NASCIO 2018 State IT Recognition Awards

Title: Problem Management

Category: Enterprise IT Management Initiatives

State: Colorado

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Project Dates:

    Initiation Date: January 1, 2017

    End Date: Project Go-Live February 1, 2017

Executive Summary:

In the Governor's Office of Information Technology's (OIT) ongoing effort to improve best practices around IT Service Management, or ITSM, a need for an effective Problem Management solution became more and more evident as improvements were made within the Change and Major Incident Management processes. Seeing a number of constantly repeated Major Incidents with little to no follow up on root cause, OIT's ITSM Manager, Rob Nessler, partnered with a newly hired Problem Manager, Heather Waite, and set out to create and implement an after-action process that would both be effective and efficient, as well as support the needs of all of Colorado's executive branch agencies and residents.

The aim of this project was to achieve several key performance indicators, or KPIs, with respect to service interruptions enterprise-wide. At project initiation, it was observed that OIT had no effective system of root cause analysis following Major Incidents, nor was there record of any corrective actions taken to prevent further repeats of many incidents. The idea was to begin a slow transition from a reactive approach to a more proactive approach when it came to handling service interruptions and degradations. The resultant Problem Management protocol set a system in place whereby root cause would be determined and rectified (where possible) for every reported Major Incident, as well as trending incidents at the Service Desk level that never rose to Major Incident status. With buy-in from all technology teams associated with the Major Incident Management process, the new Problem Management process went live in February 2017, five months before the initially projected date.

While there was nearly an immediate reduction in incidents, we saw an enormous benefit in July 2017 when a constant outage at the Division of Motor Vehicles impact was eliminated because of this process. The positive successes seen from Problem Management, especially with this first major victory, coupled with all victories since then, have caused state officials to take notice and further the funding to expand ITSM initiatives like this one, securing an even better future of Service Management for the State of Colorado.

Project Narrative: Concept, Significance and Impact

Concept:

As OIT has matured over the past five years, a need arose to further improve customer service by taking a proactive service management approach rather than a reactive approach, as is the trapping of most IT organizations. To accomplish this, OIT set out to create a Problem Management protocol in line with ITIL best practices, to allow for better customer service through enhanced forecasting, maintenance, support trends, and high level communication. Simply put, this allowed OIT to look at the issues which frequently repeated and to take a deeper dive to resolve the underlying problem, therefore eliminating further occurrences.

Significance:

As any ITIL compliant process can be, this involved a new way of thinking about how we support the systems that allow our state to function. While emergency response is vitally important in all walks of life, equally (and perhaps more) important is the prevention of the emergencies to begin with. The challenge in this approach is one of resources - we had to ask already overworked people to spend even more time and energy investigating impact that has already been resolved in the short term, and often with no visible payoff for six, 12, even 18 months. This new protocol was the strong representation of OIT's paradigm shift from a "support provider" to a "service provider" in the sense that it expanded our ownership of support scenarios for the *entire* life of an incident, even after-action.

Furthermore, this process has opened up a forum wherein individuals from all different teams can now work together, while not in "firefighting mode" and discover solutions and preventative actions that were never discovered before. Through teamwork and collaboration, this allowed for less "firefighting mode" requirement and more creative problem solving.

The creation of such a process was in itself a challenge - there was nobody in the public sector doing this, so it was new territory. Borrowing from private sector practices, a process was created that would meet the needs of 18 separate state agencies supported by OIT while also meeting all security, confidentiality, and political requirements unique to government projects.

Impact:

As a rule, the benefits of Problem Management when managed well may not manifest for the IT provider, and by extension the customer, for 12-18 months. As they say, organizational change takes time. However, such was the state of OIT that positive results were seen immediately - through the simple resolution of a Major Incident caused by a failed UPS. The resultant Problem discussions led to a managed schedule of UPS maintenance and replacement that was previously not in place, effectively cutting all power related incidents in half almost immediately. This development led to many similar results through proper planning and strategy around the services provided - things that we "never had time to do" before making it an enterprise requirement. We saw overall major incident numbers drop up to 5% per month right from the onset.

The biggest and most visible impact came with the resolution of one major ongoing problem. A vendor-managed system used at the Division of Motor Vehicles (DMV) had been plagued with service interruptions for a full year - often resulting in 30+ Major Incidents per month on that system alone. To put this in perspective: when a Colorado resident had a need for a Driver License service, it would often require taking time from work to go to the DMV to take care of business. Prior to this resolution, it was not uncommon for Coloradans to be turned away due to systems being down, causing them to have to take more time from work, often several times. Such was the nature of the system that Coloradans were impacted directly by these interruptions, often resulting in bad press and finger pointing by local news media.

The unrelenting nature of the Problem Management process and the ITSM Team at OIT led to a marathon troubleshooting session over a full weekend, and through the cooperation of several teams on both the vendor and OIT sides, a discovery was finally made and corrected, effectively eliminating this constant outage completely. With that one victory, the DMV Services outages disappeared almost entirely, and immediately upon resolution. This accounted for a reduction in overall Major Incidents by nearly 40%, and created an immediate positive ripple effect through the agency responsible for the system.

Since then, at least two other state governments were able to glean the methods of success from our experience and apply them locally, vastly improving their own service levels in this arena. It has also opened the door for other states experiencing similar issues to learn from OIT's example by maturing their own processes and attacking the big problems in their states following OIT's lead. Members of OIT's ITSM Team have been invited to speak at worldwide conferences, bringing international attention to OIT's efforts. The team has also worked on a more individual basis to help other government entities (state, city, and county governments) reproduce the success evident with OIT's ITSM practices.