Customer Information System Implementation:

Data Cleanup & Migration Project
Agenda

• Overview
• CIS Project Overview
• Why Clean up the Data?
• CIS Replacement Project Urgency
• Data Clean up Effort
• Data Migration
• Questions
City of Georgetown Overview

• Rapidly growing suburban community
• Population: 50,000
• 35 miles north of Austin
• Georgetown Utility Systems (GUS):
  – Energy, Water, Sewer, Drainage & Garbage Services
  – Networks
    • SCADA
    • AMI & AMR
    • Fiber System
  – Customer Accounts:
    • 26,000 electric
    • 38,000 water
    • 42,000 total accounts
CIS Project Overview

- Purchased current Incode system in 1994
  - Outgrown software
    - Proprietary (COBOL based) system
    - Difficult to integrate with other systems
    - Limitations on available customer data
    - No time of use rate capabilities
CIS Project Overview

- Consulting Contract – Westin Engineering
  – Phase I: RFP development

**Project Strategy:**
- Vision
- Objective
- Approach
- Timeline

**Project Needs:**
- Define based on 2500 line functionality matrix

**RFP Document:**
- Development of RFP based on requirements matrix and procurement rules.
- Released: 6/17/15

**Industry Overview:**
- Provide overview of vendors in current market
  - Tier 1
    - Oracle
    - SAP
  - Tier 2
    - Harris Brands
    - Itineris
CIS Project Overview

- Westin Engineering – Consulting Contract
  - Phase II: Vendor Selection/Contract Assistance

**Task 1**

Addressing Questions - RFP
Jul 2015

- Post RFP assistance:
  - Addressing vendor questions
  - Conducting Pre-Proposal workshop
  - Addendum assistance

**Task 2**

Vendor Selections
Aug – Dec 2015

- Vendor Evaluations:
  - Proposal evaluations
  - Reference Checks
  - Demonstration scripts
  - Short list coordination
  - Site visit assistance
  - Final Selection

**Task 3**

Contract Assistance
Dec – May 2016

- Contract Negotiations:
  - Technical Scope of Work
  - Contract assistance
CIS Project Overview

- Westin Engineering – Consulting Contract
  - Phase III: PM/CIS Implementation

### Task 1: Project Management
- Jun 2016 – Go-Live

- Project Management:
  - Project Initiation & Implementation Planning (Overall Project Plan)
  - Vendor Contract Management
  - Scope Management

### Task 2: Test Management
- Jun 2016 – Go-Live

- Test Management:
  - Coordinate Test Plan
  - Testing Scenario & Script Development
  - Defect Management
  - Tracking progress & vendor deliverables for project phases

### Task 3: Organizational Change Management (OCM)
- Jun 2016 – Go-Live

- Organizational (OCM) Change Management:
  - Develop overall OCM strategy & plan
  - Train project core team on approach
  - Assist in preparing GUS staff to cut-over to new CIS.
Why Cleanup the Data?

• **Things were simpler in 1994**
  – We didn’t worry about data standardization
    • As long as we could bill and were sure of accuracy we were good.
  – No standards for data input
  – Computers back then didn’t talk to one another
  – We didn’t rely on computers system data to send letters, or interact with customers.
Why Cleanup the Data?

• **Through the Years**
  – Attempts were made to standard data
    • Data & departments were in silos – impacted outcomes
    • Never adopted citywide policy on data integrity
  – Acquired a water special utility district (2014)
    • Customer data was captured in their CIS differently
CIS Replacement Project Urgency

• How do we move the data for 42,000 accounts?
  – We could hire folks to enter data into new system manually – expensive and error prone
  OR
  – We could standardize our data into a consistent format and electronically upload it into new CIS.
Data Cleanup Efforts

• **Account Service Location (Premises)**
  – GIS system of record (911 addresses)
  – Compared CIS data with GIS data
    • **Manually updated CIS records to match**
  – In new CIS, Premise information will be pushed from GIS so systems had to match

• **Mailing & Email Addresses**
  – Identified 5-10% were formatted incorrectly.
  – Updated CIS with new formats
Data Cleanup Efforts

• Contacts
  – Person/entity linked to a utility account
  – Existing Contacts were not searched
    • New contacts were created every time one was needed
  – Database shared with Permitting, A/P, A/R and information was used in different ways
  – Utility accounts purged after 6 years, contacts remained
  – Deleted 30,000 contact records that were no longer linked to an account
Data Cleanup Efforts

• Rates
  – Rates evolved over 20+ years in the current system.
    • No system standardization – could modify for special circumstances (same rate different tax)
  – Could not be deleted when no longer active
  – Rates in new CIS system are standardized
    • Using rate determinants (city limits, meter size, customer class, etc)
  – Data cleanup allowed us to document and review all rate structures and create standardized criteria in applying rates.
Data Cleanup Efforts

• Form Letters – system generated fields
  – Compiled library of all customer communications
  – Removed letters no longer used
  – Reviewed existing letters & made edits
  – Determined new letters needed and created them
  – Created a matrix showing of all communications and system-generated data field needed to ensure new CIS could produce them.
Data Cleanup Efforts

• Other data reviewed
  – Driver’s License
  – Deposits
  – Meters

• Compiled list of 400 sample accounts
  – Reviewed all special situations to see if they could be standardized
  – Account list will be used for data migration testing later in project
Data Migration

**CEO MEETING**
I brought Dilbert in case you have any technical questions.

**WHAT'S THE STATUS ON THE TECHNOLOGY PLATFORM MIGRATION PROJECT?**
Be completely honest. We have nothing to hide.

**THE PROJECT IS LIKE A HUNDRED DRUNKEN CLOWNS WITH BEES IN THEIR UNDERPANTS.**
I expect the decline in morale to lead to violence.

**WELL, OKAY.**
Most of us are only pretending to work while secretly hoping the project gets canceled after you get fired by the board.

**IT TURNS OUT THAT WE DID HAVE A FEW THINGS TO HIDE.**
Data Migration

• One of the most critical activities in the CIS replacement project
  – Converting 24 months of data

• Data Migration Process
  – Cleansing, extracting, transforming, and loading customer data into new CIS from old CIS.
Data Migration

• How did we prepare?
  – Data Warehouse Project
    • Gave us the ability to get familiar with the data in a “safe” environment
  – Created an automated validation of address data with our GIS group
  – Added additional migration iterations to the project
    • Added three additional iterations at the beginning to ensure we were ready for testing
Data Migration

• Migration Steps
  – Migration runs are a little like the movie Groundhog Day

  • Each migration run is composed of multiple phases
    – Data Mapping
    – Extract / Transform / Load
    – Visual Validation
    – Reporting
    – Error Analysis / Fixing
Data Migration

• Interaction with Testing and Training
  – There are 3 main phases of testing which Data Migration supports
    • Unit Testing
    • Integrated Systems Testing
    • User Acceptance Testing
  – Training also relies on the data being accurate and familiar in order for training to be effective
Data Migration

• **Challenges**
  – Legacy Data
    • Stored in a different format, and systems have changed in functionality
  – Skills Gap
    • No in-house developers or database administrators
  – Resource Availability
    • Project team members still have their “day jobs”
Data Migration

• What can you do to make Data Migration successful?
  – Start identifying data that needs to be “cleaned” as early as possible
  – Make sure that you stay in sync with the rest of the project
  – Understand your staff’s strength and weaknesses as it relates to data migration
Questions

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