Milton Hydro
IT Strategy & Roadmap
Final Report

September 2021
Update January 2022

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- Our Services were performed and this Report was developed in accordance with our letter of engagement dated July 20, 2021 and are subject to the terms and conditions included therein.

- Our observations are based on review of documents provided to us by Milton Hydro Distribution Inc. (Milton Hydro). No additional information was provided, requested or reviewed. As such, the observations and findings contained in this document are not meant to be exhaustive. Changes in circumstances after this date could affect the findings outlined in this document.

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About this document

This document is the Final Report deliverable for the IT Strategy & Roadmap project prepared for Milton Hydro, September 2021.

This deliverable includes the following: executive summary and project overview, IT strategic objectives and guiding principles, key findings summary, 3-year technology roadmap and prioritized initiatives, and execution considerations.

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1. Executive Summary

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Project overview and key activities

This project was delivered in three phases to assess priority business needs and develop a 3-year IT strategy and roadmap.

Overview

Milton Hydro is conducting planning activities for an upcoming regulatory application. In preparation, Milton Hydro would like to conduct a current state review and develop a technology roadmap that will identify the technology investments and implementation activities required by Milton Hydro over the next five years. Milton Hydro engaged PwC over ▮▮▮▮▮ to conduct a current and future state assessment and develop a multi-year IT Strategy & Roadmap that includes a list of prioritized technology initiatives and high-level cost estimates to inform the upcoming regulatory application.

IT strategic objectives and guiding principles were developed

IT strategic objectives are broad and clearly defined statements of end goals that an organization aspires to achieve. Guiding Principles are tactical statements that will guide decision making and prioritization related to the IT Strategy & Roadmap. Both were used to inform the initiatives of the final IT Strategy & Roadmap.

IT Strategic Objectives

Optimize existing processes and enable automation to eliminate manual and repetitive tasks so that employees may refocus on higher-value tasks and meaningful engagements with customers.

Build for growth and agility through holistic approach of people, process and technology in order to satisfy the population growth in Milton and to respond to regulatory changes and technology disruptions.

Nurture a cultural change and focus on digital upskilling Milton Hydro's workforce to drive innovation and productivity improvement from best-in-class technology solutions.

Establish a strong data foundation that allows employees to easily access real-time business information for reporting, customer information to respond to incoming inquiries faster, and enable document management and knowledge sharing capabilities.

Focus on end customers and establishing a 360 view of customer interactions so that employees can engage in meaningful conversations with customers.

Streamline customer interactions with **an omnichannel view**.

Make **technology decisions that are driven by business needs** to fulfill customer requirements and enable innovation.

Guiding Principles

1. **Customer-Centric.** Place customer at the heart of our decision-making process and enable a 360 view of customers to standardize and provide seamless omni-channel customer experience.

2. **Simple & Usable.** Allow employees to easily maintain and operate through user friendly interfaces and intuitive processes.

3. **Data Driven.** Establish a strong data foundation so that data is available across the organization in real time to support fact-based decision making and real-time reporting.

4. **Automation.** Enable automation through pre-configured workflows and system rules to streamline customer interactions and billing.

5. **Integrated.** Easy to share data with other third parties and systems across the entire technology ecosystem, including financial and operational indicators and performance data.

6. **Scalable.** Able to quickly respond to organizational / regulatory changes and scale as future demand grows, including adopting additional capabilities.

7. **Cost Effective.** Optimize costs that are appropriate for the size of Milton Hydro.

8. **Cloud first.** Explore cloud platform and cloud services as the default option.

Five roadmap themes were defined to meet future state needs

Each theme includes a set of prioritized initiatives, used to derive the 3-year technology transformation roadmap.

ENHANCING THE
EXPERIENCE OF
Our Customers

The initiatives within this theme are related to **improving the customer experience in order to make it simple, engaging and valuable**.

OPTIMIZING
**Our Performance
and Delivery**

The initiatives within this theme are related to **driving operational excellence, designing for speed, improving and measuring business performance** (i.e. by streamlining and automating business processes) and enhancing project delivery in order to reduce operational overhead and enable effective delivery of projects.

EMPOWERING
Our People

The initiatives within this theme are related to **modernizing and enhancing the employee experience** by providing the right tools to request support as well as enabling employees to develop digital skills through upskilling to **support productivity, innovation and growth**.

MANAGING & DELIVERING
VALUE WITH
Our Information

The initiatives within this theme are related to **improving the management, reliability and trust of information** in order to better enable analytics and data-driven decision-making across the organization.

MATURING
Our IT Foundation

The initiatives within this theme are business driven for **enhancing the maturity of the IT organization** in order to **enable IT to better address the needs of the business** as well as support the other programs and the organization as a whole.

See *Appendix A: Roadmap Themes and Initiative Details* for more details

20 initiatives were developed and prioritized

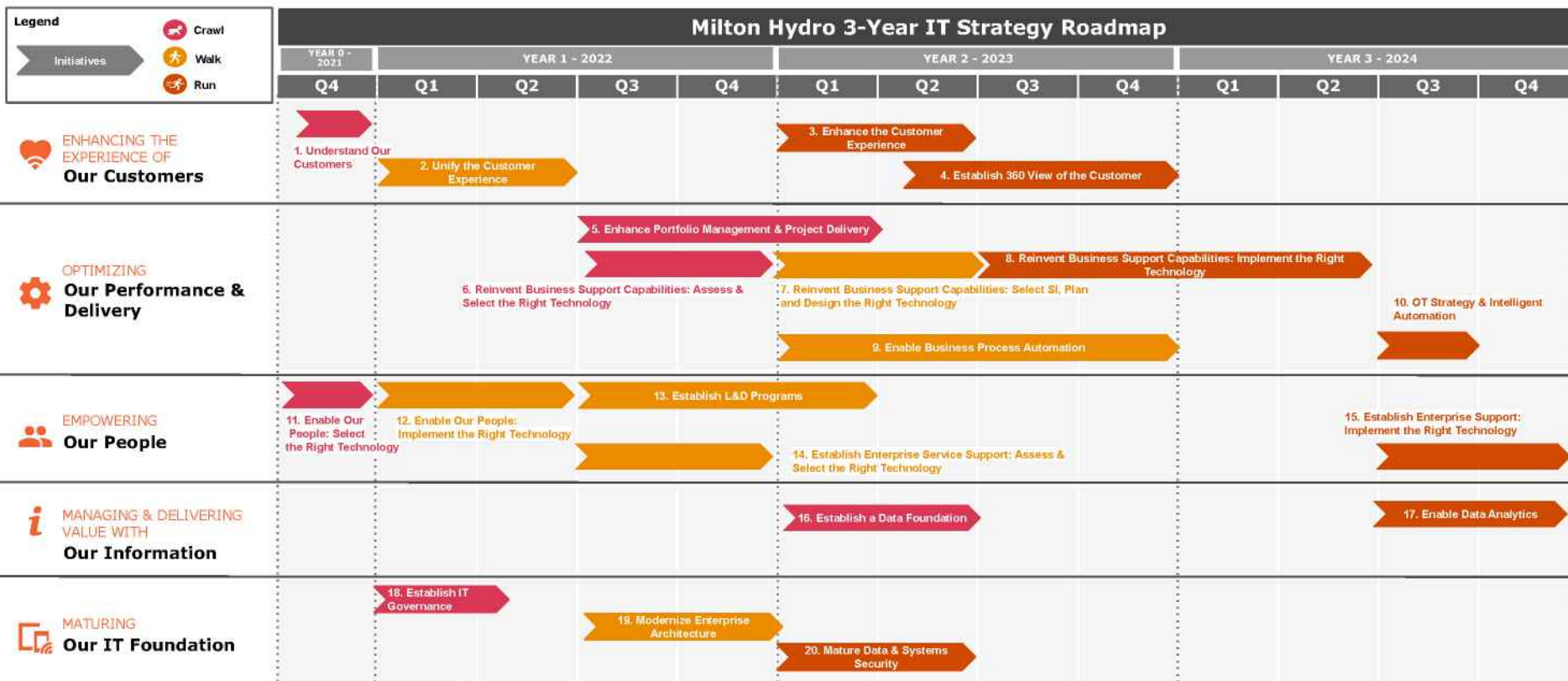Legend Crawl Walk Run

Priority Initiatives

These were validated in workshops and working sessions with Milton Hydro stakeholders and leadership.

Themes	Initiatives

ENHANCING THE EXPERIENCE OF Our Customers

1. Understand Our customers
Drive insights and actions through existing customer data and develop customer journey maps to better understand customer needs and identify gaps in current CIS system

2. Unify the Customer Experience
Adopt an omnichannel solution that streamlines customer interactions and consolidates key information (e.g. customer feedback, issues, complaints) for the customer service representatives

3. Enhance the Customer Exp.
Implement enhancements to existing customer portal that would improve customer satisfaction such as enabling self-serve onboarding, adding credit / debit payment options, and providing chatbot functionality

4. Establish 360 View of the Customer
Assess, procure and implement a fit-for-purpose CRM tool to inform relevant products and services for the regulated and unregulated businesses

OPTIMIZING Our Performance and Delivery

5. Enhance Portfolio Management & Project Delivery
Establish project management frameworks / methodologies and implement project management tools to standardize project management and dependencies tracking

6. Reinvent Business Support Capabilities: Assess & Select the Right Technology
Define Milton Hydro's needs and requirements in the desired functional areas then assess and select a fit-for-purpose technology that's suitable for Milton Hydro's size and budget considerations

7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology
Select SI, develop detailed planning and co-design the future state of the priority business processes based on the chosen technology and conduct prototyping activities

8. Reinvent Business Support Capabilities: Implement the Right Technology
Optimize processes and implement fit-for-purpose technology for Finance, HR, Procurement, Supply Chain and Work Management in a way that best achieves business outcomes and drives user adoption

9. Enable Business Process Automation
Identify suitable opportunities (e.g. repetitive, administrative and high frequency) for process automations to automate manual and mundane tasks (e.g. billing data entries and regulatory reporting)

10. OT Strategy & Intelligent Automation
Develop operational technology (OT) strategy and explore applications of intelligent automation, including artificial intelligence (AI), machine learning (ML) and emerging technologies (e.g. Internet of Things)

EMPOWERING Our People

11. Enable Our People: Select the Right Technology
Select an HRIS tool and explore opportunities to consider the HR module as part of the ERP initiative

12. Enable Our People: Implement the Right Technology
Develop and conduct training programs on existing tools and processes (e.g. document management tool, security and privacy policies) as well as new tools and concepts (e.g. automation tools, ERP, agile principles)

13. Establish L&D Programs
Implement the selected HRIS tool in parallel to assessing and implementing quick wins (e.g. simplified time entry tool)

14. Establish enterprise Service Support: Assess & Select the Right Technology
Assess and adopt an enterprise wide system to submit service requests for Finance, HR and IT

15. Establish enterprise Support: Implement the Right Technology
Build, configure and test the selected enterprise service support system

MANAGING & DELIVERING VALUE WITH Our Information

16. Establish a Data Foundation
Establish the foundational components required to manage data and information, including establishing data strategy and data governance, as well as developing an enterprise data model

17. Enable Data Analytics
Evaluate and implement required tools to enable data and analytics capabilities (including dashboard and reporting capabilities and advanced analytics capabilities)

MATURING Our IT Foundation

18. Establish IT Governance
Establish defined processes, including checkpoints and business case template for making technology decisions

19. Modernize Enterprise Architecture
Develop target state architecture that integrates new tools with legacy systems and enables scalability and flexibility to meet the growing and changing customer needs

20. Mature Data & Systems Security
Ensure data is secure and systems are reliable based on current and anticipated future needs

See **Appendix A: Roadmap Themes and Initiative Details** for more details

A 3-year IT transformation roadmap was developed

The proposed roadmap spans three fiscal years, with initiatives across all five themes included and sequenced according to priority, complexity and dependencies.

Milton Hydro 3-Year IT Strategy Roadmap

Legend
- Initiatives
- Crawl
- Walk
- Run

Theme	YEAR 0 - 2021 Q4	YEAR 1 - 2022 Q1	Q2	Q3	Q4	YEAR 2 - 2023 Q1	Q2	Q3	Q4	YEAR 3 - 2024 Q1	Q2	Q3	Q4

ENHANCING THE EXPERIENCE OF Our Customers
- 1. Understand Our Customers
- 2. Unify the Customer Experience
- 3. Enhance the Customer Experience
- 4. Establish 360 View of the Customer

OPTIMIZING Our Performance & Delivery
- 5. Enhance Portfolio Management & Project Delivery
- 6. Reinvent Business Support Capabilities: Assess & Select the Right Technology
- 7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology
- 8. Reinvent Business Support Capabilities: Implement the Right Technology
- 9. Enable Business Process Automation
- 10. OT Strategy & Intelligent Automation

EMPOWERING Our People
- 11. Enable Our People: Select the Right Technology
- 12. Enable Our People: Implement the Right Technology
- 13. Establish L&D Programs
- 14. Establish Enterprise Service Support: Assess & Select the Right Technology
- 15. Establish Enterprise Support: Implement the Right Technology

MANAGING & DELIVERING VALUE WITH Our Information
- 16. Establish a Data Foundation
- 17. Enable Data Analytics

MATURING Our IT Foundation
- 18. Establish IT Governance
- 19. Modernize Enterprise Architecture
- 20. Mature Data & Systems Security

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High-level cost estimates were developed for the 8 priority initiatives

Average **external cost metrics and 3-year CAPEX and OPEX estimates** have been prepared for **eight prioritized initiatives** in the IT Roadmap.

Average external cost estimates*

~$1,621k
Total CAPEX

~$188k
Yearly OPEX

CAPEX and OPEX estimates over 3 years

Year 0 - 2021 Q4	Year 1 - 2022	Year 2 - 2023	Year 3 - 2024
	~$435k	~$923k	~$263k
	~$23k	~$188k	~$188k

Top 8 priority initiatives estimated:

- 2. Unify the Customer Experience
- 6. Reinvent Business Support Capabilities: Assess & Select the Right Technology
- 7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology
- 8. Reinvent Business Support Capabilities: Implement the Right Technology
- 9. Enable Business Process Automation
- 11. Enable Our People: Select the Right Technology
- 12. Enable Our People: Implement the Right Technology
- 14. Establish Enterprise Service Support: Assess & Select the Right Technology

CAPEX

Capital Expenditures are one-time project cost typically related to implementation, services, training, change management, etc.

OPEX

Operating Expenditures are monthly/annually recurring costs typically related to usage, licencing or subscription fees.

*Average cost estimate is rounded to the closest '000.

Overall Assumptions

Cost estimates include only external support: The estimates prepared do not include cost estimates for internal resource costs. However, estimated internal FTE resource requirements for the 8 prioritized initiatives has been prepared for Milton Hydro to incorporate in planning efforts, please see Appendix D: Details of Cost and Internal Resource Estimates for more details on internal FTE requirements.

Average values used for CAPEX and OPEX ranges: CAPEX and OPEX estimates were prepared in ranges. For the CAPEX and OPEX summaries provided here, the average value of the range was included in the calculation.
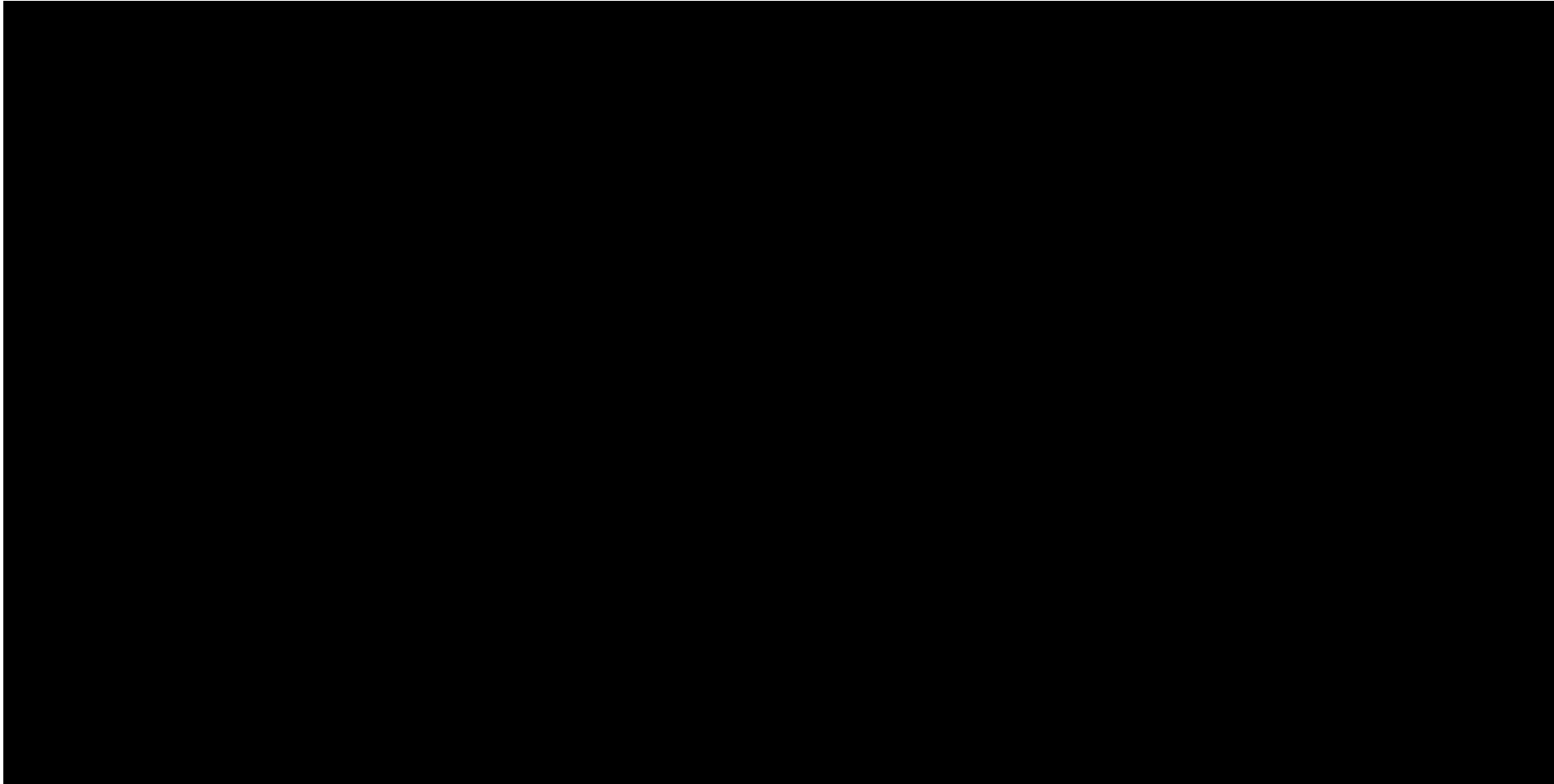
Example solution options: To inform the estimates for initiatives that involved implementation of a specific solution type (e.g. ERP), the approach involved identifying potential solution options and then baselining the estimates based on the options, as well as previous experience.

Duration and implementation timelines: CAPEX costs have taken into consideration the expected duration of the initiatives. However, duration does not equal total level of effort. Considerations related to duration and effort is highlighted in the assumptions.

Nominal values: Estimated costs are nominal values and have not been adjusted for inflation or cost of capital.

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*See **Appendix B: Details of Cost and Internal Resource Estimates** for more details*

A 100-day plan with immediate next steps was developed

2. Project Background and Objectives

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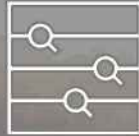# Project background and objective

Background

Milton Hydro is conducting planning activities for an upcoming regulatory application. In preparation, Milton Hydro would like to conduct a **current state review** and develop a **technology roadmap** that will identify the technology investments and implementation activities required by Milton Hydro **over the next five years**.

Milton Hydro has engaged PwC ████████ to conduct a **current and future state assessment** and develop a **multi-year IT Strategy & Roadmap** that includes a list of prioritized technology initiatives and high-level cost estimates to inform the upcoming regulatory application.

Objectives

Establish the current state and define the future vision of IT at Milton Hydro	Identify and prioritize initiatives that will bridge the gap between current and future states	Develop costing for priority initiatives and develop an IT Strategy Roadmap for Milton Hydro

Our approach involved three phases
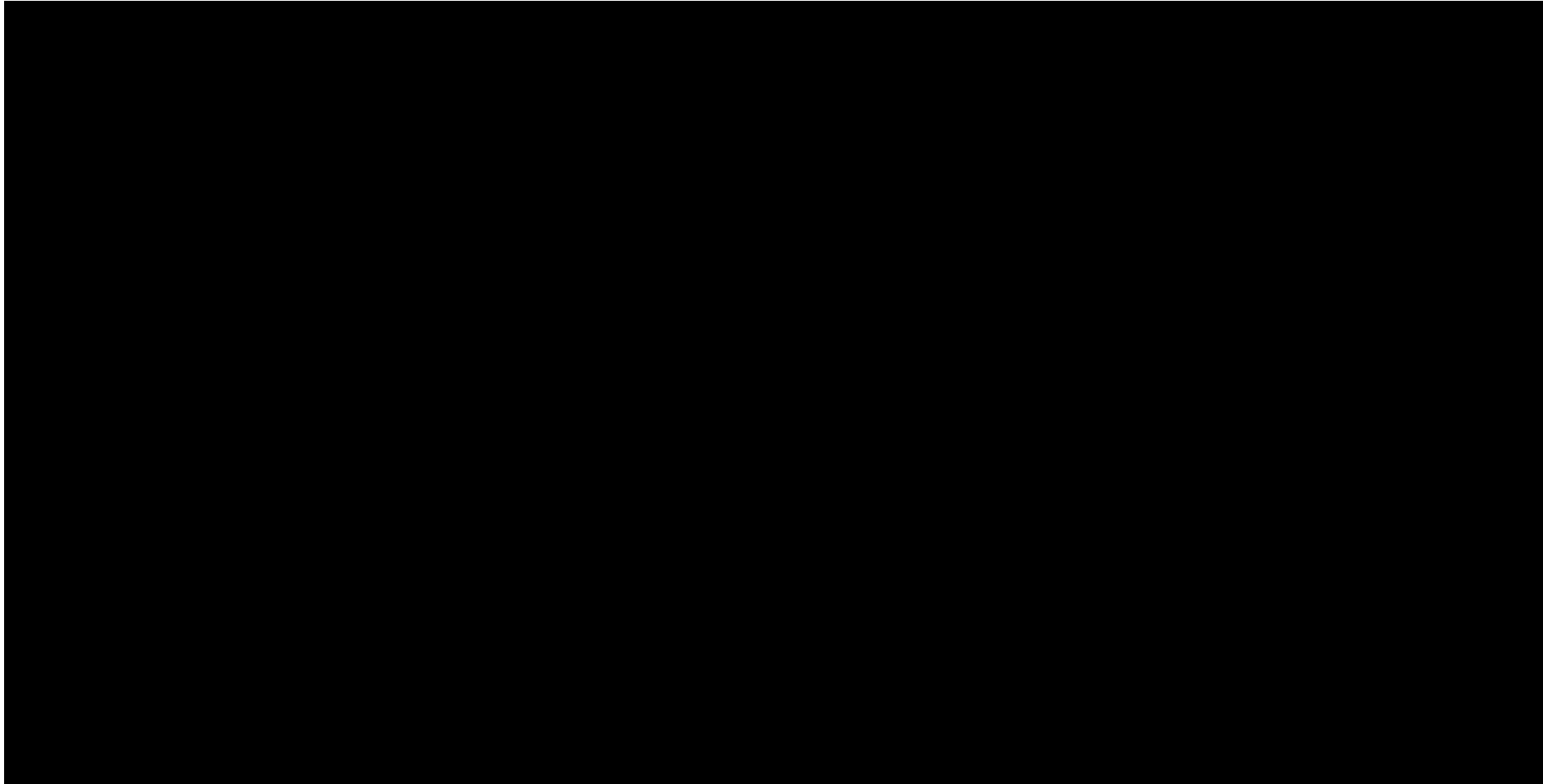
The three phases were delivered over ▮▮▮▮▮▮
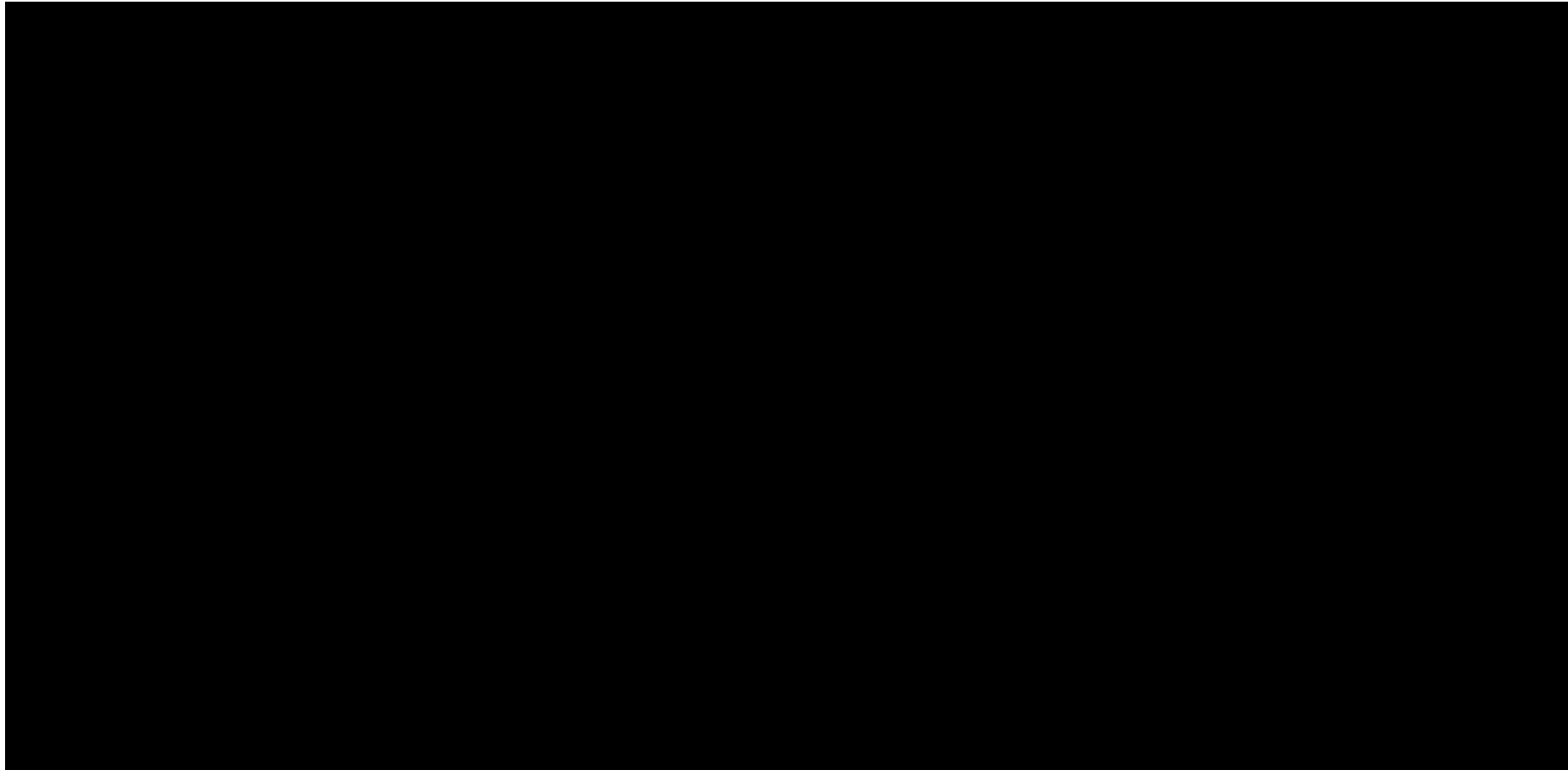
3. IT Strategic Objectives and IT Strategy Guiding Principles

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IT strategic objectives were defined and linked back to corporate strategic objectives

Future Ready our Business

Optimize existing processes and enable automation to eliminate manual and repetitive tasks so that employees may refocus on higher-value tasks and meaningful engagements with customers.

Build for growth and agility through holistic approach of people, process and technology in order to satisfy the population growth in Milton and to respond to regulatory changes and technology disruptions.

Nurture a cultural change and focus on digital upskilling Milton Hydro's workforce to drive innovation and productivity improvement from best-in-class technology solutions.

Build a **Customer-Centric** Organization

Establish a strong data foundation that allows employees to easily access real-time business information for reporting, customer information to respond to incoming inquiries faster, and enable document management and knowledge sharing capabilities.

Focus on end customers and establishing a 360 view of customer interactions so that employees can engage in meaningful conversations with customers.

Streamline customer interactions with **an omnichannel view**.

Maximize value with an **Enterprise Approach**

Make **technology decisions that are driven by business needs** to fulfill customer requirements and enable innovation.

A set of IT strategy guiding principles were developed to guide decision-making and prioritization

1. **Customer-Centric.** Place customer at the heart of our decision-making process and enable a 360 view of customers to standardize and provide seamless omni-channel customer experience.

2. **Simple & Usable.** Allow employees to easily maintain and operate through user friendly interfaces and intuitive processes.

3. **Data Driven.** Establish a strong data foundation so that data is available across the organization in real time to support fact-based decision making and real-time reporting.

4. **Automation.** Enable automation through pre-configured workflows and system rules to streamline customer interactions and billing.

5. **Integrated.** Easy to share data with other third parties and systems across the entire technology ecosystem, including financial and operational indicators and performance data.

6. **Scalable.** Able to quickly respond to organizational / regulatory changes and scale as future demand grows, including adopting additional capabilities.

7. **Cost Effective.** Optimize costs that are appropriate for the size of Milton Hydro.

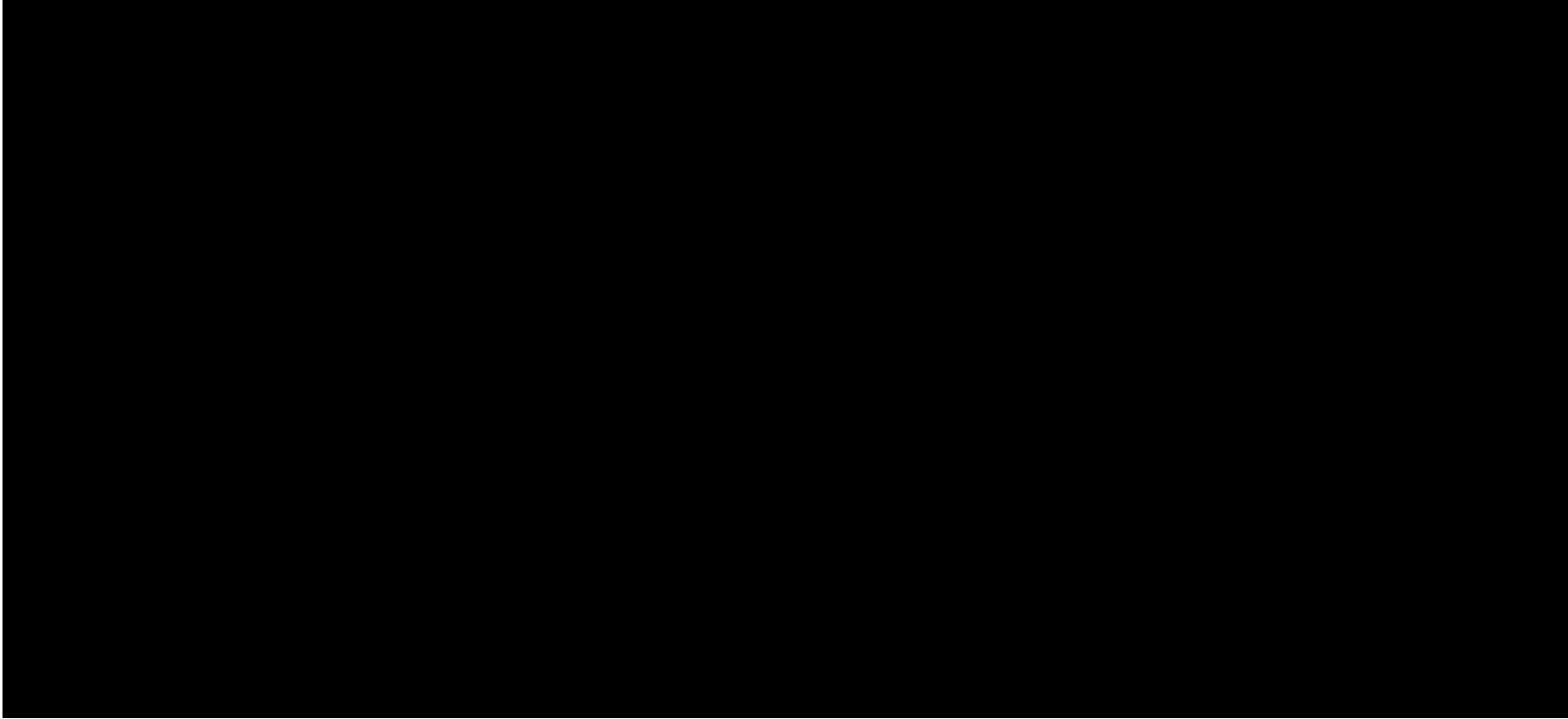8. **Cloud first.** Explore cloud platform and cloud services as the default option.

4. Current State Assessment and Target State Needs

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A BCM was used to identify the business needs and long term vision

Key stakeholders were consulted to understand current challenges and future business/technology needs

What we heard from you during interviews and workshops

We don't track customer feedback, issues / complaints and health scores very well because **it's all disjointed**, and is sometimes manually entered twice. Further, the **onboarding process is completely manual and not scalable** for future growth.

Gathering and compiling data for OEB is very manual, but these are **routine processes** that could be fully automated.

Finals entry is **completely manual.** At least 4 hours per week spent on manually entering meter read comments. During rate change periods, it is essentially a full-time job on its own that overwhelms the three billing clerks.

Cayenta doesn't do all the things that we need it to do; For example, planning is done manually across all departments. It is a financial system that's being used as a de facto ERP.

We **aren't able to adequately manage** tendering, procurement and a just-in-time inventory because the **current platform is not fit-for-purpose** - a file sharing solution is being used as a de facto tendering platform.

We **lack tool, dedicated team and defined processes** to manage projects, track issues, allocate funds and compare projected to actual spend. Currently **everything is done in Excel and Calendar**
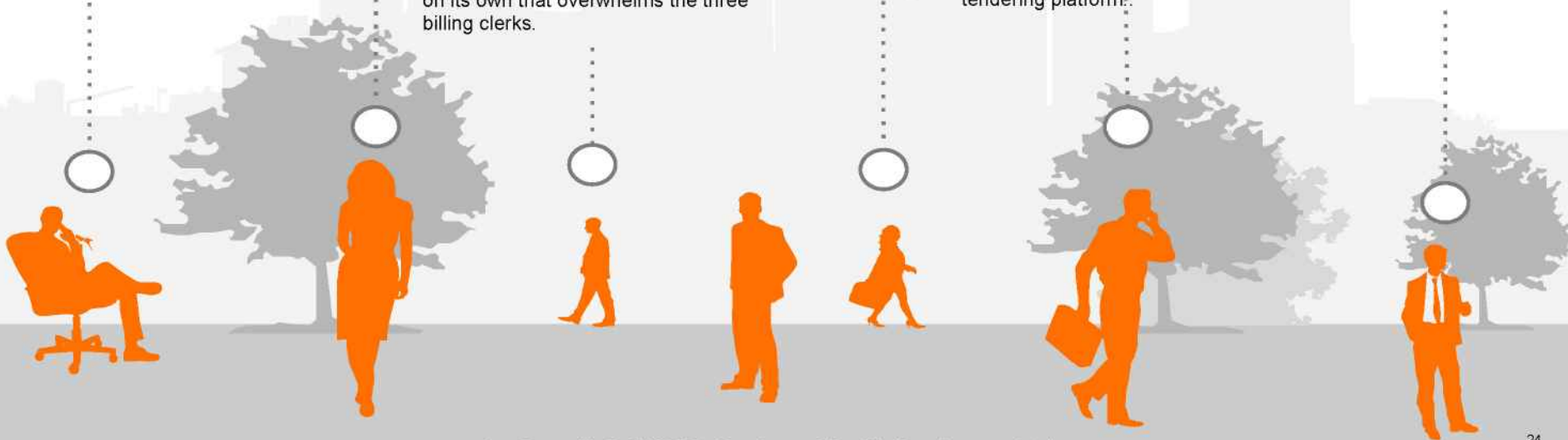
See **Appendix B: BCM Prioritization and Key Findings** for more details

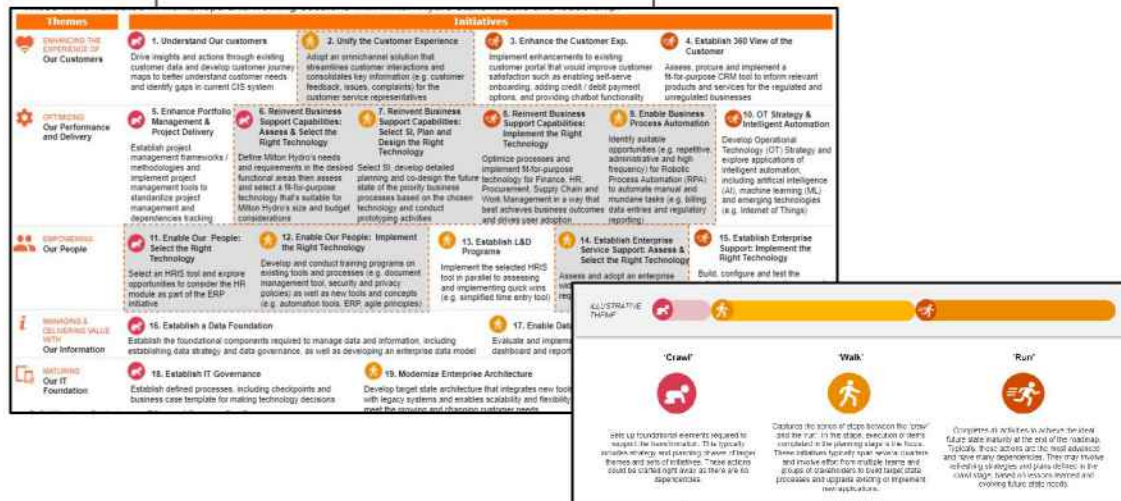24

5. Technology Themes and Initiatives

Introduction to Milton Hydro's IT themes and initiatives

Themes
Five themes that initiatives are grouped into.

Initiatives
20 technology initiatives proposed across the 5 themes.

Initiative Type
Three initiative types:
Crawl, Walk or Run.

Purpose
Technology themes breakdown the implementation of organizational change into achievable components and serve as key input into the IT roadmap.

Themes
Themes represent areas for investment that align with the business needs, IT strategy vision and guiding principles. A theme is a group of related initiatives managed in a coordinated manner to obtain benefits not available from managing them individually.

Initiative
Each initiative is comprised of a set of activities to enable business priorities. Initiatives are mapped to themes based on linkages and similar objectives.

Initiative Types
Separating initiatives into types encourages more agile project implementation and encourages organizational change.

realizing the future state vision through technology themes

Based on an understanding of the current state, prioritization of business capabilities and your strategic objectives and guiding principles, **five IT Strategy and Roadmap themes and 20 technology initiatives** were defined to address key priority areas in terms of technology needs and enablement opportunities at Milton Hydro

IT Strategy and Roadmap Themes

ENHANCING THE EXPERIENCE OF
Our Customers

OPTIMIZING
Our Performance & Delivery

EMPOWERING
Our People

MANAGING AND DELIVERING VALUE WITH
Our Information

MATURING
Our IT Foundation

Key Takeaways & Implications

Why Define Themes for Delivery?

Separating projects into categories encourages more agile project implementation and encourages organizational change. 20 technology initiatives have been defined to enable Milton Hydro' Strategy over the next 3 to 5 years.

Key Benefits and Outcomes the initiatives Are Intended to deliver?

The technology initiatives are focused on meeting the needs of your customers and the business. At a high level, the desired benefits and business value that the initiatives are intended to deliver include the following:

- Optimizing your existing processes and enabling automation to eliminate manual and repetitive tasks so that employees can refocus on higher-value tasks and meaningful engagements with customers
- Support growth and agility in order to satisfy population growth and to respond to regulatory changes
- Establish a strong data foundation that allows employees to easily access real time information in order to respond to customer inquiries faster
- Focus on end customers and establishing a 360 view of interaction, including omni-channel capability
- Governance that support making technology decision that are driven by business needs to fulfill customer requirements and enable innovation

*See **Appendix A: Roadmap Themes and Initiatives Detail** for more details*

Initiatives are categorized according to type, as either a 'Crawl', 'Walk' or 'Run' initiative

A set of technology initiatives have been proposed for each theme and categorized as crawl, walk, or run. Each theme has a unique timing of crawl, walk and run.

ILLUSTRATIVE THEME

'Crawl'

Sets up foundational elements required to support the transformation. This typically includes strategy and planning phases of larger themes and sets of initiatives. These actions could be started right away as there are no dependencies.

'Walk'

Captures the series of steps between the 'crawl' and the 'run'. In this stage, execution of items completed in the planning stage is the focus. These initiatives typically span several quarters and involve effort from multiple teams and groups of stakeholders to build target state processes and upgrade existing or implement new applications.

'Run'

Completes all activities to achieve the ideal future state maturity at the end of the roadmap. Typically, these actions are the most advanced and have many dependencies. They may involve refreshing strategies and plans defined in the crawl stage, based on lessons learned and evolving future state needs.

Each theme consists of a set of initiatives

IT Strategy and Roadmap Themes	Initiatives

ENHANCING THE EXPERIENCE OF
Our Customers
The initiatives within this theme are related to improving the customer experience in order to make it simple, engaging and valuable.

1. Understand Our customers
2. Unify the Customer Experience
3. Enhance the Customer Experience
4. Establish 360 View of the Customer

OPTIMIZING
Our Performance and Delivery
The initiatives within this theme are related to driving operational excellence, designing for speed, improving and measuring business performance (i.e. by streamlining and automating business processes) and enhancing project delivery in order to reduce operational overhead and enable effective delivery of projects.

5. Enhance Portfolio Management & Project Delivery
6. Reinvent business support capabilities: assess & select the right Technology
7. Reinvent business support capabilities: select SI, plan and design the right Technology
8. Reinvent business support capabilities: implement the right Technology
9. Enable Business Process Automation
10. OT Strategy & Intelligent Automation

EMPOWERING
Our People
The initiatives within this theme are related to modernizing and enhancing the employee experience by providing the right tools to request support as well as enabling employees to develop digital skills through upskilling to support productivity, innovation and growth.

11. Enable Our People: Select the Right Technology
12. Enable Our People: Implement the Right Technology
13. Establish L&D programs
14. Establish enterprise service support: Assess & select the Right Technology
15. Establish enterprise support: Implement the Right Technology

MANAGING & DELIVERING VALUE WITH
Our Information
The initiatives within this theme are related to improving the management, reliability and trust of information in order to better enable analytics and data-driven decision-making across the organization.

16. Establish a Data Foundation
17. Enable Data Analytics

MATURING
Our IT Foundation
The initiatives within this theme are business driven for enhancing the maturity of the IT organization in order to enable IT to better address the needs of the business as well as support the other programs and the organization as a whole.

18. Establish IT Governance
19. Modernize Enterprise Architecture
20. Mature Data & Systems Security

See *Appendix A: Roadmap Themes and Initiatives Detail* for more details

Description of the initiatives for each theme

Themes	Initiatives

ENHANCING THE EXPERIENCE OF Our Customers

1. Understand Our customers
Drive insights and actions through existing customer data and develop customer journey map to better understand customer needs and identify gaps in current CIS system

2. Unify the Customer Experience
Adopt omnichannel solution that streamlines customer interactions and consolidates key information (e.g. customer feedback, issues, complaints) for the customer service representatives

3. Enhance the Customer Exp.
Implement enhancements to existing customer portal that would improve customer satisfaction such as enabling self-serve onboarding, adding credit / debit payment options, and providing chatbot functionality

4. Establish 360 View of the Customer
Assess, procure and implement a fit-for-purpose CRM tool to inform relevant products and services for the regulated and unregulated businesses

OPTIMIZING Our Performance and Delivery

5. Enhance Portfolio Management & Project Delivery
Establish project management frameworks / methodologies and implement project management tool to standardize project management and dependencies tracking

6. Reinvent Business Support Capabilities: Assess & Select the Right Technology
Define Milton Hydro's needs and requirements in the desired functional areas then assess and select a fit-for-purpose technology that's suitable for Milton Hydro's size and budget considerations

7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology
Select SI, develop detailed planning and co-design the future state of the priority business processes based on the chosen technology and conduct prototyping activities.

8. Reinvent Business Support Capabilities: Implement the Right Technology
Optimize processes and implement fit-for-purpose technology for Finance, HR, Procurement, Supply Chain and Work Management in a way that best achieves business outcomes and drives user adoption

9. Enable Business Process Automation
Identify suitable opportunities (e.g. repetitive, administrative and high frequency) for process automations to automate manual and mundane tasks (e.g. billing data entries and regulatory reporting)

10. OT Strategy & Intelligent Automation
Develop operational technology (OT) Strategy and explore applications of intelligent automation, including artificial intelligence (AI), machine learning (ML) and emerging technologies (e.g. Internet of Things).

EMPOWERING Our People

11. Enable Our People: Select the Right Technology
Select an HRIS tool and explore opportunities to consider HR module as part of the ERP initiative

12. Enable Our People: Implement the Right Technology
Develop and conduct training programs on existing tools and processes (e.g. document management tool, security and privacy policies) as well as new tools and concepts (e.g. automation tools, ERP, agile principles)

13. Establish L&D Programs
Implement the selected HRIS tool in parallel to assessing and implementing quick wins (e.g. simplified time entry tool)

14. Establish Enterprise Service Support: Assess & Select the Right Technology
Assess and adopt an enterprise wide system to submit service requests for Finance, HR and IT

15. Establish Enterprise Support: Implement the Right Technology
Build, configure and test the selected enterprise service support system.

MANAGING & DELIVERING VALUE WITH Our Information

16. Establish a Data Foundation
Establish the foundational components required to manage data and information, including establishing data strategy and data governance, as well as developing enterprise data model

17. Enable Data analytics
Evaluate and implement required tools to enable data & analytics capabilities (including dashboard and reporting capabilities and advanced analytics capabilities)

MATURING Our IT Foundation

18. Establish IT Governance
Establish defined process, including checkpoints and business case template for making technology decisions

19. Modernize Enterprise Architecture
Develop target state architecture that integrates new tools with legacy systems and enables scalability and flexibility to meet the growing and changing customer needs

20. Mature Data & Systems security
Ensure data is secure and systems are reliable based on current and anticipated future needs

See **Appendix A: Roadmap Themes and Initiatives Detail** for more details

6. Technology Roadmap

Introduction to Milton Hydro's Technology Roadmap

The **Technology Roadmap** aligns key stakeholders across business and IT on 'when' and 'how' technology will support the business strategy and **drive business priorities**, now and into the future.

Technology roadmapping is an ongoing process of identifying and defining key technology themes/initiatives that will support the needs of the organization.

The use of a roadmap enables the following within an organization:

● Ensures that **technology and infrastructure investments** will meet short-term and long-term strategic business priorities and objectives for an organization

● Encourages **collaboration between business and IT stakeholders** and a 'values based' discussion to secure executive alignment on existing and new investments

● Support the **planning of projects and resources in an organized manner** (i.e. due to the resource-intensive, complex nature of managing a collection of technologies)

● **Reflects changes in projects or timing** - taking into consideration dependencies, risk factors and change impacts.
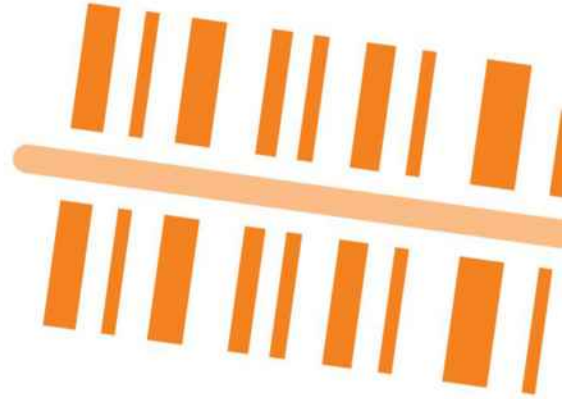
Key considerations when developing a IT roadmap
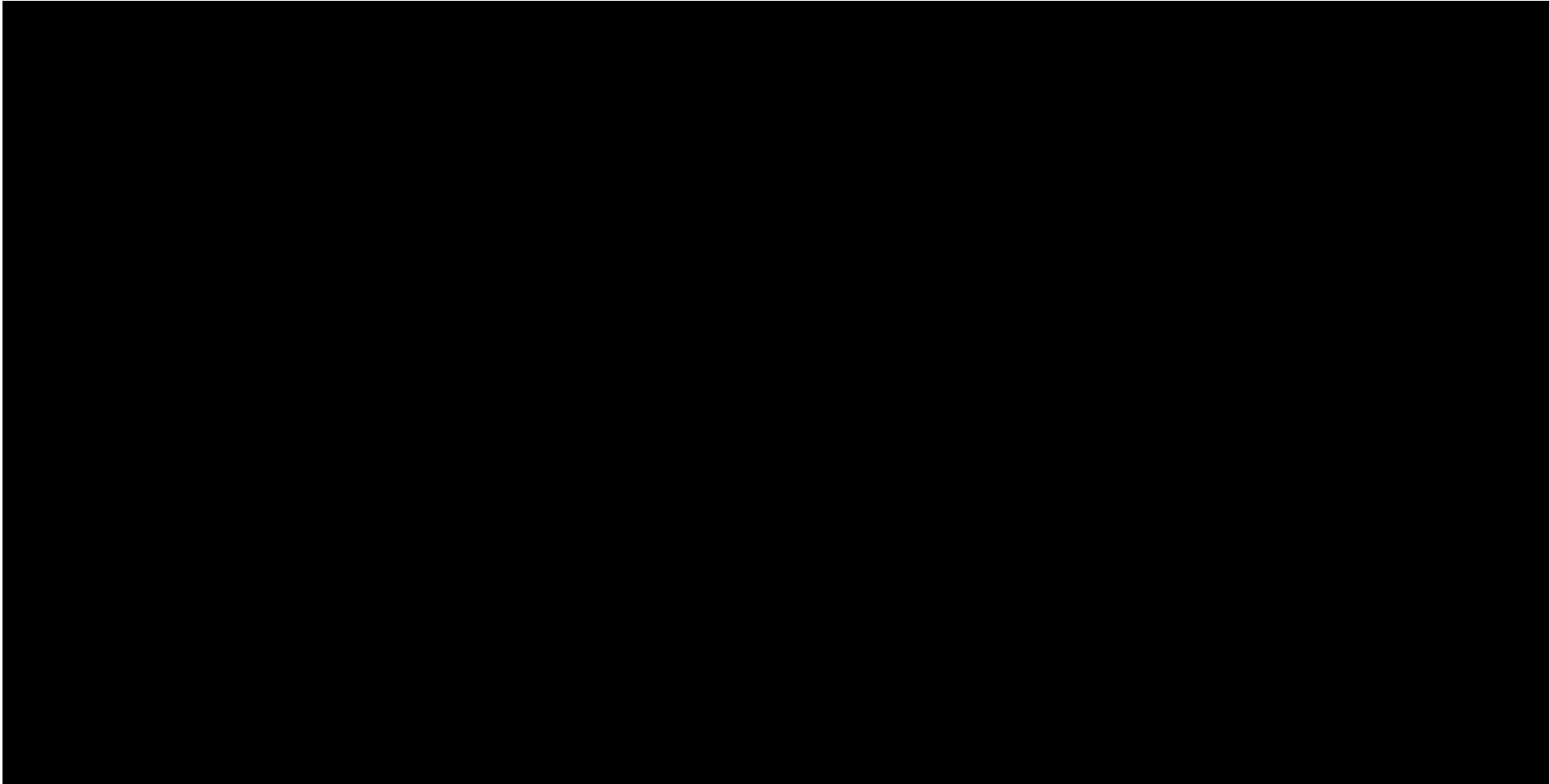
Introduction to Milton Hydro's IT Roadmap

Initiatives Start Time & Sequencing
The roadmap outlines when a initiative is intended to begin, its sequence order and its estimated duration as part of the overall roadmap but does not provide a true indication of timeline or duration (as a result of more detailed roadmap planning which is required)
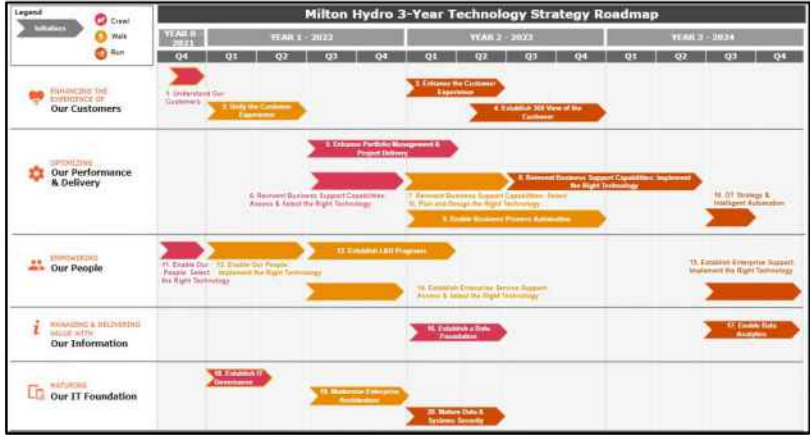
Themes
Five themes that initiatives are grouped into.

Purpose
Technology roadmapping is an ongoing process to encourage business and IT alignment around technology and infrastructure investments, as well as the planning of projects and resources in an organized manner.

Themes
Themes represent areas for investment that align with the business needs, IT strategy vision and guiding principles. A theme is a group of related projects managed in a coordinated manner to obtain benefits not available from managing them individually.

Initiative
Each initiative is comprised of a set of activities to enable business priorities. Initiatives are mapped to themes based on linkages and similar objectives.

Timeline
The strategic roadmap is defined based on a 3-year forward looking timeline view. The roadmap captures the anticipated start of each initiative and the estimated duration.

Milton Hydro 3-Year IT Strategy Roadmap

Legend

- Initiatives
- Crawl
- Walk
- Run

	YEAR 0 - 2021	YEAR 1 - 2022				YEAR 2 - 2023				YEAR 3 - 2024			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

ENHANCING THE EXPERIENCE OF Our Customers

- 1. Understand Our Customers
- 2. Unify the Customer Experience
- 3. Enhance the Customer Experience
- 4. Establish 360 View of the Customer

OPTIMIZING Our Performance & Delivery

- 5. Enhance Portfolio Management & Project Delivery
- 6. Reinvent Business Support Capabilities: Assess & Select the Right Technology
- 7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology
- 8. Reinvent Business Support Capabilities: Implement the Right Technology
- 9. Enable Business Process Automation
- 10. OT Strategy & Intelligent Automation

EMPOWERING Our People

- 11. Enable Our People: Select the Right Technology
- 12. Enable Our People: Implement the Right Technology
- 13. Establish L&D Programs
- 14. Establish Enterprise Service Support: Assess & Select the Right Technology
- 15. Establish Enterprise Support: Implement the Right Technology

MANAGING & DELIVERING VALUE WITH Our Information

- 16. Establish a Data Foundation
- 17. Enable Data Analytics

MATURING Our IT Foundation

- 18. Establish IT Governance
- 19. Modernize Enterprise Architecture
- 20. Mature Data & Systems Security

7. High-level Cost Estimates for Prioritized Initiatives

pwc

Top 8 priority initiatives were identified for developing high-level cost estimates

Priority Initiatives

Themes	Initiatives

ENHANCING THE EXPERIENCE OF Our Customers

1. Understand Our customers
Drive insights and actions through existing customer data and develop customer journey map to better understand customer needs and identify gaps in current CIS system

2. Unify the Customer Experience
Adopt omnichannel solution that streamlines customer interactions and consolidates key information (e.g. customer feedback, issues, complaints) for the customer service representatives

3. Enhance the Customer Exp.
Implement enhancements to existing customer portal that would improve customer satisfaction such as enabling self-serve onboarding, adding credit / debit payment options, and providing chatbot functionality

4. Establish 360 View of the Customer
Assess, procure and implement a fit-for-purpose CRM tool to inform relevant products and services for the regulated and unregulated businesses

OPTIMIZING Our Performance and Delivery

5. Enhance Portfolio Management & Project Delivery
Establish project management frameworks / methodologies and implement project management tool to standardize project management and dependencies tracking

6. Reinvent Business Support Capabilities: Assess & Select the Right Technology
Define Milton Hydro's needs and requirements in the desired functional areas then assess and select a fit-for-purpose technology that's suitable for Milton Hydro's size and budget considerations

7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology
Select SI, develop detailed planning and co-design the future state of the priority business processes based on the chosen technology and conduct prototyping activities.

8. Reinvent Business Support Capabilities: Implement the Right Technology
Optimize processes and implement fit-for-purpose technology for Finance, HR, Procurement, Supply Chain and Work Management in a way that best achieves business outcomes and drives user adoption

9. Enable Business Process Automation
Identify suitable opportunities (e.g. repetitive, administrative and high frequency) for process automations to automate manual and mundane tasks (e.g. billing data entries and regulatory reporting)

10. OT Strategy & Intelligent Automation
Develop operational technology (OT) strategy and explore applications of intelligent automation, including artificial intelligence (AI), machine learning (ML) and emerging technologies (e.g. Internet of Things).

EMPOWERING Our People

11. Enable Our People: Select the Right Technology
Select an HRIS tool and explore opportunities to consider HR module as part of the ERP initiative

12. Enable Our People: Implement the Right Technology
Develop and conduct training programs on existing tools and processes (e.g. document management tool, security and privacy policies) as well as new tools and concepts (e.g. automation tools, ERP, agile principles)

13. Establish L&D Programs
Implement the selected HRIS tool in parallel to assessing and implementing quick wins (e.g. simplified time entry tool)

14. Establish Enterprise Service Support: Assess & Select the Right Technology
Assess and adopt an enterprise wide system to submit service requests for Finance, HR and IT

15. Establish Enterprise Support: Implement the Right Technology
Build, configure and test the selected enterprise service support system.

MANAGING & DELIVERING VALUE WITH Our Information

16. Establish a Data Foundation
Establish the foundational components required to manage data and information, including establishing data strategy and data governance, as well as developing enterprise data model

17. Enable Data analytics
Evaluate and implement required tools to enable data & analytics capabilities (including dashboard and reporting capabilities and advanced analytics capabilities)

MATURING Our IT Foundation

18. Establish IT Governance
Establish defined process, including checkpoints and business case template for making technology decisions

19. Modernize Enterprise Architecture
Develop target state architecture that integrates new tools with legacy systems and enables scalability and flexibility to meet the growing and changing customer needs

20. Mature Data & Systems security
Ensure data is secure and systems are reliable based on current and anticipated future needs

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See *Appendix A: Roadmap Themes and Initiative Details* for more details

Summary of high-level CAPEX and OPEX estimates

Average **external cost metrics and 3-year CAPEX and OPEX estimates** have been prepared for **eight prioritized initiatives** in the IT Roadmap.

Average external cost estimates*

~$1,621k
Total CAPEX

~$188k
Yearly OPEX

CAPEX and OPEX estimates over 3 years

Year 0 - 2021 Q4	Year 1 - 2022	Year 2 - 2023	Year 3 - 2024
	~$435k	~$923k	~$263k
	~$23k	~$188k	~$188k

Top 8 priority initiatives estimated:

- 2. Unify the Customer Experience
- 6. Reinvent Business Support Capabilities: Assess & Select the Right Technology
- 7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology
- 8. Reinvent Business Support Capabilities: Implement the Right Technology
- 9. Enable Business Process Automation
- 11. Enable Our People: Select the Right Technology
- 12. Enable Our People: Implement the Right Technology
- 14. Establish Enterprise Service Support: Assess & Select the Right Technology

*Average cost estimate is rounded to the closest '000.

CAPEX

Capital Expenditures are one-time project cost typically related to implementation, services, training, change management, etc.

OPEX

Operating Expenditures are monthly/annually recurring costs typically related to usage, licencing or subscription fees.

Overall Assumptions

Cost estimates include only external support: The estimates prepared do not include cost estimates for internal resource costs. However, estimated internal FTE resource requirements for the 8 prioritized initiatives has been prepared for Milton Hydro to incorporate in planning efforts, please see Appendix D: Details of Cost and Internal Resource Estimates for more details on internal FTE requirements.

Average values used for CAPEX and OPEX ranges: CAPEX and OPEX estimates were prepared in ranges. For the CAPEX and OPEX summaries provided here, the average value of the range was included in the calculation.

Example solution options: To inform the estimates for initiatives that involved implementation of a specific solution type (e.g. ERP), the approach involved identifying potential solution options and then baselining the estimates based on the options, as well as previous experience.

Duration and implementation timelines: CAPEX costs have taken into consideration the expected duration of the initiatives. However, duration does not equal total level of effort. Considerations related to duration and effort is highlighted in the assumptions.

Nominal values: Estimated costs are nominal values and have not been adjusted for inflation or cost of capital.

See **Appendix B: Details of Cost and Internal Resource Estimates** for more details

8. Technology Roadmap Execution Considerations

9. Immediate Next Steps

pwc

A 100-day plan with immediate next steps

This 100-day plan outlines the key activities recommended for the remainder of the calendar year to initiate implementation of the IT strategic roadmap. These initiatives will require adequate resourcing and funding from Milton Hydro.

SEPTEMBER 2021	OCTOBER 2021	NOVEMBER 2021	DECEMBER 2021

Expand Roadmap View
Build a more detailed roadmap view including timing, costing, and resourcing for each initiative, and ensure buy-in across the organization

ENHANCING THE EXPERIENCE OF OUR CUSTOMERS
1. Understand Our Customers

Analyze / consolidate customer data

Develop customer journey map

Conduct needs and gaps analysis for CRM / CIS

Plan Projects
Plan specific projects to implement FY21 initiatives based on the current budget and resources IT and in-flight projects. Plan FY22 and beyond initiatives based on the budget request.

Onboard ERP Implementation SME
Bring on a subject matter expert on ERP selection and implementation. This resource may also act as a project manager for the ERP initiatives.

EMPOWERING OUR PEOPLE
11. Enable Our People: Select the Right Technology

Requirements Gathering / Market Scan

RFP Development / Evaluation Framework / Use Case Development

RFP Response Period

RFP Response Assessment

Demo Evaluation and Assessment

RFP release ★

RFP deadline ★

Vendor selection & notification ★

Hold First Steering Committee Meeting ★
Hold first SteerCo meeting to review the roadmap enablement progress (to be repeated every 90 days)

Stand-up project management
Including identification of workstream leads, backfilled/external resource requirements, and design/approval of reporting and governance structure

Holiday break office closures

Continued involvement is essential to a successful transformation

Your input and participation in the next transformation phases will be essential.

Thank you to engaged stakeholders for your time and insights. They were essential in helping shape the roadmap!

14
Stakeholders

3
Leadership sessions

4
Workshops

We conducted interviews, held workshops, and leadership material reviews and check-ins with Milton Hydro business stakeholders from across the organization.

To deliver on the roadmap, continued input and support is needed across Milton Hydro, focused in four key areas, specifically:

Providing **advice, guidance, and input into global process design** and defining new ways of working

Supporting Milton Hydro in **socializing the case for change**, gaining approval and funding

Actively **participating in the implementation of new initiatives**

Championing Milton Hydro's transformation and nurturing adoption of new technologies across the organization

There are three important immediate next steps to be completed in the upcoming weeks to kick-start the transformation.

We have recommended a '**100-day plan**' for Milton Hydro leadership to begin delivering on the technology transformation roadmap. This will require internal review and approvals to **kick-off work on the immediate actions.**

Resources (internal, external, and back-filled) and funding will be required to accomplish the activities set out in the roadmap. **The regulatory application to request funding will need to include** considerations to anticipated CAPEX, OPEX and ancillary costs (i.e. resourcing, change management).

Roadmap and supporting materials will need to be socialized across Milton Hydro, to communicate the work to be done, and the stakeholder input required across the organization.

Appendices

Appendix A: Roadmap Themes and Initiative Details

Appendix B: Details of Cost and Internal Resource Estimates

Appendix C: BCM Prioritization and Key Findings

Appendix D: ERP Selection and Implementation Approach

Appendix A:
Roadmap Themes and
Initiatives Details

Enhancing the Experience of Our Customers

ℹ Overview

Develop a deeper and more holistic understanding of Milton Hydro's customers, including behaviour and preferences, and deploy an omni-channel solution and other enhancements to improve the customer experience. In addition, implement or modify CRM to establish a 360 view of the customer to inform personalized services/products for the unregulated business.

� Rationale and Business Need

Customer centricity is a core strategic priority for Milton Hydro, however,there are no processes in place to analyze customer data. In addition, customer complaints and issues collected from different channels are not consolidated or integrated, which results in longer wait times. Current technology does not support the capture of comprehensive customer data beyond billing.

👍 Business Benefits

- Customer support staff can free up time to focus on more value add activities
- Reduced operational costs to support customers
- Enhanced customer experience
- Enhanced planning based on customers' needs, profiles and preferences
- Increased revenue through personalized offerings for the unregulated business

⌖ Initiatives

1. Understand Our Customers — Crawl

2. Unify the Customer Experience — Walk

3. Enhance the Customer Experience — Run

4. Establish a 360 View of the Customer — Run

✎ Assumptions

- Milton Hydro continues to focus on being a customer-centric organization as a strategic priority
- There's a desire to focus on growing the unregulated business as a business priority
- CRM will be used as the "system of record" for all customer-related data and information

Themes Snapshot

Effort Required	Complexity
LOW ———— HIGH	LOW ———— HIGH
Cost	Time
LOW ———— HIGH	LOW ———— HIGH

Risks & Other Considerations

- Integration of technology is required to support the various systems and data flows
- Change management is required to address people related impacts (i.e. skills, behaviour, culture related) to drive successful CRM user adoption
- Data and security is a critical consideration relating to CRM

Business Capabilities Enabled
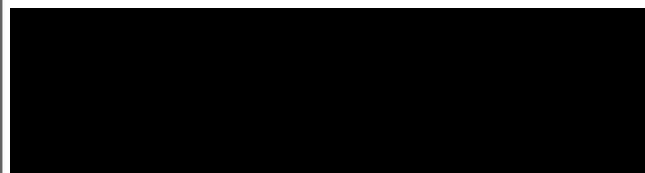
Enhancing the Experience of Our Customers - Initiatives

Initiatives	Description	Est. Cost*	Complexity	Est. Duration
1. Understand Our Customers	Analyze existing customer data (i.e. location information, payment information, interval data, etc.) to gain better insight around Milton Hydro customers and to drive actions. Develop customer journey maps that are responsive and flexible for changing regulator-issued directives to better understand current state pain points, identify future state customer needs and to highlight gaps in current CIS system.	N/A (only Top Priority Initiatives Estimated)	L	2 months
2. Unify the Customer Experience	Assess and adopt a simple an easy-to-use omnichannel solution that streamlines customer interactions by consolidating key information such as customer feedback, issues and complaints, account info, etc. irrespective of the interaction channel / platform in order to provide the customer representatives with all the necessary information.	CAPEX: $40k-$80k OPEX: $20k-$40k	M	6 months[1]
3. Enhance the Customer Experience	Enable self-serve onboarding through existing customer portal and provide credit and debit payment options to minimize manual efforts and enhance scalability. Implement a chatbot functionality on Milton Hydro's website to provide an additional method of customer interaction and to optimize customer service representatives' time and effort.	N/A (only Top Priority Initiatives Estimated)	M	6 months
4. Establish 360 View of the Customer	Modify or assess, procure and implement a fit-for-purpose CRM tool to establish a 360 view of the customer that can help to inform relevant products and services for the regulated and unregulated businesses.	N/A (only Top Priority Initiatives Estimated)	H	8 months[2]

1. Assumes 2 month for assessment / selection followed by 4 months of implementation
2. Assumes 2 month for assessment / selection followed by 6 months of implementation

*See **Appendix B: Details of Cost and Internal Resource Estimates** for more details

Optimizing Our Performance & Delivery

Overview

Drive operational excellence by optimizing business processes and enhancing project delivery to manage projects effectively. Reduce operational overhead by enabling automation through fit-for-purpose tools across various business functions.

Rationale and Business Need

Many existing processes are being completed manually without proper tools, resulting in significant manual effort to track, manage and report on progress. This is particularly true in the areas of HR, finance, procurement, supply chain, project management and billing. While there is a tool for financial accounting and CIS, the majority of the work is being managed in Excel and shared drives.

Business Benefits

- Enhanced project planning, management, tracking and delivery capabilities
- Improved operational efficiency through simplification / automation of business processes and workflows
- Reduced operational cost
- Increased opportunity for employees to focus on higher value activities
- Improved collaboration and visibility
- Enhanced decision-making ability
- Increased data visibility and transparency by creating single source of truth

Initiatives

#	Initiative	
5	Enhance Portfolio Management & Project Delivery	Crawl
6	Reinvent Business Support Capabilities: Assess & Select the Right Technology	Crawl
7	Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology	Walk
8	Reinvent Business Support Capabilities: Implement the Right Technology	Run
9	Enable Business Process Automation	Walk
10	OT Strategy & Intelligent Automation	Run

Assumptions

- Quick win opportunities exist for automating business processes
- ERP system and supporting systems integrator will be selected through a competitive process (e.g. RFP)
- Business requirements for the ERP still needs to be identified across all in-scope business units/functions

Themes Snapshot
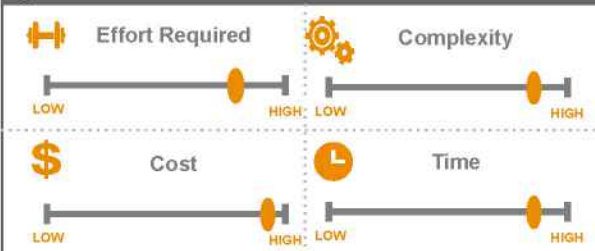
Effort Required: LOW — HIGH

Complexity: LOW — HIGH

Cost: LOW — HIGH

Time: LOW — HIGH

Risks & Other Considerations

- Change management is required to address people related impacts (i.e. skills, behaviour, culture related)
- Target state assessment is required to determine changes (e.g. processes, organizational structure, capabilities) that may be dependent and specific to each business unit
- Requirements (functional & non-functional) should be reviewed for appropriateness for Milton Hydro's size

Business Capabilities Enabled
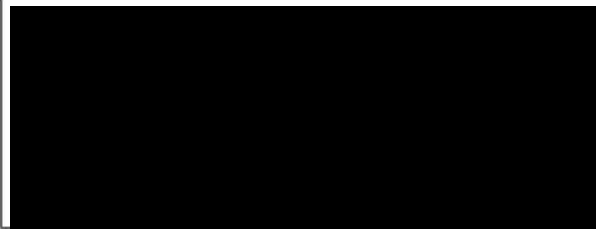
Optimizing Our Performance & Delivery - Initiatives (1 of 2)

Initiatives	Description	Est. Cost*	Complexity	Est. Duration
5. Enhance Portfolio Management & Project Delivery	Enhance and streamline portfolio management and project delivery capabilities by introducing project management frameworks, methodologies, tools and templates, with the goal of ensuring Milton Hydro's project management processes are well-documented and standard tools are used across the organization. This may include the procurement and implementation of a fit-for-purpose project management tool / software that manages capital planning, project resourcing & scheduling for both distribution and capital projects. Take measures to ensure a single solution is implemented and adopted across all business lines.	N/A (only Top Priority Initiatives Estimated)	M	9 months
6. Reinvent Business Support Capabilities: Assess & Select the Right Technology	Confirm functional areas in scope, including (but not limited to) Finance, Procurement, Supply Chain and Work Management. Gather non-functional, unique and functional and technical requirements that are tailored for Milton Hydro's size and needs and conduct market scan to better understand the ERP technology landscape. Develop use cases and RFP, then release RFP to select a fit-for-purpose ERP technology vendor.	CAPEX: $250k - $320k OPEX: $0	M	6 months
7. Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology	Develop and release RFP to select a systems integrator (SI) to act as partner for the ERP implementation. Onboard vendor / SI and develop detailed plan for executing on design and process definition activities. Co-design the future state of the priority business processes based on the chosen technology.	CAPEX: $290k - $400k OPEX: $0	M	6 months
8. Reinvent Business Support Capabilities: Implement the Right Technology	Build, configure, test, and demo the Finance, Procurement, Supply Chain, Work Management modules. Design a security framework for the new ERP. Go live with new ways of working that are enabled by the new ERP solution.	CAPEX: $400k-$650k OPEX: $80k-$150k	H	12 months

*See **Appendix B: Details of Cost and Internal Resource Estimates** for more details

Optimizing Our Performance & Delivery - Initiatives (2 of 2)

Initiatives	Description	Est. Cost*	Complexity	Est. Duration
9. Enable Business Process Automation	Leverage existing automation capabilities within Northstar and MCare for automatic loading of billing / financials. Evaluate other suitable opportunities to automate work (e.g. repetitive, administrative and high frequency), business processes, workflows across all business functions (e.g. automating regulatory reporting). Identify use cases and conduct prototyping by process automation tools (tool options to be assessed) to automate manual and mundane tasks and understand how best to handle exceptions and errors.	CAPEX: $330k-$490k OPEX: $20k-$35k	H	12 months
10. OT Strategy & Intelligent Automation	Conduct a current state assessment of the Operational Technology (OT) landscape and develop an OT Strategy that addresses the identified gap and enables IT/OT integration. Explore opportunities (e.g. smart warehouse) for how intelligent automation and emerging technology can be used by Milton Hydro, including the use of cognitive intelligence capabilities (e.g. artificial intelligence (AI), machine learning (ML), and emerging technologies (e.g. blockchain, augmented reality (AR), internet of Things (IoT).	N/A (only top priority initiatives estimated)	H	3 months

*See **Appendix B: Details of Cost and Internal Resource Estimates** for more details

Empowering Our People

Overview

Enable better employee management, performance tracking and people analytics through a new HRIS system. Support Milton Hydro employees through digital upskilling and training to maximize the value and use of both current and future technologies. Provide an enterprise service ticketing system that enables self-serve capability and helps with ticket prioritization.

Rationale and Business Need

Employee management and HR processes are manual due to lack of proper tool. Training on existing tools such as Office 365 and SharePoint will help to bridge skill gaps and support the adoption of available tools. Continuous upskilling will also be required for any new tools being considered. Currently the ticketing system only supports IT requests and lacks an effective prioritization method.

Business Benefits

- Maximize productivity and use of collaboration tools
- Simplified and unified employee learning experience through centralized and flexible access to training
- Equip employees for adoption of new technologies
- Reduced costs and burden on internal support services
- Increased data visibility and transparency by putting in place a single source of truth for people data

Initiatives

11. Enable Our People: Select the Right Technology — Crawl

12. Enable Our People: Implement the Right Technology — Walk

13. Establish L&D Programs — Walk

14. Establish Enterprise Service Support: Assess & Select the Right Technology — Walk

15. Establish Enterprise Service Support: Implement the Right Technology — Run

Assumptions

- Milton Hydro is willing to invest in refreshing training content to maintain its relevance
- There is a desire to consider an enterprise learning tool which can be integrated with other internal systems as required
- There's a need to manage and prioritize other types of service request tickets besides IT

Themes Snapshot
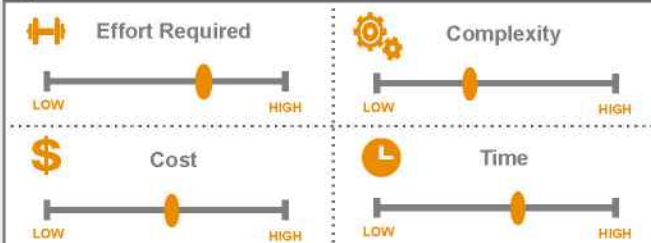
Effort Required — LOW / HIGH

Complexity — LOW / HIGH

Cost — LOW / HIGH

Time — LOW / HIGH

Risks & Other Considerations

- Change management is required to address people related impacts (i.e. skills, behaviour, culture related)
- Clear understanding of L&D requirements and options to deliver relevant and up-to-date content in the right channel
- Completion of optional L&D courses requires an appropriate value proposition and incentives

Business Capabilities Enabled

Empowering Our People - Initiatives

Initiatives	Description	Est. Cost*	Complexity	Est. Duration
11. Enable Our People: Select the Right Technology	Proceed with the vendor demonstrations and RFP evaluation to select a fit-for-purpose HRIS technology that meets Milton Hydro's HR needs. Select a system integrator to implement the chosen HRIS technology.	CAPEX: $0 OPEX: $0	M	3 months
12. Enable Our People: Implement the Right Technology	Conduct an initial discovery to determine whether payroll will be included in scope for HRIS. Build, configure and test the HRIS technology that manages the full employee lifecycle from hire to termination, enables employee performance monitoring and reporting, provides self-serve capabilities, mobility and simplified time entry.	CAPEX: $50k-$100k OPEX: $10k-$20k	H	6 months
13. Establish L&D Programs	Evaluate current learning and development programs and tools against current and future needs of both Milton Hydro and Milton Hydro's employees in order to deliver an improved employee (and supporting customer) experience. Establish training / L&D programs for both existing tools (e.g. document management tool, file sharing tool, Microsoft office tools) and new tools introduced via other initiatives (i.e. ERP, dashboard, automation and reporting tools). Assess suitable training tools that can automate learning and compliance tracking and enable mobile use.	N/A (only Top Priority Initiatives Estimated)	M	6 months
14. Establish Enterprise Service Support: Assess & Select the Right Technology	Gather and document requirements across the business, then select an enterprise wide system to submit service requests that will help to prioritize and manage support services for Finance, HR and IT. This system will ideally integrate with modern omnichannel solutions such as Monday.com.	CAPEX: $200k-$300k OPEX: $0	M	6 months
15. Establish Enterprise Service Support: Implement the Right Technology	Build, configure and test the selected enterprise service support system and ensure that it's implemented in a way that achieves business outcomes, minimizes risk and locks-in value, while driving meaningful user adoption.	N/A (only Top Priority Initiatives Estimated)	H	6 months

*See **Appendix B: Details of Cost and Internal Resource Estimates** for more details

Managing & Delivering Value with Our Information

Overview

Identify and implement opportunities where Milton Hydro can leverage technology to meet current and future needs related to business analytics, enterprise data and reporting requirements.

Rationale and Business Need

Milton Hydro does not currently have a centralized analytics tool or any tool that provides an enterprise view of existing data and reports. As a result, data collection for reporting is a manual and time-consuming exercise that detracts IT resources from higher-value tasks and increases lead times for business users to obtain the reports they need to meet business and regulatory requirements. KPIs are also not well defined so it's hard to measure performance.

Business Benefits

- Streamlined/simplified processes for data collection/access
- Increased visibility and transparency to business performance
- Reduced manual effort and cost associated with resolving data issues
- Enhanced decision-making ability through the greater availability and accessibility of information

Initiatives

16. Establish a Data Foundation — **Walk**

17. Enable Data Analytics — **Run**

Assumptions

- Milton Hydro plans to make investments in becoming a data and insights-driven organization
- Milton Hydro will invest in training of resources to develop the capabilities within information management

Themes Snapshot

Effort Required — LOW / HIGH

Complexity — LOW / HIGH

Cost — LOW / HIGH

Time — LOW / HIGH
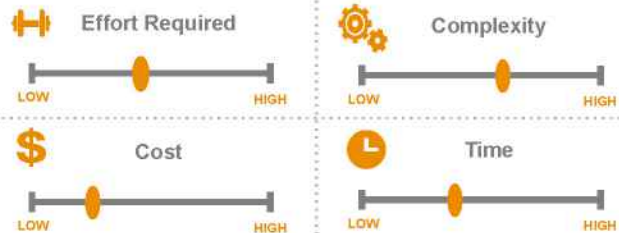
Risks & Other Considerations

- Planning related to timing and resources to establish the data integrity and governance foundation is required
- Clear prioritization based on business value is required to deliver tangible benefits
- Continued education/awareness is required to sustain the use and value of data and information as a strategic asset

Business Capabilities Enabled

Managing & Delivering Value with Our Information - Initiatives

Initiatives	Description	Est. Cost	Complexity	Est. Duration
16. Establish Data Foundation	Enable the trust, quality, integrity and completeness of Milton Hydro's data by establishing the fundamental components of an enterprise data strategy, including documentation and mapping of target state data sources (target state data model), identification of core tools required to manage information, identification of organizational objectives supported by data use, and development of a data governance / operating model. Evaluate current tools and potential providers to meet Milton Hydro's current and future business needs. Define KPIs and metrics to measure key performance and seek solutions that will enable an enterprise view of Milton Hydro's data and existing reports. This initiative is dependent on the new ERP, HRIS and CRM tools, as a result the target state data model will need to be refreshed periodically.	N/A (Only Top Priority Initiatives Estimated)	M	6 months
17. Enable Data Analytics	Procure and implement a centralized analytics tool that integrates dashboards and self-serve capabilities so that business users can view and create reports themselves instead of requesting through IT. Enhance current analytics capabilities and continuously identify, prototype, productionize additional use cases to evolve analytics capabilities with business needs. This initiative is dependent on the new ERP, HRIS and CRM tools and their analytics capabilities.	N/A (Only Top Priority Initiatives Estimated)	M	6 months

Maturing Our IT Foundation

Overview

Increase the maturity and effectiveness of Milton Hydro's IT function so it may better support Milton Hydro's other business areas, protect the organization's assets and scale with growth.

Rationale and Business Need

IT governance is not clearly defined and there's a lack of documented process for selecting and acquiring new technologies. Currently the process is ad-hoc and developing a process that ensures decisions are business driven is needed. Attestations and training are in place for security, but could be improved, especially with regards to data loss prevention (DLP) and privacy. Some legacy systems in Milton Hydro's application landscape present integration challenges.

Business Benefits

- Enhanced role of IT as a strategic partner
- Defined governance structure to support improved issue escalation and strategic decision-making
- Established mechanisms for departments to communicate needs, leading to better planning and service satisfaction
- Enhanced service delivery through greater efficiency, agility and elasticity to consistently meet business demand and better support innovation

Initiatives

18. Establish IT Governance — Crawl

19. Modernize Enterprise Architecture — Walk

20. Mature Data & Systems Security — Run
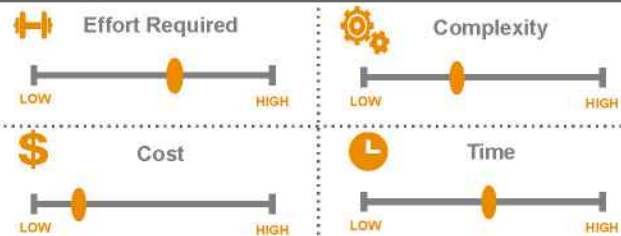
Assumptions

- Milton Hydro has or will secure external support to augment the existing IT team in order to increase capacity and ensure execution is supported with resources with the right technical skills and experience
- The target state architecture will be developed after decisions on ERP and HRIS have been made

Themes Snapshot

Effort Required — LOW / HIGH

Complexity — LOW / HIGH

Cost — LOW / HIGH

Time — LOW / HIGH

Risks & Other Considerations

- Change management is required to address people related impacts (i.e. skills, behaviour, culture related)
- Assessment of skills and capabilities is required to determine whether new cybersecurity skills are required and/or a skills gap exists with the current IT team

Business Capabilities Enabled

Maturing Our IT Foundation - Initiatives

Initiatives	Description	Est. Cost	Complexity	Est. Duration
18. Establish IT Governance	Establish IT governance model including steering committee, roles and responsibilities, terms of reference, and cadence as it relates to oversight of technology and transformation projects. In addition, document processes, checkpoints and business case templates to support decision making for the selection of new technologies.	N/A (Only Top Priority Initiatives Estimated)	L	4 month
19. Modernize Enterprise Architecture	Map the current state architecture and develop target state architecture that integrates new tools with legacy systems and enables scalability and flexibility to meet the growing and changing customer needs. Unlock value through greater efficiency and scalability as well as improved performance by modernizing current enabling systems and IT infrastructure. The architecture should be refreshed periodically - it is recommended that Milton Hydro repeat this initiative to update the architecture on a yearly basis.	N/A (Only Top Priority Initiatives Estimated)	M	6 months
20. Mature Data & Systems Security	Assess and implement a cybersecurity program and raise cybersecurity awareness within the organization. Introduce enhanced employee training on data security and privacy in order to ensure data is secure and systems are reliable based on current need and anticipated future events. Assess data loss prevention (DLP) solution to safeguard Milton Hydro's data.	N/A (Only Top Priority Initiatives Estimated)	M	6 months

Appendix B:
Details of Cost and Internal Resource Estimates

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Breakdown of average external cost estimates by year

Average CAPEX and OPEX cost estimates were developed for the top 8 priority initiatives and calculated across 3 years based on their sequencing on the roadmap.

#	Initiative	System Category	CAPEX (one time cost)			OPEX (ongoing cost)		
			Year 1 (2022)	Year 2 (2023)	Year 3 (2024)	Year 1 (2022)	Year 2 (2023)	Year 3 (2024)
2	Unify the Customer Experience	Omnichannel Platform	$60,000			$15,000	$30,000	$30,000
6	Reinvent Business Support Capabilities: Assess & Select the Right Technology	Enterprise Resource Planning (ERP) System	$175,000					
7	Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology	Enterprise Resource Planning (ERP) System		$250,000				
8	Reinvent Business Support Capabilities: Implement the Right Technology	Enterprise Resource Planning (ERP) System		$263,000	$263,000		$115,000	$115,000
9	Enable Business Process Automation	Automation Tool(s)		$410,000			$28,000	$28,000
11	Enable Our People: Select the Right Technology	Human Resource Information System (HRIS)	$0					
12	Enable Our People: Implement the Right Technology	Human Resource Information System (HRIS)	$75,000			$8,000	$15,000	$15,000
14	Establish Enterprise Service Support: Assess & Select the Right Technology	Enterprise Service Ticketing	$125,000					
	Average Cost		**$435,000**	**$923,000**	**$263,000**	**$23,000**	**$188,000**	**$188,000**

Breakdown of high-level external cost estimates (1/2)

High-level CAPEX and OPEX cost estimates were developed for the top 8 priority initiatives. These estimates do not include Milton Hydro's internal planning activities or decision making process, therefore the estimated cost will not reflect the total all-in costs for the initiative.

#	Initiative	Duration	CAPEX (one time cost)	OPEX (ongoing cost)	Assumption
2	**Unify the Customer Experience** System Category: Omnichannel Platform)	6 month	$40k-$80k	$20k-$40k	• Assumes no external support required for system selection, vendor demo and RFP process • One-time cost estimate includes implementation and integration, training and change management • Ongoing cost estimate includes licensing for ~10 users and application support • Excludes project management, data migration and custom configuration
6	**Reinvent Business Support Capabilities: Assess & Select the Right Technology** System Category: ERP System)	6 month	$150k - $200k	$0	• One-time cost estimate includes **requirements gathering, market scan, system selection, use case and RFP development** to select ERP technology vendor • Estimated level of external effort required is ~3-4 month
7	**Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology** System Category: ERP System)	6 month	$200k - $300k	$0	• One-time cost estimate includes **RFP development** to select SI for ERP implementation and **detailed project planning and target state end-to-end process design** to lay the foundation for a successful ERP implementation • Estimated level of external effort required is ~4-5 month
8	**Reinvent Business Support Capabilities: Implement the Right Technology** System Category: ERP System)	12 month	$400k-$650k	$80k-$150k*	• One-time cost estimate includes implementation and integration for **Finance, Procurement, Supply Chain and Work Management** modules, project management support, testing, training and change management • Ongoing cost includes licensing for ~40 users and application support • Excludes data migration and custom configuration
	Average Cost		**$1,010k**	**$145k**	*Average cost is rounded to the closest '000.

*ERP licensing/subscription and application support costs can vary significantly by vendor as it is dependent on the scope, requirements, customizations, integrations, etc. and it could be as high as $350k per year based on initial analysis. For the purposes of the above cost estimates license costs have been focused on low to mid range ERP licence costs.

Breakdown of high-level external cost estimates (2/2)

High-level CAPEX and OPEX cost estimates were developed for the top 8 priority initiatives. These estimates do not include Milton Hydro's internal planning activities or decision making process, therefore the estimated cost will not reflect the total all-in costs for the initiative.

#	Initiative	Duration	CAPEX (one time cost)	OPEX (ongoing cost)	Assumption
9	**Enable Business Process Automation** (System Category: Automation Tool)	12 month	$330k-$490k	$20k-35k	• Milton Hydro will conduct **current state assessment and discovery activities** to identify suitable automation opportunities and work with vendor(s) to develop and implement **process automations** that include target state process design, solution design, automation development, testing, go-live, and knowledge transfer • RPA technology is used as an example for the purpose of estimating CAPEX and OPEX budgets • Estimated level of external effort required is variable and dependent on the technology(ies) chosen
11	**Enable Our People: Select the Right Technology** (System Category: HRIS)	3 month	$0	$0	• An in-flight initiative is currently in progress where RFP responses have already been received and vendor demonstrations are being scheduled. Therefore, it is assumed that no external support will be required for vendor demonstrations or RFP evaluation to select the HRIS technology
12	**Enable Our People: Implement the Right Technology** (System Category: HRIS)	6 month	$50k-$100k	$10k-$20k	• One-time cost includes implementation of **core HR, recruitment, performance, compensation, benefits, analytics and time** modules, target state process design, training and change management • Ongoing cost includes licensing for ~50 employees and application support • Implementation and licensing costs are based on estimates received from ADP and will be validated through the RFP process • Estimated level of external effort required is ~3 months
14	**Establish Enterprise Service Support: Assess & Select the Right Technology** (System Category: Enterprise Service Ticketing)	6 month	$100k-$150k	$0	• On-time cost includes a **current state assessment** to understand current processes, requirements gathering and a **market scan** to inform the selection of a suitable vendor • Estimated level of external effort required is ~3 month
	Average Cost		**$610k**	**$43k**	*Average cost is rounded to the closest '000.

Breakdown of internal resourcing requirement (1/2)

High-level internal resourcing needs were developed for the top 8 priority initiatives. These estimates represent the level of effort required to implement the proposed technology initiatives.

#	Initiative	Customer Service	IT	Finance	HR	Procurement	Regulatory Affair	Engineering	Assumption
2	Unify the Customer Experience (System Category: Omnichannel Platform)	• 20% of 1 FTE over 6 weeks • 50% of 1 FTE over 10 weeks • 10% of 1 FTE over 10 weeks • 100% of 1 FTE over 2 weeks	• 20% for 1 FTE over 6 weeks • 10% for 1 FTE over 10 weeks • 100% for 1 FTE over 2 weeks			• 20% for 1 FTE over 6 weeks			• To support **requirements gathering and RFP**, 20% of 1 FTE will be required from customer service, IT and Procurement • To support **project management**, 50% of 1 FTE will be required from customer service • To support **omnichannel implementation**, 10% of 1 FTE from each area: customer service and IT • To support **omnichannel go-live testing**, 100% of 1 FTE will be required for the last 2 weeks
6	Reinvent Business Support Capabilities: Assess & Select the Right Technology (System Category: ERP System)	• 10% of 1 FTE over 10 weeks • 50% of 1 FTE over 10 weeks	• 10% of 1 FTE over 10 weeks	• 10% of 1 FTE over 10 weeks		• 10% of 1 FTE over 10 weeks • 20% of 1 FTE over 6 weeks	• 10% of 1 FTE over 10 weeks	• 10% of 1 FTE over 10 weeks	• To support **requirements gathering and market scan**, 10% of 1 FTE will be required from each functional area • To support **RFP process and contract negotiation**, 20% of 1 FTE will be required from Procurement for 6 weeks • To support **PM**, 50% of 1 FTE will be required from IT
7	Reinvent Business Support Capabilities: Select SI, Plan and Design the Right Technology (System Category: ERP System)	• 20% of 1 FTE over 10 weeks • 50% of 1 FTE over 10 weeks	• 20% of 1 FTE over 10 weeks	• 20% of 1 FTE over 10 weeks		• 20% of 1 FTE over 10 weeks • 20% of 1 FTE over 6 weeks	• 20% of 1 FTE over 10 weeks	• 20% of 1 FTE over 10 weeks	• To support **detailed planning and process design**, 20% effort will be required from each functional area • To support **RFP process and contract negotiation**, 20% effort will be required from Procurement for 6 weeks • To support **PM**, 50% of 1 FTE will be required from IT
8	Reinvent Business Support Capabilities: Implement the Right Technology (System Category: ERP System)	• 100% of 1 FTE over 52 weeks • 50% of 1 FTE over 52 weeks • 60% of 1 FTE over 4 weeks	• 20% of 1 FTE over 52 weeks • 60% of 1 FTE over 4 weeks			• 20% of 1 FTE over 52 weeks • 60% of 1 FTE over 4 weeks	• 20% of 1 FTE over 52 weeks • 60% of 1 FTE over 4 weeks	• 20% of 1 FTE over 52 weeks • 60% of 1 FTE over 4 weeks	• To support **PM and change management**, 100% of 1 FTE will be required from IT • To support **ERP implementation**, 0% of 1 FTE will be required from each functional area and 50% of 1 FTE will be required from IT • To support **ERP go-live testing**, 60% of 1 FTE will be required from each functional area for 1 month

Breakdown of internal resourcing requirement (2/2)

High-level internal resourcing needs were developed for the top 8 priority initiatives. These estimates represent the level of effort required to implement the proposed technology initiatives.

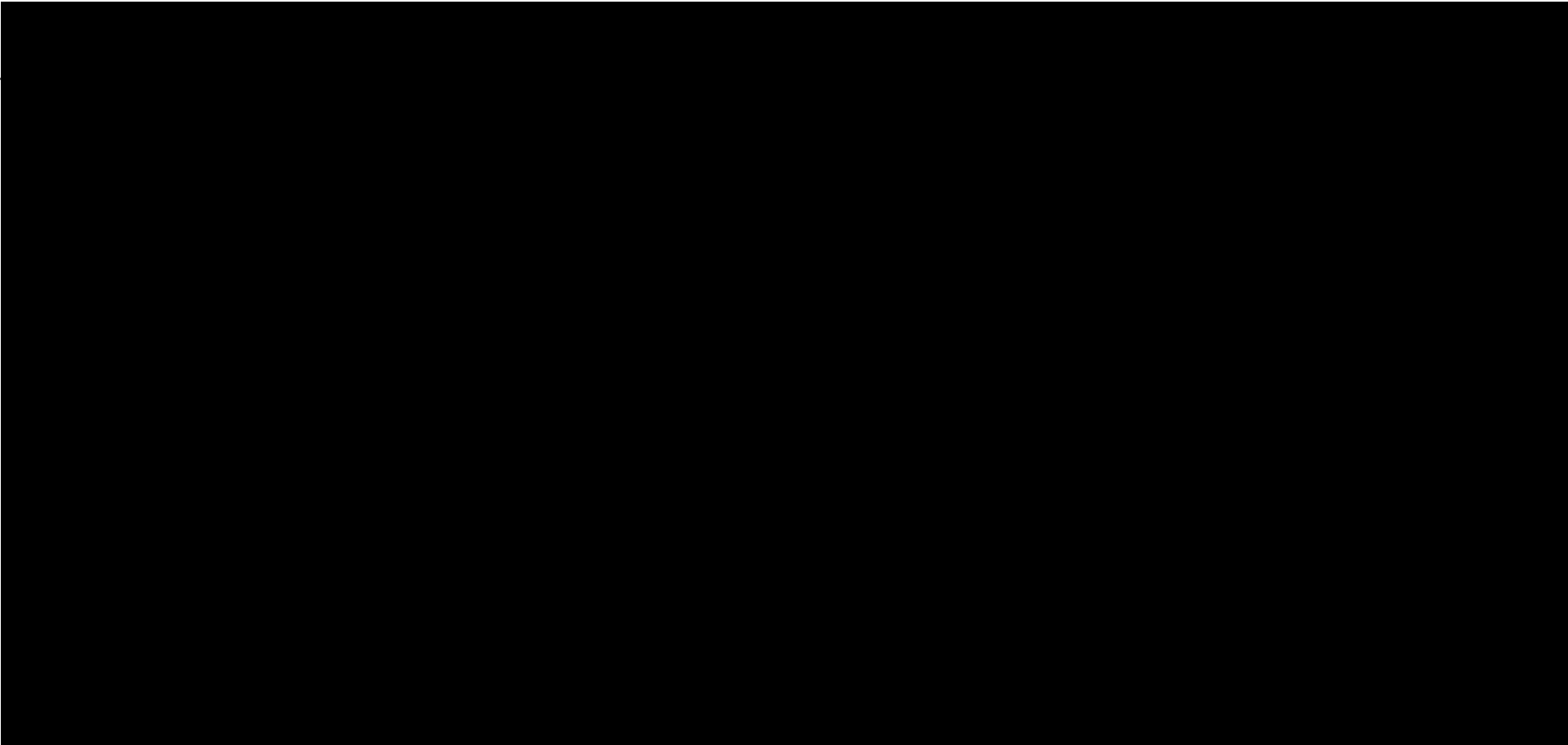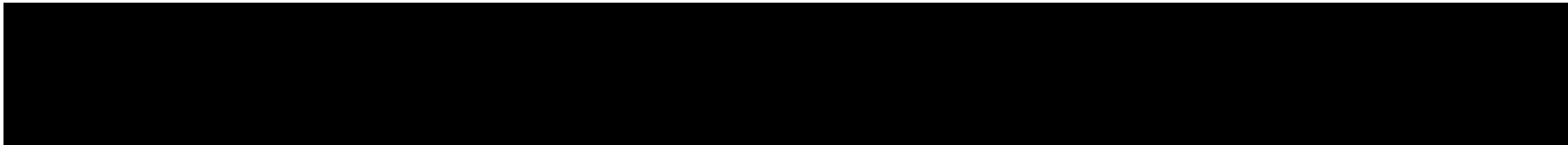| #	Initiative	Customer Service	IT	Finance	HR	Procurement	Regulatory Affair	Engineering	Assumption
9	Enable Business Process Automation (System Category: Automation Tool)	20% of 1 FTE over 4 weeks	20% of 1 FTE over 4 weeks	20% of 1 FTE over 4 weeks	20% of 1 FTE over 4 weeks	20% of 1 FTE over 4 weeks	20% of 1 FTE over 4 weeks	20% of 1 FTE over 4 weeks	• To support **current state assessment and process discovery** to identify automation opportunity, 20% of 1 FTE will be required from each functional area • To support **development of two automation bot**, 50% of 1 FTE will be required from one functional area (to be determined based on assessment) • To support **project management**, 50% of 1 FTE will be required from one functional area (to be determined based on assessment)
		\u00b7 50% of 1 FTE over 12 weeks (SMS from the team that will be building the two automation bots) \u00b7 50% of 1 FTE over 12 weeks (PM from the team that will be building the two automation bots)							
11	Enable Our People: Select the Right Technology (System Category: HRIS)		• 10% of 1 FTE over 4 weeks		• 10% of 1 FTE over 4 weeks • 50% of 1 FTE over 4 weeks	• 10% of 1 FTE over 4 weeks • 20% of 1 FTE over 2 weeks			• To support **vendor demonstration and RFP evaluation**, 10% effort will be required from IT, HR and Procurement • To support **contract negotiation**, 20% effort will be required from Procurement for 2 weeks • To support **project management**, 50% of 1 FTE will be required from HR
12	Enable Our People: Implement the Right Technology (System Category: HRIS)		• 10% of 1 FTE over 10 weeks • 60% of 1 FTE over 2 weeks	• 60% of 1 FTE over 2 weeks	• 10% of 1 FTE over 10 weeks • 50% of 1 FTE over 10 weeks • 60% of 1 FTE over 2 weeks	• 60% of 1 FTE over 2 weeks	• 60% of 1 FTE over 2 weeks	• 60% of 1 FTE over 2 weeks	• To support **HRIS implementation**, 10% of 1 FTE will be required from both HR and IT • To support **project management**, 50% of 1 FTE will be required from HR • To support **HRIS go-live testing**, 60% of 1 FTE across each functional area will be required on the last 2 weeks of the project for testing the tool before go-live
14	Establish Enterprise Service Support: Assess & Select the Right Technology (System Category: Enterprise Service Ticketing)		• 10% of 1 FTE over 12 weeks • 50% of 1 FTE over 12 weeks	• 10% of 1 FTE over 12 weeks	• 10% of 1 FTE over 12 weeks				• To support **current state assessment and system selection**, 10% of 1 FTE will be required from IT, Finance and HR • To support **project management**, 50% of 1 FTE will be required from IT

Appendix C:
BCM Prioritization and Key Findings

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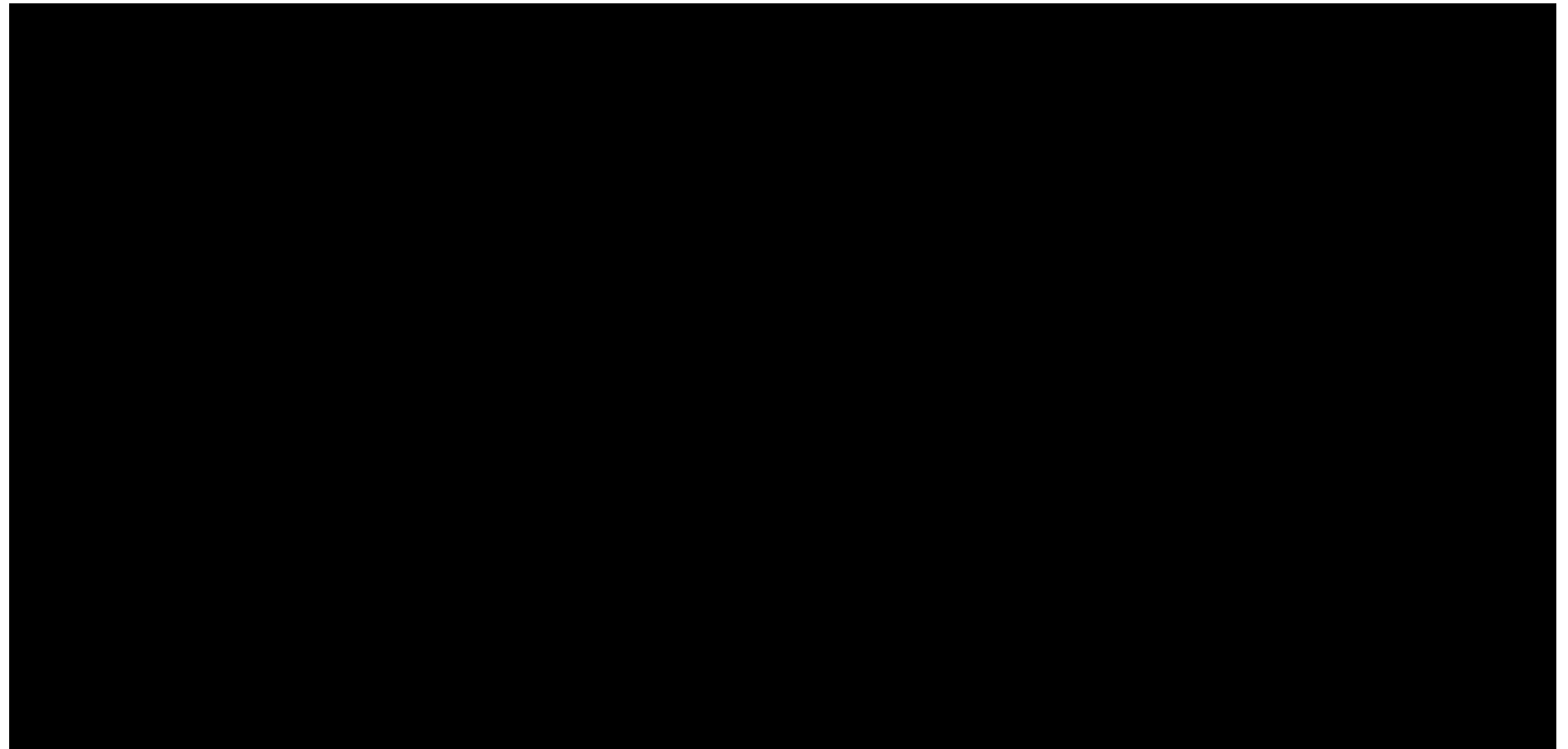# Appendix D:
ERP Selection and
Implementation Approach

Thank you