

2017 MICHIGAN NASCIO AWARD NOMINATION

TITLE: Michigan Treasury Online (MTO) – User Optimization Project

CATEGORY: Digital Government: Government to Business

STATE: Michigan

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PROJECT INITIATION DATE: 07/01/15

PROJECT IMPLEMENTATION: Multiple Project Releases

1. Release 1 – 01/11/16
2. Release 2 – 04/04/16
3. Release 2.5 – 06/30/16
4. Release 2.75 – 09/22/16

EXECUTIVE SUMMARY

Michigan Treasury Online (MTO) is the public facing portal for filing returns and paying of Sales, Use, and Withholding (SUW) taxes for approximately 350,000 businesses registered with the State of Michigan. This critical application is a key instrument in acquiring over \$18 billion in revenue for the State.

Prior to 2015, the SUW program was comprised of paper filings and return processing managed by legacy applications. The original MTO portal was launched in January 2015, coupled with moving return processing to Treasury's SAP integrated tax system. It was not met with user enthusiasm.

The ***MTO User Optimization Project*** was initiated in July 2015 to rapidly deploy critical and quantifiable user experience enhancements across the MTO application. This project invoked an agile approach to development which produced the rapid, iterative and quantifiable results that management sought. The first lines of code were laid within 5 days of project initiation. A complete re-write of the application was initially accomplished within five (5) two-week development 'Sprints'. An industry leading web development consultant was acquired to assist in implementing a completely new and modernized style for MTO which significantly streamlined the user experience.

As a result, MTO User Optimization Release 1 was rolled out to the public on January 11, 2016. This first of four releases in 2016, addressed the vast majority of user pains associated with the original MTO application:

- *Rebranding of MTO to vastly improve look and feel and navigation*
- *Decoupling from Michigan Business One Stop (MBOS)*
- *Implementing a single set of credentials (through JPMC Payconnexion)*
- *Providing the user with self-help credential features (via MILogin); i.e forgotten password/username*
- *Reducing the number of steps needed for authentication – and filing returns*
- *Improving the delegation process*
- *Adding delivery of email confirmations after returns are submitted*
- *Adding inactivity alerts before user session expiration*
- *Segregating the application into more sustainable components; providing means for future tax integration*

Early public survey results have demonstrated a greater than 300% increase in the 'satisfied' or 'very satisfied' rate since MTO was reintroduced to Michigan businesses. The new site welcomed a 30% increase to the user population in the first three months after Release 1. In addition, MTO filings are up 200% compared to same period of 2015. Additionally, 25% of annual returns have been received via MTO instead of paper returns thus far. The impact to the business is already being felt; with significant decreases in return errors and payment issues.

This beyond increased user satisfaction, the project was a success due to the below factors:

- *Reviewing and evaluating lessons learned from past implementation*
- *Having supportive executive governance and buy-in from the business*
- *Having solid program/portfolio management*
- *Executing Agile development*
- *Having a fully dedicated and co-located technical and business teams and utilizing other DTMB areas*

PROJECT NARRATIVE

CONCEPT

Filing State of Michigan Sales, Use and Withholding (SUW) taxes was a manual, paper-based process for the over 350,000 businesses registered in the State of Michigan. Once the paper returns and payments were received by the Michigan Department of Treasury (Treasury) Business Tax Processing area, they required a manual process to get them submitted to the State's legacy applications for processing. These manual processes took time to complete for both the business tax payers and Treasury. This meant tax payers would need to wait if they were to receive any credits or mailing delays causing penalties and fees to be accrued. This would result in Treasury experiencing delays in acquiring over \$18 Billion in revenue for the State of Michigan.

In January 2015, the Michigan Treasury Online (MTO) public facing internet portal was rolled out to business tax payers for the return filing and paying of SUW taxes online. This original MTO website/portal was launched and coupled with moving Treasury's return processing to Treasury's SAP integrated tax system and off the legacy applications. SAP serves as the system of record for all data, data processing, business rules and the workflow associated with processing of business tax returns.

The business tax payer reception of the January 2015 MTO launch was poor. Between January and June 2015, MTO user dissatisfaction results of greater than 73% were obtained due to the problematic execution and coupled with constrained design solutions. In addition, Treasury's contact center was inundated with user calls for assistance as the application was not intuitive or user friendly.

To identify and address the fundamental issues related to the initial MTO release, the Michigan Department of Technology, Management and Budget (DTMB) and Treasury rapidly formed a task force. During the identification of issues, the DTMB and Treasury MTO Task Force found that poor business user engagement at the inception of MTO was the result of another technical solution being tied to the failing MTO front-end application; Michigan Business One Stop (MBOS). MBOS served not only as a credential management device for MTO, but also held significant functionality related to individual business users establishing their relationship to the businesses they were associated with. This structure provided another layer of authentication and access to online business tax filing. The initial unique and challenging business rules related to SUW tax filing only made the user experience more complicated across both MTO and MBOS applications.

Another component of the MTO application is the ability of business users to submit tax payments/obligations to Treasury. The MTO payment processing functionality is through a partnership with JP Morgan Chase (JPMC) Bank's Pay Connexion application. Even with JPMC being a proven service provider, the technical solution to bridge the two applications, MTO and Pay Connexion, inadvertently created additional user issues by requiring the maintenance of multiple sets of access/user credentialing across the end-to-end user experience.

Illustration 1.0 below is the January 2015 launch representation of application layers:

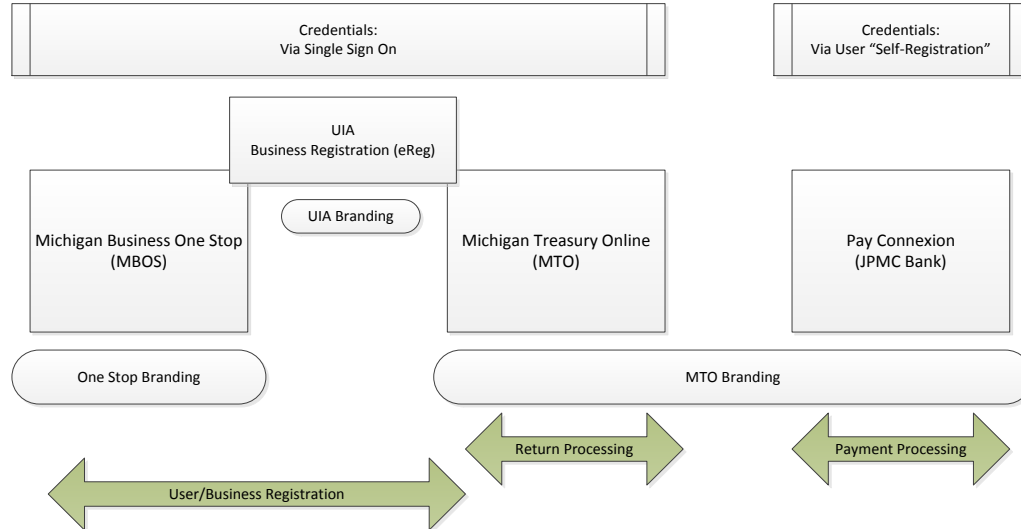


Illustration 1.0

The MTO Task Force identified the following key items that needed to be addressed related to the initial MTO user experience:

1. Restructure the MTO application to reduce the number of user credentials so multiple sets of user credentials would not need to be maintained.
2. Restructure the cumbersome tax payer authentication/establishment of business relationship(s) to maintain security while improving user experience.
3. Rebuild the MTO application to address overall user friendliness to provide a positive user outcome.

SIGNIFICANCE

In order to address the three goals identified by the MTO Task Force, a new project team was assembled in July 2015 to overhaul the MTO application. The project employed an agile approach, scrum methodology for project management and development. This approach integrated a dedicated DTMB information technology (IT) and Treasury project team that was co-located to enhance collaboration throughout each step of the planned releases which consisted of development sprints, testing cycles and implementations. There were multiple releases of the MTO User Optimization Experience project which was chartered in July 2015 through the fourth release in September 2016.

Management support also secured all required support services for the MTO Optimization initiative, including the Michigan Center for Shared Solutions' Solutions Design Team and eMich representatives which is the division that ensures State of Michigan branding and standards are adhered to in State of Michigan public website development.

DTMB, the IT area, partnered with Deloitte for the MTO website redevelopment. A communications expert and an industry leading User Interface (UI) resource was obtained through this partnership. This

UI resource was charged with establishing a completely new ‘look and feel’ for the MTO website that resulted in an eMich standard for other state of Michigan websites.

To address both the ‘multiple credentials’ issue, as well as the user experiencing multiple ‘look and feel’ applications, the project joined forces with the newly established MILogin solution. MILogin is a single sign-on solution providing secure and customizable user credential services for state of Michigan applications (both internal and external public facing). Implementing this approach permitted common branding from the user’s first point of contact and throughout the MTO application experience. In addition, all aspects of a taxpayer’s authentication, including their business relationship(s), were moved fully within the MTO application. Together, these solutions permitted the complete decoupling from the previous MBOS frontend and providing the end user a seamless MTO online experience.

The technical solution also addressed the partnership with JPMC Bank’s Pay Connexion application. Moving from “self-registration” to “auto-registration” removed the requirement of a second set of user credentials to access Pay Connexion. The two applications established a seamless, internal, system-generated user logon through Pay Connexion. This technical solution achieved the goal of requiring only a single set of user credentials, while retaining user friendly options within Pay Connexion such as payment activity history.

Parallel to addressing the fundamental technical solutions was the complete makeover of the MTO “look and feel”. The entire site branding was overhauled; including implementing industry leading trends covering everything from color schemes to navigation, font styling to user selection buttons and modals. Techniques employed through this initiative have been adopted directly into the larger eMich standards, establishing new principles for future State of Michigan websites.

Below is a summary of the major undertakings of the MTO redevelopment:

- Rebranding MTO to vastly improve “look and feel” and navigation for a better user experience
- Decoupling MTO from Michigan Business One Stop (MBOS)
- Implementing a single set of credentials throughout MTO, including through JPMC Pay Connexion
- Providing user self-help credential features via MILogin; e.g. forgotten password/username
- Reducing the number of steps needed for authentication while maintaining the needed security
- Improving delegation process by establishing ‘Self-delegation’ through shared secrets
- Delivering an email to users with a confirmation of return submittal
- Providing an inactivity alert to users before expiring their session
- Segregating the application into manageable components; providing a means for future tax expansion to the site
- Providing maximized browser capabilities
- Improving user experience through enhancements to the tax filing processes including:
 - changing location of submit button,
 - adding cancel button for Discontinue business function,
 - creating option to view and print Sales Tax License,
 - adding file period declaration correction,
 - changing online forms to match paper based forms,
 - enhancing error messages,

- adding field validations,
- improving application button labels and descriptions,
- adding ability to print the return confirmation page,
- adding ability to save user progress on a return and continuing in a new session,
- adding ability to change filing frequency,
- providing for upload and download of worksheets,
- automating of gas credit refund request form,
- improving way to determine unmet obligations,
- resolving notice updates in real time to mitigate conflicting letters to users.

Illustration 1.1 below represents the January 2016 redevelopment of the MTO experience:

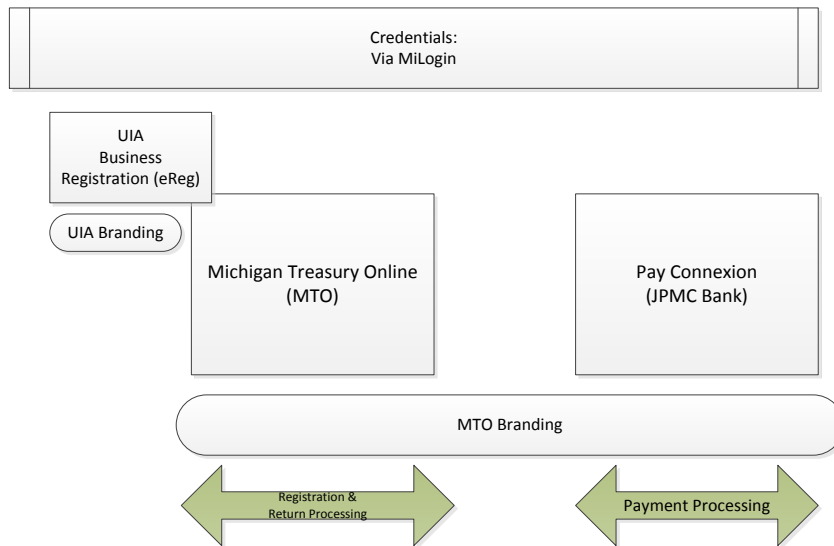


Illustration 1.1

IMPACT

A public survey was incorporated into the MTO application to gather feedback from the end users. The public survey results have demonstrated a 323% increase in overall user satisfaction rating since the MTO project implemented releases in 2016.

From January through December 2015, there were 7,386 individuals who completed the MTO survey and this resulted in a “satisfied” rating of 17.53%, a “neither satisfied nor dissatisfied” rating of 9.25% and a “dissatisfied” rating of 73.22%.

During 2016, after the MTO project releases were placed into production, the following survey ratings were realized: “satisfied” rating of 52.33%, a “neither satisfied nor dissatisfied” rating of 7.62% and a “dissatisfied” rating of 40.05%.

For 2017, the trend in satisfied users has continued to improve. Currently, users are indicating that they are “satisfied” with a 54.15% rating. For the “neither satisfied nor dissatisfied” crowd, a rating of 12.52% has been realized. Those users that remain “dissatisfied” has dropped to a 33.34% rating.

These results support the concept that the MTO improvements and enhancements are improving the overall user satisfaction with the application.

Additionally, members of Treasury's Business Tax Processing staff have been attending business tax payer events such as association meetings and conferences to share with them the enhancements being made to the MTO application. Having such opportunities for open and transparent dialogue with end users has assisted Treasury in knowing what the users like or have remaining concerns about the application. Direct feedback from the business tax payers has resulted in additional user stories being added to the MTO agile backlog and included as the project would allow in the 2016 MTO production releases.

Below is direct feedback from the MTO business tax payers:

"Thanks for all of the improvements you have made to this site. When I first tried to use it several years ago it was not user friendly and didn't function well. From everything I have seen over the past year, you seem to have fixed these problems and made everything easier/more convenient for businesses in MI. Thanks!"

"This is a very simple way to file business taxes, and is based identically on the previous paper form. Excellent job. Thanks."

"I absolutely LOVE the changes to the system. It is so much easier to use."

"This was the easiest government website I have used. I work for a governmental agency for my full time job."

"Just a positive...much better than the previous system!!! Thanks for the upgrade and user friendly site."

"This is sooooo much better and easier than last year!!!"

"This updated website for filing Michigan taxes is 200% better than it was for filing in 2015. Thank you, thank you, and thank you!"

"The MTO services WAS 300% improved and so much easier to use. It is now better than Minnesota and Wisconsin! Thank you!"

"This site is 1 million times better than the old one.....thank you for the improved service."

The follow are the critical success factors for the MTO Optimization project:

- Reviewed and evaluated lessons learned from past implementation
- Supportive executive governance and buy-in from the business
- Solid program/portfolio management
- Agile development
- Fully dedicated and co-located technical and business teams
- Utilization of DTMB Center for Shared Solutions' (CSS) services; Solution Design Team, eMichigan Standards/ADA/Usability