			5.3.5 Recovery Receivable Management