

City of Kingsport

Proposal for CIS Implementation Management Support

September 20, 2024



SCOPE OF WORK

The City of Kingsport (“City”) previously contracted with Raftelis to help select a new customer information system (“CIS”) and a customer self-service (“CSS”) solution. Through a competitive process, the City selected Hansen to replace its legacy Central Square solution used for utility billing and utility customer portal. In this scope of work (“SOW”), Raftelis proposes to provide additional project management, risk management, and ongoing consulting assistance to the City to support its successful CIS and CSS implementation. This scope of work is designed to provide continuing industry guidance and additional project management support to the City’s implementation team during the Hansen system configuration, testing, training, and go-live for fifteen (15) months of the CIS and CSS implementation project and for an additional three (3) months through the end of post-live support. The proposed tasks listed are in alignment with Hansen’s Scope of Work for ease of associating Raftelis’ proposed tasks and responsibilities to the overall scope and milestones of Hansen’s work effort.

1.1. CIS Implementation Project Oversight

Raftelis will work collaboratively with the City’s Project Manager and Hansen’s team to provide several important implementation support services on behalf of the City. Raftelis’ proposed implementation support effort includes the following tasks:

- Hansen vendor management
- Advisor on industry best practices based on American Water Works Association (AWWA) standards
- Risk and decision management
- Project scheduling and planning coordination
- Project management support for the City’s implementation requirements and processes
- Project management support for the system set-up and configuration

In addition, Raftelis will assist the City’s Project Manager with project planning logistics and advise on key decisions. Raftelis will facilitate communication and project activities with the City’s Steering Committee, Core Team, and Hansen’s Project Manager in performing the following project tasks.

- Evaluate Hansen’s deliverables and recommend acceptance by the City. If the deliverable is not deemed satisfactory, recommend corrective action to Hansen’s Project Manager
- Conduct and/or attend regular Project Status Meetings with the CIS project team during which scope, schedule, cost, and progress are compared to plans
- Review project communications
- Support the City’s management of the overall project scope, identify out of scope tasks, and initiate a change control process to generate change orders when needed
- Develop, document, track, and assist in driving the resolution of project risks and issues throughout the project, including assisting in escalation, when necessary, with the City and Hansen’s management team
- Review Hansen’s submittals including requirements and configuration documents for quality, provide constructive feedback, and make recommendations on disposition
- Help the City coordinate and manage Hansen’s activities, contract management and control, budget monitoring, invoice processing, schedule tracking, requests for information, change orders, and other tasks associated with project administration supporting the City’s Project Manager

- Guide the City's project team during ongoing business process development, data mapping, interface development, and module workshops
- Review project documentation and deliverables in a timely manner and allow the City's project team reasonable time for the review of documents
- Advise the City on key project activities including design, configuration, data migration, conversion, test plan development and test execution, report development, training materials development, go-live and post-live stabilization
- Develop an Organizational Readiness Plan to provide guidance and contingency plans to better manage the continuity of operations at Go-Live

Project Oversight Deliverables

- ✓ Attendance and participation in weekly and monthly Project Status meetings
- ✓ Review and provide feedback on Hansen's deliverables throughout the project
- ✓ Assist in the development of a comprehensive CIS Project Risk Log
- ✓ Ongoing project and system assessment
- ✓ Monthly Project Status Report of the project's progress
- ✓ Organizational Readiness Plan

Project Initiation

During the first step in the implementation process, Hansen proposes to create a detailed Implementation Plan that defines Hansen's approach and tasks for the CIS replacement. Raftelis will expand Hansen's Plan and Project Schedule into a Consolidated Implementation Plan that contains and ties the interdependencies of tasks for all parties (i.e., Hansen, the City, third-party vendors, Raftelis, etc.). This expanded Consolidated Implementation Plan will help guide the City and Hansen during the subsequent configuration, testing, training, and cutover of the new solution. The Consolidated Implementation Plan will be updated and maintained throughout the project as the overall roadmap.

Project Initiation Deliverables

- ✓ Review Hansen's Implementation Plan for CIS and the Project Schedule
- ✓ Develop a comprehensive Consolidated Implementation Plan
- ✓ Assist Hansen's and City's Project Managers with preparing for the Kickoff Meeting
- ✓ Attend the Project Kickoff Meeting

Application Prep & Training

Hansen proposes four (4) weeks of Core Team Training. During training, Hansen proposes to document any gaps in system functionality compared to the current business processes and requirements. Raftelis will attend the Core Team Training sessions to provide guidance to the City's team on industry best practices and hold Hansen accountable to the functionality represented as standard in their RFP response. In addition, Raftelis will document scenarios that should be developed into testing scripts.

Application Prep & Training Deliverables

- ✓ Attend Core Team training
- ✓ Provide guidance to the City on best practices

- ✓ Document scenarios and use cases for test script development

Configuration Workshops

Raftelis will actively participate in Hansen's Configuration Workshops side-by-side with the City to carefully define its future vision, core To-Be business processes, detailed system interfaces, field mobility, historical data conversion, testing strategies, acceptance procedures, and cutover strategies. Raftelis will help embed the City's desired To-Be state in Hansen's planning processes and challenge any urge to design to the 'status quo,' while also understanding that change is not required for all processes. Throughout Hansen's Configuration Workshops, our resources will provide information about current industry best practices, improving customer engagement, and helping the team achieve results that will be efficient and effective in utilizing their new CIS.

Configuration Workshops Deliverables

- ✓ Participate in Hansen's Configuration Workshops
- ✓ Provide the City with suggested best practices to be implemented during the workshops
- ✓ Assist the City in aligning the solution's recommendations with Hansen's SOW and the City's project vision
- ✓ Review and comment on Hansen's business process documents

Legacy Data Conversion

Hansen will deliver a Data Conversion Plan that contextualizes the conversion methodology for the non-technical audience. It is typically a key deliverable that explains how the City will be confident that all relevant data is converted accurately at go-live. Raftelis will review and comment on Hansen's Data Conversion Plan for the City. As part of Data Conversion Plan, Raftelis will assist the City in determining the right amount and types of data to convert as a part of the data conversion. There will need to be several validation points from both the City's data extract and from Hansen once the data is loaded to verify that the data has come across cleanly and accurately. Raftelis will support both the City and Hansen to determine what data points need to be compared to confirm a successful conversion from the current utility billing system to the new CIS. Comparing the two sets of validation points will be an interactive process, with data cleansing on the part of the City and conversion scripting on the part of Hansen to attain a clean conversion before going into final test phases.

Legacy Data Conversion Deliverables

- ✓ Review and provide feedback on the Data Conversion Plan
- ✓ Assist the City and Hansen in determining validation parameters so that all expected data is converted

User Interface (UI) Configuration

Hansen will facilitate a User Interface ("UI") Workshop with City staff and have included up to 100 hours of UI configuration as part of their SOW. Raftelis will attend the UI Workshop and provide additional guidance to the City on best industry practices. We will also review and provide feedback on the requirements document. Hansen has previously assured the City that 100 hours should be sufficient for UI configuration. As the hours are used, close management of change requests will be required to avoid an overrun. Raftelis will provide this oversight and guidance for the City to navigate and prioritize late changes.

UI Configuration Deliverables

- ✓ Attendance at UI Workshop
- ✓ Review of Hansen's requirements document
- ✓ Provide guidance for prioritizing changes to avoid hour overrun

Integration Workshops & Development

This CIS implementation includes building new interfaces with other City and third-party systems. Hansen's contract will identify roles and responsibilities for implementing all system interfaces. The City will be responsible for the third-party interface creation from its side, with Hansen providing interface work and information from their system. Raftelis will work with the City's staff to help manage and execute the integrations to the various third-party systems. Raftelis will actively participate in the Interface Design Workshops, review the interface design documents, and work collaboratively with the City and vendors for a successful outcome. Raftelis will also assist the City with identifying the required integration points, data requirements, frequency, and other important integration aspects so that the desired integrations are established, tested, and ready for system go-live.

Integration Workshops & Development Deliverables

- ✓ Attendance at Interface Design Workshops
- ✓ Review and provide feedback on requirements documents
- ✓ Work collaboratively with Hansen, City staff, and third-party vendors to help manage and execute the integrations to the various third-party systems

Reporting

Reporting is a critical need in any CIS implementation and Raftelis will help the City assess and develop approaches for achieving its reporting needs. Specifically, Raftelis will help determine when it is appropriate to adopt more dynamic queries, reports, and dashboards that will be the most useful to the City rather than replicating existing reports. Raftelis will provide key experience and best practices for reports that will improve the ability of the City to manage its business more effectively and efficiently.

Reporting Deliverables

- ✓ Assist in identifying enhanced reports
- ✓ Review report development and testing in a timely manner

End User Training

Effective end-user training is critical to the overall success of the project. Often, the requisite training sessions get delayed or accelerated resulting in lower user acceptance. It is expected that all end user training will be provided by Hansen for all users. In our experience, it is much more effective to have a collaborative training effort led by the vendor and with the assistance of key core team project members who have tested the system and know the business processes. Raftelis will work with the City and Hansen so that all users get the proper training before CIS go-live.

Raftelis will work with the City to coordinate the training schedule, resources, and facilities to conduct the various CIS vendor training sessions. This will be a complex effort across multiple departments and several levels of end users. Raftelis will assist in creating and filling in a training matrix to organize and manage this effort. Raftelis will

assist the City's Project Manager in monitoring the progress of the training and design appropriate corrective actions as necessary.

End User Training Deliverables

- ✓ Assist the City in planning and coordinating the agendas and schedules so that all end users receive adequate training
- ✓ Assist the City in monitoring the progress of training and design appropriate corrective actions as necessary
- ✓ Check that all users are properly trained before Go-Live by reviewing attendance sheets and test results

Cutover Planning/Development, Mock Go-Lives & Go-Live Cutover

The creation of a cutover strategy and a comprehensive detailed cutover schedule of activities is crucial to preparing for going live. The planning and creation of the schedule is a joint effort of all the stakeholders involved. The plan will contain tasks that will be a part of the go-live process to make the go-live a much more predictable and stable process. The Cutover Strategy will be used in practice two 'mock' go-lives prior to the actual move to production. Each task will have owners, expected times, and clear points of communication between members of the team. Raftelis will lead the effort to create a comprehensive Cutover Strategy, thereby reducing risk and providing a clear map and expectations for go-live. Raftelis will participate in two mock go-lives to simulate the tasks and timeline of the actual go-live. These will be conducted over a weekend and run in a 24/7 timeframe. We will also be onsite for the go-live transition to assist the City in a smooth cut over.

Cutover Planning/Development, Mock Go-Lives & Go-Live Cutover Deliverables

- ✓ Review and provide feedback on Hansen's Cutover Strategy
- ✓ Manage the adherence to the Cutover Strategy during two mock go-lives
- ✓ Manage the adherence to the Cutover Strategy during go-live
- ✓ Onsite management and support of go-live
- ✓ Issue escalation and contingency plan activation

Post Go-Live Support (Heightened Support)

Raftelis will provide post go-live support services after the successful CIS implementation. Raftelis Project Management services are designed to assist, advise, augment, and support the City's Project Manager and Core Team through the post-live business transformation. Raftelis Project Manager will facilitate project communication and management activities among the various stakeholders in performing the following tasks.

- Guide the City's project team during the stabilization period of the project
- Assist the team in prioritizing activities in the post-live phase for 3 months
- Assist the vendor in prioritizing the items they are responsible for completing
- Managing the effort to reduce the number of active open incidents being tracked in the post-live phase
- Communicate status and escalation issues to the City's and Hansen's management team

Several common tasks that are typically in this phase include supplemental end user training, planning for future system interfaces, refinement of implemented business processes and workflows, tracking and resolution of system issues, and vendor support coordination. At the successful project conclusion, Raftelis

will develop and review project close-out documentation including a Consolidated Final Report, documentation of lessons learned, and signed agreements on all phases of the project.

- Formal Project Acceptance Checklist that will include acceptance by the City's Project Manager including final Risks and Issue Logs
- Lessons learned from the implementation process
- Consolidated Final Report

Heightened Support Deliverables

- ✓ Bi-weekly Management Status meetings
- ✓ Weekly Core Team meetings
- ✓ Weekly meetings with Hansen
- ✓ Issues resolution and end user support for post live phase
- ✓ Project Acceptance Checklist
- ✓ Project Close-out Plan
- ✓ Lessons Learned Report
- ✓ Consolidated Final Report

1.2. Data Conversion Services

Accurate and complete data are essential for the function of the CIS. Our team has hands-on experience working in a variety of information systems. We can help the City understand the data needs and challenges by providing data analysis, extraction, cleanup, transformation, and quality control of the City's data. Please note that conversion projects typically require several rounds of extraction, conversion, upload, and validation to successfully migrate the desired City data and therefore this process may be repeated several times during a project.

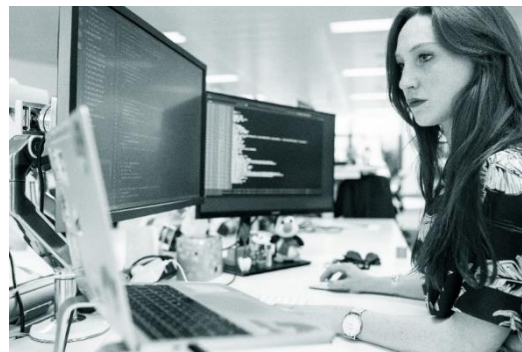
A. Discovery and Analysis

We typically meet with the City's IT staff and conversion team and ask a series of questions to get an idea of where data is located, what the data structure is, and what documentation exists to inform the conversion effort. Through discussions with staff, we gain an understanding of the quality and limitations that currently exist in the data. We work closely with the City's IT department to gain access to the new system, followed by an extensive review of the City's data. Based on feedback received during the discovery phase, the team analyzes the data and documents the current data structure, comparing actual data with input received from CIS users and administrators.

The data cleansing effort usually begins at the start of the project and continues throughout. Based on the desired approach, Raftelis may investigate data issues already identified by City staff and can also run a series of tests to identify additional data issues. Raftelis may provide lists of data edits for City staff to apply manually in the billing system or can offer solutions for applying updates in bulk, such as the Microsoft Playwright tool. The approach may vary depending on whether edits are made inside the existing billing system or in database format and is largely dependent on the individual needs of the project.

B. Mapping Old Data to New

Working with Hansen, we wish to gain a deep understanding of the data environment in the new CIS (i.e., database schema, cloud-based versus on-premise, etc.) and its data migration requirements. We work collaboratively to help reach an agreement with the City and Hansen on what data and elements should be converted from the old system. We also assist the City and Hansen reach an agreement on how many years of data should be converted. These decisions are documented to lay a foundation for the following tasks.



Based on the requirements for the new system, we can help identify what data tables, columns and fields need to be converted, what the source of the data element is, and what its destination will be in the new system. We have found it very useful to create documentation for every data element to be converted. In an example scenario, accounts data may be fifty (50) fields in the old CIS which need to be mapped to twenty (20) fields in the new system.

C. Data Transformation Queries

Informed by the above analyses, our team can plan and write data queries to transform each data element into the new format using the data element name and location in the City's database. These queries can then be executed to reformat and repackage the data using the specifications provided by the CIS vendor. This will result in transformed CIS data files that can be loaded into the target environment. In certain systems, the data may be able to stay in a slightly modified database format and can be imported directly to the new CIS.

D. Data Validation in New System

The last phase involves performing a suite of tests and checks to check that data is correctly mapped in the new system. Our team can compare the new and old systems to check that the data matches individual customer accounts and will also perform systemwide checks (e.g., GL balancing) along with the vendor data conversion specialist to compare the migrated data with the legacy system.

1.3. CIS Test Management

Raftelis can support the City's testing effort by working with Hansen and the City staff to enhance the standard product test scenarios to meet the specific needs of the City's CIS business processes. Raftelis can assist in managing the City's effort to execute these test scenarios for the CIS business processes and associated interfaces. Raftelis can assist the City and Hansen in creating realistic and comprehensive test plans that will define procedures to guide the City during all phases of testing. Performance testing may also be included in the Test Plan, to be executed during the latter phases of testing.

Raftelis will provide the City with a Test Manager to support the City during the testing process and help manage the comprehensive testing of the Hansen product prior to implementation. This can be accomplished through a combination of onsite and remote support. Raftelis can review and contribute to Hansen's Test Plan to help guide its development based on the City's desired 'to be' business processes and requirements defined during Hansen's Configuration Workshops.

Raftelis can also develop a list of core scenarios and 'day-in-the-life' scenarios with the City's project team that will help the City determine pass/fail criteria. This approach provides comprehensive testing of the business processes and functional requirements. Each test cycle should have validated testing exit and

entrance criteria in the vendor contract that determine if the testing phase is complete, and the system is ready for the next cycle of testing. Each of the Pass/Fail criteria items can be presented to and approved by the City's Project Manager and documented in the Test Plan.

Issues found during testing need to be documented, prioritized and tracked to resolution as part of effective test management. The Raftelis Test Manager will track, advise, and assist in managing the issues for the City. Raftelis' business and technological expertise allows our Test Manager to guide the City and Hansen to the best resolution, not just the easiest for the vendor.

Test Management Deliverables

- ✓ Assist in the Test Plan development for all phases of testing
- ✓ Assist in development of Test Scenario and Script Development
- ✓ Track testing and progress toward exit and entrance criteria
- ✓ List of core scenarios and 'Day-in-the-Life' scenarios
- ✓ Tracking and prioritization of issues to resolution

PROJECT SCHEDULE

Raftelis' schedule of providing services to the City is dependent on Hansen's project schedule. As stated above, Raftelis will provide consulting services to the City to assist with the implementation of the Hansen CIS and CSS solution. Raftelis does not make any representations or warranties with respect to the operation or effectiveness of Hansen's software solution. Raftelis is not responsible for impacts and/or delays to Hansen's project schedule due to circumstances or actions by others outside of our control.

PROJECT FEES

The total estimated fees to provide the above scope of services within this proposal is \$393,725 and includes all professional fees and anticipated project expenses. Raftelis' services will be billed to the City monthly on a time and materials basis up to the not-to-exceed contract limit.

The table below provides an estimate of the allocation of resources amongst the tasks outlined above. However, since there is uncertainty as to the actual level of support required within each task, Raftelis reserves the right to shift hours between tasks.

| Activity | CIS Implementation Support | | | | | SubTotal Hours | Subtotal Fees | Travel | Total |
|--|----------------------------|-------------|-----------------|--------------|-------------|-------------------|------------------|-------------------|-------|
| | PM | Program Mgr | Data Specialist | Test Manager | | | | | |
| | \$ 250 | \$ 275 | \$ 275 | \$ 250 | | | | | |
| Project Oversight | 260 | 90 | 0 | 0 | 350 | \$ 89,750 | \$ 12,000 | \$ 101,750 | |
| Project Initiation | 32 | 8 | 0 | 0 | 40 | \$ 10,200 | \$ 3,000 | \$ 13,200 | |
| Initial Planning and Document Review | 24 | 0 | 0 | 0 | 24 | \$ 6,000 | | \$ 6,000 | |
| Kickoff Meeting | 8 | 8 | 0 | 0 | 16 | \$ 4,200 | \$ 3,000 | \$ 7,200 | |
| Summary | 32 | 8 | 0 | 0 | 40 | \$ 10,200 | \$ 3,000 | \$ 13,200 | |
| Application Prep and Training | 96 | 24 | 0 | 0 | 120 | \$ 30,600 | \$ 6,000 | \$ 36,600 | |
| CIS Core Team Training | 96 | 24 | 0 | 0 | 120 | \$ 30,600 | \$ 6,000 | \$ 36,600 | |
| Summary | 96 | 24 | 0 | 0 | 120 | \$ 30,600 | \$ 6,000 | \$ 36,600 | |
| Configuration Workshops & Consulting | 100 | 16 | 0 | 0 | 116 | \$ 41,900 | \$ 6,000 | \$ 47,900 | |
| Workshops | 100 | 16 | 0 | 0 | 116 | \$ 29,400 | \$ 6,000 | \$ 35,400 | |
| Document Review | 50 | 0 | 0 | 0 | 50 | \$ 12,500 | | \$ 12,500 | |
| Summary | 100 | 16 | 0 | 0 | 116 | \$ 41,900 | \$ 6,000 | \$ 47,900 | |
| Data Conversion Services | 52 | 0 | 216 | 0 | 268 | \$ 72,400 | \$ 4,500 | \$ 76,900 | |
| Data Analysis and Mapping | 16 | 0 | 48 | 0 | 64 | \$ 17,200 | \$ 1,500 | \$ 18,700 | |
| Data Extracts and Validation (up to 6) | 36 | 0 | 120 | 0 | 156 | \$ 42,000 | \$ 1,500 | \$ 43,500 | |
| Go Live Cutover | 0 | 0 | 48 | 0 | 48 | \$ 13,200 | \$ 1,500 | \$ 14,700 | |
| Summary | 52 | 0 | 216 | 0 | 268 | \$ 72,400 | \$ 4,500 | \$ 76,900 | |
| Test Management | 0 | 0 | 0 | 188 | 188 | \$ 47,000 | \$ 6,000 | \$ 53,000 | |
| Test Planning | 0 | 0 | 0 | 34 | 34 | \$ 8,500 | \$ 1,500 | \$ 10,000 | |
| Test Preparation (Script and Scenario Development) | 0 | 0 | 0 | 34 | 34 | \$ 8,500 | \$ 1,500 | \$ 10,000 | |
| Test Execution and Issue Management | 0 | 0 | 0 | 120 | 120 | \$ 30,000 | \$ 3,000 | \$ 33,000 | |
| Summary | 0 | 0 | 0 | 188 | 188 | \$ 47,000 | \$ 6,000 | \$ 53,000 | |
| Cutover Planning/Development, Mock Go-Lives & Go-Live | | | | | | | | | |
| Cutover | 120 | 36 | 0 | 0 | 156 | \$ 39,900 | \$ 6,000 | \$ 45,900 | |
| Mock Go-Live #1 | 40 | 2 | 0 | 0 | 42 | \$ 10,550 | \$ 1,500 | \$ 12,050 | |
| Mock Go-Live #2 | 40 | 2 | 0 | 0 | 42 | \$ 10,550 | \$ 1,500 | \$ 12,050 | |
| Go-Live | 40 | 32 | 0 | 0 | 72 | \$ 18,800 | \$ 3,000 | \$ 21,800 | |
| Summary | 120 | 36 | 0 | 0 | 156 | \$ 39,900 | \$ 6,000 | \$ 45,900 | |
| Post-Live Support | 60 | 22 | 0 | 0 | 82 | \$ 21,050 | \$ 3,000 | \$ 24,050 | |
| Month 1 | 30 | 10 | 0 | 0 | 40 | \$ 10,250 | \$ 3,000 | \$ 13,250 | |
| Month 2 | 20 | 8 | 0 | 0 | 28 | \$ 7,200 | | \$ 7,200 | |
| Month 3 | 10 | 4 | 0 | 0 | 14 | \$ 3,600 | | \$ 3,600 | |
| Summary | 60 | 22 | 0 | 0 | 82 | \$ 21,050 | \$ 3,000 | \$ 24,050 | |
| Summary | 720 | 196 | 216 | 188 | 1320 | \$ 352,800 | \$ 46,500 | \$ 399,300 | |

It has been our pleasure working with Kingsport on past and current projects, and we look forward to the opportunity to support the City in this engagement. If the terms of this engagement are acceptable, please sign in the space below and return a copy of the letter for our files. Should you have any questions or concerns regarding the contents of this Scope of Services, please do not hesitate to contact me at 860.405.6474 or kwillis@raftelis.com.

We accept the terms of this Scope of Services:

| | |
|-----------|--------------------------|
| | |
| Signature | Date |
| Title | Name of authorized agent |

APPENDIX - ADDITIONAL INNOVATIVE SERVICES (OPTIONAL)

If desired by the City, Raftelis can provide optional value-added services throughout the Hansen CIS implementation. The optional services offered below include automated user acceptance testing, business process documentation services, and organizational change management (“OCM”). Each of these services complement and free up key City staff, allowing them to focus on their primary workloads and decision making during the CIS implementation.

As stated, the services described below are optional and have purposefully not been included in Raftelis’ project fees detailed above. If there is interest within the City for part or all of these optional services, Raftelis can provide a separate quote to the City for its consideration. No optional work will be performed without prior written consent of both the City and Raftelis.

Automated User Acceptance Testing (UAT)

UAT for CIS solutions can be a challenging, labor-intensive, and a manual process that takes staff away from their dedicated core business functions. By using advanced screen-mapping technologies, we can run tests and validation across any web-based CIS solution. This technology interacts with the user interface the same way a typical CIS user would. Tests that normally take many hours to perform manually can be executed in seconds with meaningful results. This allows the City’s staff to have input on the testing process while focusing on supporting the everyday City’s operations.

A. Identify the Testing Domain and Mapping

We can work with Hansen to attain access to the CIS test environment. In collaboration with the City and Hansen, we can then develop and agree upon a suite of test cases and workflows that align with the City’s typical business and customer service processes. The tests would interact with a wide range of screens, systems, fields, and data for maximum system coverage. These may be a combination of unit testing and complex, integrated testing. We design and publish metrics to assess the portion of the system that is being tested under the selected test cases to agree upon an ideal percent coverage goal. These metrics can assist with progress reporting during the project. Additional tools that utilize statistical methods, such as Microsoft’s Pairwise Independent Combinatorial Tool (PICT), can be used to dramatically improve the efficiency of test case generation while increasing coverage.

For each scenario, we can map out the screens accessed, and use code to define the configuration of these screens including the names and locations of fields and buttons. For each test case and workflow identified by the City and Hansen, we commonly analyze the order of actions performed, such as buttons clicked. We write code to perform these actions, building upon the screen mapping effort which assigned names and locations to interaction points on each screen.

We then translate the code developed for each screen and action into sets of plain English text called scenarios. These scenarios can be modified or duplicated by non-technical staff because they are written in plain English which allows business users like a CSR Supervisor to participate in creating test cases/scenarios. Cases may be structured to incorporate various data elements and allow for applying data arrays for appropriate test coverage of system functionality. Scenarios can also be repurposed for training because they describe the intended behavior of a variety of system functions. As the set of scenarios is developed, easy-to-understand system documentation is created effortlessly as a byproduct, since the scenarios are guaranteed to always be up to date with the current state of the system.

B. Compile Test Data and Execute Tests

We can help to identify test cases that require an array of data. In collaboration with the City, we can jointly develop test data which will be entered into the system by the tool. The fields and data are dependent on the requirements for the test case (e.g., fields to generate a custom letter). The amount of data is based on the percent coverage desired for the test case, agreed upon during the test case development phase. Large volumes of records can be processed by this tool for maximum coverage.

We can execute the scenarios developed above using the Microsoft Playwright tool. As these scenarios will be saved after development, they can be executed multiple times during an implementation project, such as after each data conversion to provide regression testing results.

We can also provide tracking of tests executed, positive or negative results, and documentation on points of failure for negative results, which will apply to Hansen. These results are then used for progress reporting and tracking. The tool can identify exactly what step in a scenario caused a negative result which can help the vendor or staff identify exactly what data or code will need to be modified to achieve the desired result.

C. Testing for Maintenance and Upgrades

Tests developed during this process may be retained and applied during future updates to the system to identify changes, which may result in bugs or issues, or modification of test cases. This improves the return on investment (“ROI”) of this tool as UAT takes less manual effort throughout the maintenance lifecycle of the CIS.

Business Process Documentation Services

Documentation of ‘To Be’ business processes is a critical task for the City to ensure their users know how to use the system, how to troubleshoot issues, where decision points are in how to handle processes and accounts, etc. This process is often pushed off during a large, complex CIS implementation, and does not get completed in an effective fashion before go-live. Our experience in business process analysis and documentation can help us to be very efficient and effective in completing these documents, working with both the product experts (Hansen) and the City process experts (City staff). We can create an estimate based on the amount of assistance the City would like to have in completing business process documentation as we proceed through the project.

Organizational Change Management (OCM) and Communications

This CIS transformation project will present the City with many challenges. To realize the full potential of the City’s investment in this upgrade, it is essential that organizational change management (“OCM”) be effectively addressed. Effective organizational change involves preparing staff to perform the new business processes, modifying job responsibilities as needed, and full implementation of the software’s new capabilities.

Raftelis collaborates with its clients to provide the participating staff with the requisite tools, strategies, and methodologies to embrace the new CIS solution. Raftelis can help establish the City’s OCM vision and program for this important project and brainstorm actions for optimum end-user adoption. Raftelis can document the results of this effort and help train the project core team on the specific OCM approach. After the OCM Workshop is completed, Raftelis typically provides monthly updates and revisions to the City as needed and facilitates resolution of identified change issues.

Raftelis also leverages our internal strategic communications practice to publicize the City's project vision and help the message reach the right people inside the organization. These additional strategic communication services are designed to further support the City in effectively communicating both internally and externally, highlighting the project's transformative aspects and benefits.

OCM DELIVERABLES:

- ✓ Raftelis will lead OCM Workshop
- ✓ Raftelis will collaborate with your team to establish an OCM vision
- ✓ We will provide an OCM Plan
- ✓ Train the project Core Team on the specific OCM approach
- ✓ Provide monthly updates and revisions to the City as needed and facilitate resolution of identified change issues
- ✓ Review and address the project communication needs