CASE STUDY

Field Service

YORK TAPS XPLORE FOR WATER WORKS MODERNIZATION

The Regional Municipality of York is one of six regional governments in Ontario and covers 1,776 square kilometers from Lake Simcoe in the north to Steeles Avenue in the south. York's Water and Wastewater branch is responsible for overseeing the wholesale supply of drinking water to residents of the region's nine area municipalities. The branch is also responsible for the collection and treatment of wastewater. Water and wastewater functions include the operation and maintenance of transmission water mains and major sanitary sewers, pumping stations, water storage facilities, production wells and treatment plants. The region has attracted new businesses and residents in recent years with 15,000 to 20,000 more jobs added annually. In fact, during 2006, York Region's population grew by approximately 32,291 people in 10,162 newly completed homes, reaching a total estimated population of 950,674.

With this growing population of residents and businesses, the Region of York's technology administrators knew that its water work's modernization effort would become increasingly more vital. "As the population of York Region has grown rapidly over the years, the demand for sufficient clean water has become larger," says a representative for the Regional Municipality of York. "At the same time, the volume of waste water that is required to be treated is also increasing rapidly."

Prior to its technology upgrade, the Region of York's field operators recorded their field meter readings using pen and paper at various hub sites. Afterwards, the operators input their data into an Excel spreadsheet at their main offices. Each hub site has vast amounts of data to be recorded and a wide range of forms for data input. "As a result, in the process of input, data would often be missing or input incorrectly," explains the York representative. ."In order to avoid missing data, operators were required to be onsite two to three times a week." Consequently, York Region operators were working a huge work load to collect the data.

"To correct the problem, York implemented a process of vendor solicitation and user acceptance testing to determine the hardware and software necessary for the job. Consequently, the Region of York decided to implement Xplore iX104C3 rugged mobile computers coupled with advanced technology systems such as the Inovex Canvass Mobile Data Collection system (in field data capturing system) to streamline the process to capture on-site data. "Under our evaluation and testing, the Xplore computer earned good feedback and comments from other users in York Region," said the York representative.

York's technology deployment consisted of four stages: First, the initial deployment of Xplore's tablet PCs to a pilot hub where operators would use Excel for initial data collection. The second stage consisted of deployment to seven subsequent hubs and the use of Excel to record data. At stage three, Xplore tablet PC with Inovex's mobile data collection software was deployed to a single pilot hub. Finally, at stage four, Xplore tablets with Inovex's mobile data collection software were deployed to all hubs.

Once implemented, the York Region's Water and Waste Water branch experienced a number of improvements in process, including: (1) single point of entry reduces work for reporting; (2) in-field analysis and trending tools on the Xplore tablet; (3) automated error checking and notifications for erroneous data entry; and (4) compliance thresholds for water/wastewater flow and chemical consumption are immediately visible for issue tracking.

"All the operators love the new systems as it really saves their data capturing time," said York's representative. "Instead of carrying paper forms to sites, operators just carry a handy tablet computer. It eliminates the chance to lose or mix data as the software will guide them to capture the correct information, which will automatically sync to the server database when the computer is connected to the network."

The Region of York's technology upgrades illustrates an important lesson. "A good application design and a good tablet computer are equally important in the success of deploying a mobile solution," said a representative.