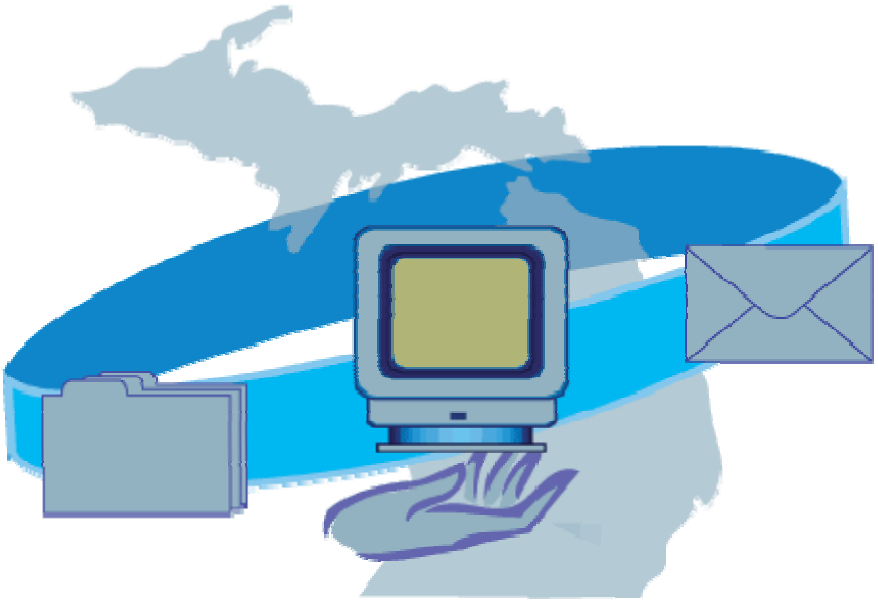

Michigan Statewide Office Platform

Nomination Category: Enterprise IT Management Initiatives

Executive Summary

There is no productivity tool more critical to the success of any government program than the employee's computer. When the support and configuration of the most basic functions are beyond our reach, government's productivity and effectiveness suffers greatly.
Without access to word processing, spreadsheets, custom applications and automated workflow engines; the work of any state slows to a crawl. Michigan's Statewide Office Platform is not just another story about standardization and consolidation. The Statewide Office is an IT management initiative that is transferable to other government groups and the private sector. While standardization and consolidation play a role in the program, the real heart and success of the Statewide Office is the establishment of a statewide common office environment for all state agencies and their employees 55,000 desktops.
When faced with a lack of skilled staff to support the state's offices, out of control security problems, intractable budget issues and growing support concerns; Michigan's Department of Information Technology (MDIT) partnered with our agencies, worked with our toughest technical critics and developed a comprehensive strategy to stabilize the operations of every state department.
In the past 18 months, MDIT teams have migrated over 40,000 of its 55,000 employees to some component of the statewide office and moved more than 19,000 to the complete platform. The program has trained more than 200 technical staff, reorganized our teams into streamlined groups and created a support structure that allows managers to deploy technicians anywhere in the state whenever they are needed.
Like any consolidation effort, Michigan's Statewide Office saves significant dollars. By centralizing major functions, our departments will go from 2,612 "office" servers down to 670, eliminating an estimated $9.7 million for hardware support costs alone. Within the first year of its operation, the support team for the statewide office platform dropped its rates and shaved off 23 additional positions and found ways to make use of existing state staff as the program moved forward (efficiencies of $2-4 million dollars).
ROI is only part of the story. First-call resolution is up by nearly 20%, virus outbreaks are nearly non-existent in the Statewide Office and more than 90 server administration staff have been freed up to focus on higher priority assignments supporting the state's critical projects; like re-writing eligibility systems, keeping up with changing tax legislation and converting our law-enforcement systems to new technology.
The combined tool set enables both the office-bound and mobile worker by providing centralized software authorization and distribution, remote control software, BlackBerry / PDA support, security and application patch management, the ability to distribute support tools over the internet and a real-time inventory of software on the desktop workstations.
The Statewide Office combines best practices in cross-agency collaboration, human capital management, technical architecture, change management and organizational development to deliver a suite of services that have changed the face of basic government operations in our state.

Project Description

Business Problem:

The State of Michigan was at the same crossroads where many states find themselves today, the problems, constraints and challenges are the same. It was simply unacceptable to continue business this way any longer and Michigan started looking for a better way. We reached out to the private sector and looked at models employed in companies like GM, Ford and Dell. What we found to solve the issues was as obvious as it was a challenge to implement.

As a result of Michigan's IT organizations being consolidation, we started with significant challenges. The state was left with an aggregate of staff attrition through early retirement, prolonged budget constraints that forced agencies to choose between refreshing aging hardware, training staff or funding citizen programs. There were no processes or standards to operate under, and more than 1400 geographic locations to support across Michigan. Technicians were deployed to unfamiliar environments and many times would be forced to leave the job undone to look for spare parts. The work took days and the result was major frustration for both MDIT staff and the clients.

Support was not the only issue; even getting new equipment in the field was a challenge. By the end of MDIT's first year, 8,000 new desktop computers were stored in our warehouse without deployment plans. Security was also a serious concern. Thousands of employees were still running operating systems more than six years old with outdated or no anti-virus protection. Patch deployment was inconsistent and there was no common information repository for the office equipment. There is no better statement of the impact all these factors had than when the state was affected by the "Blaster" virus in August of 2003. It took our teams days just to identify the variety of solutions needed to resolve the virus infections across all the non-standard equipment and took more than 100 employees 2-3 weeks to effectively deal with the outbreak. State employees from all 19 agencies were blocked from working while our support teams made their way across the state to visit each and every infected PC. Michigan needed a statewide office platform.

Business Solution: The Statewide Office Platform

The MDIT answer was to implement a statewide office environment that could accommodate all 19 state agencies, and do it as quickly as possible. Hundreds of software products were being used to connect an end-user to the basic services they need to be productive. The common Statewide Office standardized and bundled these products to reduce technical complexity. The solution consists of standard "build" configurations for all PC's, centralized file storage wherever possible, a two-tiered backup solution, a single automated tool for distributing software and security patches, a print/output solution, Anti-Virus protection, DHCP services and DNS/WINS. Our approach to realizing a standard environment needed to effectively deal with the immediate needs AND set the stage for a long term solution.

<u>Identify the Pain Points and Develop Quick Hits – Get IT Staff Buy-In</u>

As part of the short term solution, a number of cross functional workgroups, made up of employees from the help desk, field support techs, warehouse staff and MDIT client agencies were formed to identify and solve the immediate support needs. Outcomes of the workgroups included a direct line for field techs so agency specific information was a

phone-call away, implementation of a website where information / instructions could be shared and inventory management was implemented to expedite break fix repairs. Combined, these short term solutions reduced equipment deployments from over 120 days to less than 30 days and started to develop a knowledge base across MDIT teams.

Get the Facts, Do Your Homework and get the Techies on Your Side: Many long months were invested in talking to the agencies and our technical staff to understand their business needs. As we discussed requirements with agency customers, it became clear that our departments just "wanted it to work" and were less concerned with how we fixed the problem. The largest resistance was coming internally from our own IT staff. After all, their jobs were being affected and many had invested their careers in setting up the vast array of tools that were in use. This phase was no simple task, any state will have a multitude of business requirements that need to be understood and sometimes challenged. MDIT developed a formal governance model, formed cross functional workgroups from hundreds of technical staff and empowered them to finalize the details of the design. When consensus could not be reached during technical discussions the issues were raised to a board of respected architects that ensured the tough decisions were made.

Get Consensus, Gain Trust: High level business requirements were presented to Michigan's Information Technology Executive Council (MITEC). This group is made up of senior members of the executive, legislative and judicial branches of government and serves as MDIT's steering committee. Direct sponsorship from the MDIT Executive Team kept the project moving forward and the detailed design was ratified and tested in a lab setting.

Piloting the Solution – Find a Tough Target and Test the Waters: Changing the state office environment is a huge undertaking and the MDIT team wanted a suitable challenge for our new architecture. The Department of Labor & Economic Growth (DLEG) was selected as the pilot agency. Its diverse set of more than 30 discrete business units (ie. Liquor Control Commission, Bureau of Construction Codes, Bureau of Workforce Transformation and many others) gave MDIT a true workout for the flexibility of the technology platform and rollout processes. Lessons learned from the pilot were taken back to the design team where improvements in the solution and processes were documented and tested in the lab.

Developing the Support Strategy– Reorganize for Effect: MDIT developed an organizational structure that would allow implementation and ongoing support from one group and the program to succeed. The effort formally combined the functions of our technology helpdesk, systems administration, desktop services, training / documentation and a project management office to form the Office Automation Services (OAS) organization. Everyone from our field support staff to our help desk techs were trained (and retrained) on the solution, the processes and their role in the new organization. Employees assigned to migrations for the first time were given mentors that had experience with the architecture and a focus in constant internal improvement was fostered at every level. As a result of the reorganization, teams focused directly on the complete implementation of the Statewide Office. A comprehensive set of reusable project process, procedures, checklists, assessment and implementation documents were created that detailed the common steps each agency needed for successful consolidation. These processes break each department migration into the following high level steps:

1) Kick off and executive buy-in (including the formal Communications Plan) - 2) Site assessment and requirements gathering - 3) Agency design and configuration - 4) Pilot - 5) Rollout delivery - 6) Feedback and project close-down
Existing staff could now support up to 5 concurrent cutovers and maintain base operations. A funding model was developed which defined a single rate charged per desktop. This service based approach allowed agencies to convert/upgrade their office infrastructure with limited up front investment.
Length of time and scope of current operation: The project has been in operation for over four years and 11 of Michigan's 19 departments have completed or are in some phase of migration to the Statewide Office. The environment has been fully implemented in the Department of Management and Budget, Department of Education, Department of Human Services, Department of Environmental Quality, Department of Civil Service and the Department of Information Technology. More than 40,000 of the state's employees use some form of the common platform and from security patches to common file storage the solution has played a dramatic role in stabilizing state operations.
Transferability to other states: Both government and private sector organizations can leverage the technology framework and project management model to implement their own common office environment. While each state holds its own unique challenges, our templates are being used as a starting point to stimulate discussions and another state could cut more than a year off design efforts by using Michigan's model as baseline architecture. MDIT is routinely approached by states for both technical documentation and our business case analysis to support the trend toward a common office.

Significance in the operations of government:

Significance for MDIT:
Employee Morale and Maturity: For Michigan and MDIT in particular this project marked a turning point in our organization. It highlighted the true benefit of a consolidated organization and empowered line staff to make a difference in the state's bottom line. Our employees themselves were determined to never let a lack of funds or staffing challenges derail the project's success. Managers teamed to build employee skills and found win/win assignments like training field support workers in basic engineering roles that were resource challenged and assigning help desk workers to deployment teams across the state so they had first-hand knowledge of the architecture and tools. Time and again state employee volunteers worked overtime to complete migrations over the weekends to keep business interruptions to a minimum and costs down. Indeed, contract rates for cutovers at the Department of Human Services alone were quoted at $1.1 million and volunteers working overtime avoided more than $600,000 of that expense for the agency.
Efficiencies: MDIT has been able to transition away from a vertical staffing model dependant on specific people to a model that leverages everyone's technology skill sets across all departments. Standardization has allowed the "build it once" approach; one desktop base image to support all hardware models. We have one server base image to support file servers, print servers, domain controllers; and one software package for all users of that software. Build it once, test it once, and distribute it once to all target users. The efficiencies gained have allowed MDIT to refocus support staff on learning emerging technologies and providing new services.

Consistent Remote Backups: The Statewide Office Platform no longer relies on end-users to change tapes. Instead our architecture creates consistent backups without user intervention and allows for rapid recovery.

Significance for State Agencies:

Enable the Mobile Worker: The Statewide Office Platform makes mobile workers a reality. Tools and procedures for supporting secure connectivity have been developed and are now being piloted throughout the state. This "next generation" laptop provides broadband and Wi-Fi access and gives employees fast, secure access to their files and tools from anywhere in the state.

Service Levels and Productivity: Michigan's Client Service Center receives over 25,000 contacts a month. With the implementation of the statewide environment, the help desk staff have been able to increase their first call resolution between 12 and 15% that equate to roughly 3,000 additional calls each month that are being resolved at first contact.

Security Enhancements: Patches are now consistent statewide and virus outbreaks are few and far between. Critical security patches can be distributed and installed in a matter of minutes whether the end-user's desktop is in Lansing or a far reaching corner of Michigan.

Disaster Recovery: In January 2007 the Department of Environmental Quality lost their centralized data storage system for the second time in a six week period when their aged hardware failed. OAS teams migrated all of the agencies data to the common office storage platform and had the agency operational in a single weekend. The Department of Civil Service had similar issues with file and print along with application servers that have failed and the systems were recovered by moving systems over to the M/1 ADOPT infrastructure when repairs to the end of life servers would have taken longer.

Alignment to Cabinet and Legislative Priorities: The goal from our Governor, Legislature and CIO were clear. Listed explicitly in the Cabinet Action Plan and our Technology Strategic Plan (Goal 3), each agency was charged with streamlining how they offered even the most basic (and critical) of services. Participating in the Statewide Office is one way our agencies can cut costs and increase their people's productivity.

Refresh of Server Infrastructure: The vast majority of state agencies had not upgraded any of their remote office servers since the consolidation of IT services and the average age of these servers was between 6 and 7 years. Moving to a rated service model gave departments the flexibility to reduce up front costs and get their offices upgraded and under warranty.

Consistency: Employees are able to work in any State office and find the same technological capability.

Significance to Citizens:

Cost and Stability: The vast majority of state services depend on technology in the office. Whether performing an interview to determine benefits eligibility, renewing your driver's license or opening a new business you will be working with a state worker that needs connection to their applications, the ability to print forms and a place to store your records in an electronic file. Since its inception, the Statewide Office Platform has increased the availability of these functions to our ultimate customer…our citizens. Michigan is spending less taxpayer money and keeping state workers focused on their main mission; providing services.

Benefits of the Statewide Office Platform:

Less Equipment: MDIT has increased the level of support, drastically lowered the failure rate of equipment, reduced the complexity and provided greater functionality. Nearly 75% of the servers supporting state offices will be eliminated (from 2,612 to 670) once the migration is complete. By implementing a streamlined and consolidated solution rather than replacing servers one-for-one the state will save more than $9.7 million ($5,000 for each server).

Lower Rates: After just one year of rollout we realized efficiencies in operations and lowered the desktop rate by $10 a year (for 55,000 desktops) for an estimated 2008 savings of $550,000.

Reduction in Staff: The reorganization to the new Office Automation Services organization removed the requirement for 23 additional staff resulting in cost avoidance of $2,070,000 in 2008 (estimated $90,000 per position).

Reduced Travel: With the Statewide Office Platform more than 80% of desktop problems can be corrected from a remote location; saving, time, money and getting agency staff working faster.

Service Improvement: Common process and planning has brought deployment and installation of office equipment from an average of more than 120 days for deployments to less than 30 days.

Development Efficiencies: A statewide office platform takes complexity out of developing deployment plans and gives Michigan's development teams a laboratory environment to test software upgrades, application deployments and compatibility issues.

Accurate Inventory of Equipment: Since the introduction of the Statewide Office a comprehensive and real-time inventory of hardware and software assets has been captured for all agencies. This data has improved support in innumerable ways and service as the basis for billing and improved disaster recovery. The second billing quarter for 2008 was 56,114 desktops and laptops that was a decrease of 780 devices from the first quarter of 2008. The agencies continue to work with MDIT to verify the inventory data.

Faster Time to Recover: MDIT successfully blocked 99.94% of all virus attacks. In 2004, MDIT had to remedy 4,664 systems attacks. Each virus took an average of 3.49 days to fix. This cost the State dearly in lost staff productivity and technician repair time. The Statewide Office Platform has nearly eliminated this problem altogether and has not had an outbreak in nearly 2 years.

Number of statewide PC virus infections (FY 2004)	Average time to repair in non-Statewide Office environment	Industry average time to repair in SCCM managed environment
4664	**3.49 Days**	***3- 6 hours**

*Industry standards used because no outages have been recorded in converted sites in nearly 2 years.

Benefits Impact Multiple Stakeholders: MDIT employees, employees and contractor staff of all agencies, citizens of Michigan along with users outside of Michigan benefit from the statewide office platform implementation.

In the end, the Statewide Office Platform is more that a combination of technical solutions, more than a cost saving or consolidation effort. It has brought our agency to new levels of maturity and engaged our clients in a dialogue of true collaboration. This platform lies at the center on nearly every strategic initiative we undertake and has transformed the foundation of enabling technology across the state.