

On-time, under budget, within scope – the roadmap to a successful CIS Implementation

HOW CITIZENS ENERGY GROUP IMPLEMENTED ORACLE C2M AND DIDN'T SKIP A BEAT

Citizens Energy Group's successful transformation to a new customer information system is a roadmap for utilities faced with finding where to start when transitioning legacy systems to today's technology solutions. Learn how they did it - on time, under budget, and with great operational success.

INTRODUCTION

Citizens Energy Group (Citizens) is a broad-based utility company established in Indianapolis, Indiana, offering diverse utility services providing natural gas, water, steam, chilled water, and wastewater treatment services to over 439,800 homes and businesses. Citizens was using the Hansen Technology (formerly SCT) Banner CIS application, originally implemented in 1999, to manage its customers and produce utility charges. In 2009, Citizens upgraded to Customer Suite version 4.1.

This paper explains Citizens' journey to move beyond their aging technology platform to a new state-of-the-art system that supports and enables the company's commitment to excellent customer service. As many utilities do, Citizens began with a degree of uncertainty facing the challenges of system implementation, digital transformation, and business process improvement across broad intervals of time and technological advances. Citizens' Executive leadership recognized that their goal of a 'successful project' would

Citizens Energy Group

Indianapolis, Indiana

PREPARED BY:

AAC Utility Partners, LLC

Selection and Project Management Consultant

IN COLLABORATION WITH:

Oracle Utilities

C2M System Provider

Infosys

System Integrator

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require prudent unbiased guidance, leadership skills based on knowledge, and technical expertise beyond the capabilities of their internal staff resources.

Essentially, Citizens' success was predicated on putting the right people in the right place at the right time doing the right things. For Citizens' digital transformation, this process began with and was completed under the guidance of AAC Utility Partners – first as their selection consultant and ultimately as their project manager throughout the implementation project, bringing the system online. The information that follows describes the various aspects of the process, how Citizens made its selection of Oracle Utilities as a software partner; Infosys as a system implementation partner; Black and Veatch as a quality assurance partner, and how the team worked together to complete the project within the schedule, budget, and operational parameters that Citizens set out to achieve.

ASSESSMENT AND SELECTION

Recognizing the complexity of procuring and implementing a once-in-a-generation Customer Information System (CIS) and Meter Data Management System (MDMS), Citizens Energy Group contracted with AAC Utility Partners, LLC (AAC), a vendor-independent, utilities-specific consulting firm for mission-critical applications. As their strategic partner and procurement advisor, AAC worked with Citizens to refine their strategy, develop a Needs Assessment including a comprehensive list of business requirements, and a competitive Request for Proposals (RFP) process for selecting a solution provider and system integrator (SI). AAC provided a thorough evaluation process that included detailed demonstration scripts for both the software provider and the system integration company to understand the proposed methodology and recommended staffing to implement such a complex system. AAC's signature methodology, NavigateOne™, provided a proven process to Citizens for contracting with the most qualified and lowest risk solution provider and SI.

AAC's role was to develop and solicit an RFP that communicated Citizens' unique service offerings and desire to be the best-in-class service provider to their Gas and Water customers. Citizens was looking for a solution and an integration firm experienced with utili-

ties that provide Gas, Water, and Chilled Water services and that could deliver functionality to a customer base of nearly 400,000 customers. They were also looking for a system integration firm that could implement such a system and ensure that Citizens' staff would utilize the application on day one.



Citizens was looking to replace their 20-year-old legacy system with a modern customer-centric system that could accommodate their complex service offerings while maintaining the high level of service expected by their customers. The organization also wanted to streamline its business processes and improve efficiency across the organization through enhanced integrations to existing subsystems and direct integrations into the new MDMS solution. Utilizing AAC's NavigateOne™ Selection Methodology, Citizens issued a comprehensive RFP and hosted on-site scripted demonstrations that required the vendors to address current and future needs. As a result of the responses and other evaluation criteria, the customer-focused evaluation team selected both Oracle as the application provider and Infosys as the system integrator to implement the highly functional Oracle Utilities Customer to Meter (C2M) solution. Both vendors addressed Citizens' business requirements above the other vendors in the highly competitive market space. Both vendors were able to implement a system to improve customer engagements and overall business performance by addressing some critical areas of concern.

Enhancing the Web Self-Service Capabilities

Streamlining and providing efficient processes within the system to facilitate quicker responses when customers engaged the web portal for self-service needs.

Offering Robust Billing Programs and Payment Options

Establishing operational excellence through better integration with third-party applications and real-time reporting so that executives can determine what customer initiatives need to be deployed promptly to address customer needs.

CONTRACTING AND THE STATEMENT OF WORK

Early on during the assessment phase of the project, Citizens management voiced their concerns regarding runaway CIS projects that had been in the press recently.

Citizens' management wanted a truly independent firm to help the firm select the software provider and the system integrator. After an exhaustive search of the North American market for advisory firms, AAC Utility Partners came out on top. Having provided confirmation of their independence from the software vendors and system integrators, Citizens' management was confident they could count on AAC's assessments and recommendations and that they would offer the most unbiased guidance.

During the early stages of considering the project, Citizens was very concerned about the reports they had heard regarding failed CIS projects. Several projects had been completely stopped or the costs were exponentially exceeded.

The key question Citizens asked was, "how do we mitigate that risk"? Citizens recognized that AAC had a proven and detailed assessment and selection methodology, NavigateOne™, which provided structure, templates, and metrics to thoroughly evaluate the vendors. As a component of that methodology, AAC developed the NavigateOne™ Statement of Work that is written to protect AAC's clients but is fair with all partners as it requires accountability.

When it comes to an enterprise software implementation, all organizations desire a fixed-price guaranteed project, but how do you accomplish that while being fair to all partners?

The first step was to capture business requirements at a level of detail that specific Citizens requirements could be measured throughout the project. These requirements, as defined earlier in the assessment, were an integral part of the request for proposal as well as the final due diligence and contracting with Infosys and Oracle.

Oracle played an important part in the contracting phase by illustrating how its C2M solution would help Citizens transform its business to exceed its customers' expectations. Citizens selected Oracle Utilities C2M as the backbone for this CIS and MDMS technology transformation because of its robust capabilities to meet end-to-end needs.

As part of the advisory services, the AAC NavigateOne™ Statement of Work (SOW) was utilized as a starting point for the agreements. The SOW included accelerators for Deliverables, Governance, Acceptance of Deliverables, Process and Procedures, Phased Entry and Exit Criteria, Staffing Agreements (not plans), and Milestone Payments that were tied to the Deliverables. In short, ownership, responsibilities, and accountability for all partners were clearly defined. All partners participated in the contract negotiation phase to reach an agreement that met the business requirement of Citizens Energy.

IMPLEMENTATION

The objective of the CIS2020 (the name assigned to Citizens' CIS replacement program) was to replace the Legacy Banner CIS (also called 'Customer Suite 4.1') along with BillGen (which was used for complex billing and third-party gas supplier nominations and balancing) to improve customer services and operational improvements.

The implementation of the new system was critical to Citizens executing on their company strategy, so the project team focused on a few specific goals: to get the right people involved, to have a clear and transparent communication plan, and to have measurable benchmarks so that project progress could be analyzed.

As with all successful implementations, one of the core tenets is a comprehensive statement of work. The implementation was aligned with the AAC Utility Partners' NavigateOne™ Statement of Work (SOW) and contract documents that included: 188 deliverables, schedule, test plans, conversion plans, and entry and exit criteria for each project phase. These criteria were the key drivers for the success of the project to be delivered on schedule, on-cost, and within scope. The criteria made measurable progress and gave the AAC Project Manager concrete ways to share with stakeholders whether the project was on track to reach mission-critical project goals.

The Banner system had three different instances, one for each of the business units brought in over the lifecycle of the system. This made converting the data into a single instance a bigger challenge.

The CIS2020 program impacted the following functional areas, each requiring careful consideration of the uniqueness of the Organizational structure and its diverse operating companies, trusts, and divisions:

- Combination Utility Billing (Gas, Water, Wastewater, Steam, Chilled Water)
- Customer, Premises, and Account Management
- Customer Self-Service
- Credit and Collections Management
- Financial Management and Accounting
- Meter Data Management
- Billing Management
- Rates Management
- Usage Management
- Inventory Management
- Service Order Management
- Payment Management
- Red Flag Management
- Document Management
- Loan Management
- Thermal Billing (Steam and Chilled Water)
- Third-Party Gas Supplier Nominations and Balancing
- System Security

Functional Requirements

- Over 3,000 functional and technical requirements in scope
- 19 functional specifications created to capture business and process requirements

300 End-Users Impacted:

- Billing
- Revenue Assurance
- Customer Service
- Finance and Accounting
- Regulatory/Rates
- Operations
- Engineering

122 Integration points to internal and external systems including

- Payment Processing
- Finance and Accounting
- Customer Self-Service
- Metering
- Mobile Workforce Management
- Customer Alerts

Integration technology included a combination of the following:

- API and Web-service calls
- Oracle Fusion middleware / Service-oriented Architecture (SOA)
- Flat-files (XML, fixed/delimited)

56 Extensions of Oracle C2M to meet unique regulatory and critical business requirements

80 reporting and analytical requirements

120+ Master/admin Configurations

20 Conversion Specifications and Scripts

- 2 years of legacy data converted
- 22 hours for a complete run

The solution scope included the following:

- Oracle Customer to Meter(C2M) v 2.7.0.1
- Oracle Utilities Customer Self-Service (OUCSS) Web Services
- Oracle Fusion Middleware
- Integration with 30+ Edge Applications
- Oracle BI Publisher
- Robotics Process Automation

The success of the program can be attributed to the following ethos adopted by the Project Management Office:

- Change the Process and Not the Product
- Scope Management is a Team Responsibility
- Customer FIRST
- Minimize customer impact – migration to new system should be as transparent to the customer as possible; integrate the existing self-service portal with C2M
- One Team, Common Goals
- Manage the project to weekly and monthly objectives and deliverables. In other words, manage the project not like one 22-month long project, rather manage it like 22 month-long projects.

THE KEY FACTORS THAT MADE THE PROGRAM SUCCESSFUL

Strong Executive Support

The CIS2020 Project was a strategic initiative on Citizens' strategic plan in fiscal years 2018, 2019, and 2020. The Project Management Team included strong Citizens Executive Sponsor support represented by the Vice President of Customer Operations, the Chief Information Officer, and senior management staff as members of the Project Steering Committee that included AAC implementation leadership. The System Integrator (Infosys) and the Software Partner (Oracle) also had senior leadership personnel and experienced consultants participating in the project. Citizens devoted full-time and part-time resources to support the project from applicable areas. Citizens also retained Black & Veatch, an industry leader in the Quality

Assurance field, to participate and provide independent monthly reviews of the project under the guidance of Citizens' Internal Audit Department.

Project Governance Structure

The project was overseen by an Executive Steering Committee whose role was to ensure that the project was properly resourced, to remove barriers to success, and to ensure the team was informed of issues that might impact the implementation plan. A Project Management Office, led by Project Managers from both Citizens and Infosys, included Project Leads whose responsibility was to manage the timeline and resources through the execution of the project. A Project Success Committee included Executives from Citizens, Infosys, and Oracle to ensure alignment of goals and removal of barriers to project success.

- **Dedicated Project Team** – Both Citizens and Infosys dedicated experienced professionals to the project team. These individuals were chosen carefully for their experience, knowledge, and expertise. Critical team roles included Team Leads, Workstream Leads, Testers, and Trainers.
- **"Box-buddy" approach to teamwork and collaboration** – paired Citizens PMO Members, Functional Leads, and Technical Leads with Infosys onshore and offshore cohorts to ensure requirements were translated effectively and accurately into system requirements and final deliverables.
- **Solution Review Board** – Infosys and Citizens set up a Solution Review Board to critically review all the extensions and new requirements. SRB governance ensured the team stayed close to the baseline version as possible and that also helped in scope management for the program.

Professional Project Management

AAC Utility partners assigned experienced Project Managers that were knowledgeable and experienced in the NavigateOne™ Methodology to lead the implementation. Infosys assigned seasoned on-site and off-shore Project Managers who had performed similar CIS transformations successfully.

- **Strong Scope Management** – Utilizing the NavigateOne™ Statement of Work and strong

governance structures allowed the team to monitor adherence to project scope and make adjustments when necessary.

- **Detailed Project Plan and Supporting Plans** – A very detailed project plan including all phases of the project allowed the team to identify and manage effectively through conflicts, over-allocation of resources, and delayed tasks to achieve the scope objectives within the original timeline. Several supporting plans were developed to ensure effective and efficient execution of various aspects of the implementation. These included but were not limited to a Quality Management Plan, Risk Management Plan, Schedule Management Plan, Environment Management Plan, System Infrastructure Plan, Communications Plan, Knowledge Transfer Plan, Conversion Plan, Test Plan, and others.

Oversight: Clear and Transparent Project Team Communication Plan

The Project Management Team developed a detailed Communication Plan that was collaborative and transparent. The objective of the Communication Plan was to keep all stakeholders informed. The communication plan included a Weekly Status Report, Monthly Project Steering Committee meeting, Monthly Project Success Committee meeting (Citizens - Executive Sponsor, AAC, Infosys Leadership, Oracle Leadership, and Project Managers), and Monthly Quality Assurance review and report by Black & Veatch. Periodic Change Control Board meetings were also conducted to control the scope of the project, monitoring and controlling the 181 project-related deliverables outlined in the NavigateOne™ Statement of Work.

Risk Management

The Project Management Team had a formal Risk Management Plan from the start of the project. Risk was managed collaboratively with an approach to Identify Early, Capture, Record, Classify, Mitigate and Report Timely. Risks and issues were actively managed through the online project management tool provided by the system integrator. This tool allowed any member of the project team or other stakeholders to raise concerns and document them on the risk register to be reviewed by the Project Management Team. Risk man-

agement meetings were held weekly. Each risk was analyzed, scored, and assigned to a team member. Team members identified a response to the risk and ensured that the response was implemented. In addition, risks were evaluated in the Black & Veatch monthly independent quality review meetings to ensure adherence to the implementation plan and to resolve related risks.

Experienced Integrator

Throughout the project, Infosys demonstrated deep and strong expertise, experience, and knowledge of the utility industry, implementing utility software systems, and managing large complex projects.

- **Pre-configured C2M system** – Infosys was chosen based on their depth of utility knowledge and a pre-configured C2M system (PACE – Pre-configured and Accelerated Customer Care and Billing) that they brought to the project which included multiple accelerators.



- **Parallel Billing Engine** – a parallel billing engine was provided by Infosys which enabled Citizens to test all of its bill cycles in both the new system and the legacy CIS. Results of the parallel billing run could be automatically compared to identify differences that would later be analyzed and reconciled. The parallel billing engine allowed Citizens to achieve a match rate that exceeded 99.9 percent for all 45 bill cycles tested before reconciling items were applied.
- **Data Conversion Framework** – The Infosys legacy to C2M data conversion framework was used in the engagement which provided the required tools and accelerators including the reconciliation framework

which ensured 100 percent reconciliation for master and transactional data before Go Live.

Testing Management

The project testing team developed a comprehensive Testing Strategy and utilized test management tools for measurement, defects management, and reporting. Detailed testing plans included:

- Unit Testing - 2,732 unique tests
- System Integrating Testing - 2,239 unique tests
- User Acceptance Testing - 2,099 unique tests
- Parallel Bill Testing - 43 Cycles
- Stress & Performance Testing
- Regression Testing
- Penetration Testing
- Smoke Testing
- Data Conversion
- Disaster Recovery
- 3 Mock Cutovers

Conversion Activities

Infosys with the support of the Citizens technical and functional teams created a Conversion Strategy and Conversion Plan. Detailed conversion functional specifications were developed collaboratively, and the team agreed upon metrics to measure the progress of the conversion process that included data mapping from the legacy system to C2M of all master records, conversion cycle duration during each mock, captured financial balances, and records counts of master records by entity.

GO-LIVE

The Project Management Team, with Infosys as the lead, developed a detailed Cut-Over Plan and Go-Live Checklist. Schedule monitoring and control included a detailed identification of needed cut-over staff capacity. Three resources from Citizens and Infosys were assigned Cut-Over Master responsibilities to support three shifts during the three mock go-lives and the final go-live weekend.

One of the key success factors for the Go-Live was the transparent Cut-Over Plan communication with all stakeholders before and during the three Mock-Go Live tests. Citizens management also developed a formal Operational Business Readiness Plan. Lessons learned from each mock test were documented and used to improve the subsequent test. The team used formal Go/No-Go Certification memos from the related responsible team members (e.g., Functional Leads, Technical Lead, Financial Reconciliation Lead, Conversion Lead, and Testing Lead).

POST GO-LIVE

Hyper-Care Plan

- Plan for post-go-live proficiency gap – One year in advance of the planned go-live, Citizens began onboarding additional contact center personnel to accommodate an expected proficiency decline immediately after go-live. By doing this, Citizens was able to continue to exceed its service level goals immediately after go-live.
- Command Center for Hyper-Care – a hyper-care command center for providing post-go-live issue identification and resolution and end-user support was staffed by nine dedicated resources, including the Infosys Project Manager, Citizens Functional Business Lead (Hyper-Care/Command Center Lead), Citizens Technical Lead, Citizens Testing Lead, Citizens Training Lead, and two Testers. The Command Center leveraged Microsoft Teams to communicate with Operating Areas via 19 Teams Channels for respective stakeholder areas. The Command Center deployed Area Captains and Floor Walkers in key operational areas to provide immediate on-the-ground support.
- Robotic Process Automation (RPA) Exceptions – Infosys brought in innovation by way of Robotic Process Automation (RPA), which was developed and deployed in anticipation of increased back-office workload. The RPA allowed for the clearing of exceptions with repeatable steps. This capability prevented the need for Citizens to increase staff by as many as four associates at an annual cost of \$50K per associate.

Project and Operational Success

Citizens' CIS transformation was grounded in a thorough analysis of business and operational objectives, which ultimately formed the foundation for project success. Capturing those objectives in explicit detail, the NavigateOne™ Scope of Work served as an integral tool for guiding the highly qualified and talented Citizens' project team toward one set of goals with a common purpose. As such, each decision throughout the process was thoughtful and carefully weighed against Citizens' core insights that set the framework for the project from the onset. The once-in-a-career project was completed on time, under budget, and within the Citizens'-defined scope. Citizens did not experience a decline in customer service after go-live. They were able to accommodate a dramatic increase in phone calls and payment arrangement enrollment at the expiration of the utility moratorium on disconnects due to the Covid19 pandemic. The post-go-live results reflect operational metrics that meet or exceed desired goals. Citizens is very pleased with the system roll-out and ease of adaptability to the new functionality for both Citizens' staff and the online community that it serves. ■

About the Authors:

Citizens Energy Group provides safe and reliable utility services to about 800,000 people in the Indianapolis area. Citizens operates its utilities only for the benefit of customers and the community. Additional information is available online at www.CitizensEnergyGroup.com - Facebook - Twitter - YouTube

AAC Utility Partners, LLC is a vendor-independent consulting firm assisting utility clients in the areas of Strategy, Selection, Cloud Adoption, and Project Implementation Leadership Services. AAC is the leading independent Cloud consulting firm focused on utility industry specific applications and business process services. To learn more, visit www.TeamAAC.com

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