Comprehensive Overview

Background

In 2011, the City of Cuyahoga Falls entered into a contract with Innoprise Software, Inc. for the purchase of a new software system. The Innoprise system is a third-party web-based Enterprise Resource Planning system. Included in the software package were unlimited user licenses, implementation support, data conversion, training, software upgrades and enhancements, software patches and fixes, ongoing product requirements support for new product initiatives, and unlimited technical support. Over the years, the system has continued to be updated and enhanced as technology has continued to evolve. Though the Utility Billing module of the software was converted in early summer of 2016, system upgrades and other module conversions have been occurring over the past three years across various City Departments. The Finance Department converted their software system to Innoprise in 2013. Community Development and Engineering were converted in 2014, and Payroll in 2015.

For the purpose of this overview, it is necessary to note that Innoprise is the Utility Billing system and Aclara is another third-party application used to transmit meter read information. Each month certain accounts are flagged by the system as needing special attention by members of the Utility Billing Department prior to being processed for billing. These accounts are referred to as Manual Review Accounts.

There are six residential and commercial billing cycles that are processed and mailed or eBilled throughout the month. The bills are typically created on the 1st, 5th, 10th, 15th, 20th, and 25th day of each month. Given the dates that the billing cycles are created, they are identified as Cycle 1, Cycle 5, Cycle 10, Cycle 15, Cycle 20, and Cycle 25.

Utility Billing Software Conversion

The current system, HTE, had become obsolete and was unable to receive updates that would improve technological capabilities and data security measures. Leading up to the conversion, the City worked closely with project personnel from both Aclara and Innoprise. After multiple testing and verification procedures were performed, identified issues were corrected, and employees were trained on system operations, the decision was made to proceed with the conversion. With the components of the project plan in place, project personnel from

Innoprise, Aclara, and representatives from both the City's Information Services and Utility Billing Departments agreed that the system was ready to go live. The timeline below highlights the sequence of events which took place from the decision to go live with June 2016 Cycle 10 billing.

Date	Activity	Comment
10-Jun	Data conversion from HTE to Innoprise began	
13-Jun	HTE to Innoprise data conversion completed	
20-Jun	Aclara reading system data conversion completed	Aclara missed the deadline of June 13 for conversion
20-Jun	Cycles 10, 15, and 20 bills were created in Innoprise	Unusually high volume of Manual Review Accounts identified
27-Jun	Cycle 25 bills were created	
6-Jul	Cycles 1 and 5 bills were created	All cycles have been billed out of Innoprise
13-Jul	Cycle 10 bills were created	
28-Jul	Cycle 15 bills were created	Unusually high volume of Manual Review Accounts identified and issued
29-Jul	Aclara meter read data cap identified	See explanation below
9-Aug	Cycle 1 bills were created	Cycles 20 and 25 were not billed in July
11-Aug	Cycle 5 bills were created	
12-Aug	Cycle 10 bills were created	
18-Aug	Cycle 15 bills were created	
23-Aug	Cycle 20 bills were created	
29-Aug	Cycle 25 bills were created	
1-Sep	Cycle 1 bills were created	September forward, all billing cycles were created +/- 2 days of cycle date
6-Sep	Kevin's Meter Testing retained	Single phase meter accuracy testing, full and light loads
7-Sep	Cycle 5 bills were created	
9-Sep	Summit County Internal Audit retained	Agreed upon procedures over Electric Utility Billing process/accuracy
12-Sep	Cycle 10 bills were created	
16-Sep	Cycle 15 bills were created	
20-Sep	Cycle 20 bills were created	
26-Sep	Cycle 25 bills were created	
30-Sep	Cycle 1 bills were created	
4-Oct	BDO USA, LLP retained	Review of processes and procedures, remediation of Internal Audit observations
5-Oct	Cycle 5 bills were created	
11-Oct	Cycle 10 bills were created	
17-Oct	Cycle 15 bills were created	
20-Oct	Cycle 20 bills were created	
26-Oct	Cycle 25 bills were created	
1-Nov	Cycle 1 bills were created	
4-Nov	Cycle 5 bills were created	
10-Nov	Cycle 10 bills were created	
16-Nov	Cycle 15 bills were created	
21-Nov	Cycle 20 bills were created	

It is important to note that not all accounts were affected by the system conversion, and not all cycles encountered the same transition issues. However, once June Cycles 10, 15, and 20 were processed and mailed, it was evident that there were significantly more accounts than normal that were flagged to be manually reviewed prior to processing. These manual reviews were time intensive as each account had to be individually reviewed and corrected and due to the time involved to take corrective action, billing cycles continued to be delayed in July and August. The most significant contributor to the high volume of Manual Review Accounts was

identified as a cap in data being transferred from the meter read application (see more detailed explanation below). With the issue corrected and the backlog of Manual Review Accounts beginning to clear, billing cycles were back on track with Cycle 1 in September.

Questions and Challenges

Throughout the conversion, the Utility Billing Department experienced some challenges. Management and staff members worked to address each issue as it was presented and dedicated their time and resources to remedy the issues as efficiently and expeditiously as possible. The following is an overview of some of the main issues that were encountered during the conversion.

Aclara Meter Read Data Cap

The reason that the accounts were being flagged was due to the system was not receiving some of the meter read data that should have been transferred from Aclara. The bills were sent to Aclara to download the reads, but large quantities of accounts were returned with no reads in the system. Upon manual review, the reads were visible to the employees, but they were not transferring or being recognized by the new system to be billed. Utility Billing employees began to input the data and review the accounts manually to ensure accuracy prior to processing the bills.

Returning to Cycle 10, the Utility Billing Department continued to address the Manual Review Accounts and bills were sent out on July 13, 2016. Cycle 15 is the largest of the billing cycles. Cycle 15 bills were sent out on July 28, 2016, due to the large quantity of Manual Review Accounts that had resulted from the June bills for Cycle 15. Further, when processing the Cycle 15 bills in July, it was again noted that large numbers of bills were being flagged with no reads as Manual Review Accounts. Again, the reads were visible upon account review but were not populating in the billing system for processing. It was then discovered that the reads were not populating due to an unknown cap of 10,000 reads in the Aclara system. This meant that, though all account reads were being transmitted to Aclara, Aclara was only sending 10,000 back to the system and all others were pushed into the Manual Review Accounts because some of their data was not transferred. The City immediately worked with Aclara to have the cap removed.

Due to the cap, roughly 2,000-2,500 accounts were forced into the manual review because all of the data was not transferred. In any given cycle, approximately 200 accounts will normally be identified as a Manual Review Account for issues ranging from abnormally high consumption to a failed Meter Transmission Unit (MTU). It is important to note that June Cycle 15 bills that were identified as Manual Review Accounts were processed system-wide with estimated bills on July 25, 2016. July Cycle 15 bills were then sent on July 28, 2016.

Length of Billing Cycles

The manual review of multiple billing cycles delayed when bills were sent to customers. It also affected the length of the billing cycles and the amounts that were billed to customers. The delay in billing essentially extended or lessened the respective billing cycles. For example, July's Cycle 15 was not billed until July 28 causing the July 15 Cycle to be approximately 45 days in length instead of the normal 30 days. As issues were resolved and billing cycles began to be returned to their proper mail dates, residents may have been subjected to shorter billing cycles due to the previous month's extended cycle. This meant that residents might have received two bills in one month. The issues have been resolved, and customers are on regular billing cycle schedules.

Power Cost Factor (PCF) Questions

When the new bills were launched on the new system, there was also a new bill design for the actual invoice. Power Cost Factor (PCF) was broken out in a different location on the bill, and residents began to question what it was and how it was calculated. PCF has appeared on the utility bills dating back to the 1980s. The PCF is a variable rate that changes monthly and is calculated based on a formula set by City Ordinance. The PCF is the sum of the city's power costs from the last 6 months divided by the sum of the city's kilowatt-hours (kWh) sold from the last 6 months and then subtracted from the Set Cost (SC), which is $0.08/kWh. This calculated PCF is then multiplied by the customer's kWh consumption for that billing period. Depending on how high power costs have been over the previous 6 months, the PCF could be a charge or a credit on a customer bill. The PCF accounts for the constantly fluctuating costs of the power supply. The credit rating agencies see this method of power cost recovery as essential in keeping the utility in good financial condition while keeping base electric rates as low as possible.

Meters Rolling From 5 to 6 Dials

Most residential meters have 5 dials on them and transmit a 5 digit read. When the meter hits 99,999, it will then roll over and return to 0. However, the MTU which transmits data back to the system does not roll over and will send 6 digits back to the billing system. When a meter hit 99,999, Aclara would automatically roll over to 100,000, which was unrecognized by the system due to the 6th digit and the account would be sent for manual review. Now when a roll over occurs, employees manually enter the meter register within the billing system and change the number of dials from 5 to 6. This is done on a monthly basis pending the number of meters that roll over. The previous HTE system had truncated the first digit to achieve the same effect.

MTU Transmittal

The MTU transmittal issues date back to 2009 with the original JCI/AMR project. Additionally, some meters were never upgraded with the newer AMR readers back during the original installation in 2009. Many residential MTUs have stopped sending reads to the new system. Once an MTU fails to transmit, a meter read is physically taken by a meter reader and the data is manually entered by staff members in the Utility Billing Department. Currently, there are roughly 4,500 manual meter reads throughout the City per month. To address this issue, the City hired additional part-time meter readers early in 2016.

Sprinkler Meters

Regarding sprinkler meters, consumption is relatively dormant throughout the year except for in the spring and summer months. HTE allowed accounts with sprinkler meters to bill the meters at zero consumption without pushing them into Manual Review Accounts. Accounts with sprinkler meters where consumption is zero are being flagged as a Manual Review Account preventing their entire bills from being processed. Innoprise is not currently configured to suspend billing for sprinkler meter accounts with zero consumption. A programmatic change has been requested to accommodate the zero consumption bills. In the meantime, Utility Billing staff members are manually overriding the system parameters so that the bills can process.

Large Commercial Accounts and Rate Structure

Once the conversion was completed, it was determined that the calculation for electric billing for large commercial accounts was not following the rate structure established by the ordinance. After further review, the issue was identified that the Variable Rate Tier Block configuration needed to be modified. Given the complexity of the rate structures, system parameters to accommodate for this calculation were not easily configurable. Following several attempts to work with Innoprise to build the rate structure properly, the solution was identified, tested, and implemented effective Cycle 1 for November.

Additional Actions Taken

As issues were identified, Steps were immediately put into place to address customer questions and concerns, to verify meter and system accuracy, and to ensure transparency in the process.

Communications

Due to increased call volume and limited dedicated staff, employees throughout City departments were cross-trained and temporarily reassigned to the Utility Billing Department to increase efficiency in regards to returning phone calls to address customer questions and concerns. Customer questions and concerns were further addressed through face-to-face interactions in the Utility Billing Department, emails, and social media. Employees worked overtime hours to accommodate residents outside of business hours and appointments were taken for late night and weekend appointments.

Late Fees and Bill Payment

To address concern over the payments of bills, late fees, and utility terminations were suspended and additional time was granted to make payments on bills. Staff members worked individually with customers to help address any issues of potential financial burden to ensure that payment options were affordable and available.

Meter Accuracy

Some customers raised concern about the precision of meter reads. The City retained a certified meter testing vendor to make certain that meters were transmitting accurate reads. The City had been previously conducting testing on meters at the request of some customers. Kevin's Meter Testing found that the City's meter test set is calibrated properly to test meters in accordance with a known good meter standard. Additionally, they checked meters in a random test sample, and that testing verified that meters were reading accurately.

Internal Audit Review

To ensure transparency, the City then requested that the Summit County Internal Audit Department (IAD) assist in performing a full assessment of the electric billing and control environment. IAD agreed to conduct an overview of the activities that occurred on June 1, 2016, through July 31, 2016. Agreed-Upon Procedures included an overview of the internal control structure for the Utility Billing Department, documentation of the timeline of events respective to the billing system conversion, a review of the IT security environment, a performance of detail testing to ensure the accuracy of billing statements and procedures and provide recommendations. The following is a brief summary of the audit recommendations and responses.

Observation 1 noted that there were no formal policies and procedures in place for the electric utility billing processes. The City has retained BDO USA, LLP to help write formal policies and procedures, and they are currently in development.

Observation 2 states that electric billing proofs are reviewed prior to bill generation to ensure accuracy though the reviews are not documented. The process to review and document bills will be formalized and written into the policies and procedures that are currently being developed.

Observation 3 explains that when a customer receives two bills in the same month, that each bill contains a customer charge. Per the city ordinance, there should be a once per month charge. However, this is explained as the base charge for which the customer is being billed for a particular month, regardless of the date it mails. For example, weekends and holidays could move bill dates forward or backward which may result in a customer receiving two bills in one month. Customers receive 12 base charges per year.

Observation 4 states that participation in the renewable energy program is not noted on the billing statement as required per City Ordinance. There are approximately 150 accounts with renewable energy program participants. Reconfiguring the billing statements would not be cost effective for less than 1% of the customer base.

Observation 5 notes that PCF for government institutions was not calculated in accordance with the City Ordinance. Proposed changes in the legislation will be forthcoming to clean up the way in which PCF is calculated for government institutions to be in line with the PCF calculations citywide.

Observation 6 states that Upon recalculation of residential and commercial electric rate schedules, IAD noted ninety-eight (98) of twenty-nine thousand eight hundred sixty-six (29,866), or 0.3%, residential instances and two hundred three (203) of two thousand three hundred nineteen (2,319), or 9%, commercial instances where the electric bill was calculated incorrectly.
Subsequent to the IAD report being issued, the calculation issues have been corrected.

Observation 7 notes that Upon reconciliation of the electric portion of the recalculated bill to the customer's billing statement in Innoprise, IAD noted nineteen (19) of seven hundred forty-nine (749) instances, or 3%, where the 2015 customer charge was used in lieu of the 2016 charge (EcoSmart schedule). Subsequent to the IAD report being issued, the calculation issues have been corrected.

Policies and Procedures

BDO USA, LLP was retained to assess the processes and procedures of the Utility Billing Department, assess operations, provide documentation of the follow of processes and make recommendations. They agreed to evaluate whether best practices were being utilized, that there was a full working understanding of the intricacies of the system, to help firm controls to enhance documentation and reporting capabilities, and help implement any recommendations found within the Internal Audit report.

BDO interviewed all pertinent staff related to Utility Billing and observed the day to day operations. They looked at the Innoprise system as a whole to understand how the system works, how it is designed, how to retrieve information, and assess whether the functions were being utilized to maximize the benefits of the system. They also worked to help build reporting

capabilities to pull data more efficiently and help further customize the software. BDO has served as an added resource to identify and resolve issues.

Moving Forward

The City has been working closely with BDO to develop and implement formal policies and procedures in the Utility Billing Department. Effective actions have been taken to remediate all known issues. As we move forward, we will continue to refine and enhance our processes and use of the system.