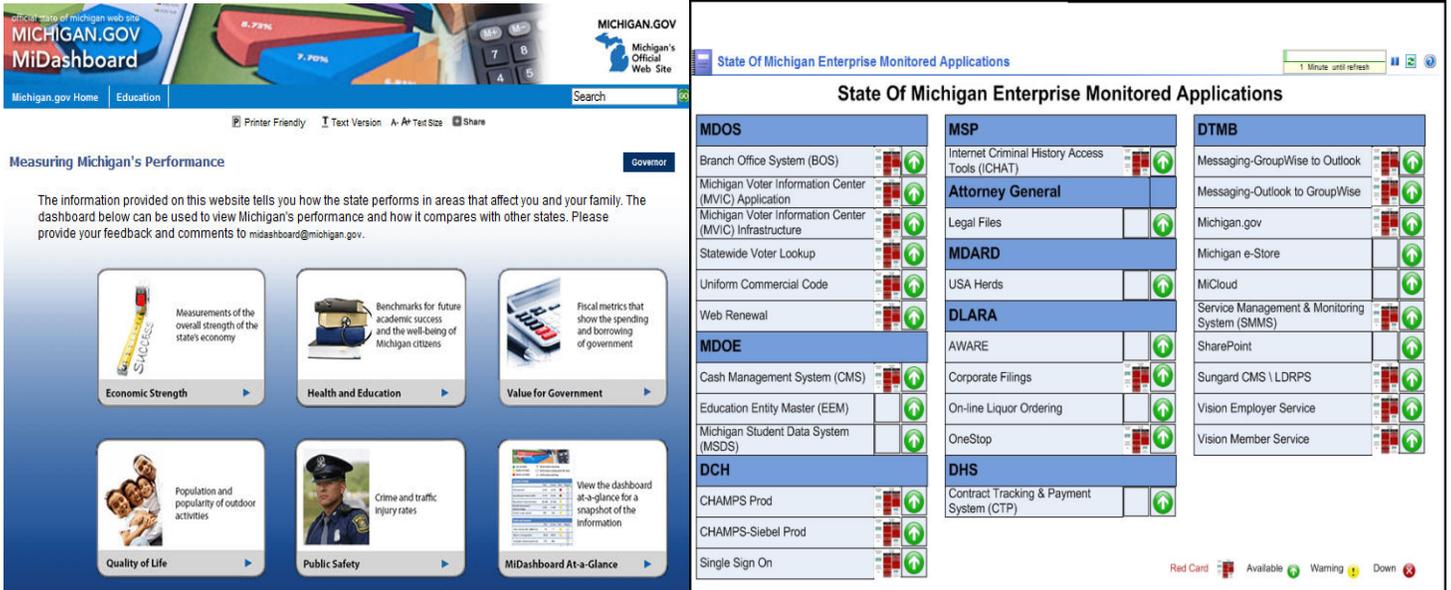


**2011 - NASCIO RECOGNITION AWARD NOMINATION**  
**Nomination Category: Enterprise IT Management Initiatives**  
**Optimizing Government Technology Value: Establishing Enterprise Metrics to**  
**Ensure Operational Readiness and Business Availability**



**A. Cover Sheet**

**Identifiers and Contacts**

*Name of Project or Proposal*

Optimizing Government Technology Value: Establishing Enterprise Metrics to Ensure Operational Readiness and Business Availability

*Name of State Agency*

State of Michigan, Department of Technology, Management & Budget (DTMB), Infrastructure Services

*Name of Sponsor*

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*Name of contact person for any vendor  
involved in drafting the materials*

Carol Steele Sherman

*Recommended nomination category  
(e.g. G2B, G2C).*

Enterprise IT Management Initiatives

*Description of any previous recognition  
received by project*

None.

## **B. EXECUTIVE SUMMARY:**

Michigan has received many benefits from its consolidation model by driving efficiencies into our processes. These changes have allowed the Department of Technology, Management & Budget (DTMB) to modernize and become more agile and responsive in our effort to transform government services. That transformation has many benefits including substantial savings for our clients. From 2008-2010 the Data Center was able to save the State of Michigan over \$45.3 Million dollars with our new service oriented focus. In 2009/2010 it became very clear that Michigan was poised for a new administration with challenging new business goals for Michigan. Our clients were faced with growing budget shortfalls and were demanding reliable IT solutions and cost reductions. IT needed to drive more efficiency into their processes so they could remain competitive and continue to drive IT costs down. Measuring Government value became a key component of newly elected Governor Snyder's transition early in November 2010, and DTMB was ready for those challenges thanks to DTMB's new Service Management & Monitoring system (SMMS) Strategies.

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! DTMB's SMMS monitors and manages essential services for our business customers that are fit for purpose, stable and which are so reliable that the business views them as a trusted utility. More than that, DTMB measures critical service availability with new Service Level Agreement (SLA) information for our clients. Our 7x24 support for all executive branch agencies includes over 32,110 business applications and over 1,300 telecommunication locations across the state. The Service Management Center (SMC) builds trust regarding the reliability of critical infrastructure within Michigan - optimizing government technology value to include operational readiness and business availability. This first-in-the-nation enterprise SMC service is the result of careful planning and a new vision for government that is easily transferable to other government agencies. To improve communication issues with internal and external clients, DTMB introduced an innovative best practice Information Technology Infrastructure Library (ITIL)-based Service Operation focused on a holistic service lifecycle. In January 2010, a new modernized solution was introduced to automate and facilitate the SMMS function for Michigan. This system facilitates service availability functions and tracks and reports availability metrics for IT Service Operations. Staff developed new processes with an overall service strategy to align with data center and system support governance, decision making, with mission critical priorities. The newly integrated 7x24x365 Service Operations culture and SMMS system led to dramatic improvement in service delivery. 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 IT Services.

This service management framework and ITIL based application processes are used daily for IT operations and for State emergencies like the 2010 Kalamazoo Oil Spill, virus outbreaks and other serious situations. With instantaneous and consistent communication in times of crisis, we deliver critical information to our IT staff, executives and clients, anywhere, anytime. Our clients benefit with better service availability, quicker problem resolution and lower costs.

### **C. DESCRIPTION OF THE PROBLEM:**

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

With IT consolidation, we 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 DTMB 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*.

***Finding the path to a "Service Delivery Culture"*** – Once we consolidated, we performed a gap analysis of ITIL recommended practices and Michigan's practice for the same process. Using this information, DTMB 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 DTMB service environment.

***Our Solution – An Application designed specifically for our Framework*** - Our solution was to modernize our original ITIL based application which would now integrate our help desk tracking system, enterprise monitoring, CMDB, DR and integrate all of our ITIL processes into a single solution. The Service Management & Monitoring Service (SMMS) application now focuses attention to the availability of the "services" we provide to our clients. Our service enables the management of critical services throughout their lifecycle, monitors and captures metrics for the delivery of services to our clients according to their underlying service level agreements, and allows the organization to adjust the service offerings to changing business needs. Utilizing the system, DTMB was able to jump start a new *service* culture by embracing a common language and set of conceptual processes designed for IT service organizations.

***First State in Nation with Enterprise-wide ITIL Reality*** – DTMB initiated the first "Day Start" conference call, 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 DTMB 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's ability to deliver critical government functions. 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 few years, our SMC processes and our software continued to evolve to include ITIL based problem management, change management, configuration management and event monitoring. The Day Start process expanded to accommodate those new processes, and ITIL began to receive a great deal of attention by DTMB's CIO and other IT executives. Attendance on the call was tracked, and our morning Day Start "audience and fan base" grew. Today, the Day Start process has evolved to a point where DTMB is 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. Staff works around the clock to update the status of incidents and changes, 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 open incidents, recently closed incidents and changes; 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 2009, DTMB 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 DTMB 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 DTMB's Executive Team encouraged staff to grow this culture by providing support and direction. In 2009-2010, the Project team focused on training, evangelizing the ITIL story, ITIL Service Operations Governance, Enterprise-wide Configuration Management, Enterprise Monitoring, Change Management processes, and developing policy for all of the Service Operation processes. 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, DTMB relies on the SMC to ensure optimum government technology value for operational readiness and business availability.

Whether by creating better communication and accountability or pointing to the modernization of legacy 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. An "expert" external assessment of our Data Center in the summer of 2010 reported, *"The State of Michigan has made significant progress in consolidation efforts and internal cost and performance optimization in recent years. The ability to know the cost of*

*specific elements of service and to charge those costs back to the entities receiving service is both sophisticated and parallels commercial standards of accountability. It should be noted that the level of detail and accuracy of the CMDB is significantly better than what we typically find in other government entities and is equivalent to what we find in commercial and outsourced service provider databases.”*

Some facts regarding the significance of this project include:

- **Transferability:** This best practice, a centralized, well documented and innovative use of existing technologies, solutions and processes– is transferable to other jurisdictions regardless of level of ITIL maturity;
- **Citizen Well-being/Transferability:** All IT business services in Michigan are classified by criticality based on the Client’s business requirements. Through the Data Center’s DR process a “*Red Card*” of critical IT Services that align to Agency Business functions was generated that became standard issue for State staff across State government. This card ensures that everyone knows what business services are most critical to State Government;
- **State & Enterprise effectiveness, efficiency, quality and measurability:** Introduction ITIL Training for 212 employees and Foundation certification training was provided to a team of 35 employees. 35 of our employees are now ITIL certified and can “walk the talk”, with 51 more scheduled in 2011. Interest has continued to grow, and we now have waiting lists for presentations and training. DTMB has published availability metrics for over two years and IT staffs are proud to report to our clients our service availability by service. Today, the actual service delivery metrics roll to our department’s scorecard and soon will roll to our Governor’s Value for Money Government dashboard;
- **Innovation and Improved Management:** The SMMS application now controls all records in Incident and Release Management, and is a portal into the CMDB, DR and the help desk system. It is truly one stop shopping for ITIL service process updates;
- Major Problem Review (MPR) and Root Cause Analysis (RCA) are performed on all Major Incidents. The information obtained from these two processes, helps our IT staff respond to service outages in a consistent manner;
- Earlier DTMB 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 then, with some IT organizations following the process but not all. The new policy included the establishment of a change management governance board to govern the processes around change. Local change boards were established for each IT service area within DTMB. As part of the change, the submittal form requires an impact statement, a plan for the change, a risk assessment, a communication plan 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 change – providing an on-line knowledgebase that we use when triaging a service outage or planning a change;
- **Shared or Cross-Boundary:** In the event of a major 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 updates to the Department’s executives throughout the crisis. The Department’s Emergency Crisis team is assembled along with SMC staff into the “War Room”, where the crisis is managed using the SMMS tools and processes we also use on a daily basis to manage all IT Incidents. Whether the service disruption is a mainframe service crash, a major oil spill, a pandemic, a Statewide Power outage, or a disruption to a critical business service affecting 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, delivering true business IT value;

- **Transparency:** The SMMS Operations Status boards are shown live in many DTMB office areas, including the executive office. As employees walk by the common area, they may look at the SMMS portal, their eyes checking the board for new incidents and service availability metrics that may affect their service areas. Our Executives now know about service impacting incidents **BEFORE** our Clients start calling them, and they know the immediate status for incident resolution. Again, delivering true business value;
- **Mobility:** 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 staff, often with only a 50-60% success rate. In mid-2008, DTMB acquired a software solution from Sungard 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 services. Today, *one person* can reach hundreds of mobile State 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; again delivering technology value that embraces the mobility goal of our Department.*

## **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.

- **Shared Service beneficiaries include:** State Agencies, Local Government, and our Citizens. With the release of the new SMMS in January 2010, our processes are very mature and DTMB is now speaking the same language as the agencies it serves. The goals of Service management align well with the DTMB and the State’s Vision for Michigan – We measure and are focused on Value for Money Government.
- **Consolidation/Optimization:** Communication efforts such as the SMMS application, incident notification, the Day Start Call, configuration management, event monitoring, change management and our metric reporting processes all contributed to this win, but stopping there simply doesn’t tell the whole story. During a very recent mainframe service outage that affected 8 State agencies closing services to Secretary of State offices statewide for almost 2 days, the 2010 Kalamazoo River Oil Spill that threatened our beautiful Great Lakes, our tourism

industry and our citizens; and several major virus outbreaks, the SMC provided the essential processes, and communication to ensure that all IT 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 saved millions of dollars through cost avoidance.

- Savings and cost avoidance: 45.3 Million Dollars** - The Data Center implemented this ITIL solution without any additional cost to their clients; we provided over 29.7 Million dollars in rebates and credits back to their clients over the last 3 years due to efficiencies gained in the Data Center. Michigan avoided spending over \$5 million for an off the shelf Service Management Software by developing the SMMS System in-house. \$10.6 million dollars of cost was avoided based on the new level of maturity with ITIL incident management processes.

The SMC and the adoption of ITIL also contributed to better overall service for our clients. As the chart below shows, with the increased participation of IT staff, our changes are up, but our incidents are down. By driving efficiencies and innovation into the incident and change management process, our number of incidents and time duration will continue to decline while our ability to adapt or change our services should increase. By bringing greater efficiency to IT processes, ITIL frees up 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 Changes	Total Incidents	Percentage of Incidents				Cost Savings
			≤ 1 hour	≤ 12 hours	≤ 24 hours	≥ 24 hours	
2008	6,717	5,231	41%	25%	14%	20%	(\$ 3,998,517)
2009	7,667	4,848	29%	45%	12%	14%	(\$ 3,689,384)
2010	8,359	4,313	27%	48%	12%	13%	(\$ 2,950,322)
Total Incident Cost Savings:							(\$ 10,638,223)
2008-2010 Data Center Rebates and Credits:							(\$ 29,777,456)
Cost Avoidance Software Development:							(\$ 5,000,000)
<b>Total Overall Savings and Cost Avoidance:</b>							<b>(\$ 45,315,679)</b>

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 DTMB make change where change was needed and helped us resolve service impacting incidents faster. Our Employees now have the information they need to deliver true Government technology value. Michigan IT is truly focused on achieving excellence, achieving transparency and accountability, and the “Value for Money Government” vision of our Department and our Governor.