Capturx Case Study

Corpus Christi Street Service Department

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Corpus Christi, TX Street Services Department Increase Productivity by 20% Using Capturx

The Corpus Christi Street Services department ranks preventive maintenance (PM) as its highest priority for preservation of the structural integrity of street pavements across the city. Pavement preservation is accomplished by applying relatively inexpensive PM at regular intervals to avoid much more expensive repairs later. However, with limited staff resources and a large street network, the inspection cycle was beginning to stretch to 3 to 4 years. Corpus Christi was looking for ways to maximize the time inspectors spend in the field and to minimize processing inspection forms into their pavement management system.

Summary

Customer: Corpus Christi, TX inspects 900 miles of roadway to maintain high quality of the transportation system.

Challenge: Inspector's time is wasted having to re-key field data into their Pavement Management System.

Solution: Capturx Forms for Excel automatically converts handwritten data into digital format.

Results: Inspector productivity increases up to 20%– freeing them from administrative work.

Situation

The City of Corpus Christi maintains nearly 900 miles of roadway pavement. Before any planned maintenance takes place, a series of inspections and calculations are done to determine the severity and priority of pavement issues.

Throughout the year, inspectors categorize and measure the roadway distress and determine their severity. Inspectors use paper forms to document measurements and issues. Alligator cracking, edge cracking, potholes, swelling, and rutting are some of the 19 identified distresses that impact roadways. When inspections are complete, the data still needs to be processed to calculate the quantity and severity. These data are then sorted, summarized, and entered into the city's Pavement Management System (PMS), MicroPaver, that calculates an index used to help quantify the network condition. Each day inspectors spend 5 to 6 hours in the field, typically filling out 30 to 40 paper forms. Manually processing the data and entering it into MicroPaver typically takes an additional 1 to 1.5 hours back at the office.

Challenges

Inspectors spend as much as 20% of their day processing paperwork, limiting the amount of time they perform inspections in the field. It was taking longer to complete an inspection cycle and revisit any given section of road. As a result, citizen concern and complaints were increasing, requiring more time from the inspectors to prepare responses allowing them less time for inspections.

The Street Services department goal of cutting the inspection cycle time in 1/2 was hampered by the time consuming process of data entry into MicroPaver. The city did not want to move to more complex mobile technologies like PDAs or laptops, which are expensive, cumbersome, and require workflow changes by the inspectors. Their goal was to keep the paper-based process field data collection process, but to speed up the data entry process from paper.

"By using Capturx, we estimate that we'll be able to inspect up to 30% more roadway per month"

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City of Corpus Christi

"The greatest benefit is the re-allocation of time savings so that the inspectors don't have to do office work. The inspectors can stay out in the field and do what they do best rather than have to come into the office to do paperwork."

FRANK PALACINO
Pavement Information Manager
City of Corpus Christi, TX

Solution

To maximize time spent by inspectors in the field, the City of Corpus Christi selected Capturx Forms for Excel – a digital forms data collection solution using ordinary paper with digital pens.

With Capturx, inspectors print and use the same form that they've been using for years, printed on normal paper using one of the City's office printers. The forms are printed from Excel using the Capturx add-in, which creates a unique digital watermark enabling the form to be read by the digital pen. As the inspector later writes on the form using the digital pen, it creates a normal ink record of the data collected on paper while also making a digital copy which it stores on the pen's memory.

Each stroke of the pen on the paper form creates new digitized data. When the pen is docked into its USB port on a PC or laptop, the field data is automatically integrated into Excel. There is no new technology to learn or data to re-enter.

Benefits

Increases inspector productivity up to 20% – freeing them from administrative work

With Capturx, the inspectors no longer have to transcribe inspection information from paper. Capturx not only reduces paperwork processing, but it also enables inspectors to stay in the field longer and complete more inspections.

Inspections now stored as Electronic Data with paper backup

Although the data backlog was not an issue, the build-up of paper records was. With Capturx, that data is stored in electronic format in Excel. The paper version becomes a back up.

Works the way they work

Capturx automates the process without changing the simple and reliable paper-based data collection. The pen is durable, easy to carry, and the data upload can be performed by nearly anyone.

When the pen is docked to a PC, the data is instantly available for editing or upload to MicroPaver. Unlike mobile computers, Capturx does not require complex training, support or management of hardware or software, and if the Capturx digital pen is lost, there's paper back-up of all data.

Future Plans

For the future, the City of Corpus Christi is exploring two areas. First, the ability to prepare Capturx ready field forms with all the header information pre-printed which will keep hand operations to a minimum. Secondly, to export the completed information from Excel directly into MicroPaver. This will provide an additional time savings component to the process.