



## Innovative use of a web-based, mobile service keeps Montgomery County road construction moving swiftly

**Needs analysis:** *The County Engineer's Office in Montgomery County, Ohio wanted to administer road construction projects in real time and avoid complex software that keeps engineers tethered to the office.* **Product implemented:** *Montgomery County chose Info Tech's Appia® service since it is web-based, provides real-time online collaboration and allows for field data collection on mobile devices.* **Results:** *Prompt, accurate payments are the norm, resulting in better prices from contractors. Fewer trips to job sites are necessary, saving time and gas. Funding agencies have more confidence that standards are being met.*

Home to the City of Dayton and several institutions of higher education, Montgomery County, Ohio is a thriving area known as the 'birthplace of innovation.' It is the fifth most populous county in Ohio with 550,000 residents, and its location at the junction of I-70 and I-75 between Cincinnati and Columbus makes it an ideal location for business and commerce.

Montgomery County Engineer Paul Gruner is an elected official, a registered professional engineer and a professional surveyor, as required by Ohio law. Mr. Gruner's office manages an annual budget of \$16 million for road and bridge construction, operation and maintenance covering 320 miles of roadway, with funding coming from gas tax and vehicle registration fees. The County recently sought out a new tool to help better manage construction administration and inspection. They knew they wanted the latest technology and wanted to leverage the web with a focus on usability. Info Tech's Appia® service fit the bill since it is web-based, mobile accessible, and is easy to implement and use. The Appia service is designed for capital improvement and infrastructure projects. It effectively manages daily reporting, funding, items, change orders and payments with an intuitive interface and multiple role types for controlled, real-time collaboration.

"With a web service, we don't have to back up and transfer the data back and forth between the field and the database at our main office," said Daniel R. Medeiros, Construction Administrator for the Montgomery County Engineer's Office. "The data is real time, as opposed to before when the update was manually performed. The inspectors can enter data from the job site, as it happens, eliminating the 'memory factor' and producing more accurate and complete information."

The service also gives the county engineers the ability to work remotely.

"I can review and approve daily reports, estimates, and change orders from almost anywhere," Mr. Medeiros said. "This capability saves a lot of time, since I am mostly 'in the field' and not at a desk in the office. I can also perform these tasks at home, after normal



*The North Dixie Drive roadway improvement project in Harrison Township/City of Vandalia was administered using the Appia service.*

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The Appia service is accessed by team members at Montgomery County on iPhones, iPads and laptops in the field, and on desktop computers for those in the office. The County also takes advantage of the free read-only licenses, giving read-only access to new users and others, such as administrative team members, which saves money while still ensuring information is available to those who need it.

Montgomery County sees value in the fact that all aspects of daily activities are tracked in the Appia service, including work force, equipment used/idle, materials management, etc., with photo documentation adding to the credibility of reporting.

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The Appia service was recently used on a few projects with multiple fund sources, including North Dixie Drive Roadway Improvements in Harrison Township and the City of Vandalia (\$5.3 million, five funding sources) and the Ridge Avenue bridge replacement in the City of Dayton (\$5.2 million, two funding sources). The service can handle multiple funding sources with ease so there was no confusion.

“Appia has the capability of setting up funding packages making



*The Ridge Avenue bridge replacement in the City of Dayton was administered using the Appia service. Here it is shown while under construction and then completed with day and night views.*

it much easier to track pay items which may or may not be eligible for reimbursement from certain funding sources,” said Mr. Medeiros.

With any investment in software, agencies are looking for a return. How does this service impact the bottom line? Mr. Medeiros points to a few ways where the Appia service is making a measureable difference. First, he notes that contractors are benefitting from prompt, accurate payments, including change order payments, which translates into lower bid prices from those contractors. Mr. Medeiros also feels that he and other project engineers are making fewer trips to job site since the Appia service has been implemented. Further, he feels that Ohio DOT and FHWA have more confidence that their funds are being used according to their standards and proper record keeping practices.

“Successful audits translate into procuring future funding from these sources,” he said. “Using the Appia service has affected our budgets by accurately tracking pay quantities and change order information, potentially keeping those costs down much more than before.”

When users need help with the service on occasion, the Info Tech customer support team is available to assist. While no one likes having to call for support, Mr.

Medeiros notes that this team is on the ball and is a pleasure to call. “The Appia customer service department ‘sets the bar’ for all others to try to achieve.”

As Montgomery County continues its quest to be a center of innovation, up-to-date infrastructure will play a vital role. The citizens of the County can be proud that the County Engineer’s Office is innovating as well, using the latest technology in road construction to manage jobs quickly and efficiently.