Problem Management

Process Asset Library

Office of Information and Technology

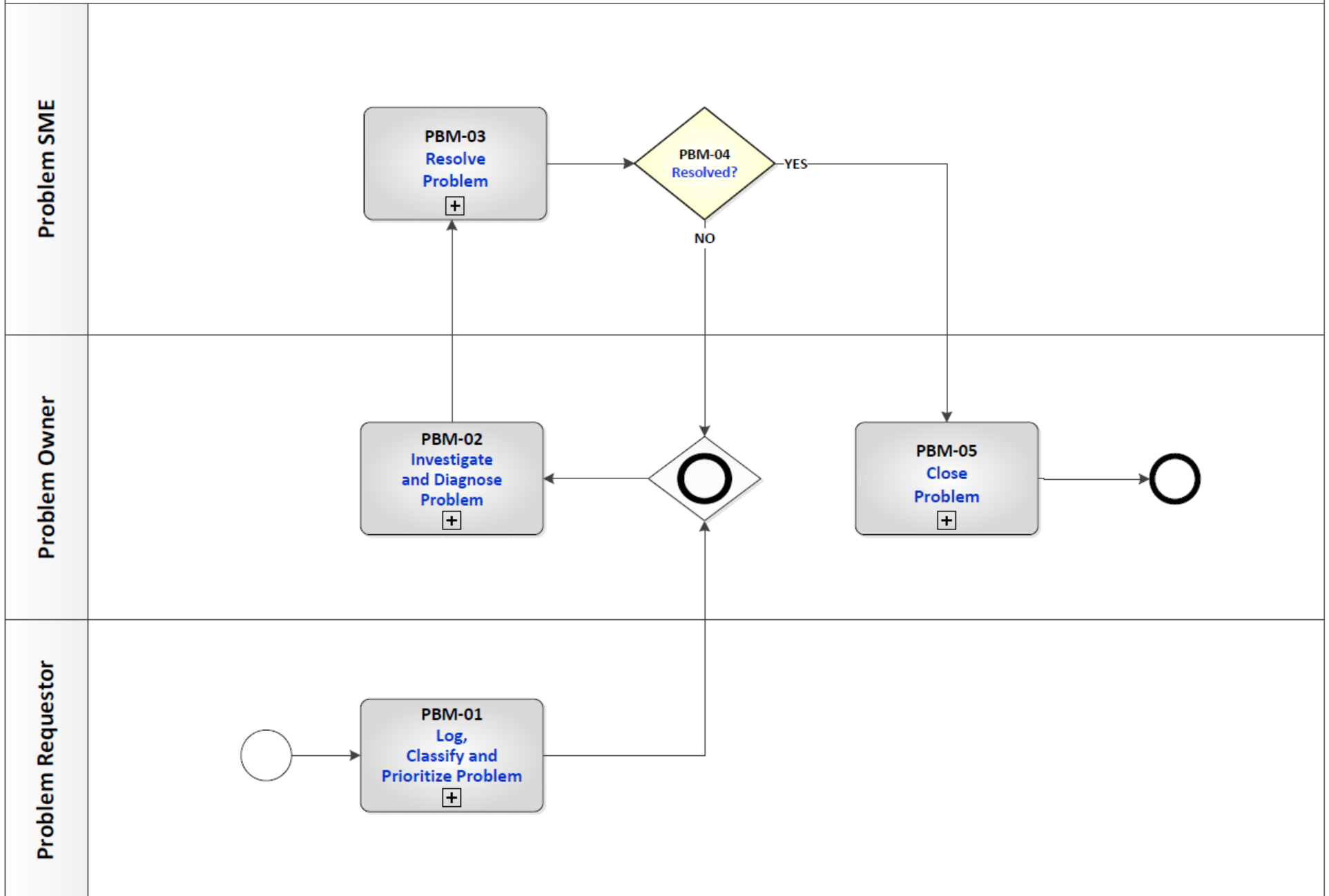# Table of Contents

Problem Management Process Map

Problem Management (PBM)

Problem SME

PBM-03
Resolve
Problem
+

PBM-04
Resolved?

—YES—

NO

Problem Owner

PBM-02
Investigate
and Diagnose
Problem
+

PBM-05
Close
Problem
+

Problem Requestor

PBM-01
Log,
Classify and
Prioritize Problem
+

Problem Management: PBM-01 Log, Classify and Prioritize Problem

OIT Problem Analyst

PBM-01.01
Conduct Proactive Problem Management Monitoring

Problem Requestor

PBM-01.02
Record Problem Details

PBM-01.03
Classify Problem

PBM-01.09
Perform Deviation Management

Problem Manager

PBM-01.07
Determine Problem Priority

PBM-01.08
Management Notification Required?

PBM-01.13
Leave Problem Record Open?

PBM-01.14
Document Reason and Close Record

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Close Problem

PBM-01.10
Allocate Resources and Determine Go-ahead Plan

PBM-01.11
Go Ahead with Integration?

PBM-01.12
Assign Problem Owner

PBM-01.04
Review Problem Details and Reclassify, as Necessary

PBM-01.05
Existing Parent Ticket?

PBM-01.06
Link Problem to Existing Record

YES / NO (decision labels)

Problem Management: PBM-02 Investigate and Diagnose Problem

Problem Owner

PBM-02.05
Document
Known Error

PBM-02.06
Share
Known Error,
as Necessary

Problem SME

PBM-02.01
Associate
Relevant Incident
Records to Problem
Record

PBM-02.02
Collect
Available Data on
Primary and
Supporting Systems

PBM-02.03
Collect
and Review System
Requirements and
Specifications

PBM-02.04
Search
Problem Root Causes
and Potential
Workaround

Incident
Records
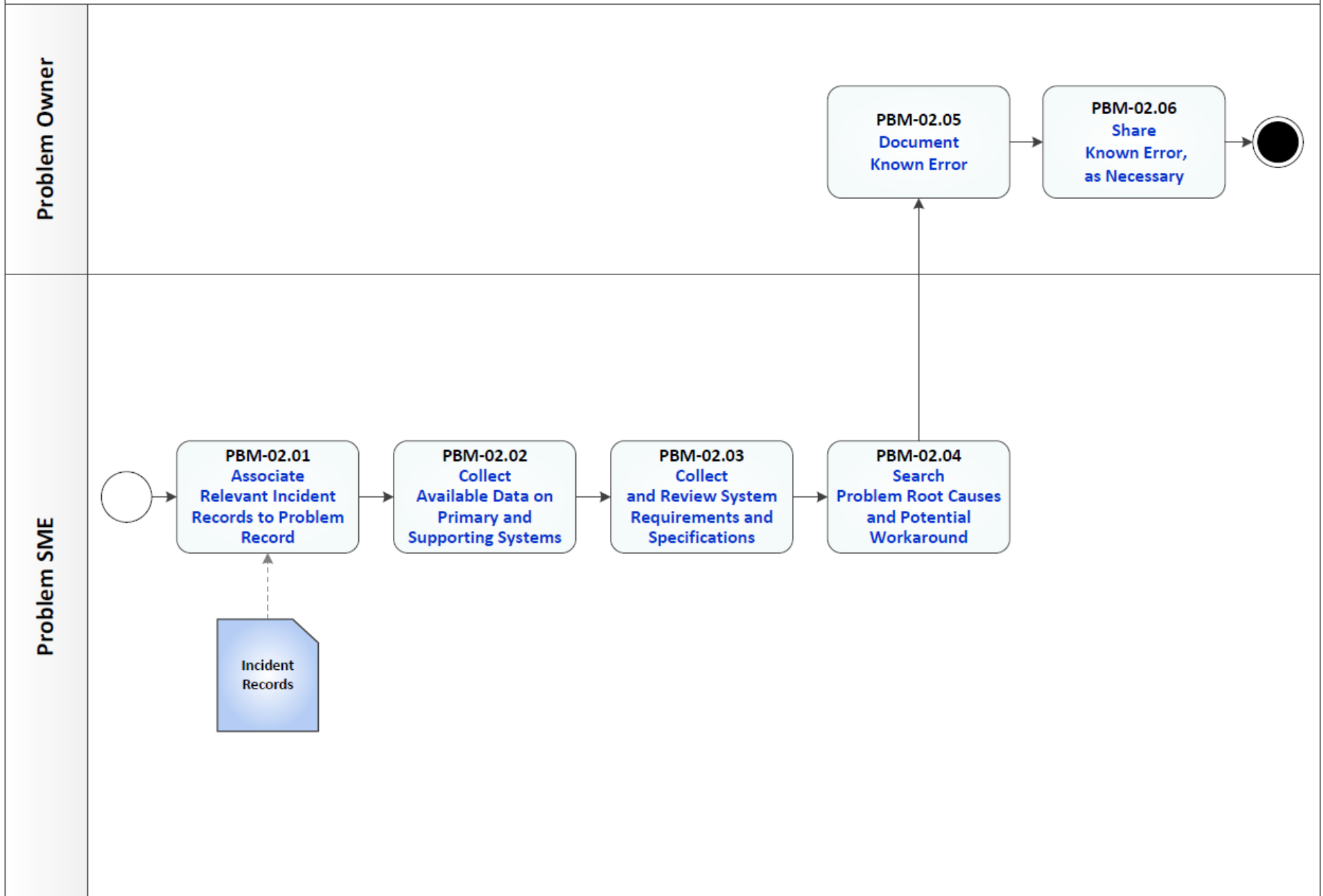
Problem Management: PBM-03 Resolve Problem

Problem Manager

PBM-03.02
Review
Proposed Solutions

Problem SME

PBM-03.01
Identify
Possible Solutions

PBM-03.03
Change Required
to Implement
Solution?

—YES→

—NO—

PBM-03.04
Create
Request for Change

PBM-03.05
Problem
Solution?

—Permanent Fix→

—Workaround→

—Accept Problem—

PBM-03.10
Confirm
Fix

PBM-03.11
Problem
Resolved?

—YES—

PBM-03.12
Record
Results of Attempt
and Investigate
Further

NO

YES

PBM-03.08
Confirm
Workaround

PBM-03.09
Acceptable
Permanent
Solution?

—YES

NO

PBM-03.06
Update
Known Error Record
and Knowledge
Articles, as Necessary

PBM-03.07
Close
Problem?

—YES—

NO

The links in this process map are inactive. Please scroll to view activity data.   4

Problem Management: PBM-05 Close Problem

Problem Manager	

PBM-05.05
Conduct Major Problem Review

Problem Owner

YES

PBM-05.04
Major Problem?   NO

PBM-05.01
Update Status and Content of Known Error Record

PBM-05.02
Flag Problem for Knowledge Article, as Necessary

PBM-05.03
Communicate Problem Solution

PBM-05.06
Close Problem and Associated Incident Records

The links in this process map are inactive. Please scroll to view activity data.   5

Process: Problem Management

Overview: The process map for Problem Management cycles through the following process and review activities:

PBM-01 Log, Classify and Prioritize Problem
PBM-01.01 Conduct Proactive Problem Management Monitoring
PBM-01.02 Record Problem Details
PBM-01.03 Classify Problem
PBM-01.04 Review Problem Details and Reclassify, as Necessary
PBM-01.05 Existing Parent Ticket?
PBM-01.06 Link Problem to Existing Record
PBM-01.07 Determine Problem Priority
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PBM-02 Investigate and Diagnose Problem
PBM-02.01 Associate Relevant Incident Records to Problem Record
PBM-02.02 Collect Available Data on Primary and Supporting Systems
PBM-02.03 Collect and Review System Requirements and Specifications
PBM-02.04 Search Problem Root Causes and Potential Workaround
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PBM-02.06 Share Known Error, as Necessary
PBM-03 Resolve Problem
PBM-03.01 Identify Possible Solutions
PBM-03.02 Review Proposed Solutions
PBM-03.03 Change Required to Implement Solution?
PBM-03.04 Create Request for Change
PBM-03.05 Problem Solution?
PBM-03.06 Update Known Error Record and Knowledge Articles, as Necessary
PBM-03.07 Close Problem?
PBM-03.08 Confirm Workaround
PBM-03.09 Acceptable Permanent Solution?
PBM-03.10 Confirm Fix
PBM-03.11 Problem Resolved?
PBM-03.12 Record Results of Attempt and Investigate Further
PBM-04 Resolved?
PBM-05 Close Problem
PBM-05.01 Update Status and Content of Known Error Record
PBM-05.02 Flag Problem for Knowledge Article, as Necessary
PBM-05.03 Communicate Problem Solution
PBM-05.04 Major Problem?

PBM-05.05 Conduct Major Problem Review
PBM-05.06 Close Problem and Associated Incident Records

Problem Management Description and Goals

Description

The Enterprise IT Problem Management process explains the handling of all problems from the time they are defined through restoration of service, root cause analysis, and permanent resolution, if known. The primary objectives of Problem Management are to manage and resolve known problems, prevent or eliminate recurring incidents, and to minimize the impact of incidents that cannot be prevented. In order to achieve this, Problem Management practitioners search for the root causes of incidents, document known errors in the Known Error Database, and take measures to improve or correct the affected situations.

Goals

The goals of Problem Management are to manage and resolve new or known problems, prevent or eliminate recurring incidents, and to minimize the impact of incidents that cannot be prevented. In order to achieve this.

The scope of Problem Management includes:

- Analysis of closed incident records to identify recurring issues

- Detection and tracking of problems

- Assistance to Incident Management in long running issues

- Root cause analysis and diagnosis of problems

- Creation of Known Error Records in Know Error Database

- Initiation and tracking of the corrective actions to a problem

- Reduce the number of incidents to prevent service disruptions

- Maintain service levels

- Reduce the risk associated with change to the production environment

- Improve end-user and customer satisfaction

Problem Management RACI Information

The following describes the RACI information for this process:

PBM-01.01 Conduct Proactive Problem Management Monitoring

Responsible Role: OIT Problem Analyst

Accountable Role: Problem Manager

Consulted Role: Problem Owner; Problem SME

Informed Role: None Listed

PBM-01.02 Record Problem Details

Responsible Role: Problem Requester

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: Problem SME; OIT Problem Analyst

PBM-01.03 Classify Problem

Responsible Role: Problem Requester

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: Problem SME; OIT Problem Analyst

PBM-01.04 Review Problem Details and Reclassify, as Necessary

Responsible Role: Problem Manager

Accountable Role: Problem Requester

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem SME

PBM-01.05 Existing Parent Ticket?

Responsible Role: Problem Manager

Accountable Role: Problem Requester

Consulted Role: Problem SME; OIT Problem Analyst

Informed Role: None Listed

PBM-01.06 Link Problem to Existing Record

Responsible Role: Problem Manager

Accountable Role: Problem Requester

Consulted Role: None Listed

Informed Role: Problem SME; OIT Problem Analyst

PBM-01.07 Determine Problem Priority

Responsible Role: Problem Manager

Accountable Role: Problem Requester

Consulted Role: Problem Owner

Informed Role: Problem SME; OIT Problem Analyst

PBM-01.08 Management Notification Required?

Responsible Role: Problem Manager

Accountable Role: Problem Requester

Consulted Role: None Listed

Informed Role: None Listed

PBM-01.09 Perform Deviation Management

Responsible Role: Problem Requester

Accountable Role: Problem Manager

Consulted Role: Problem SME

Informed Role: OIT Problem Analyst

PBM-01.10 Allocate Resources and Determine Go-ahead Plan

Responsible Role: Problem Manager

Accountable Role: Problem Requester

Consulted Role: Problem SME

Informed Role: OIT Problem Analyst; Stakeholders; Problem Owner; Problem Requester

PBM-01.11 Go Ahead with Integration?

Responsible Role: Problem Manager

Accountable Role: Problem Requester

Consulted Role: None Listed

Informed Role: None Listed

PBM-01.12 Assign Problem Owner

Responsible Role: Problem Manager

Accountable Role: Problem Owner

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Problem SME

PBM-01.13 Leave Problem Record Open?

Responsible Role: Problem Manager

Accountable Role: Problem Owner

Consulted Role: None Listed

Informed Role: None Listed

PBM-01.14 Document Reason and Close Record

Responsible Role: Problem Manager

Accountable Role: Problem Owner

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Problem SME

PBM-02.01 Associate Relevant Incident Records to Problem Record

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager; Problem Requester; Incident Management Analyst

Informed Role: OIT Problem Analyst; Incident Manager

PBM-02.02 Collect Available Data on Primary and Supporting Systems

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager; Problem Requester; Incident Management Analyst

Informed Role: OIT Problem Analyst; Incident Manager; Stakeholders

PBM-02.03 Collect and Review System Requirements and Specifications

Responsible Role: Problem SME

Accountable Role: Problem Manager

Consulted Role: Problem Owner; Incident Management Analyst

Informed Role: OIT Problem Analyst; Problem Requester; Incident Manager; Stakeholders

PBM-02.04 Search Problem Root Causes and Potential Workaround

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager; Incident Management Analyst

Informed Role: OIT Problem Analyst; Problem Requester; Incident Manager; Stakeholders

PBM-02.05 Document Known Error

Responsible Role: Problem Owner

Accountable Role: Problem SME

Consulted Role: Problem Manager

Informed Role: OIT Problem Analyst; Problem Requester; Stakeholders

PBM-02.06 Share Known Error, as Necessary

Responsible Role: Problem Owner

Accountable Role: Problem SME

Consulted Role: Problem Manager

Informed Role: Problem Requester; Problem SME; Stakeholders

PBM-03.01 Identify Possible Solutions

Responsible Role: Problem SME

Accountable Role: Problem Manager

Consulted Role: Problem Owner

Informed Role: OIT Problem Analyst; Problem Requester

PBM-03.02 Review Proposed Solutions

Responsible Role: Problem Manager

Accountable Role: Problem SME

Consulted Role: Problem Owner

Informed Role: OIT Problem Analyst; Problem Requester

PBM-03.03 Change Required to Implement Solution?

Responsible Role: Problem SME

Accountable Role: Problem Manager

Consulted Role: Problem Owner

Informed Role: None Listed

PBM-03.04 Create Request for Change

Responsible Role: Problem SME

Accountable Role: Problem Manager

Consulted Role: Problem Owner

Informed Role: OIT Problem Analyst; Stakeholders; Problem Requester

PBM-03.05 Problem Solution?

Responsible Role: Problem SME

Accountable Role: Problem Manager

Consulted Role: Problem Owner

Informed Role: None Listed

PBM-03.06 Update Known Error Record and Knowledge Articles, as Necessary

Responsible Role: Problem SME

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Stakeholders

PBM-03.07 Close Problem?

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager

Informed Role: OIT Problem Analyst; Problem Requester

PBM-03.08 Confirm Workaround

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager

Informed Role: OIT Problem Analyst; Problem Requester

PBM-03.09 Acceptable Permanent Solution?

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager

Informed Role: OIT Problem Analyst; Problem Requester

PBM-03.10 Confirm Fix

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager

Informed Role: OIT Problem Analyst; Problem Requester

PBM-03.11 Problem Resolved?

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager

Informed Role: OIT Problem Analyst; Problem Requester

PBM-03.12 Record Results of Attempt and Investigate Further

Responsible Role: Problem SME

Accountable Role: Problem Owner

Consulted Role: Problem Manager

Informed Role: OIT Problem Analyst; Problem Requester; Stakeholders

PBM-04 Resolved?

Responsible Role: Problem SME

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: None Listed

PBM-05.01 Update Status and Content of Known Error Record

Responsible Role: Problem Owner

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Problem SME

PBM-05.02 Flag Problem for Knowledge Article, as Necessary

Responsible Role: Problem Owner

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Problem SME

PBM-05.03 Communicate Problem Solution

Responsible Role: Problem Owner

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Problem SME; Stakeholder Offices

PBM-05.04 Major Problem?

Responsible Role: Problem Owner

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Problem SME

PBM-05.05 Conduct Major Problem Review

Responsible Role: Problem Manager

Accountable Role: Problem Owner

Consulted Role: Problem SME

Informed Role: OIT Problem Analyst; Problem Requester

PBM-05.06 Close Problem and Associated Incident Records

Responsible Role: Problem Owner

Accountable Role: Problem Manager

Consulted Role: None Listed

Informed Role: OIT Problem Analyst; Problem Requester; Problem SME

Problem Management Associated Artifacts Information

Associated Artifacts information (including hyperlinks) for this process include:

Configuration Items (CI's)

Incident Ticket

Problem Ticket

Request for Change

Problem Management Tools and Web Sites Information

The Tools and Web Sites associated with this process (including hyperlinks) include:

Configuration Management Database

IT Service Management

Known Error Database

Technical Reference Model

Problem Management Standards Information

Standards associated with this process (including hyperlinks) include:

Impact, Urgency, and Priority Matrix

ITIL® Glossary and Abbreviations

Problem Management Practice Document

Problem Management Process

Process Activity Name: PBM-01 Log, Classify and Prioritize Problem

Previous Activities

Process Begins

Next Activities

PBM-01.01 Conduct Proactive Problem Management Monitoring

Description

The sub-process PBM-01 Log, Classify and Prioritize Problem cycles through the following dependent activities:

- Conduct Proactive Problem Management Monitoring

- Record Problem Details

- Classify Problem

- Review Problem Details and Reclassify, as Necessary

- Existing Parent Ticket?

- Link Problem to Existing Record

- Determine Problem Priority

- Management Notification Required?

- Deviation Management

- Allocate Resources and Determine Go-ahead Plan

- Go Ahead with Integration

- Assign Problem Owner

- Leave Problem Record Open?

- Document Reason and Close Record

Process Activity Name: PBM-01.01 Conduct Proactive Problem Management Monitoring

Previous Activities

PBM-01 Log, Classify and Prioritize Problem

Next Activities

PBM-01.02 Record Problem Details

Description

The OIT Problem Analyst conducts proactive problem management monitoring to identify IT problems by monitoring automated processes (e.g., Enterprise System Monitoring (ESM),

notifying management, performing trend analyses and flagging incidents for review as a potential problem.

Input

Incident Tickets

Output

Monitored Incident Tickets

Trend Analysis

Associated Artifacts

Incident Ticket

Responsible Role

OIT Problem Analyst

Accountable Role

Problem Manager

Consulted Role

Problem Owner; Problem SME

Informed Role

None Listed

Tools and Websites

IT Service Management

More Info

A problem is commonly detected when the cause of one or more incidents reported to the service desk is unknown. If the problem has not been previously recorded, a problem record should be immediately created to help assure service performance and continuity of operations.

Process Activity Name: PBM-01.02 Record Problem Details

Previous Activities

PBM-01.01 Conduct Proactive Problem Management Monitoring

Next Activities

PBM-01.03 Classify Problem

Description

The Problem Requestor records the problem details in the IT Service Management (ITSM) tool, logging all details known at that time. If the problem is opened from an existing change, event or incident, the Problem Requestor must be sure to reference the existing change, event or incident.

Input

Problem Details

Existing Change, Event or Incident

Output

Logged Problem Details

Problem Ticket

Associated Artifacts

Problem Ticket

Responsible Role

Problem Requester

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

Problem SME; OIT Problem Analyst

Tools and Websites

IT Service Management

More Info

Refer to Problem Record Overview (Job Aid) that further details mandatory and suggested problem form fields.

Process Activity Name: PBM-01.03 Classify Problem

Previous Activities

PBM-01.02 Record Problem Details

Next Activities

PBM-01.04 Review Problem Details and Reclassify, as Necessary

Description

The Problem Requester classifies the problem by completing the problem classification fields such as Configuration Item (CI) and the Categorization scheme. The same categorization used for classifying incidents is used for problem classification.

Input

Logged Problem Details

Problem Ticket

Output

Classified Problem

Associated Artifacts

None Listed

Responsible Role

Problem Requester

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

Problem SME; OIT Problem Analyst

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-01.04 Review Problem Details and Reclassify, as Necessary

Previous Activities

PBM-01.03 Classify Problem

Next Activities

PBM-01.05 Existing Parent Ticket?

Description

The Problem Manager reviews the problem record and all documented details and takes ownership of the record if the initial categorization/assignment was correct or re-categorizes/reassigns the record, if necessary. The Problem Manager updates or completes the record, as necessary, to correct inaccurate or incomplete information on the problem record.

Input

Classified Problem

Problem Ticket

Output

Reviewed and Reclassified Problem (as Necessary)

Associated Artifacts

Problem Ticket

Responsible Role

Problem Manager

Accountable Role

Problem Requester

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem SME

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-01.05 Existing Parent Ticket?

Previous Activities

PBM-01.04 Review Problem Details and Reclassify, as Necessary

Next Activities

If "YES":

PBM-01.06 Link Problem to Existing Record

Or

If "NO":

PBM-01.07 Determine Problem Priority

Description

The Problem Manager determines if there is an existing parent ticket reported indicating a recurring problem (Yes) or not No).

Responsible Role

Problem Manager

Accountable Role

Problem Requester

Consulted Role

Problem SME; OIT Problem Analyst

Informed Role

None Listed

Process Activity Name: PBM-01.06 Link Problem to Existing Record

Previous Activities

PBM-01.05 Existing Parent Ticket?

Next Activities

PBM-02 Investigate and Diagnose Problem

Description

If there is an existing parent ticket, the Problem Manager links the problem to the existing record to reflect that this is a recurring problem.

Input

Problem Ticket

Output

Problem Linked to Existing Parent Record

Associated Artifacts

Problem Ticket

Responsible Role

Problem Manager

Accountable Role

Problem Requester

Consulted Role

None Listed

Informed Role

Problem SME; OIT Problem Analyst

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-01.07 Determine Problem Priority

Previous Activities

PBM-01.05 Existing Parent Ticket?

Next Activities

PBM-01.08 Management Notification Required?

Description

The Problem Manager reviews the problem details and prioritizes the problem by determining the impact and urgency values.

Input

Classified Problem

Output

Determination of Problem Impact and Urgency

Associated Artifacts

Problem Ticket

Responsible Role

Problem Manager

Accountable Role

Problem Requester

Consulted Role

Problem Owner

Informed Role

Problem SME; OIT Problem Analyst

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-01.08 Management Notification Required?

Previous Activities

PBM-01.07 Determine Problem Priority

Next Activities

If "YES":

PBM-01.09 Perform Deviation Management

Or

If "NO":

PBM-01.10 Allocate Resources and Determine Go-ahead Plan

Description

The Problem Manager reviews the problem details and determines whether management notification is required (Yes) or not (No) based upon the impact and urgency values assigned to the problem.

Responsible Role

Problem Manager

Accountable Role

Problem Requester

Consulted Role

None Listed

Informed Role

None Listed

Process Activity Name: PBM-01.09 Perform Deviation Management

Previous Activities

PBM-01.08 Management Notification Required?

Next Activities

PBM-02 Investigate and Diagnose Problem

Description

If management notification is required, the Problem Requestor performs deviation management procedures to investigate and diagnose the problem.

Input

Problem Ticket

Impact and Urgency of Problem

Output

Problem Escalated to Management

Associated Artifacts

Problem Ticket

Responsible Role

Problem Requester

Accountable Role

Problem Manager

Consulted Role

Problem SME

Informed Role

OIT Problem Analyst

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-01.10 Allocate Resources and Determine Go-ahead Plan

Previous Activities

PBM-01.08 Management Notification Required?

Next Activities

PBM-01.11 Go Ahead with Integration?

Description

The Problem Manager allocates resources and determines the go-ahead plan for proceeding with the investigation. If the Problem Manager deems this is not a true problem, he or she must document the rationale. The necessary resources required to execute the investigation should be considered when evaluating the go-ahead plan.

Input

Available Resources

Problem Details with Impact and Urgency

Output

Allocated Resources

Go-ahead Plan

Associated Artifacts

Problem Ticket

Responsible Role

Problem Manager

Accountable Role

Problem Requester

Consulted Role

Problem SME

Informed Role

OIT Problem Analyst; Stakeholders; Problem Owner; Problem Requester

Tools and Websites

IT Service Management

Technical Reference Model

More Info

None Listed

Process Activity Name: PBM-01.11 Go Ahead with Integration?

Previous Activities

PBM-01.10 Allocate Resources and Determine Go-ahead Plan

Next Activities

If "YES":

PBM-01.12 Assign Problem Owner

Or

If "NO":

PBM-01.13 Leave Problem Record Open?

Description

The Problem Manager determines if the problem is worth investigating (Yes) or not (No) based on the information and the projected resource requirements known at the time.

Responsible Role

Problem Manager

Accountable Role

Problem Requester

Consulted Role

None Listed

Informed Role

None Listed

Process Activity Name: PBM-01.12 Assign Problem Owner

Previous Activities

PBM-01.11 Go Ahead with Integration?

Next Activities

PBM-02 Investigate and Diagnose Problem

Description

Once the decision to go ahead with integration is made, the Problem Manager assigns a Problem Owner to continue detailed root cause analysis investigation of the problem.

Input

Allocated Resources

Go-ahead Plan

Problem Ticket

Output

Identified Problem Owner

Associated Artifacts

None Listed

Responsible Role

Problem Manager

Accountable Role

Problem Owner

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Problem SME

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-01.13 Leave Problem Record Open?

Previous Activities

PBM-01.11 Go Ahead with Integration?

Next Activities

If "YES":

PBM-02 Investigate and Diagnose Problem

Or

If "NO":

PBM-01.14 Document Reason and Close Record

Description

Once the decision to not go ahead with integration is made, the Problem Manager determines whether to leave the Problem Record open (Yes) or not (No).

Responsible Role

Problem Manager

Accountable Role

Problem Owner

Consulted Role

None Listed

Informed Role

None Listed

Process Activity Name: PBM-01.14 Document Reason and Close Record

Previous Activities

PBM-01.13 Leave Problem Record Open?

Next Activities

PBM-05 Close Problem

Description

The Problem Manager documents the reason for closing the record and closes it.

Input

Go-ahead Plan

Status Update

Output

Closed Record

Associated Artifacts

Problem Ticket

Responsible Role

Problem Manager

Accountable Role

Problem Owner

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Problem SME

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-02 Investigate and Diagnose Problem

Previous Activities

PBM-01.06 Link Problem to Existing Record

Or

PBM-01.09 Perform Deviation Management

Or

PBM-01.12 Assign Problem Owner

Or

PBM-01.14 Document Reason and Close Record

Or

PBM-04 Resolved?

Next Activities

PBM-02.01 Associate Relevant Incident Records to Problem Record

Description

The sub-process PBM-02 Investigate and Diagnose Problem cycles through the following dependent activities:

- Associate Relevant Incident Records to Problem Record

- Collect Available Data on Primary and Supporting Systems

- Collect and Review System Requirements and Specifications

- Search Problem Root Causes and Potential Workaround

- Document Known Error

- Share Known Error, as Necessary

Process Activity Name: PBM-02.01 Associate Relevant Incident Records to Problem Record

Previous Activities

PBM-02 Investigate and Diagnose Problem

Next Activities

PBM-02.02 Collect Available Data on Primary and Supporting Systems

Description

The Problem Subject Matter Expert (SME) reviews the problem record to determine if there are other relevant existing incidents that should be related and if so, associates the relevant incident records to the problem record.

Input

Problem Ticket

Existing Incident Records

Output

Associated Incidents to Problem Ticket

Associated Artifacts

Problem Ticket

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager; Problem Requester; Incident Management Analyst

Informed Role

OIT Problem Analyst; Incident Manager

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-02.02 Collect Available Data on Primary and Supporting Systems

Previous Activities

PBM-02.01 Associate Relevant Incident Records to Problem Record

Next Activities

PBM-02.03 Collect and Review System Requirements and Specifications

Description

The Problem Subject Matter Expert (SME) collects available data related to the impacted configuration item or primary and supporting systems to understand the issue and compiles all relevant data for the investigation.

Input

Data Related to Configuration or Systems

Output

Compiled Data

Associated Artifacts

None Listed

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager; Problem Requester; Incident Management Analyst

Informed Role

OIT Problem Analyst; Incident Manager; Stakeholders

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-02.03 Collect and Review System Requirements and Specifications

Previous Activities

PBM-02.02 Collect Available Data on Primary and Supporting Systems

Next Activities

PBM-02.04 Search Problem Root Causes and Potential Workaround

Description

The Problem Subject Matter Expert (SME) Collects and reviews existing system requirements and specifications to understand how the system or configuration item should be performing. Using this and the previously collected current state, data issues are pinpointed and departures from normal performance are identified.

Input

Compiled Data

Output

Collected and Reviewed System Requirements/Specifications

Associated Artifacts

None Listed

Responsible Role

Problem SME

Accountable Role

Problem Manager

Consulted Role

Problem Owner; Incident Management Analyst

Informed Role

OIT Problem Analyst; Problem Requester; Incident Manager; Stakeholders

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-02.04 Search Problem Root Causes and Potential Workaround

Previous Activities

PBM-02.03 Collect and Review System Requirements and Specifications

Next Activities

PBM-02.05 Document Known Error

Description

The Problem Subject Matter Expert (SME) searches existing problem records and known errors to identify a root cause and to see if there is an applicable workaround available. Upon identification of a root cause, the Problem SME documents the problem root cause description.

Input

Existing Problem Tickets

Output

Applicable Workaround

Identified Root Cause

Root Cause Description

Associated Artifacts

None Listed

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager; Incident Management Analyst

Informed Role

OIT Problem Analyst; Problem Requester; Incident Manager; Stakeholders

Tools and Websites

IT Service Management

More Info

If other teams are required to assist with the investigation, task records should be opened and assigned to the applicable teams.

Process Activity Name: PBM-02.05 Document Known Error

Previous Activities

PBM-02.04 Search Problem Root Causes and Potential Workaround

Next Activities

PBM-02.06 Share Known Error, as Necessary

Description

The Problem Owner documents the known error in the Known Error Database, including any identified workarounds.

Input

Applicable Workaround

Identified Root Cause

Root Cause Description

Output

Documented Known Error

Associated Artifacts

Problem Ticket

Responsible Role

Problem Owner

Accountable Role

Problem SME

Consulted Role

Problem Manager

Informed Role

OIT Problem Analyst; Problem Requester; Stakeholders

Tools and Websites

Configuration Management Database

IT Service Management

Known Error Database

More Info

None Listed

Process Activity Name: PBM-02.06 Share Known Error, as Necessary

Previous Activities

PBM-02.05 Document Known Error

Next Activities

PBM-03 Resolve Problem

Description

The Problem Owner shares the known error with the Service Desk and other applicable support teams if the known error can assist with incident investigation and resolution.

Input

Documented Known Error

Output

Shared Known Error

Associated Artifacts

Configuration Items (CI's)

Problem Ticket

Responsible Role

Problem Owner

Accountable Role

Problem SME

Consulted Role

Problem Manager

Informed Role

Problem Requester; Problem SME; Stakeholders

Tools and Websites

Configuration Management Database

IT Service Management

More Info

None Listed

Process Activity Name: PBM-03 Resolve Problem

Previous Activities

PBM-02.06 Share Known Error, as Necessary

Next Activities

PBM-03.01 Identify Possible Solutions

Description

The sub-process PBM-03 Resolve Problem cycles through the following dependent activities:

- Identify Possible Solutions

- Review Proposed Solutions

- Change Required to Implement Solution?

- Create Request for Change

- Problem Solution?

- Update Known Error Record and Knowledge Articles, as Necessary

- Close Problem?

- Confirm Workaround

- Acceptable Permanent Solution?

- Confirm Fix

- Problem Resolved?

- Record Results of Attempt and Investigate Further

Process Activity Name: PBM-03.01 Identify Possible Solutions

Previous Activities

PBM-03 Resolve Problem

Or

PBM-03.07 Close Problem?

Next Activities

PBM-03.02 Review Proposed Solutions

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, identifies and creates a list of possible solutions based on the root cause investigation. All options are submitted to the Problem Manager for review/approval.

Input

Applicable Workaround

Documented Known Error

Identified Root Cause

Problem Ticket

Root Cause Description

Output

List of Possible Solutions

Associated Artifacts

None Listed

Responsible Role

Problem SME

Accountable Role

Problem Manager

Consulted Role

Problem Owner

Informed Role

OIT Problem Analyst; Problem Requester

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-03.02 Review Proposed Solutions

Previous Activities

PBM-03.01 Identify Possible Solutions

Next Activities

PBM-03.03 Change Required to Implement Solution?

Description

The Problem Manager reviews the options presented and determines the best course of action for resolving the issue. The Problem Manager then documents the decision and rationale in the record for the team to proceed.

Input

List of Possible Solutions

Problem Ticket

Output

Documented Decision with Rationale

Identified Course of Action

Reviewed Presented Options

Updated Problem Ticket

Associated Artifacts

Problem Ticket

Responsible Role

Problem Manager

Accountable Role

Problem SME

Consulted Role

Problem Owner

Informed Role

OIT Problem Analyst; Problem Requester

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-03.03 Change Required to Implement Solution?

Previous Activities

PBM-03.02 Review Proposed Solutions

Next Activities

If "YES":

PBM-03.04 Create Request for Change

Or

If "NO":

PBM-03.05 Problem Solution?

Description

The Problem Subject Matter Expert (SME) determines whether the proposed fix or workaround involves a change to the production environment and needs a change request (Yes) or not (No).

Responsible Role

Problem SME

Accountable Role

Problem Manager

Consulted Role

Problem Owner

Informed Role

None Listed

Process Activity Name: PBM-03.04 Create Request for Change

Previous Activities

PBM-03.03 Change Required to Implement Solution?

Next Activities

PBM-03.05 Problem Solution?

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, creates a Request for Change (RFC) to document the proposed solution and potential impacts. Depending on established thresholds for change, additional supporting documentation may be required (e.g., change implementation plan, back-out plan). The Problem Owner also updates the Problem ticket to reflect the handoff to Change Management.

Input

Back-out Plan

Change Implementation Plan

Documented Decision with Rationale

Identified Course of Action

Problem Ticket

Reviewed Presented Options

Output

Request for Change

Updated Problem Ticket

Associated Artifacts

Problem Ticket

Request for Change

Responsible Role

Problem SME

Accountable Role

Problem Manager

Consulted Role

Problem Owner

Informed Role

OIT Problem Analyst; Stakeholders; Problem Requester

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-03.05 Problem Solution?

Previous Activities

PBM-03.03 Change Required to Implement Solution?

Or

PBM-03.04 Create Request for Change

Next Activities

If "Permanent Fix":

PBM-03.10 Confirm Fix

Or

If "Workaround":

PBM-03.08 Confirm Workaround

Or

If "Accept Problem":

PBM-03.06 Update Known Error Record and Knowledge Articles, as Necessary

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, determines whether there is a permanent fix (Permanent Fix), an available workaround (Workaround) or whether the problem has a low enough priority and impact to just accept the problem with no additional action (Accept Problem).

Responsible Role

Problem SME

Accountable Role

Problem Manager

Consulted Role

Problem Owner

Informed Role

None Listed

Process Activity Name: PBM-03.06 Update Known Error Record and Knowledge Articles, as Necessary

Previous Activities

PBM-03.05 Problem Solution?

Or

PBM-03.09 Acceptable Permanent Solution?

Next Activities

PBM-03.07 Close Problem?

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, updates the problem record, known error record and knowledge articles, as necessary, to confirm the accepted status of the problem.

Input

Knowledge Articles

Known Error Record

Problem Resolution Decision

Problem Ticket

Request for Change

Output

Updated Knowledge Articles

Updated Known Error Record

Updated Problem Ticket

Updated Request for Change

Associated Artifacts

Problem Ticket

Request for Change

Responsible Role

Problem SME

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Stakeholders

Tools and Websites

IT Service Management

Known Error Database

More Info

None Listed

Process Activity Name: PBM-03.07 Close Problem?

Previous Activities

PBM-03.06 Update Known Error Record and Knowledge Articles, as Necessary

Next Activities

If "YES":

PBM-04 Resolved?

Or

If "NO":

PBM-03.01 Identify Possible Solutions

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, determines if the problem should be closed (Yes) or not (No) at this time.

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager

Informed Role

OIT Problem Analyst; Problem Requester

Process Activity Name: PBM-03.08 Confirm Workaround

Previous Activities

PBM-03.05 Problem Solution?

Next Activities

PBM-03.09 Acceptable Permanent Solution?

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, confirms the executed workaround to resolve the issue and updates the problem record.

Input

Executed Workaround

Knowledge Articles

Known Error Record

Problem Ticket

Output

Confirmed Workaround

Updated Problem Ticket

Associated Artifacts

Problem Ticket

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager

Informed Role

OIT Problem Analyst; Problem Requester

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-03.09 Acceptable Permanent Solution?

Previous Activities

PBM-03.08 Confirm Workaround

Next Activities

If "YES":

PBM-03.11 Problem Resolved?

Or

If "NO":

PBM-03.06 Update Known Error Record and Knowledge Articles, as Necessary

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, determines if the implemented workaround solution provides an acceptable permanent solution to the problem (Yes) or not (No).

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager

Informed Role

OIT Problem Analyst; Problem Requester

Process Activity Name: PBM-03.10 Confirm Fix

Previous Activities

PBM-03.05 Problem Solution?

Next Activities

PBM-03.11 Problem Resolved?

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, confirms the executed fix resolved the issue and updates the problem record.

Input

Executed Solution

Knowledge Articles

Known Error Record

Problem Ticket

Output

Confirmed Fix

Updated Problem Ticket

Associated Artifacts

Problem Ticket

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager

Informed Role

OIT Problem Analyst; Problem Requester

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-03.11 Problem Resolved?

Previous Activities

PBM-03.09 Acceptable Permanent Solution?

Or

PBM-03.10 Confirm Fix

Next Activities

If "YES":

PBM-04 Resolved?

Or

If "NO":

PBM-03.12 Record Results of Attempt and Investigate Further

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, determines if the problem is resolved (Yes) or not (Yes).

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager

Informed Role

OIT Problem Analyst; Problem Requester

Process Activity Name: PBM-03.12 Record Results of Attempt and Investigate Further

Previous Activities

PBM-03.11 Problem Resolved?

Next Activities

PBM-04 Resolved?

Description

The Problem Subject Matter Expert (SME), in coordination with the Problem Owner, records all notes from the potential solution implementation including why it was unsuccessful.

Input

Executed Fix/Workaround

Knowledge Articles

Known Error Record

Problem Ticket

Output

Unsuccessful Attempt Documented

Updated Problem Ticket

Associated Artifacts

Problem Ticket

Responsible Role

Problem SME

Accountable Role

Problem Owner

Consulted Role

Problem Manager

Informed Role

OIT Problem Analyst; Problem Requester; Stakeholders

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-04 Resolved?

Previous Activities

PBM-03.07 Close Problem?

Or

PBM-03.11 Problem Resolved?

Or

PBM-03.12 Record Results of Attempt and Investigate Further

Next Activities

If "YES":

PBM-05 Close Problem

Or

If "NO":

PBM-02 Investigate and Diagnose Problem

Description

The Problem Subject Matter Expert (SME) determines if the problem is resolved (Yes) or not (No).

Responsible Role

Problem SME

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

None Listed

Process Activity Name: PBM-05 Close Problem

Previous Activities

PBM-04 Resolved?

Or

PBM-01.14 Document Reason and Close Record

Next Activities

PBM-05.01 Update Status and Content of Known Error Record

Description

The sub-process PBM-05 Close Problem cycles through the following dependent activities:

- Update Status and Content of Known Error Record

- Flag Problem for Knowledge Article, as Necessary

- Communicate Problem Solution

- Major Problem?

- Conduct Major Problem Review

- Close Problem and Associated Incident Records

Process Activity Name: PBM-05.01 Update Status and Content of Known Error Record

Previous Activities

PBM-05 Close Problem

Next Activities

PBM-05.02 Flag Problem for Knowledge Article, as Necessary

Description

The Problem Owner ensures the status and content of the known error record is up to date if a known error record was opened for the problem. If the problem is permanently resolved, the Problem Owner retires the known error. If the known error or workaround is accepted, the Problem Owner follows knowledge management procedures to manage the known error. The Problem Owner updates the ticket to reflect all management decisions.

Input

Executed Workaround/Fix

Knowledge Articles

Known Error Record

Management Decisions

Problem Ticket

Output

Updated Known Error Record

Updated Problem Ticket

Associated Artifacts

Problem Ticket

Responsible Role

Problem Owner

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Problem SME

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-05.02 Flag Problem for Knowledge Article, as Necessary

Previous Activities

PBM-05.01 Update Status and Content of Known Error Record

Next Activities

PBM-05.03 Communicate Problem Solution

Description

The Problem Owner flags the problem if a knowledge article is needed to assist IT with supporting the new permanent fix, accepted known error, or workaround and follows knowledge management procedures to create the article. In addition, if the workaround is something which could be executed by a user, the Problem Owner creates a user-facing article.

Input

Executed Workaround/Fix

Knowledge Articles

Known Error Record

Management Decisions

Problem Ticket

Output

Flagged Problem

Knowledge Article

Updated Problem Ticket

User-facing Article

Associated Artifacts

Problem Ticket

Responsible Role

Problem Owner

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Problem SME

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-05.03 Communicate Problem Solution

Previous Activities

PBM-05.02 Flag Problem for Knowledge Article, as Necessary

Next Activities

PBM-05.04 Major Problem?

Description

The Problem Owner communicates the problem solution to all relevant parties including other support teams, the Service Desk, or deviation teams, as necessary. The Problem Owner ensures everyone is aware of the executed resolution and of any knowledge in existence to help resolve issues in the future. The Problem Owner then prepares the problem record for closure before submitting to the Problem Manager for review and closure.

Input

Executed Workaround/Fix

Flagged Knowledge and/or User-facing Articles

Known Error Record

Management Decisions

Problem Ticket

Output

Problem Ticket Prepared for Closure

Problem Solution Communication

Associated Artifacts

Problem Ticket

Responsible Role

Problem Owner

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Problem SME; Stakeholder Offices

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-05.04 Major Problem?

Previous Activities

PBM-05.03 Communicate Problem Solution

Next Activities

If "YES":

PBM-05.05 Conduct Major Problem Review

Or

If "NO":

PBM-05.06 Close Problem and Associated Incident Records

Description

The Problem Owner determines if the problem was major (Yes) or not (No) using the following criteria for a major problem:

- Any problem resulting from a priority 1 or priority 2 incident

- Any problem that impacts multiple areas

- Any problem that would benefit from additional review (based on input from the Problem Manager)

Responsible Role

Problem Owner

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Problem SME

Process Activity Name: PBM-05.05 Conduct Major Problem Review

Previous Activities

PBM-05.04 Major Problem?

Next Activities

PBM-05.06 Close Problem and Associated Incident Records

Description

The Problem Manager conducts a Major Problem Review by confirming resolution or executing a course of action for resolving the issue.

Input

Executed Workaround/Fix

Flagged Knowledge and/or User-facing Articles

Known Error Record

Management Decisions

Problem Ticket

Output

Major Problem Review

Confirmed Resolution

Executed Resolution

Associated Artifacts

None Listed

Responsible Role

Problem Manager

Accountable Role

Problem Owner

Consulted Role

Problem SME

Informed Role

OIT Problem Analyst; Problem Requester

Tools and Websites

IT Service Management

More Info

None Listed

Process Activity Name: PBM-05.06 Close Problem and Associated Incident Records

Previous Activities

PBM-05.04 Major Problem?

Or

PBM-05.05 Conduct Major Problem Review

Next Activities

Process Ends

Description

The Problem Owner closes the problem and associated incident records by completing all necessary problem closure fields on the closing the problem record and associated incident records. The Problem Owner will also complete a request for change, as required.

Input

Executed Workaround/Fix

Flagged Knowledge and/or User-facing Articles

Incident Records

Known Error Record

Management Decisions

Problem Ticket

Output

Closed Incident Record

Closed Problem Ticket

Request for Change, if Required

Associated Artifacts

Incident Ticket

Problem Ticket

Request for Change

Responsible Role

Problem Owner

Accountable Role

Problem Manager

Consulted Role

None Listed

Informed Role

OIT Problem Analyst; Problem Requester; Problem SME

Tools and Websites

IT Service Management

More Info

None Listed

END OF PROCESS