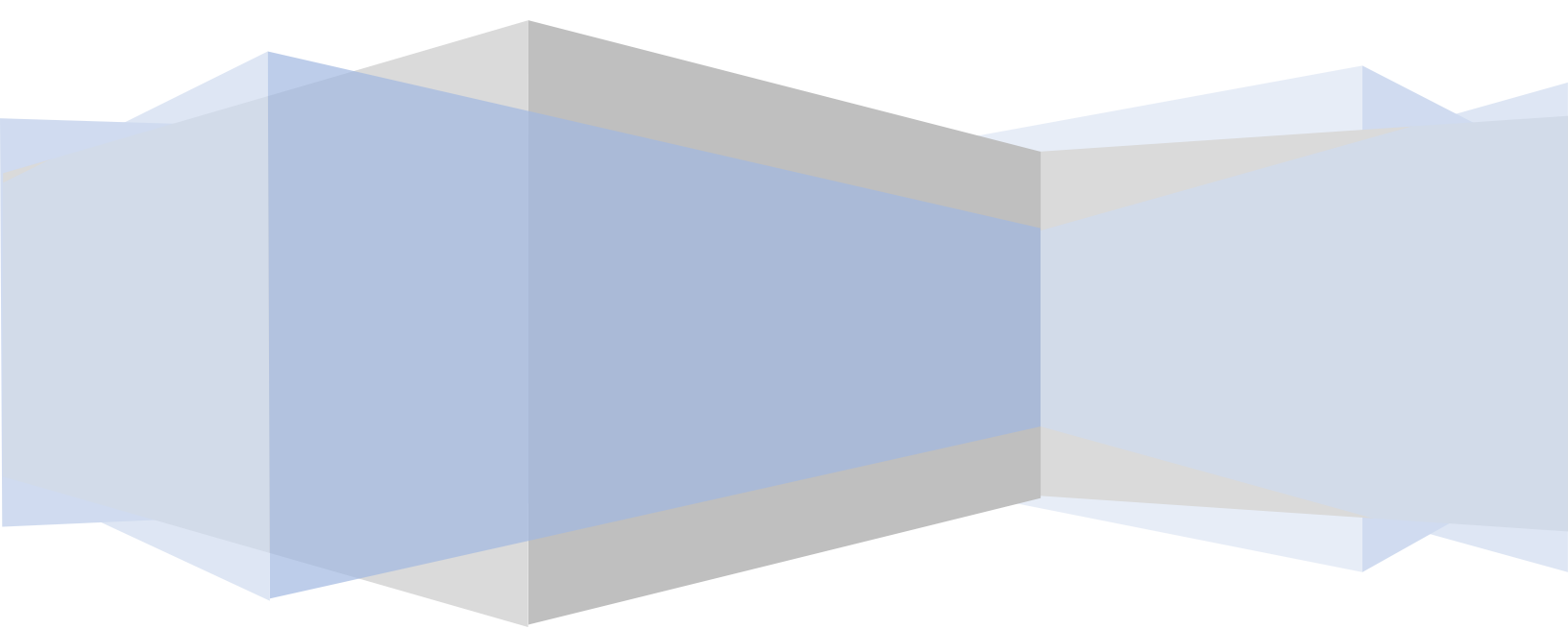


Problem Management Process

Vanderbilt University

June 10, 2020



Contents

Version History.....	3
Summary	4
ITIL Problem Management.....	4
Proactive vs. Reactive Problem Management	5
Incident – Problem – Change – Knowledge	5
When is a Problem created?.....	6
Who can create Problems?.....	6
Viewing Problems	6
Problem Ownership	7
When should a Problem be moved to the Problem Management Team?	7
Problem Lifetime.....	7
Design Considerations	8
Problem Status / Workflow	8
Problem Statuses	8
Problem Workflow	9
Problem Form	10
Problem Priority.....	10
Top Issues.....	Error! Bookmark not defined.
Known Errors.....	10
Incident Relationships.....	11
Problem Relationships	11
Change Relationships.....	11
Incident – Problem – Change Relationships	11

Version History

Date	Version	Who	Comments
6/5/2018	1.0	Kevin Kraus	First draft
6/7/2018	1.1	ITSM team	Edits, additions
7/10/2018	1.2	C Graves	Edits
6/11/2020	1.3	T Osborne	Updated workflow, removed Top Issue, references to Tweets
9/14/2020		Taj Wolff	Approval of document

Summary

A Problem may be the cause of one or more related Incidents. Problems involve a more complicated issue than Incidents and require a deeper investigative process so that the Incidents do not reoccur. Incidents, Problems and Changes can be independent of each other or used together.

ITIL Problem Management

Problem Management is an IT Service Management process tasked with managing the life cycle of underlying "Problems."

ITIL does not provide organizations with an exact method of adopting Problem Management, rather a structured framework that requires adjustment to fit individual business needs and constraints.



Proactive vs. Reactive Problem Management

Reactive Problem Management is the Problem-solving response to one or more Incidents.

Proactive Problem Management identifies and solves Problems before Incidents occur. This activity is associated with Continual Service Improvement (CSI).

Incident – Problem – Change – Knowledge

Incident, Problem and Change records can be created and managed separately. When combined, and included with Knowledge Known Errors and Workarounds, the value of the cumulative information often exceeds the value of information from individual modules.

The Problem Management process works in conjunction with Incident, Change, and Knowledge Management to provide value to the business. The primary goal of Problem Management is to minimize the impact of Problems on the business and prevent recurrence. A successful Problem Management process reduces downtime and disruptions.

Normally, an Incident needs to be resolved within a specific timeline; the goal is to restore service as quickly as possible. Problems are often researched and investigated over a longer period, until root cause is identified, and a permanent resolution is implemented.

When is a Problem created?

A Problem record is created to track a recurring issue, or when extended resource involvement is needed to address recurring issues or issues with no immediate resolution. Extended resources include budget cycles, multiple support teams, vendors, and Subject Matter Experts.

Who can create Problems?

Any team can create a Problem, with the exception of Tier 1 user permissions.

Problems are typically created by the Team that owns, or is experiencing, the Problem. The Problem Management Team can also create or own Problems.

The Problem Management Team is comprised of representatives from various technical support teams, including Security, Cloud Services, Network, and Hosting Services. Problems can be escalated to the Problem Management Team for determination of next steps and final disposition.

The Problem Priority Matrix is University wide.

		Impact		
		University Wide	Small Group	Individual
Urgency	Work is blocked	1	1	2
	Work is degraded	1	2	3
	Work is unaffected	3	4	4

Viewing Problems

Details of Problems can be viewed by IT Teams with no restriction.

Designated Problem fields, such as Diagnosis and Workaround, can be published to Vanderbilt University Authenticated customers.

Problem Ownership

A Problem remains with the Team that created it, until that Team determines it needs to go to another Team or the Problem Management Team. The Problem Management Team can also assume ownership.

The assigned team owner manages the Problem and related tasks, including procurement of needed resources, to resolve the Problem.

Ownership may be transferred to another Team, or to the Problem Management Team, during the life cycle of the Problem.

When should a Problem be moved to the Problem Management Team?

Problems may be transferred to the Problem Management Team when:

- Additional resources are needed for investigation.
- Increased awareness, visibility, urgency or broader management involvement are required.

Other considerations for escalation to the Problem Management Team include:

- Multiple teams are involved, including competing goals between multiple teams.
- Determination of other teams or vendors who can help resolve the Problem.
- High impact to the University.
- Urgency or visibility dictates the need for communication to leadership.

Problem Lifetime

Problems can remain active indefinitely, until:

- A resolution is implemented.
- A workaround is documented.
- A project or change is completed.
- The Problem is no longer an issue.

Design Considerations

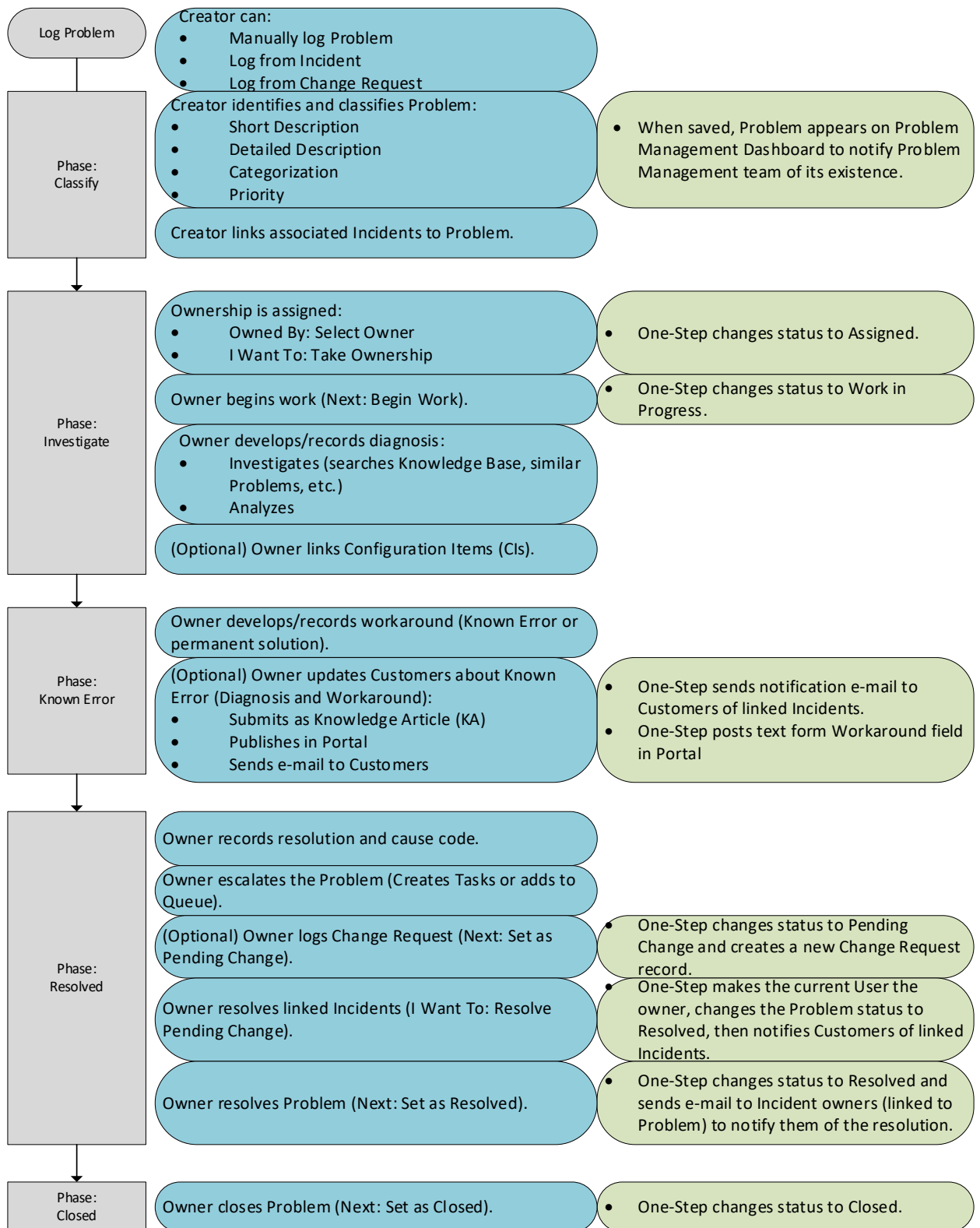
This section covers Design Considerations for a Problem Management implementation. Specific forms and statuses are based on the Cherwell IT Service Management system.

Problem Status / Workflow

Problem Statuses

- **New:** Problem is logged, identified, and classified.
- **Assigned:** Problem is assigned to an owner team.
- **Work in Progress:** Problem is diagnosed, investigated, and analyzed.
- **Pending Change:** Problem is on hold until a Change Request is implemented.
- **Resolved:** Problem is resolved.
- **Closed:** Problem is closed.

Problem Workflow



Problem Form

Problem 10228

Status **New**
Next: Begin Work

Priority

Linked Incidents **0**

Owned By: Assign To...

- select owner -
- select team -

I Want To:

- [Take Ownership](#)
- [Publish to Top Issues in Portal](#)
- [Send E-Mail Update to Customer](#)
- [Resolve Attached Incidents](#)
- [Set as Resolved](#)
- [View More Status Options](#)

Classify
Investigate
Known Error
Resolve
Closed

Step 1: Identify and Classify Last Edited by

Short Description: [Tweet](#)

Detailed Description:

Service:

Category:

Priority:

Step 2: Investigation and Analysis

Diagnosis:

Affected CI: [View Impacted CI's](#)

Step 3: Workaround and Known Error

Workaround:

[Submit Workaround to Knowledge Base](#)

[Publish Known Error in Portal](#)

[Tweet Known Error](#)

Step 4: Root Cause and Resolution

Resolution:

Cause Code:

Problem Priority

The Problem priority matrix is customizable. This matrix has been customized for Vanderbilt University.

		Impact		
		University Wide	Small Group	Individual
Urgency	Work is blocked	1	1	2
	Work is degraded	1	2	3
	Work is unaffected	3	4	4

Known Errors

A Known Error is a Problem that has a documented Root Cause and Workaround. Multiple Known Errors can exist simultaneously, with corresponding Known Error Workarounds and Solutions documented in Knowledge Articles.

Known Errors can be published to the Customer Portal, notifying customers of the issue, providing Workarounds, and reducing calls to the Service desk.

- Example
 - Web Mail doesn't work with browser XYZ, use browser ABC.
- Published to the Portal for Customer notification
 - Form: Publish Known Errors in Portal
- Fields Used

- Diagnosis
- Workaround

Incident Relationships

- Can be linked to a Problem
- Can be linked to a Change

Problem Relationships

- Can have linked Incidents
- Can be linked to a Change
- When a Problem is active, linked Incidents can be resolved
 - Form: Resolve Attached Incidents -> Resolve Incidents (Folder: Blueprint - Workflow Actions -> One-Step)

Change Relationships

- Can have linked Incidents
- Can have linked Problems
- When a Change is Resolved, linked Problems can be closed
 - Auto-Close Problem (Folder: Blueprint -> One-Step). This would be added to the Form.
- When a Problem is Closed, linked Incidents can be resolved
 - Automation Process: Problem – Resolve Incident -> Resolve Incidents (Automation Process) (Folder: Blueprint - Workflow Actions -> One-Step)

Incident – Problem – Change Relationships

- An Incident can be linked to a Problem, and a Problem can be linked to a Change
- When the Change is Resolved, a linked Problem can be resolved. Linked Incidents to Problems can also be Resolved.