



CIS Optimization: Getting the Most Out of your Customer Information System

 Kaihen®

| CIS Series

Table of Contents

1	Introduction
2	What is CIS Optimization?
3	Why Optimize Your CIS?
4	CIS Optimization Journey
5	CIS Optimization Approach
6	CIS Optimization: Stabilize
7	CIS Optimization: Enhance
8	CIS Optimization: Extend
9	Next Steps
10	Key Takeaways
11	Contributors

Introduction

If you're a Utility that is considering going down the Customer Information System (CIS) replacement path, have either already started on this journey, or have finished your project and are now looking back at it, then the following CIS Series is for you.

CIS projects are a considerable investment in time, money, and effort. Using best practices, industry knowledge and insights found in the pages ahead will set you up for success, save you time and money during your process, and reduce your risk by using insights and learnings of others in the Utility industry.

Throughout this series, we'll provide insights into Utilities and open a discussion and debate forum, where you can discover key aspects to consider when planning or delivering your CIS project.

Kaihen has worked on many CIS projects in Canada, and we will share our learnings and points of view, as well as the experiences of our Canadian clients to help you during your CIS journey.



| *CIS Series*

01

What is CIS Optimization?

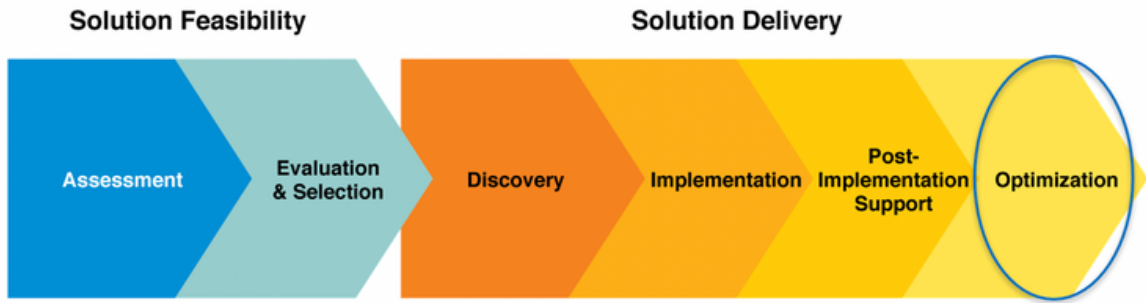
So, what is CIS Optimization? At Kaihen, we typically see that utility clients spend years preparing and planning for CIS implementations or upgrades needed to meet their strategic objectives and goals.

They develop business cases, select their software vendors, and, in some cases, system integrators through a lengthy procurement process. Once the project is approved, they design and develop their new systems and processes, implement everything over the next year, and finally focus on post-implementation support after go-live. **However**, clients rarely (if ever) circle back to see if they realized the expected benefits of their investment, ensuring their business processes are optimized and confirming that the system is functioning the way it was intended. Because CIS projects are complex and costly, some functionality or key objective is often descoped in the hopes that it will be addressed later but that is usually not the case when the project is disbanded. People go back to their day-to-day roles.

All too often, we find that customers move from project implementation into regular operations and day-to-day normalcy takes over. But now is the time to focus on continuous improvement and ensure you get the best out of your CIS. *Based on a recent poll with Electricity Canada's Customer Council members[1], when asked "If you've recently done a CIS implementation, did you consider an optimization phase?", only 11% of Utilities that responded to the poll said yes.* This indicates that the CIS Optimization concept is not typical in the project planning for Utilities yet.






We like to tell our clients that are preparing to implement or upgrade, to plan for the CIS Optimization Phase in their upfront project planning; and for clients that have implemented or upgraded within the last 4 months to 2+ years, we suggest that they now consider a CIS Optimization Phase.

[1] Webinar conducted with Electricity Canada Customer Council members, October 26, 2022, representing utilities across Canada.



In this whitepaper, we will discuss our thoughts on how to optimize your customer experience business processes, as well as optimize the customer organization, the CIS application, and surrounding technology. We will share our recommended CIS Optimization Journey and Approach.

The potential scope of the CIS Optimization phase includes the following:

-  Customer Experience Business Process Optimization
-  Organizational Optimization
-  CIS Application Optimization
-  CIS Technology Optimization
-  Benefits Realization

Why Optimize Your CIS?

Ideally, the Utility focuses on out-of-the-box functionality during its upfront CIS implementation. This tried and tested advice results in significantly better chances of a successful CIS project. Once a stable and efficient CIS is in place, the Utility should then look for opportunities to further optimize its solution. In many cases, this can be done by configuring new features of the CIS, without the need for customization.

We live in a world where customer needs, regulatory environments, and technologies are changing. Geographic, demographic, and climate changes are also key influencers. Organizations need to constantly review and refine their organizations' goals, supported by a solution roadmap, to accommodate these changes.

Key drivers for optimizing your CIS:

- Stabilizing operations to align your people, technology, processes
- Changing customer needs (customer choice, access everywhere, anytime)
- Changing regulatory environment (e. g. green button)
- Changing technologies (e. g. EVs, smart metering)
- Changing organizational needs

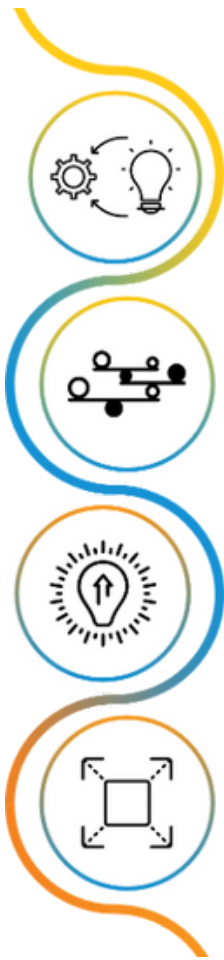
This will enable organizations to realize benefits such as:

- Improve customer experience, simplify customer journey, have a 360-degree view of their customers – lots of focus on this right now
- Meet changing customer expectations, regulatory requirements, and environmental changes (e.g., COVID's impact on collection processes)
- Streamline businesses and technologies to minimize costs and increase revenues
- Provide new service offerings using your CIS application as the enabler to meet the needs of the organization and customers

CIS Optimization Journey

The key to optimization is choosing a CIS platform that aligns with your organization's goals and vision, for both now (tactical) and in the future (strategic).

When implementing your CIS, start with the end in mind and plan for Optimization. Keep the list of future features that could not be implemented during the project. Ensure both the business and IT groups within the Utility need to be aligned on the Optimization goals.



Stage 1: Stabilize – get to know your CIS

- Gain knowledge, experience, and a deep understanding of how to use your CIS to inform future improvements
- Review, refine and prioritize the optimization list in line with your tactical plan
- Start planning for the Enhance Stage

Stage 2: Enhance – improve your meter-to-cash functionality

- Implement new CIS features based on your prioritized optimization list - recognize the power of the configuration.
- Start conversations with your vendor to understand their solution roadmap and how it aligns with your goals and visions
- Plan to extend application and technology, supported by organizational changes to meet strategic goals

Stage 3: Extend – get the most from your CIS

- Extend application to edge systems and technologies
- Work closely with your CIS solution vendor to influence their roadmap and align it with your strategic initiatives



Don Siciliano, Utility Finance Manager,
Region of Durham states that:

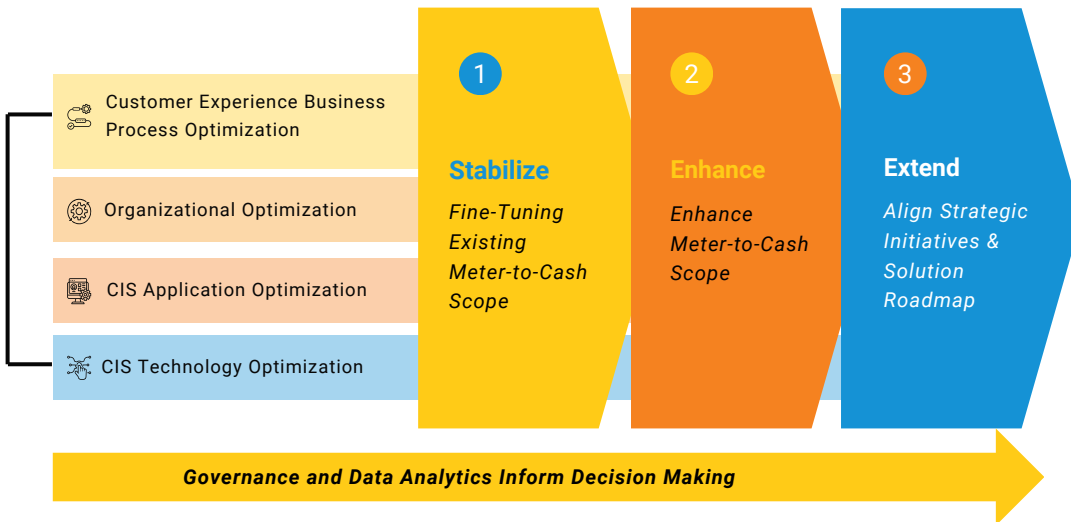
“To avoid risks, because we are risk-averse, and increase customer staff acceptance of the new CIS, many changes were scheduled to be implemented after our stabilization period. We recognized during the project that there were many things that we wanted to do, and planned to do, but knew from a risk standpoint, it made sense for us to delay those items until after the system was stabilized. We recognized that creating a CIS that allowed for future optimization would reduce the risks related to the implementation and increase the chances of success.”



| *CIS Series*

04

CIS Optimization Approach



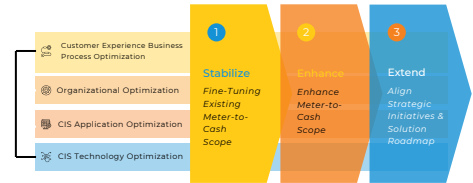
Kaihen's CIS Optimization Approach considers the four optimization areas (Customer Experience Business Processes, Organization, Application, and Technology) across the three stages in the CIS Optimization journey – Stabilize, Enhance and Extend.





The three CIS Optimization stages don't need to be fully sequential. In fact, there may be some overlap between the stages and Utilities may potentially need to move back and forth between them. There is also no set duration for these stages since every Utility will have a different list of planned activities to accomplish in each stage, together with their overall solution roadmap.

We suggest that Utilities start to focus on stabilization-type initiatives as soon as 4-6 months after their initial go-live. It's important to have a governance model in place to manage the CIS Optimization priorities and allocate them into the various stages. Cost/benefit and other related metrics should be used and tracked to support the decision-making process regarding specific initiatives in each stage.

Let's have a closer look at the three stages in a bit more detail and provide examples of initiatives for each stage.

CIS Optimization: Stabilize



 <p>Customer Experience Business Process Optimization</p>	<ul style="list-style-type: none"> • Update full meter-to-cash Level 3 business process documentation to align with actual processes conducted • Streamline business processes to gain efficiencies and meet changing needs of the customer • Conduct revenue assurance assessment
 <p>Organizational Optimization</p>	<ul style="list-style-type: none"> • Give the project team time to “revitalize” • Conduct refresher training to ensure users are using the system as intended, update training materials as required • Limit changes to “Regulatory” and “Need to Have” changes • Ensure Service Delivery Model is operating effectively and SLAs are being met • Plan for Enhance step
 <p>CIS Application Optimization</p>	<ul style="list-style-type: none"> • Focus end users on “learning the system” and building expertise • Refine security as needed to match any role changes • Consider adding new reports/queries to provide insight into data analytics
 <p>CIS Technology Optimization</p>	<ul style="list-style-type: none"> • Ensure effective release management of patches • Fine tune system performance, hardware capacity

With that in mind, Business Process Optimization is a great place to start.

Now is when Utilities should compare what they documented in their ‘To Be’ process maps during the project against what is happening in operations since go-live. There may be differences identified and therefore those differences should be aligned in the business process documentation. But don’t stop there.

Now that the Customer Operations teams are conducting these processes daily, engage them to see where the processes can be streamlined to gain efficiencies and improve the customer experience. Once again, ensure that the business process documentation is revised to reflect these changes.

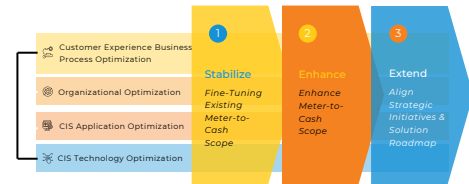
As Brenda Craig (Global Customer Solutions, Product Marketing Director at Oracle Energy and Water) articulates that “refining processes, such as credit & collections, ensuring that they are where they need to be for what's going on with the current times”. Cathy Tough, Chief Customer Officer at SAP Canada, declares that a Utility should “establish a stable foundation that supports their current business with the vision of taking advantage of some of the next generation capabilities that are available”.





CIS projects are often long and stressful initiatives that can take a toll on Utility staff members. Once the system is stable and the users are over the initial ‘hump’, we recommend that the team takes time to revitalize. This is a good moment to assess the various user groups using the CIS solution and determine if any refresher training is required. Like the business process maps, now is also the time to confirm that the training materials are accurate and aligned with how people are using the system. The aim is for the staff to be comfortable with their CIS and gain a deep understanding of the way it works to inform suggested improvements. Utilities should start to look at their organization and ensure their current structure is operating as they expected to support their new CIS.

From an application or technology perspective, Utilities should look to make minor tweaks to the existing CIS application and supporting infrastructure to fine-tune functionality as the end users learn the system and build expertise. The focus should be on ensuring operational key performance indicators are met before moving to the Enhance stage.

The Stabilization stage is also the time to conduct planning for the Enhance and Extend stages. As Don Siciliano suggests “During the project if we came across something that we really wanted to do, we made note of that change and planned for it after our stabilization period. We recognized that creating a CIS that allowed for future optimization would reduce the risks related to the implementation and increase our success.”

CIS Optimization: Enhance



 Customer Experience Business Process Optimization	<ul style="list-style-type: none"> • Redesign partial or whole customer bill • Optimize and prioritize workflow features focusing on exceptions, manual items, and value-add refinements • Enhance the use of CIS capabilities to meet changing needs of customers, limited to existing CIS functionality
 Organizational Optimization	<ul style="list-style-type: none"> • Improve user adoption and use of the CIS's full functionality • Focus people on "higher" value skills • Enhance organization structure and service delivery model • Enhance KPIs and controls to better inform decision making
 CIS Application Optimization	<ul style="list-style-type: none"> • Enhance data analytics to better inform decision making • Revise billing cycles or frequency to improve revenue assurance • Ensure CIS stays current, minimizing operational risk • Integrate with other applications – customer portal, collection agencies, outage management, field services
 CIS Technology Optimization	<ul style="list-style-type: none"> • Integrate with technologies • Understand CIS vendor 3-5 year roadmap, consider upgrade plan • Consider cloud hosted delivery options

The objective of the next CIS Optimization stage is to enhance the functionality of the CIS and integrate it with other key applications. Utilities sometimes want to redesign their customer bill as part of their CIS implementation; however, we recommend delaying this activity until after the system and operations are stable.

The Enhance stage though is the right time to address this important objective. The customer bill is a key customer experience touchpoint and Utilities should spend the time to design their optimal customer bill. Reviewing and revising billing frequency is another good example of an activity better left to the Enhance stage.

By minimizing customer-facing change during the CIS implementation, project risk is mostly shifted to internal operational risk. Once the CIS is stable, revising the billing frequency, such as moving from bi-monthly to monthly billing, may improve the Utility's revenue assurance but will need a well-orchestrated customer communication plan as well.

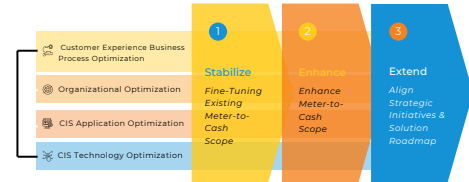
This is also a good time to optimize business processes. Brenda Craig provides an example **"making sure that you're using the system to refine workflows (To Do's in Oracle) to allow the application to solve problems for you and reduce manual intervention"**





Don Siciliano provides a good example of using technology to optimize the CIS – **"several meter reading improvements such as the transition to full meter reading are being implemented after initial CIS go-live to manage risk on the project."**

The Enhance stage is also the time to start with a regular cadence to keep the CIS current. The business and IT teams need to get into the routine of applying regular patches to the CIS solution, and working with the CIS solution vendor, to introduce effective release management. As Cathy Tough states: **"In the cloud world, new features are delivered quickly and utilities will need to start to adapt to the cadence and run shorter cycles that include a few new features faster."** Engaging closely with the CIS solution vendor will also provide Utility a better view of the solution roadmap and allow for better planning for the Extend stage.

And the organization should continue to be reviewed and refined in support of the business, application, and technology improvements. The overall solution roadmap should be reviewed with the vendor and systems integrator to plan for the Extend phase.

CIS Optimization: Extend



 <p>Customer Experience Business Process Optimization</p>	<ul style="list-style-type: none"> • Modernize customer experience through continuous improvement and enhanced customer-focused tools (e.g., chatbots) • Integrate supporting technologies, such as AI and machine learning, to improve workflow and exception management • Consider robotic process automation (RPA)
 <p>Organizational Optimization</p>	<ul style="list-style-type: none"> • Engage in user groups and vendor discussions to keep a pulse on industry trends • Introduce a "culture of change" to promote continuous improvement identification and implementation
 <p>CIS Application Optimization</p>	<ul style="list-style-type: none"> • Expand the scope of the CIS by leveraging other functionality (e.g., EVs, net metering, DER, micro grid, etc.) • Update CIS Solution Roadmap to align the company's goals with the vendor's roadmap longer term to maximize the Utility's value from their investment
 <p>CIS Technology Optimization</p>	<ul style="list-style-type: none"> • Transition to a Cloud (SaaS) hosted solution or Managed Services Model • Integrate CIS with upgraded edge systems (e.g. enhanced AMI)

The last stage in CIS Optimization is to extend the CIS beyond the typical meter-to-cash functionality into edge systems and technologies.

This stage is ongoing. The utility should look to create a CIS Solution Roadmap to align the company's goals with the software vendor's roadmap longer term to maximize the Utility's value from their investment. It requires tight integration between the business, IT, vendor(s), and systems integrator(s).

Brenda Craig offers some Oracle roadmap examples, such as [“digital asset cloud service \(better support for behind-the-meter devices in the billing application\) and exceptionless billing through machine learning.”](#)

Cathy Tough adds that SAP's roadmap examples are “based on customer feedback and needs: continuing enhancements of existing functionality & simplification of processes plus net new innovations, such as Omni channel environments, chatbots, live chat capabilities, the rollout of self-service capabilities by process, and machine learning to remove repetitive tasks. Commercializing utilities customer base consumption data & analytics is also key.”

The Extend stage provides an opportunity for the Utility to initiate a “culture of change” to promote continuous improvement identification and implementation. If users are empowered to voice their ideas, since they are the ones with the day-to-day experience on the system, The Utility can continue to provide feedback to their CIS solution vendors and seek ongoing improvements in efficiency, productivity, and customer experience. The business process documentation that was optimized during the Stabilization stage, should continue to be kept current and used for assessing the impacts of additional changes to people, processes, and systems.

As an example, Don Siciliano led an initiative “to implement a meter replacement interface that would allow us to automate the validation and processing of data coming into our CIS. We also implemented an automated work order system interface which would facilitate the timely repair and replacement of meters and related technology. We’re also implementing a new cloud-based meter reading system that will automate the download and upload of meter reading data directly into the CIS from the field. These changes will complete everything we had planned to change with our new CIS and will allow us to do business the way we want to into the future.”

Utilities may also want to assess additional technology optimization at this time. If the Utility has begun moving more established applications to the cloud, and its IT strategy is aligned with cloud solutions, then a CIS Cloud assessment may be to achieve a holistic view. Kaihen suggests an intermediate stage though if a Utility isn't “Cloud-ready” yet. Utilities could move from an On-Premises CIS to a Private Cloud CIS first before deciding if a move to the Public Cloud is warranted. Refer to our [CIS Cloud Decision whitepaper](#) for more details.



| CIS Series

08

Next Steps

If you're ready to begin your CIS Optimization journey, start with three simple steps: Prepare, Diagnose, and Plan:

01 Prepare

- Gauge user feedback on how to best use your CIS (Stabilize)
- Set tactical goals for CIS (Enhance)
- Set strategic goals for CIS and extending systems (Extend)
- Educate businesses on the benefits of CIS optimization and the possibilities

02 Diagnose

- Gather and document desired enhancements in line with objectives
- Use data analytics to inform and prioritize enhancement into manageable stages

03 Plan

- Engage closely with your CIS solution provider to influence their roadmap
- Create a roadmap to implement tactical activities and plan for strategic activities
- Consider enablers (RFPs, new technology, new skill sets)

CIS Optimization: Key Takeaways

Based on a recent poll with Electricity Canada's Customer Council^[1], Utilities reported that fine-tuning their CIS application, integration with other applications (such as their customer portal), and customer experience modernization would be their top reasons for CIS Optimization. Business process documentation, redesigning their customer bill, and process improvements through AI or RPA, were also noted as reasons for CIS Optimization.

^[1] Webinar conducted with Electricity Canada Customer Council members, October 26, 2022, representing utilities across Canada.

- 01** When assessing your CIS solution, pick a platform that aligns with the Utilities' customer strategies
- 02** If you are preparing to implement or upgrade, plan for the CIS Optimization Phase in your upfront project planning; and if you have implemented or upgraded within the last 4 months to 2+ years, we suggest that you now consider a CIS Optimization Phase
- 03** De-risk your initial CIS implementation by scheduling some new enhancements during the Optimization Phase
- 04** Look for opportunities to optimize customer experience business processes, as well as the customer organization, the CIS application and surrounding technology
- 05** There are three stages to CIS Optimization:
 1. **Stabilize** - fine-tuning existing Meter-to-Cash scope
 2. **Enhance** – focus on enhancing meter-to-cash related scope
 3. **Extend** – aligning the utility's strategic initiatives with the CIS Solution roadmap

Whitepaper Contributors

A Special Thanks To:

- Electricity Canada's Customer Council
- Don Siciliano, Utility Finance Manager, Region of Durham
- Cathy Tough, Chief Customer Officer, SAP Canada
- Brenda Craig, Global Customer Solutions, Product Marketing Director, Oracle Energy and Water



About Kaihen

Kaihen helps electric, gas, and water utilities prepare for the kinds of fundamental business changes that improve operations and customer service.

Our name is a word meaning change, innovation, or transformation. It embodies everything we do for our clients.

Our core competency is business readiness—ensuring that our client's people, processes, and systems are well-prepared to adopt the change we help to implement. And we do so by managing projects, designing and improving business processes, training users, solution testing, and implementing powerful change management initiatives.

As a proudly Canadian consulting firm, our service offerings revolve around five key business functions of our client's businesses: Customer Operations, Smart Metering, Outage Management, Utility Data & Analytics, and Asset & Work Management.

For Information Contact:
Pat Leahey, Director of Business Development
+1-416-710-4551
pleahey@kaihen.ca