

2009 - NASCIO RECOGNITION AWARD NOMINATION
Nomination Category: Enterprise IT Management Initiatives
Government's Watchful Eye: The Michigan Service Management Center Project



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Identifiers and Contacts

<i>Name of Project or Proposal</i>	Government's Watchful Eye: The Michigan Service Management Center Project
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<i>Category (e.g. G2B, G2C).</i>	Enterprise IT Management Initiatives

B. EXECUTIVE SUMMARY:

From citizens renewing their driver's licenses to new businesses seeking permits, government's customers have long-sought efficient, end-to-end technology support without excuses or finger-pointing. The wait is over. The Michigan Department of Information Technology (MDIT) not only monitors essential government systems, we proactively provide real-time redundancy if hardware or software fails. Our 7x24 support for all executive branch agencies includes over 800 critical business applications and over 1,300 telecommunications locations across the state. The Service Management Center (SMC) has become Michigan Government's around-the-clock watchful eye that catches service impacting incidents before our clients start calling about them – enabling new trust in government services.

This first-in-the-nation enterprise service is the result of careful planning and a new vision for government IT management. Through a comprehensive review and reengineering of existing technology support (prior to MDIT), we completed an, "As is/to be, gap analysis" examining services from a customer perspective. This new enterprise system management approach can be adapted by governments everywhere. Previous processes and procedures were characterized as internally focused and often concentrating on technical operational issues that clients did not understand. The old goal was to keep the "hardware running," with little thought as to what that meant to critical systems or businesses. Staff talked about mainframes, servers and routers being down, but our clients had to interpret what that meant to their business. Organizational turf issues sometimes led to statements such as "not my job."

To improve communication issues with internal and external clients, MDIT established an innovative Information Technology Infrastructure Library (ITIL)-based Service Management Center (SMC). Staff developed new processes with an overall service strategy to align with data center and system support governance and decision making with mission priorities. The Department implemented a 7 x 24 x 365 Service Monitoring, Incident Response, Technology Coordination and Communication Center for its enterprise IT operations environment which led to dramatic improvement in service delivery. This has allowed MDIT to more efficiently facilitate and communicate incident, monitoring, configuration management and change management events that affect IT service delivery for all executive branch agencies.

Tested processes and procedures are now relied upon by IT staff on a daily basis. The "big screen" dashboard consoles provide timely status information for the successful delivery of IT Services Statewide. Our immense progress is reaffirmed daily in our "day start call" which ensures that executives and staff alike have seamless, up-to-date information on critical systems status. This framework and ITIL based processes are used for virus outbreaks and other serious emergency situations and are easily adaptable to other governmental entities and large businesses. With instantaneous and consistent communication in times of crisis for IT staff and our executives, anywhere, anytime, our clients benefit with better uptime, quicker problem resolution and lower costs. We saved over \$13 Million on the average FTE cost from 2005-08. This behind the scenes client video demonstrates the SMC's enormous impact: [Http://www.michigan.gov/mdit-smc](http://www.michigan.gov/mdit-smc)

C. DESCRIPTION OF THE PROBLEM:

In Michigan, enterprise-wide consolidation projects saved millions of dollars, but our operational processes were not developed with enterprise consolidation in mind. IT Infrastructure staff in Michigan began focusing more on managing hardware and software, and less and less on what our agencies' business was required to do for State Government. We ran nine complex mainframes, vast networks, and thousands of servers for our customers, but *they ran the business*.

Over time, we had lost touch with what was running on our platforms, and the significance of the services we offered each client. Our clients didn't understand the technical jargon we spoke, and we understood less and less about what our client's business demands were. When we experienced outages, it was very difficult for MDIT staff to know what application was down, which agencies were impacted, and who needed to know. Our clients and our executives were left in the dark about what was working and what was not. Our Clients were not happy, our executives were not happy and IT was overwhelmed with just "Running IT". Our Clients were beginning to look elsewhere for some of their IT Services. To survive, we needed to find a solution that helped *IT manage the business of IT*.

Our Solution – An ITIL Framework - After researching solutions for Michigan's IT service delivery problems, the Information Technology Infrastructure Library (ITIL) was determined to be a best practice solution used worldwide. ITIL enables the management of services throughout their lifecycle, monitors the performance of services and their underlying agreements, manages the evolution of services and allows the organization to adjust the service offerings to changing business needs. Utilizing the ITIL framework, MDIT was able jump start a new service culture by embracing a common language and set of conceptual processes designed for IT organizations.

Finding the path to a "Service Delivery Culture" – Early in 2002, we performed a gap analysis of ITIL recommended practices and Michigan's practice for the same process. Using this information, MDIT was able to begin the planning process for the culture changes required to migrate toward service process disciplines. Service Management Tools were required to help Michigan move in the right direction. Research done at that time determined that Service Management software on the market was very costly, and did not fully address the demanding consolidated MDIT service environment. Instead of acquiring the software, we decided to build an ITIL-based solution which integrated with our Remedy help desk tracking system. Version 1.0 of Service Management and Monitoring System (SMMS) was built by MDIT staff to address early release management, incident management and configuration management processes. In August 2003, MDIT began to roll out these early ITIL based processes, and launched the 7 x 24 x 365 Service Management Center (SMC).

First State in Nation with Enterprise-wide ITIL Reality – MDIT initiated the first "Day Start" conference call on March 8, 2004 – the first in the nation using ITIL with an enterprise-wide management approach and strategy covering all agencies. With its frequency and regularity, today this has become a morning ritual for many MDIT Executives and IT staff. Whether they are on the road or sitting at their desk, it is a great way to stay informed about the availability of IT Services to our Clients, *prior* to the

start of the business day. Armed with this information, they are ready to begin their day working with their respective client agencies on any service related issues that may be affecting the client.

The goal of the early Day Start process was to deliver timely, enterprise-impacting information to key decision-makers at the start of each business day. Over the next couple of years, our SMC processes and our software continued to evolve to include ITIL based problem management and change management. The Day Start process expanded to accommodate those new processes, and ITIL began to receive a great deal of attention by MDIT's CIO and other IT executives. Attendance on the call was tracked, and our morning Day Start "audience and fan base" grew. By 2006, the Day Start process had evolved to a point where MDIT was communicating the status of recent service impacting incidents, approved changes, outstanding problems, and noteworthy announcements to a large number of IT staff using the same "Service Terms" that our Clients used.

Today, work begins each morning at 5:30 AM preparing for the "Day Start" conference call. SMC staff arrives and begins reviewing the status of all service impacting Incidents, Changes, and Problems. They work with the staff from the night shift to update the status of incidents, ensuring the information posted to the SMC Operations Status Board is captured from a "Service impacting" perspective. At 6:30 AM, many of our Technical Support Staff begin arriving to work. The SMC staff initiates calls to obtain up-to-date information on any open incidents or recently closed incidents; ensuring information is accurately updated prior to the Day Start Call. The Day Start conference call begins at 7:30 AM each workday when an SMC staff member prepares IT Staff by "announcing" the "*Breaking IT Service News of the day*".

In 2007, MDIT recognized that we still had a long way to go to truly become an "ITIL compliant" Service provider. We needed to do further planning, education and marketing to continue to work through MDIT processes to adapt our entire business environment to the new Service culture. More work was needed to evangelize and mature the ITIL processes across the Department. Seeing fewer service disruptions, the State CIO and MDIT's Executive Team encouraged staff to grow this culture, by providing support and direction. In 2008, the Project team focused on training, evangelizing the ITIL story, ITIL Governance, Enterprise wide Configuration Management and Change Management processes for the entire enterprise. Our SMMS Application continues to evolve, and is considered one of our essential services.

D. SIGNIFICANCE

The Service Management Center has constantly improved to become an essential government function in Michigan. Just as NASA relies on their Houston space flight control center to manage shuttle missions, MDIT relies on the SMC to manage critical government services.

In early 2008, MDIT published a set of guiding principles-developed with and for IT stakeholders across Michigan that drove the development of Michigan's 2008-2012 IT goals, strategies and initiatives. They are as follows:

- Effective and Efficient Customer-Based Operations and Services

- Performance, Accountability and Public Value
- Privacy, Security and Public Trust
- High Performance Worker and Workplace
- Agile Management and Infrastructure
- Shared Solutions, Standards and Flexible, Open Boundaries
- Maturation and Modernization of Solutions
- Innovation and Transformation

Whether by creating better communication and accountability or pointing to the modernization of solutions with innovative ideas, this project intersects with each of these guiding principles and is just one of the reasons it has been a success. This behind the scenes client video demonstrates the SMC's enormous impact: [Http://www.michigan.gov/mdit-smc](http://www.michigan.gov/mdit-smc) Some facts regarding the significance of this project include:

- ITIL Concepts Training was offered department wide in the fall of 2007 and over 200 State employees were introduced to ITIL. Foundation Training and certification testing was provided to a Team of key employees that same year, followed by ITIL Practitioners training and certification in 2008. In 2008 and 2009, the SMC began introducing the tools, processes and benefits of ITIL to MDIT Staff. Interest has continued to grow, and we now have waiting lists for presentations and training. MDIT can now talk about *Service Availability*, rather than hardware outages.
- The SMMS application now controls all records in Incident and Release Management, and is a portal into the Configuration Management database and the State of Michigan's Client Service Center help desk system. It is truly one stop shopping for ITIL process updates.
- The SMMS Operations Status board is shown live in five different MDIT office areas, including the executive office. As MDIT employees walk by the common area, they may look at the incident board, their eyes checking the board for new incidents that may affect their service areas. Our Executives now know about service impacting incidents **BEFORE** our Clients start calling them, and they know who in MDIT has responsibility for incident resolution.
- All IT business services within MDIT are now classified either as a *Medium, High or Urgent* criticality based on the Client's business requirements. Through this process a "*Red Card*" of critical applications was generated that has become standard issue for MDIT staff as well as other State Agencies. This card ensures that everyone knows what business application services are most critical to State Government.
- In the event of an enterprise wide service outage, the SMC assists with the activation of the Department's Emergency Coordination Center (ECC). Conference calls are organized and the "Day Start" call bridge is used for ECC Updates to the Department's executives throughout the crisis. The Department's Emergency Management Crisis team is assembled along with SMC staff into the Department's "War Room", where the crisis is managed until resolution, using the tools and processes we also use on a daily basis to manage all IT Incidents. Whether the service disruption is a Pandemic, a Statewide Power outage, or a disruption to a critical business application effecting State and Local Government, the tools and

processes of our SMC are depended upon by the Department to ensure that services are restored as soon as possible and that we communicate throughout the event the significance and status of the event.

- Post Incident Review (PIR) and Root Cause Analysis (RCA) are now performed on all Major Incidents. The information obtained from these two processes, helps our IT staff respond to similar outages in a consistent manner. The more staff understands how an incident occurred, the more likely they will not make same mistake again.
- In June 2007, MDIT implemented a Change Management Policy, managing all changes to IT services in State Government. The Request for Change (RFC) process was a “*recommended*” process until this time with some IT organizations following the process but many did not. The new policy included the establishment of a change management governance board to govern the processes around change, and an Enterprise Change Management approval process. Local Change boards were established for each IT service area within MDIT. As part of the change, the submittal form requires planning and a back out plan in case the change doesn’t go as planned. Another advantage of good change management is that SMMS provides a forward schedule of changes – providing an on-line knowledgebase for the State to use, when triaging a service outage or planning a future change.
- Notification of an incident was previously a very manual and complex problem, especially during an enterprise wide outage. The old manual process often took a team over an hour to call 40 MDIT staff, often with only a 50-60% success rate. In mid 2008, MDIT acquired a software solution from Strohl Systems (Notifind). This solution has allowed the SMC to reach out and “touch” a very *mobile* IT organization with up-to-date information on outages that are impacting their clients’ ability to provide critical business services. Today, *one person* can reach hundreds of mobile MDIT staff in less than 3-4 minutes. This tool has enabled *instantaneous and consistent* communication in times of crisis for IT staff and our executives, *anywhere, anytime*. One of our executives commented that Notifind is “Relentless” in delivering information.

E. BENEFIT OF THE PROJECT

The creation of the System Management organization, its processes and the selection of ITIL as a Service Management framework solved the communication and service related problems MDIT had experienced. With the changes completed, MDIT is now speaking the same language as the agencies it serves. Our Clients are not looking elsewhere for IT Services.

Communication efforts such as the SMMS application, incident notification, the Day Start Call, and the new Change process all contributed to this win, but stopping there simply doesn’t tell the whole story.

During several major virus outbreaks over the past four years, as well as two international CYBERSTORM exercises, the SMC provided the essential processes, procedures and communication to ensure that all MDIT activities were coordinated. From regular conference calls, to centrally tracking incidents, to the coordination of customer messages, the SMC enabled the maximum benefit to assist all parts of the organization to quickly respond in a manner that prevented thousands of additional

infections and saved millions of dollars through cost avoidance. The return on investment includes:

- The Data Center implemented this ITIL solution without any additional cost to their clients; they also provided over 30 Million dollars in rebates back to their clients over the last 5 years due to efficiencies gained over the same time period in the Data Center.
- Michigan avoided spending over \$5 million for an off the shelf Service Management Software in 2003.
- Investment of more than \$750,000 for application development services for the SMMS Application and two part time ITIL process specialists.
- Cost for ITIL training \$32,000 for 212 employees.

The SMC and the adoption of ITIL also contributed to better overall services for our clients. As the chart below shows, with the increased participation of MDIT Staff, our reported changes and incidents are up, but the resolution time of the incidents has decreased. The cost of an incident was driven down from \$1,407 in 2004 to \$733 in 2008. By driving efficiencies into the incident management process, our cost per incident and time duration will continue to decline. From 2005-2008 we were able to save over \$13 Million based on the average FTE cost. By bringing greater efficiency to IT processes, ITIL frees up IT staff from routine work and lets them work on business valued services – like putting up a new business portal in Michigan to assist new business start-ups.

Year	Total Incidents	Percentage of Incidents				Cost / Incident	Total Incident Cost Savings
		≤ 1 hour	≤ 12 hours	≤ 24 hours	≥ 24 hours		
2004	3,667	7%	36%	42%	15%	\$ 1,407.13	
2005	4,820	24%	60%	10%	6%	\$ 613.20	\$ 3,826,740.75
2006	4,860	36%	25%	13%	29%	\$ 970.75	\$ 2,120,789.93
2007	5,055	32%	42%	11%	15%	\$ 699.20	\$ 3,578,572.21
2008	5,231	41%	25%	14%	20%	\$ 733.04	\$ 3,526,157.32
							\$ 13,052,260.20

The change process requires a well thought out plan for implementing change, and of course, a back out plan if there are problems. Our knowledgebase of changes and incidents has contributed to better information on the cause of service outages, and change “templates” allowed for consistent change processes in the Department. With standard change management processes, the risk of disrupting critical systems through undocumented and unplanned changes drops dramatically. Critical IT services are available when Government and our Citizens need them and IT support staff spends less time chasing down problems and restoring services. The ITIL processes helped MDIT make change where change was needed and helped us resolve service impacting incidents faster. Our Employees now have the information they need to deliver value to their clients.