Problem Management in Technical Support

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Expert commentary provided by Buff Scott III, Principal Consultant, Propoint Solutions

While the practice of problem management isn't new, the buzz surrounding its implementation and benefits continues to grow as organizations mature and move beyond incident management. This month's HDI Research Brief reveals the current state of the industry with regard to problem management. This report shares findings from an online survey completed in March and April 2014 by 475 technical support professionals across more than thirty vertical industries. In addition, Buff Scott, ITIL Expert and co-author of the new HDI Problem Management Professional certification, weighs in on the findings with expert analysis and commentary.

Survey Results

In 85 percent of organizations that responded to this survey, problem management processes are at least under development. Of those, 54 percent report that their processes are ITIL-based, and an additional 36 percent report that their processes are somewhat based on ITIL.

It's interesting to note that a larger percentage claims to be following problem management process of some sort than those that have documented processes. "In other words," Scott says, "some appear to be following a more informal process—'tribal knowledge'—than an actual formal process."

There may be some hurdles to clear when making the transition from immature problem management to a more mature, more formal process. "Often, senior leader sponsorship and support can be difficult to gain, and,
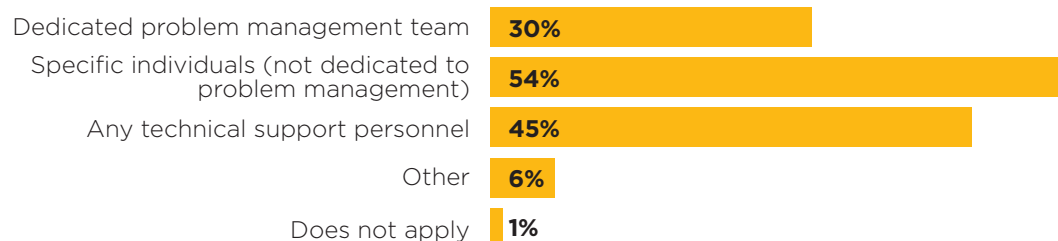
Do technical support organizations have formal problem management processes?

No process	**15%**
Under development	**36%**
Documented	**31%**
Followed	**35%**

Percentage of organizations
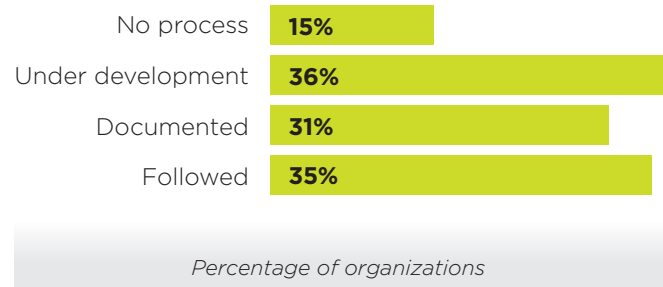
without that, the resources needed to accomplish successful problem management can be lacking," Scott says. "People need to be able to dedicate their time to the implementation and processes, and money often needs to be allocated to new technologies." Other roadblocks he's seen include incomplete and/or inaccurate data-logging; lack of daily oversight; lack of process compliance or adherence; ineffective management reporting; and the lack of appropriately skilled support personnel in the right positions.

Scott points out that the size of the organization can have an impact on the staff engaged in problem man-

Who engages in problem management activities?

Dedicated problem management team	**30%**
Specific individuals (not dedicated to problem management)	**54%**
Any technical support personnel	**45%**
Other	**6%**
Does not apply	**1%**

Percentage of organizations

agement. In 54 percent of organizations, problem management activities are assigned to specific individuals who perform other activities besides problem management. Scott says, "What I've often seen in organizations is that when the service desk can't resolve an incident, they escalate to tier 2 support personnel. Tier 2 support personnel are primarily assigned to work incidents, and then problems are typically handled by tier 3 personnel, who also spend their time working on more complex technical issues and projects."

In 45 percent of organizations, problem management activities are assigned to any technical support personnel. Scott says, "This is more common in smaller organizations, but larger organizations do this as well to make the best use of available resources." In addition, 30 percent report that they have a dedicated problem management team. A problem manager (individual) was the most common "other" response to this question.

Part of the problem management process is communicating known errors to support staff. The vast majority of organizations are using email, the ticketing system, and the knowledge base to communicate known errors to support staff. "A common practice is that when a solution or workaround (i.e., a known error) is identified by a support group, it's documented in the incident or problem record and communicated to the service desk and immediate support group team members via a notification coming from the ticketing system or via an email," Scott says, adding that, "The known error should then be recorded (in draft mode) in a common repository (e.g., knowledge base, known error database) that's accessible to everyone until it's formally reviewed and published in

"If problem management processes are in place, documented, communicated, trained on, followed up on, measured, and enforced, this will result in a reduction in incident volume, an increase in first call resolution, shorter mean times to restore service, and, ultimately, greater customer satisfaction."

—Buff Scott III, principal consultant, Propoint Solutions

the knowledge base. It should then be communicated to additional personnel based on the organization's established knowledge management practices."

The survey results indicate that of those who at least report having problem management under development, almost one-third either aren't opening problems proactively or don't know if they are (which means there's a good chance they're not). "Organizations should be able to identify and report on problem records that were opened proactively. This could be done through a field that is checked on the record, or a drop-down that indicates this record was opened reactively or proactively, with the default being reactively," explains Scott.

An additional 49 percent are proactively opening ten percent or fewer problems. "Few organizations do a good job of proactive problem management," Scott says. "Proactive problem management is sometimes hard to quantify in terms of the benefits, and there's a perception that it fixes potential problems and outages, not real

How do organizations communicate known errors to support staff?

Email notification	Ticketing system	Knowledge base	Known error database	Notify by IM/ Chat/Phone	Wiki/ web page	Other
56%	**51%**	**44%**	**25%**	**16%**	**12%**	**6%**

Percentage of organizations

ones. However, an easy way to perform proactive problem management is to perform incident analysis over different time periods. This doesn't require technical expertise, and any findings that indicate a potential problem can be referred to problem analysts for further investigation."

More specifically the organization needs to look for repeat incidents with similar characteristics (e.g., category, affected service, configuration item, cause, resolution) and then group those incidents into discrete categories: physical causes (components failed), system errors (software failed), human causes (people did something wrong or failed to do something they should have), or

62% of organizations that are following a formal problem management process have also seen a decrease in recurring incidents.

organizational causes (a process, policy, or procedure is in error). Then begin looking for common causes in categories with high incident counts.

As part of the survey, those organizations that have implemented problem management to some degree were asked about the impact on their metrics, specifically their recurring incidents and their mean time to resolve (MTTR). With regard to the change in the recurring incidents received by the support center, 62 percent of organizations that reported following a formal problem

What percentage of problems are opened proactively (i.e., before they become visible to and felt by the organization)?

- 0% — 17%
- 1–10% — 49%
- 11–25% — 12%
- 26–50% — 6%
- Greater than 50% — 3%
- I don't know — 13%
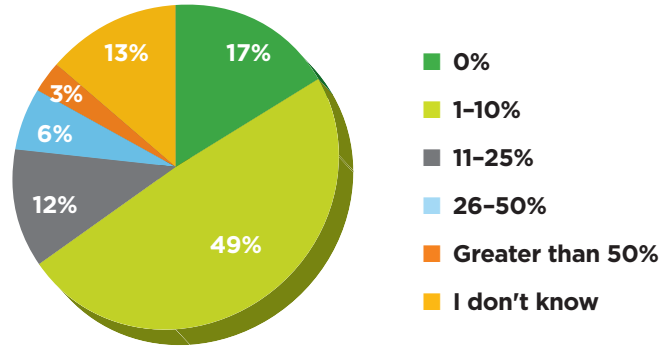
Percentage of organizations

management process also reported a decrease in recurring incidents. This indicates that implementing problem management can have an identifiable and positive effect on support organizations.

"For organizations that have either seen no reduction in recurring incidents or report that it's too early to tell, there could be a number of causes: they may not be able to track the impact of problem management back to incidents; the process may be new to the organization and not enough time has elapsed to draw a conclusion; or the process they've implemented may not be effective at identifying the correct root cause." Scott adds, "Linking incidents to their related problem records and utilizing a common categorization scheme for incident

Has your organization seen a decrease in recurring incidents since implementing a problem management process?

Does your organization have a formal problem management process?		Yes	No	It's too early to tell	Total
	Under development	13%	8%	80%	100
	Documented	43%	20%	37%	100
	Followed	62%	17%	21%	100

Percentage of organizations

and problem management will help organizations tie the problem and its resolution to those incidents that should no longer occur."

The results for MTTR are similar to the previous metric. They indicate that implementing problem management has had a clearly identifiable and positive effect on MTTR. Those organizations that reported following a formal problem management process (as opposed to the process being under development or simply documented) are seeing great success, with 53 percent reporting a shorter MTTR since implementing problem management.

The fact that the remaining organizations have either seen no reduction in MTTR (19%) or report that it's too early to tell (52%) can be attributed to a variety of causes: not having a knowledge base or a known error database (where workarounds can be found); having an immature or poorly configured knowledge base or known error database; failure to perform incident matching; not being able to track the impact of problem management on MTTR (i.e., a lack of data and reporting capabilities); or the process is new to the organization and not enough time has elapsed to draw a conclusion.

53% of organizations that are following a formal problem management process have also seen a decrease in MTTR.

Has your organization seen a reduction in its mean time to resolve incidents (MTTR) since implementing a problem management process?

Does your organization have a formal problem management process?		Yes	No	It's too early to tell	Total
	Under development	8%	10%	82%	100
	Documented	33%	28%	39%	100
	Followed	53%	23%	24%	100

Percentage of organizations

Conclusion

The research suggests that while most organizations see the value in problem management and are taking steps to implement the process, the majority of organizations are relatively immature when it comes to problem management. Scott points out that, "By eliminating recurring incidents and reducing the MTTR by implementing problem management, the business and IT productivity should increase and the business's perception of IT should be positively influenced." With the current pressures on technical support to prove its value to the business, the need for increased productivity and improved perception could not be more acute.