Ohio DOT's TIMS Provides Access to Comprehensive Data

The Ohio Department of Transportation (ODOT)'s Transportation Information Management System (TIMS) is a web-mapping portal that displays transportation infrastructure data for the state of Ohio. The tool, which is accessible for desktop and mobile devices, enables users to search for specific project information and create maps using a wide variety of system performance data. TIMS provides performance and project data to ODOT staff and public and private sector professionals, so that they can make better informed decisions regarding transportation and development.

The ODOT Office of Technical Services conceived of TIMS when it had found that responding to individual data requests was resource intensive and inefficient. The staff identified the need for a self-service application that would provide the answers to common data requests. As a result, in 2011 they contracted a vendor to develop the first version of TIMS, which allowed users to find data using a web-mapping tool. The first version of TIMS, released in 2013, highlighted the power of GIS as a spatial analysis tool, but it did not meet all the needs of ODOT's customer base. After receiving feedback and analyzing the application, the Office launched a more user-friendly, responsive version of TIMS in 2015. The new version catalogues information by project and permit data downloads.

What is TIMS?

TIMS contains six main menu items through which users access performance and project data.

Main menu items on the TIMS homepage.

The 'Project Search' includes project status, name of project manager, and links to additional project plan information. 'Create a Map' is an interactive web mapping tool that allows users to analyze and/or export a map with data such as traffic counts, environmental information, and priority snow routes. Users can filter the data and use tools to measure distance, area, and location. The 'Data Download' feature enables users to download geo-spatial transportation performance data for the whole state. The 'Standard PDF Maps' function generates maps in a standardized format, which is useful for an agency or individual who would like to create numerous maps within the same style. Similar

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to the 'Create a Map' feature, the 'Map Viewers' feature enables users to access pre-made maps with foci on different content. Finally, the 'Data Glossary' allows users to search across the site's datasets to identify which ones they need and learn about the types of data available.

The TIMS website is mobile-friendly, allowing users to access data in the field.

How are people using TIMS?

TIMS has improved the efficiency with which ODOT can assist transportation agencies in planning efforts by streamlining the provision of key data. Within minutes, users can access data that would have previously required over an hour to access and query. Internally, TIMS has increased the accuracy and consistency of the datasets input into the system. Between three and five ODOT staff regularly work on updating and maintaining the site and identifying errors or inconsistencies in the data. The transparency of TIMS enables users to identify and inform ODOT about inaccuracies in the data, which helps to improve and refine information associated with assets and projects. ODOT tracks the number of site visits; it currently has an average of 3,500 site visits per month and 2,400 page views per day. External partners, such as metropolitan planning organizations and counties, as well as internal staff, are the major users of the site. Usage statistics indicate that people access the 'Project Search' and 'Create a Map' features most frequently, and most often seek information on bridges, traffic volumes, and project status. ODOT will use these statistics to determine whether more people access TIMS through desktops or mobile devices, in an effort to better understand how people use the site.

What is next for TIMS?

ODOT has a number of plans for expanding and building upon TIMS. First, ODOT plans to expand the data available on TIMS to better suit customer needs. As many TIMS customers use information maintained by external agencies, ODOT is working with those agencies to include appropriate datasets in TIMS. ODOT will also add the new asset inventories that are being developed as part of ODOT's Transportation Asset Management (TAM) Plan to TIMS. Additionally, ODOT plans to expand mapping functions to include tools such as drawing and buffering and increase the speed of the data download. ODOT will consider developing an Android/iOS application for mobile devices if it finds users require access to TIMS from their mobile devices beyond what the mobile-friendly website can offer. Finally, ODOT is developing a TAM Decision Support Tool, a parallel system that builds on the TIMS application, but focuses on asset management and provides the ability to analyze asset performance. This application will help planning agencies make better informed decisions.

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