

Talent and Economic  
Development Department  
of Michigan



**2019 NASCIO State IT Recognition Award Nomination**

# Title: Going PRO in Michigan

**Category:** Information Communications Technology Innovations

**State:** Michigan

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**Project Initiation:** June 2017    **Project End:** October 2018

CHOOSE YOUR  
**CAREER PATH**

Select a field below and we'll show you how to get started in that career.

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MANUFACTURING

AUTOMOTIVE

IT

HEALTHCARE

CONSTRUCTION

NOT SURE

Going PRO with professional trades  
**Careers. No waiting.**



The need for professional trade talent has never been greater. These highly skilled individuals are in extraordinary demand for careers in healthcare, information technology, advanced manufacturing, construction and automotive. To help build our future in jobs that are vital to keeping Michigan healthy, strong and growing.

## Executive Summary

In 2017, the Michigan Department of Talent and Economic Development (TED) set forth an initiative, [Going PRO](#), to create awareness and direction to those with interest or experience in the professional skilled trades. The basis for this initiative stems from a combination of impacts affecting the state of Michigan including: a large number of Baby Boomers retiring from the workforce and the misconception that the professional trades are hazardous or dirty.

The [Michigan Governor and Lieutenant Governor have taken up the Going PRO initiative](#) emphasizing the need for an increased percentage of post-secondary credentials among Michiganders. Included in the trades are careers in manufacturing, healthcare, automotive, construction, and information technology. All of which typically require training of some level beyond high school but not necessarily a four-year degree. The general **unawareness of the opportunities and outdated perceptions in professional trades careers must be remediated** to allow for students, parents, influencers, teachers/counselors and the unemployed of Michigan to make more informed decisions on opportunities and “in demand” job paths.

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*It is projected that Michigan will see 545,000 trade career openings due to retirement, in addition to the 47,000 new trade job openings forecasted annually through 2026.*

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**The website showcases these high-tech and rewarding careers, leading the way in innovation here in Michigan.** The project was formed to create a standalone site for TED highlighting the professional trades targeting the extensive aforementioned demographic. While there are various other websites that capture certain pieces such as current trade job availability, certifications, career paths, etc.; there was not one that combined all into a single easy to navigate website available via both PC and mobile devices. Leveraging technology was needed to provide a “one-stop” resource to learn more about the high-demand, high-wage career opportunities in the

professional trades.

This **transformational website allows the information seeker to be provided with various search functionalities amongst the top 25 careers in the trades** including the associated pathways to enter that particular trade career, growth rates and earning potential of the trade, and current job postings all within the one centralized site:

- Professional trades career **salaries and job growth data**
- Detailed explanations of what those careers are, what it takes to succeed in those careers, typical education needed and photographs of people in action in those trades
- [“A Day in the Life” video series](#), highlighting real Michigan professionals currently working in these skilled fields explaining what the career is like day-to-day and the rewarding nature of these positions
- **Guide to local schools and training facilities**, including colleges, offering educational opportunities to get started in a professional trades career
- **Interactive photographs of Michigan landmarks** and the role skilled tradespeople played in the creation of that landmark
- Careers can be differentiated by industry, pathway, training and/or by field of work. Search options can be sorted by income (high to low, low to high) and by job growth (high to low and low to high)
- Social media sharing capabilities have been added to information throughout the site so job seekers can promote their career choices on all social media platforms – Facebook, Twitter and Linked In.

## Concept

Dated perceptions of careers in professional trades combined with an increase of baby boomers retiring has led to a steady decline in the number of individuals with the skills needed to fill these viable careers – posing the single **greatest threat to the state’s continued economic recovery**.

The [Going PRO in Michigan initiative](#) is the largest civic engagement effort in state history promoting the importance of professional trades careers with the aim of attracting more prospective candidates to address Michigan’s high-skilled labor shortage. Going PRO aims to dispel the dilemma enhancing myths about professional trades as “dark, dirty and dangerous” and showcase numerous career options, from welders, millwrights and line workers to medical sonographers, web developers and industrial mechanics as safe, rewarding careers.

The initiative will **build awareness and change perceptions about careers in the trades, as well as guide students, their parents and influencers** to [Going-PRO.com](#) so they can find career pathways, pay information and job growth projections for these careers and find training and education opportunities. Proponents say professional trades can provide opportunities for students and families to avoid tuition debt through options such as paid apprenticeships, where students’ education and training are paid by the employer. Talent and Economic Development-commissioned research shows:

- Only 1 in 3 Michigan parents encourage children to enter professional trades.
- Interest in pursuing professional trades varies by region, with a high of 17% students in Greater Lansing/Jackson saying they’ll pursue a certificate, followed by 13% in the Great Lakes Bay Region that includes Genesee, Bay, Saginaw and Midland counties and the Thumb Region that includes Huron, Sanilac and Tuscola counties; 10% in the northern Lower Peninsula and Upper Peninsula; 9% in West Michigan; and 8% in Southeast Michigan.
- Approximately half of Michigan high school students, young adults and parents lack knowledge about the value and benefits that apprenticeships offer in professional trades, with only 13% of high schoolers considering apprenticeships a good career path option.

Advocates for careers in professional trades say **Going PRO will help spur more people to consider exploring these “new collar” job opportunities**.

**Decision Process:** At the start of the project, a vendor was included for the design of webpages (front-end) that had experience in commercial web-design. The decision was made to develop the back-end internally due to: a) The large amount of data being required for the application, with most of it coming from within the state; b) More control of the development process; and c) Post-production support and maintenance would be facilitated with in-house staff since they developed the application.

**Solution / Architecture:** The solution architecture utilized was the Michigan Virtual Data Center (VDC) environment extending the State’s private cloud, which allows for complete scalability and growth, maintaining website required response performance. Additionally, the application was designed with mobile responsive design principles and standards.

**Efforts to ensure Accessibility and Information Security:** During the design and build phase, the goal was to design an easy and American with Disabilities Act (ADA) complaint navigation flow, as well as allowing for total access of the site's content (with no log-in credentials required). This was especially critical for the youth target audience that would be accessing the site. No Personal Identifiable Information (PII) data is captured or maintained by the application.

**Best Practices:** Several methods were used in designing the application;

- ✓ Current industry standards for programming practices and design patterns
- ✓ A review of similar tools from other state sites were reviewed and evaluated
- ✓ Responsive design for use on any desktop or mobile device
- ✓ Accessibility standards used per the Americans with Disabilities Act (ADA)
- ✓ Application optimized to load quickly, especially on slower internet connections

**Project Structure:** The Agile project management approach was utilized for this project, and the schedule was divided into six sprints for the front-end coding, and five sprints for the back-end coding. This iterative approach allowed for a 'feed-back' loop process that was extremely valuable in helping to create useful changes to the actual application for the end-user, based on actual comments and feedback from testing. Finally, as the project was coming to a close, a "soft launch" of the product was released early for additional testing by different state agencies for feedback and comments.

**Data: Leveraging Labor Market Statistics:** With the need to provide information on trade jobs and careers, the following is provided for each individual job; the median income, annual openings and projected job growth (percentage) – including actual job descriptions.

**Trade School and Career Centers:** The team worked with these institutions to obtain available information, including contact information. Schools and career centers can be searched and filtered by location, field of work and career.

**Communication plan** to educate user groups and promote awareness: The updated site was provided to all Michigan school districts during the 2018-19 school year, with rollouts that occurred through October 2018 at schools in Gladwin, Hillsdale, metro-Detroit, Kalamazoo, Lansing, Muskegon, Caro, Cadillac and Alpena.



Recently Governor Whitmer and Lt. Governor Gilchrist kicked off a state wide [media campaign](#) promoting the initiative.

## Significance

Michigan employers' ability to find highly skilled and capable employees is more difficult than ever and is cited as a top concern in the most recent Michigan Future Business Index (MFBI) Survey. Business leaders from

across Michigan since 2006 have participated in the semiannual MFBI Survey, sharing their perceptions of Michigan's economic outlook based on their personal experience.

A 2019 survey by the Associated General Contractors of America shows that **almost 80% of Michigan respondents in that organization are facing difficulties hiring all or some salaried and hourly professional trades positions**. More than 70% of the respondents anticipate their company's workforce needs to **increase**, and 66% said it will continue to be hard to hire (45%) or harder to hire (21%) this year.

**Application Entry Points/Target Audience:** The Home Screen not only contains a main menu for starting from, but contains icons for the following selectable trades;

- Manufacturing
- Automotive
- Information Technology
- Healthcare
- Construction

Also, a "Not Sure" icon is displayed that when selected provides the following;

- Sample trades listed side-by-side, including median income, projected job growth, education and training requirements, videos for "A Day in the Life"

An initial significant government improvement was **the consolidation of several websites into one**, with frequent updates to that data included in the ongoing operation and maintenance of this one site. Data used and made available in the application is updated as frequently as the source is updated. This is crucial to keep the outcome data up-to-date and relevant/meaningful to the users.

Several state agencies were involved in this transformational project (Talent and Economic Development, Talent Investment Agency, Workforce Development, Department of Technology Management and Budget, Labor Market Statistic and Information).

The initiative **directly supports Governor Whitmer's policy strategy and goals** related to [promoting professional trades careers in the state of Michigan](#), attracting perspective candidates to Michigan in order to address high skilled labor shortages.



**NASCIO 2019 priorities supported by Going PRO include:**

- ✓ Fortifying security and lowering risk through the use of Michigan's Virtual Data Center (VDC) secure cloud services
- ✓ Strengthening the role of centralized data
- ✓ Centralizing, consolidating, and optimizing services, operations, and business processes
- ✓ Cross-agency collaboration and shared services

- ✓ Introducing statewide connectivity using internet and mobile-accessible technology
- ✓ Data management and analytics through data architecture restructuring improving efficiency and access
- ✓ Facilitating strategy and business intelligence through greatly improved reporting
- ✓ Improving partnering and inter-jurisdictional collaboration among all stakeholders at levels ranging from local advisory groups and governments, to state agencies
- ✓ Using Agile and incremental software delivery to provide iterative designs and solutions, allow for flexible and responsive modifications, and incorporate business-owner feedback as an ongoing and integral part of the development process

## Impact

**Single-point-of-contact:** This one stop website is used to educate the Michigan public on the requirements, certifications, apprenticeships, and current opportunities etc. for trades that do not require a college degree, and the earning potential of each of the professions. Professional trades let individuals leverage their talents, work ethic and know-how to do things that matter; to help design and build a future in jobs that are vital to keeping Michigan healthy, strong and growing.

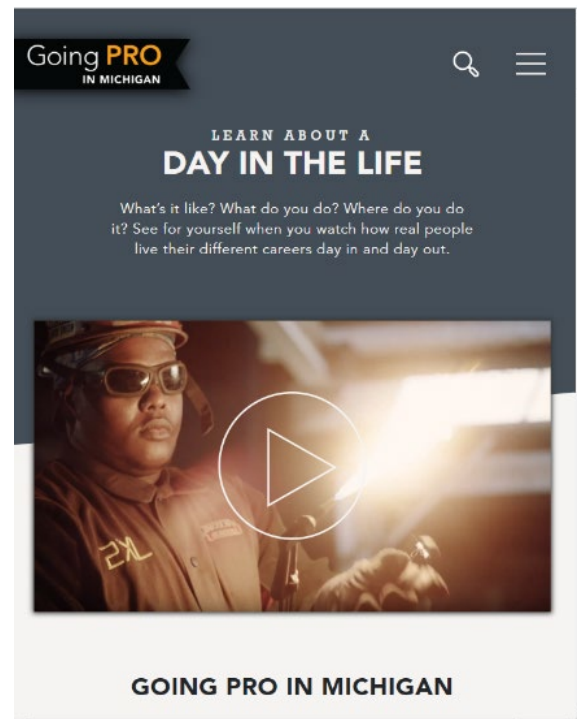
Site Structure: A responsive design was used with career paths grouped by;

1. Manufacturing
2. Automotive
3. Information Technology
4. Healthcare
5. Construction

The site includes a “[Day in the Life](#)” videos for the “Top 25 Trade Jobs”.

**Actual/Initial Audience Analytics and Metrics:** Below are numbers from Google Analytics for the period of August 20, 2018 – May 21, 2019:

- Users = 40,009 – All users/current/new sessions/unique
- New Users = 39,828 – First-time users
- Sessions = 52,400; number of sessions per User = 1.31
- Pageviews = 147,562; Pages/Session = 2.82
- Bounce Rate = 48.78% (This rate indicates that 51.22% went past the ‘Home Page’ to look at careers, job comparisons and salaries, and videos)



**Project Financial Impact/Budget:** The project was completed within the project budget (just under \$1M).

**Security:** The topic of security for this tool was evaluated, and because of the main target audience of Michigan’s general public, no log-in credentials were implemented. No Personal Identification Information is captured.

**Project Roll-out:** As the project was ending and the final tool rolled out into a production mode in October 2018, the project team continued to discuss the features and additional functionality that should be considered in the

near future. This tool will continue to be improved and enhanced, from feedback from users, trade-schools, management and the development team.

Data available via Google Analytics will indicate actual hits and usage of the site, along with any possible common exit locations that may indicate a problem that needs to be addressed. (Insert qual/quant quote).

The initiative is also capturing qualitative and quantitative performance measurements directly related to the skilled trades to assess the impact to the state of Michigan. T

he tool will only continue to get better, which per the original goal, ***benefits not only the students and unemployed of Michigan, but the businesses and industries within the state.***