

OneTouchPM®

INTRODUCTION

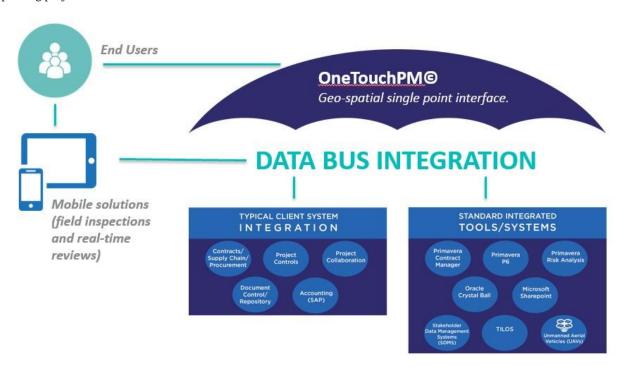
OneTouchPM®, a fully integrated, award-winning, cutting-edge program management tool that translates into cost savings for you through better decisions, improved quality control, and Team collaboration. Available exclusively to our clients, OneTouchPM® enables users to access real-time data anytime, anywhere. This innovative program management suite integrates critical project data with CAD designs, GIS, BIM, or any other source. OneTouchPM® disseminates all of the project critical information through a 4-D web portal to the Project Team.

OneTouchPM® includes a reporting module that allows view-based, real-time queries, reports and analytics to be displayed on screen. By providing a geospatial control center to manage each aspect of your project, OneTouchPM® minimizes errors by efficiently delivering the critical information needed by all decision-makers and stakeholders in an intuitive, secure, one-stop location.

Through the use of OneTouch PM® the Project Team, including contractors and vendors, are able to see real time schedule inputs in a geospatial environment. Updates to the schedule are provided through OneTouch PM® to report design/construction progress to the Project Scheduler further improving project communications.

ADVANTAGES

- OneTouchPM® integrates and communicates data collected from various disparate information systems combining them into a single COMMON OPERATING PICTURE
- Delivers real-time critical information to decision makers and project stakeholders
- · Improves decision making ability
- Creates efficiencies including benefits and risk mitigation strategies to project execution
- · Time animation of project progress
- · Quality assurance of field data entry
- Improves productivity and coordination
- No named user licensing
- · Secure, scalable
- Real-time reporting

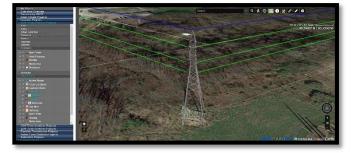




MODULES

Design

- Route Refinement Use for identification of potential re-routes, utilize the aerial photos, identify sensitive areas, show restricted areas, identify co-located and crossing utilities, show environmental impacts.
- **Preliminary Engineering** Utilize re-route information, use for spotting structures, coordinate with landowner requests and requirements.
- Engineering Load in PLS-CADD models/design data.
- Integrate Geospatial and pertinent information into a single view, custom Lidar, photogrammetry, aerial photos and topographic information.



Screenshot above shows PLS-CADD model of a structure



Screenshot above shows proposed route as well as the original route (in a timestamped manner)

Schedule Management

- **P6 Integration** Display milestones, planned dates for each structure/tower.
- **Real-time Schedule Updates** Ability to track progress, manage access, real-time status reporting.



Screenshot above shows how OneTouchPM will integrate with P6 to pull planned dates. Actual dates will be tracked directly via OneTouchPM. This module will also enable real-time status reporting of each tower/structure (design and construction phase)

Document Management System

 Upload Documents & Geo-tag Documents – Ability to upload document, geo-tag documents.

Environmental Permitting

- **Permitting** Identify permitting restrictions, track progress, attach permits to impacted areas.
- Environmental Studies & Monitoring Identify monitoring locations and track progress and results, map archaeological, cultural, wetland, threatened and endangered species.



Screenshot above shows Environmental Site
Investigation Data. OneTouchPM will automatically
display cultural, wetland and environmental data
(gathered from the field).



Field Data

- Field Notes Used to display field notes (collected via mobile application) as it relates to each of the structures or substations.
- Photos Used to display field photos in a timestamped manner.
- Integration To ensure that data collected via the mobile application can be displayed within OneTouchPM®

Real Estate

- Parcels Create a common operating picture to enable easy access of real estate date: owner information, address and mailing address.
- Parcel Boundaries Parcel Boundaries provide detailed boundaries of a property parcel. Boundaries provide details of the visual the property's size, shape and relation to surrounding geographic features.



Screenshot above shows parcels, parcel boundaries and acquisition status along the route.

Public Involvement

- Open House App A disconnected app that is used to input comments during open houses.

 Landowners issues/comments and concerns can all be tracked at single location. This will also facilitate discussion with landowners to show the route and their respective parcel to show no effect/minimal effect etc. This app will be functional in disconnected mode as well.
- Open House Comments Logged comments from open house app will be displayed onto the OneTouchPM® Site. Program Management team can review all comments from open houses by logging into

OneTouchPM® portal. Comments will be organized by category type. This will help with tracking and processing of information in an organized manner.



Screenshot above shows comments from landowners from an open house.

Executive Overview

- Schedule Reporting report on project statuses based on project type, activity status (Complete, In Progress, Not Started)
- Budget Reporting report on project level budgets and facilitate tracking of budget forecasts at project level
- Summary-Level Reporting (schedule and budget) by year and by project

Construction Management

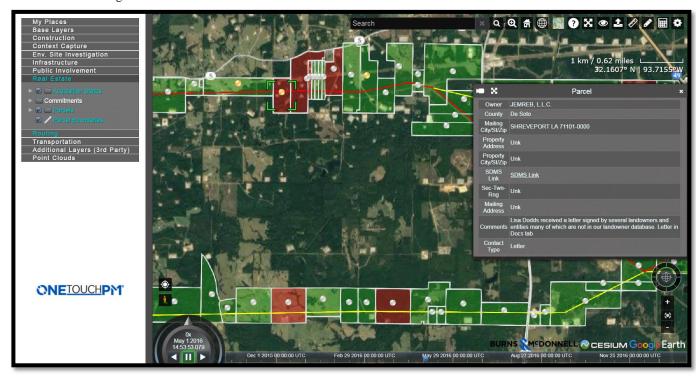
- **Construction** Track progress, manage access, report incidents.
- Outage Planning & Management Attach outage request documents, contact info, show durations.
- **Procurement** Project and track delivery of materials and equipment.



- Material Expedition & Management Assign materials from storage facility to Segments.
- Quality Assurance/Inspection Track progress, collect documentation, report/manage issues.
- **Testing & Commissioning** Collect test results.
- Safety Track man-hours by Segment, provide emergency contact information (fire, ambulance, etc.) by area.

Stakeholder Management

- **Right-of-Way Acquisition** Track meetings, easement documents, promises, requests, complaints, issues, acquisition, and access.
- ISO/Adjacent Utility Coordination Coordinate outages, crossings, and relocation of other utilities; make other utilities drawings available.



Dashboard

- Design & Construction Schedule Track design and construction schedule. Enable third party contractors to track these details directly into the dashboard. Data from dashboard will reflect onto OneTouchPM®.
- Cost Enable users to track and forecast cost. Dashboard can be used as a single platform that ComEd needs to maintain to collect any/all costs/forecast details from



contractors.

• **Project Issues, Outages, Engineering** – Track project issues, risks, outages, and engineering data.

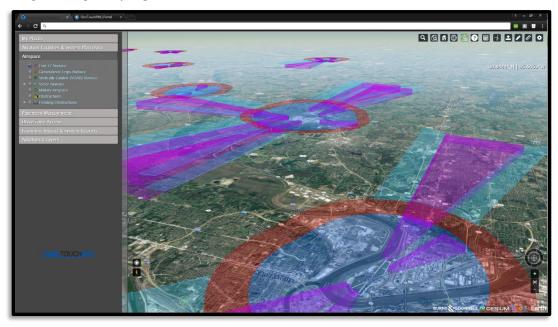
UAS Survey

- Lidar and Point
 Cloud Obtain and
 Display Accurate DEM
 Contour and Point
 Cloud Data, reduce on
 the ground survey
 labor, and proprietary
 software requirements
 to view the data
- High Definition
 Aerial Data, Photos,
 and Video Add
 Current
 Photogrammetry to the project



Aviation

• **3D Airspace** – Minimize Obstruction Impacts to National Airspace, Identify alternate routes to reduce legal and regulatory requirements.



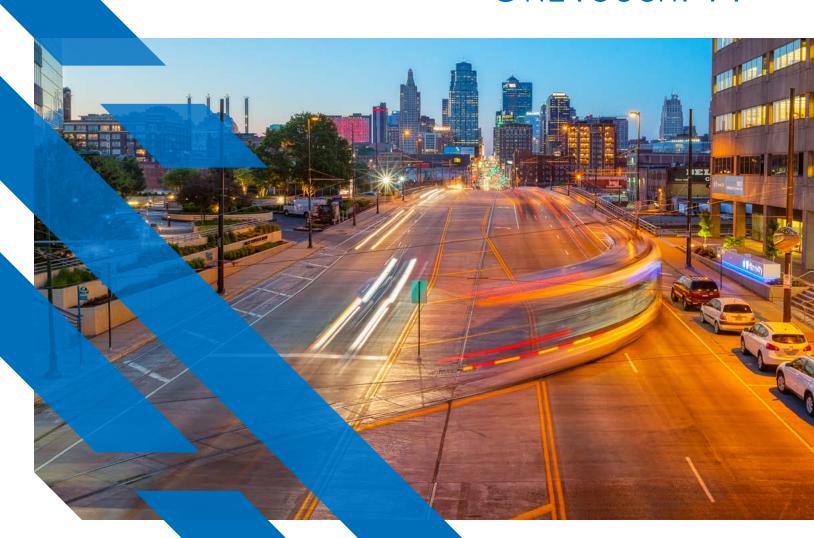




CREATE AMAZING.



$O \mathsf{NE} T \mathsf{O} \mathsf{U} \mathsf{C} \mathsf{H} \mathsf{P} \mathsf{M}^{\otimes}$





YEARS OF PROVEN RESULTS

10+ \$13B+ 350+

VALUE OF ENGINEERING PROGRAMS MANAGED

FILE FORMATS (DATA AGNOSTIC)

KEEPING YOU INFORMED DURING COMPLEX PROGRAMS AND PROJECTS

Big programs, large projects and their networks of stakeholders are by their very nature complicated. Our unique datacollaboration system simplifies project management by keeping details on track.

Whether it is routing transmission lines, building highways, cleaning up an oil spill or delivering any complex project — large or small — you can rely on OneTouchPM to keep your next challenge organized. OneTouchPM serves as a collaborative data gateway customized specifically for you. OneTouchPM gives you visual access to all your project data, building continuity through all project phases.

Our unique browser-based system integrates real-time data from disparate systems into a webbased dashboard accessible to all team members.

It includes a reporting module that allows view-based, real-time queries and reports to be displayed on screen. By providing a geospatial control center to manage each aspect of your project, OneTouchPM minimizes errors at the job site by efficiently delivering critical information to all decision-makers and stakeholders

The system is part of our adaptive technology approach that brings together the right mix of technologies to deliver your project seamlessly, precisely and efficiently from start to finish.

SUITE OF SOLUTIONS

Energized by our integrated teams of experienced professionals, our suite of solutions adapts to meet your specific needs — combining the right mix of technologies to deliver your project seamlessly, precisely and effectively. Our approach empowers us to identify, apply and even create tools that deliver on what amazing means to you.

DESIGN

You can see the destination, and you know where you need to go. Our system helps guide your critical design phases.

OneTouchPM allows the project team to see the necessary details to create effective designs: aerial photos, sensitive areas, affected areas, co-located and crossing utilities and environmental impacts. Information can be used to identify potential reroutes, spot structures and coordinate with requests and requirements from landowners.

We create models and integrate all geospatial and other pertinent information into a single view. The tool incorporates unmanned aerial vehicle (UAV) photogrammetry, aerial photos and topographic information to help use the smallest details to see and understand the big picture, including 4-D visualization.

USES

- Route selection
- Preliminary engineering
- Engineering
- Data integration, incorporation

PROJECT SPOTLIGHT

TRANSMISSION SYSTEM MODERNIZATION

American Transmission Systems Inc. (ATSI), a subsidiary of FirstEnergy

Multiple locations

With FirstEnergy investing \$4.2 billion over four years into its transmission system, utility officials knew much of the work would need to be along existing utility rightsof-way and with minimal impacts on the environment and surrounding communities. Our team, as engineer of record, uses OneTouchPM to coordinate detailed design on the far-reaching program that includes upgrades to 69-kV and 138-kV power transmission lines and substations in the Ohio Edison, Cleveland Electric Illuminating Co., Toledo Edison and Penn Power areas.



ENVIRONMENTAL

Rules. Regulations. Deadlines. Notifications. Before moving into construction, you first need to coordinate and complete a long list of tasks.

Transmitting electricity, piping wastewater or moving traffic is on hold until you secure permission from the proper authorities. OneTouchPM allows you to identify permitting restrictions, track progress and attach permits to affected areas of your project. The system also allows you to

identify specific monitoring locations, display field photos and keep tabs on progress and results.

OneTouchPM provides easy access to information involving archaeological, cultural, wetland, and threatened and endangered species.

USES

- Permitting and mitigation services
- Environmental studies and monitoring
- Archaeological, cultural, wetland, threatened and endangered species

PROJECT SPOTLIGHT

REYNOLDS-TOPEKA ELECTRIC SYSTEM IMPROVEMENT

Northern Indiana Public Service Co. (NIPSCO)

North Central Indiana

NIPSCO's plans for a new 345-kV transmission line would require more than a route. It also would need right-of-way, and that would mean conducting studies and securing permits involving a number of environmental issues.

Using OneTouchPM allowed our team to handle items involving potential crossings of the Tippecanoe River; coordination with three U.S. Army Corps of Engineers districts; federal, state and conservation lands; and more. Our team used engineering criteria to formulate routes, which were evaluated based on environmental and social issues considered significant to local populations.



STAKEHOLDER MANAGEMENT

Projects start and end with teamwork, and that means maintaining a game plan for players both on and off your payroll.

Whether it's a major program or a multiphase project, people need to be informed. If you are determining a route for a pipeline, road or overhead transmission line, you need to acquire permission or access to build. OneTouchPM allows you to track meetings, easement documents,

promises, requests, complaints, issues, acquisitions and access.

Once a route is set, you'll need to clear a path for construction. That means coordinating utility outages, crossings and relocations, and fulfilling promises made to landowners

USES

- Right-of-way
- Construction coordination
- ISO and adjacent utility coordination
- Public involvement

PROJECT SPOTLIGHT

LUTESVILLE-HERITAGE TRANSMISSION LINE

Ameren Missouri

Cape Girardeau County, Missouri

Announcing plans to build two new overhead transmission lines — one 345-kV and another 161-kV — draws attention. Ameren counted on our team to deliver viable routes for the critical connections, and that meant keeping stakeholders inside and outside the project

informed. Supported by
OneTouchPM, we consulted
with agencies, organized public
involvement activities and
participated in two rounds of open
house meetings and a community
representatives forum to present
and review the routes with affected
landowners and community
leaders. Using OneTouchPM, we
developed GIS maps and figures
for display at public open house
and community representative
forum meetings.



CONSTRUCTION MANAGEMENT

The best plans and most effective routes rely on smooth execution.

OneTouchPM generates status notifications and tracks and displays project progress. The system makes it easy to attach outage request documents, include contact information and indicate work durations

Managers can track man-hours by segment and provide emergency contact information for each area where work is occurring. Drawings, wire-stringing information, bills of materials and other documents can be provided for each location, allowing for efficient and effective tracking of deliveries and equipment.

The system also promotes a safe work site, with clear coordination of access and shared reports of potential issues and actual incidents.

USES

- Master schedule management and reporting
- Outage planning and management
- Safety documentation
- · Detailed design
- Daily reports
- Material expediting and management
- Progress reporting
- Quality assurance and inspection
- Testing and commissioning

PROJECT SPOTLIGHT

SUNRISE POWERLINK

San Diego Gas & Electric (SDG&E)

Southern California

Building 117 miles of highpower transmission lines is complicated. Our team used OneTouchPM in providing detailed project management for the job, which included having as many as 1,000 workers spread out along the project route that ran up and over a mountainside and twisted through environmentally sensitive areas to the edge of San Diego. Our team used OneTouchPM to coordinate as many as 35 helicopters airborne at a time, representing only a portion of the equipment necessary to install 438 structures lining up to hold 500- and 230-kV lines within 18 months.

EMERGENCY PREPAREDNESS AND RESPONSE

Identifying risks, sharing knowledge and maintaining clear lines of communication are all vital to promoting and maintaining a safe work site — and responding quickly and effectively in an emergency situation.

Should an emergency event occur, you'll be prepared: OneTouchPM displays high-consequence areas and assets in a geographical setting for effective planning and quick decision-making. In case of emergency, a geospatial setting provides easy access and rapid, reliable retrieval of essential information. Data is automatically refreshed to keep information up to date, a key aspect

for your preparedness. Data and documents regarding assets are compiled ahead of time and kept at your digital fingertips, ready to inform and guide your response. During an emergency, OneTouchPM pinpoints and retains incident locations, air quality readings, ongoing documents, incoming data and field photos — all important for precise response to an unplanned event.

USES

- Preparedness
- Incident response
- Environmental awareness
- Field-collected data

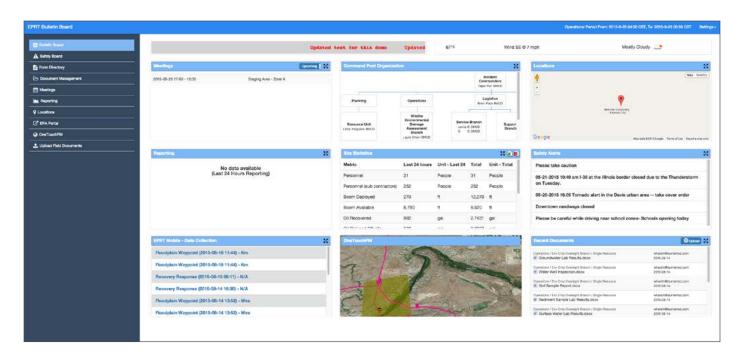
PROJECT SPOTLIGHT

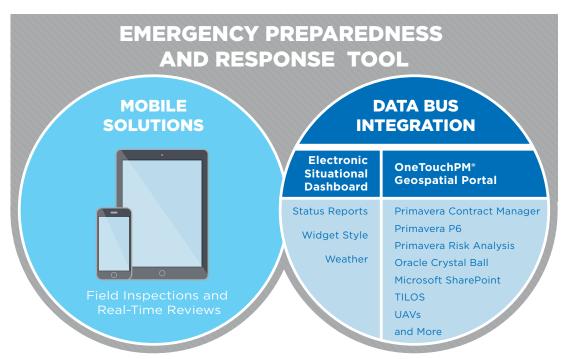
EMERGENCY PREPAREDNESS AND RESPONSE TOOL (EPRT)

TransCanada

Our client sought a software tool to enhance coordination, planning and collaboration of work during emergency events. We included our emergency preparedness response tool with OneTouchPM, allowing our client to expedite on-site response efforts and planning. As a geospatial viewer, OneTouch provides location and situation awareness to an incident command center, giving users access to geographic data, real

estate information, geolocated field photos and searchable emergency plan documents. The EPRT includes a situational dashboard that displays field statistics, organizational charts and reference information in real time.





PLANNING AND ASSET MANAGEMENT

You count on your assets to do more than simply function. They need to operate efficiently and provide consistent, reliable and resilient service.

OneTouchPM helps you compile the information you need to make proper decisions and provides it in understandable, accessible formats for regular use. The system can be used for planning, risk visualization and construction or renovation. The system makes our design-build approach even more efficient and effective, incorporating building information modeling (BIM) in 4-D — displaying three-dimensional views plus scheduling — to give you the

information you need, when and where you need it. OneTouchPM also allows you to stay on top of ongoing operations and maintenance.

Whether it's calculating needs analyses or asset risk, or displaying building information analytics or logistical issues with stakeholders, the system compiles, tracks and displays critical information. And it does so while drawing information from your existing system architectures.

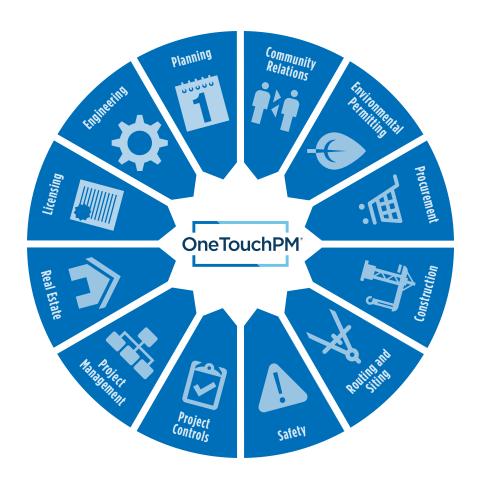
USES

- Maintenance and planning coordination
- Data integration
- Obstruction and line-of-sight studies
- Supplemental tool development and integration
- Communication coordination
- Role definition and workflow
- Airspace analysis automation
- Pavement management
- Project prioritization

PROJECT SPOTLIGHT

KANSAS AVIATION PORTAL

Kansas Department of Transportation Kansas Planners needing to understand how their projects might be affected by federal airspace restrictions now can actually see those effects take shape. The Kansas Airspace Awareness Tool transforms once-imaginary surfaces into an easy-tounderstand, visual and 3-D representation of local airspace. Users of the interactive tool see how proposed structures would fit into existing airspace and accompanying regulations.



THE BURNS & McDONNELL DIFFERENCE

True partnerships lead to successful projects. At Burns & McDonnell, we dedicate experienced and innovative leaders to your work, beyond the specific needs of a particular job and always with safety in mind. We build long-term relationships as

our people — engineers, architects, construction professionals, scientists and more — become valued extensions of your own teams, often for decades at a time. It's a point of pride that our clients find it difficult to tell the difference between a

Burns & McDonnell employee and one of their own. And that's no surprise, considering that we, as employee-owners, carry the commitment of ownership: We succeed when you do.

Learn more at burnsmcd.com.

