Capturx Case Study
Freese & Nichols

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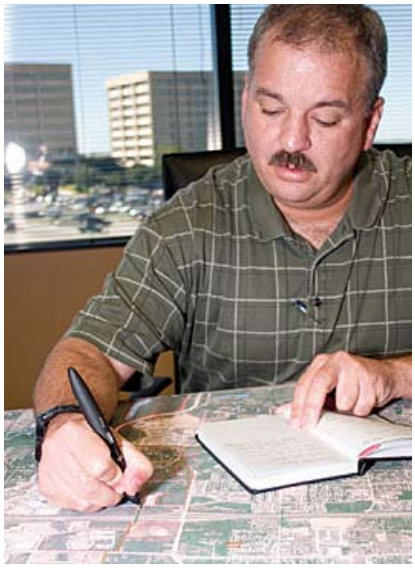
FOR ENGINEERING & CONSTRUCTION



Summary

Customer: Freese & Nichols, a Texas-based engineering and architecture firm.

Challenge: How to capture and share mission-critical field data that drives key decisions in a timely and efficient manner that field teams would adopt.

Solution: Capturx digital pen and paper software solutions from Adapx.

Benefits: Using Capturx, field teams no longer have to re-enter field data, and since data is shared more frequently and at a faster pace, they benefit from a more effective use of time and resources, as well as, a significant ROI.

Texas Based Engineering Firm Simplifies the Data Collection and Management Process

Freese & Nichols specializes in structural engineering and architecture, inventory and asset management, as well as, environmental science, and they collect a high volume of geo-spatial information for most of their projects. Typical engagements range from short-term 6 month contracts to 20 years and longer for government agencies, corporations, universities, and other organizations nationwide.

Project Scenarios

The firms inventory and asset management project teams are comprised of field employees, engineers, planners, and construction workers who take inventory of electrical, water, sewer, and gas systems. These multi-disciplinary teams work on zoning and land use overlays in the planning phases and are often collecting inventory data such as manholes and power lines.

Their wetland delineation projects are a direct response to meet national permits section 404 of the Clean Water Act. Environmental engineers check for soil type among brush that is at least four feet tall. In addition, they take inventory of trees when they build a reservoir and they have to be careful not to destroy too much habitat while they're at it. This is monitored by government bodies, so each year Freese & Nichols field employees need to go back to run inventory of the trees.

Challenges

The biggest challenge faced is how to capture and share mission-critical field data that drives key decisions in a timely and efficient manner that, most importantly, the field teams would adopt. Some of the personnel and logistical roadblocks became even clearer as attempts were made to automate some of their processes.

Dependence of field engineers and staff on traditional pen and paper for data collection, led to critical time lags between data collection and getting that data into a database for access and review. Inherent in the transcription process was the risk of errors in the data entry process due to difficulty reading multiple engineers' notes, papers getting wet or crumpled while out in the field.

By exploring the use of tablet PCs, the firm quickly concluded that they weren't convenient for field staff to carry. Staff simply were not comfortable using them and the laptops were often dropped. The cost of each PC and its repairs represented a big financial investment that did not pay off.

"The technology speaks for itself, it is intuitive to use and integrated into our existing business applications – ArcGIS, OneNote and AutoCAD."

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MARK VALENTINO
GIS coordinator Freese & Nichols

It became obvious very early on that the GPS devices didn't work well for staff because most of them are not very technical and found it hard to learn. The GPS devices also took more time to use, as they required the engineer to get out of the car to wait for a signal, and in some circumstances no signal was even available. Varying field conditions from underground manholes to being knee deep in the wetlands also made it cumbersome to maneuver with the unit in hand.

Employing these technologies was a challenge due to a resistance in changing familiar business practices to learn a new system. Since pen and paper prevailed as a common language across the team, Freese & Nichols began to research other options.

Solution

After in-depth research and much discussion about field data management solutions, the digital pen and paper software platform from Adapx was discovered to be an optimal solution. Capturx for ArcGIS Desktop, allows the operator to stick to business as usual by digitizing data captured with their pen, making transcription as quick and easy as docking the pen into a computer. In the near future, Freese & Nichols plans to use Capturx for AutoCAD so they can instantly mark up, annotate, and redline any CAD drawing, then upload the field data into any AutoCAD application as soon as they return to the office.

"We selected Capturx because we were looking to simplify our data collection and management process. The technology speaks for itself, it is intuitive to use and integrated into our existing business applications – ArcGIS, OneNote and AutoCAD."

Results

"By automating the favored data collection method among our field staff, Adapx digital pen and paper solution was immediately well received and incredibly easy to use -- with no formal training."

Thus far, Freese & Nichols experience with deploying and using Capturx for ArcGIS Desktop has been very smooth with major reported upsides and no real downside. The intangible benefits relate primarily to how well both field and office-based staff have embraced the digital pen and paper software solution from Adapx. Using Capturx, the field teams no longer have to re-enter field data, and since data is shared more frequently and at a faster pace, the company benefits from a more effective use of time and resources, as well as, a significant return on investment.