Region of Waterloo

Service Transformation Strategy

Final Report

January 2023

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Version History

Version #	Date	Prepared By	Prepared For	Comments
1	Jan 15, 2023	Ben Perry, Susan Chase, Dana Clarke, Prasanna Gunasekera, Andy Will	Core Project Team	First draft Report
2	Jan 19, 2023	Ben Perry	Core Project Team	Added Exec Summary, Key Terms, Glossary and addressed team comments
3	Jan 27, 2023	Ben Perry	CLT / Council	Incorporates feedback and grammatical fixes
4	Jan 30, 2023	PGC	Final Version	Final Version
5	Feb 1, 2023	Susan Chase	Revised Final	Incorporate CLT feedback

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Key Terms and Terminology

We have worked hard to prepare this document using easy-to-understand language. Nonetheless, the meanings of some frequently-used terms should be clarified before we start.

Table 1: Key Terms and Terminology

Digital	Refers to a mode of operating and delivering services in a way that takes full advantage of modern technologies (web, app, social, mobile, data) to deliver improved experiences, business efficiencies and insights.
Service	A service in the context of this work is something that a user wants to get done – get a permit, book an appointment, pay a bill, record a vaccination, buy a garbage tag, request maintenance on a housing unit.
Service Transformation	Re-thinking and re-designing services – through the lens of digital capabilities as well as services, equity, and environmental aspects – to be better for customers and easier to manage for the Region.
User	This term has been used throughout this document as a shorthand to refer to users of the Region's services which includes residents, businesses, visitors, the Chair and Regional Council, the workforce, and partners.

Included in Appendix A, Glossary of Terms is a complete list of acronyms used throughout this document.

Executive Summary

In 2023, most people who live and work in the Region use their smartphones, tablets and laptops to bank and shop, book and get their entertainment, connect and communicate with family and friends, in ways that fit into their busy lives.

The services they rely on are easy-to-use, available 24/7, from anywhere and provide quick, almost instant service.

For people who are familiar with these ways of getting stuff done, the Region's services should have the same characteristics – available online, accessible from anywhere, available 24/7, and simple and easy-to-use.

This Service Transformation Strategy lays out the Region's vision for investing in a Service Transformation program designed to leverage modern digital capabilities to help the Region respond to these elevated expectations and help the Region face head-on the very real challenges that it faces today and in the future.

It presents a vision, where the Region actively shifts its service model toward a Digital First approach – delivering services online as a preference – where possible and appropriate.

It is important to emphasize that this is not a digital-only approach. The Region commits to always provide phone, face-to-face, and other channels available, and will use the Service First Contact Centre (SFCC) to provide assisted services to those who cannot or will not use the digital services the Region offers.

Without hyperbole, Covid was an inflection point for the Region. Ninety percent of the people that booked vaccinations through the Region, booked online. In doing so, the community sent the Region a loud and clear message that they will use the digital services that the Region provides.

Given Waterloo Region's international reputation as "Silicon Valley North", it is not surprising that community expectations are high. Indeed, the most recent community survey confirms that delivering services digitally is one of the top three drivers of satisfaction for the community.

The service transformation work ahead will involve re-thinking and re-designing services through digital, equity, and climate-action lenses. By taking advantage of online, mobile, data, Cloud, and other modern technology capabilities – alongside new approaches to designing service experiences with the user at the centre of the design – the intent is to make services easier to use, and simpler and more cost effective to deliver.

Importantly, with various economic and budget pressures bearing down on the Region, service transformation also represents a path to unlock significant internal staff capacity to allow the Region to respond to increasingly complex community challenges, and to scale the organization as it deals with new growth pressures.

In developing the Strategy, the consulting team reviewed six of the Region's high-volume services and identified the potential to unlock almost 30,000 hours of much-needed staff capacity by transforming these six services to a Digital First mode of operation.

Delivering Digital First services is typically less labour intensive and is demonstrably more cost effective. Research suggests delivering services online can be up to thirty times cheaper than delivering services face-to-face so there is a strong, financial imperative for the Region to aggressively pursue this Strategy.

In fact, not embracing a Digital First approach risks:

- Decreasing satisfaction with Regional services.
- Damage to the Region's reputation (i.e., becoming an out-of-touch government that delivers services that do not meet community needs and expectations).
- Increased service delivery costs as the Region grows, with associated tax increases and staff growth to meet community demands.
- Significant challenges to the Region's ability to recruit and retain the best and brightest minds.

We believe there are opportunities in every service area, team, and department. The scale of the opportunity is huge and the challenge is daunting. How does the Region tackle transformation across the whole organization?

In response, the Strategy maps out an incremental approach, starting with three focused "lighthouse" teams to apply the approaches and concepts represented in the Strategy, and to model the practices for the whole organization.

The Region can then scale up from there, socializing and spreading the approaches and methods, and gradually infusing these mindsets, concepts, and approaches into all teams in the organization.

In parallel, the Strategy identifies a set of areas in which investments in new capabilities and capacity would benefit the Region. These areas include:

- Web and digital service.
- Modern workplace tools and enablers.
- End-to-end process automation.
- Data, analytics, business intelligence, and geographic information system (GIS).
- Secure, robust, resilient, and interoperable technology.

The approach presented in this Strategy is a proven model, followed by governments around the world – including the Canadian government, the Province of Ontario, and many municipalities, including Ottawa, Saskatoon, Vancouver, Peel, Durham, and Halton. Locally, area municipalities are also investing and advancing in digital service delivery.

This Strategy lays out what the Region needs to do. Some details on how the Region will mobilize the plan are still being developed with the consulting team but – make no mistake – there is much work ahead and it is imperative that the Region gets to work.

Once approved, the Region should immediately begin to put plans into motion to fund and bring together the human capital needed to establish the “lighthouse” transformation teams and begin work on projects identified in the 2023 budget that support this work.

1.0 Introduction and Context

1.1 Digital Is Taking Over the World

In the always-on, fast-moving, 21st century world, digital technology has become a powerful force in society.

Using their smartphones, tablets and laptops, many people choose to bank and shop, buy and book, get their entertainment, navigate, connect, and communicate online, in ways that fit better into their busy lives than previous ways of getting service did.

Think about how Uber and Netflix, Amazon, Facebook, and LinkedIn (and many others) have upended traditional services and marketplaces. Users – in the millions – of these types of services are increasingly expecting government services to operate in a similar way – easy, quick, available anywhere, anytime, on their device of choice.

Federal, provincial, and municipal governments across the globe, have recognized these trends and are embracing these concepts and ideas too – implementing new capabilities to deliver digital government services to their customers. In Canada, the Regions of York and Peel, Durham and Halton, the Cities of Ottawa, Saskatoon, Halifax and Vancouver (among many others) are actively pursuing digital and strategic transformation programs, and locally Waterloo, Cambridge and Kitchener are investing in digital work.

Just think about your own experiences with online health card renewals, getting a fishing license, or renewing your vehicle license sticker.

Many of these experiences are not only online, but are hybrid, including both an online and offline experience to deliver the full service. Consider riding a bus – you might purchase your ticket online, view the schedule online, see the current status of your expected bus, but then you physically go to the appropriate stop at the best time to hop on. There are many other examples of hybrid services in municipal government, such as garbage collection, pothole detection, and inspections.

Recognizing and seeking to harness these opportunities, the Region initiated the development of this Digital Transformation Strategy.

1.2 Learning From the Covid-19 Experience

The Strategy is being developed in the shadow of the Covid-19 pandemic.

While acknowledging the impact the pandemic has had on the community and Regional staff, organizationally there have been some strong positives that light the way for future digital transformation work.

First, the pandemic showed just how willing users are to interact with the Region digitally. Many services moved online, and people used the services in droves. For example, over 95% of residents who registered to be alerted when vaccination appointments were available for their age cohort, used a Regional online service to do so.

Next, it showed how fast the Region can pivot to embrace new digital capabilities and possibilities. The Region switched over a thousand workers rapidly into a remote work mode of operating, embracing online meetings, and new ways of collaborating, moving fast to reconfigure services to run digitally – without customers needing to visit Regional offices – and moving to digital approvals and payments.

It also clearly showed that the Region can innovate – can deliver in new ways – embracing iterative delivery, implementing solutions that were not perfect at the outset, but which improved over time. It taught the Region how to be more tolerant of risk and to embrace change as a positive.

These are extremely positive experiences and lessons that have naturally accelerated some digital advancements and opened the eyes of Regional leaders to the possibilities. The Region can build on this great experience and carry forward the lessons of that experience into this work.

1.3 Digital Transformation to Service Transformation

Digital transformation is not just about technology and its implementation; it's about looking at how you deliver your services through the lens of technical capabilities and how that changes how you operate.

Fundamentally, digital transformation is about re-thinking service delivery for the digital age. It's about applying a digital lens to the work and the services that the Region provides.

As the team worked on developing the Strategy, there was a recognition that digital shouldn't be the focus. The Strategy should about transformation – service transformation, *supported* by digital.

Service should be the focus, not the digital aspect of it.

Thus, we refocused the Strategy as a **Service Transformation Strategy** which envisions a more consciously -designed, customer-centred, and human-centric service delivery approach for the Region, powered by digital capabilities, that is inclusive, sustainable, easy for users to use and for staff to manage.

1.4 Overview of the Project

To develop this Strategy, the Region sought funding from the province through its Audit and Accountability Fund (AAF), and selected Perry Group Consulting Ltd. (a specialist in municipal technology and Digital Strategy) as a third-party reviewer to facilitate the development of the Strategy via a formal RFP process.

The goal was to “set out a bold, ambitious and inspiring Digital Strategy that aligns with the Region’s vision of being a world-class community”.

1.4.1 Involvement of Key Personnel

From the outset, the development of this Strategy was approached as a whole organization initiative. The consulting team has engaged and consulted widely, seeking input, ideas and validation of key concepts, strategies and tactics from across the organization and beyond.

We have worked collaboratively with the Region to prepare a Strategy that reflects the needs of the community and the organization and that understands where the Region stands today and its aspirations to be a world-class community.

Participants in the development of this Strategy have included:

- CLT as both leaders as well as project sponsors.
- A core project team which included the Director, Talent Acquisition, Client Experience and Solutions, the Director, Information Technology Services, the Director, Corporate Strategy and Performance as well as the Senior Project Manager.
- Directors and staff from every business unit.
- The Grand River Accessibility Advisory Committee (GRAAC) and the Smart Waterloo Region Innovation Lab (SWRIL).
- Various others from key teams and committees such as Communications, Client Experience, and the Reconciliation, Equity, Diversity, and Inclusion team.

1.4.2 Strategy Development Approach

Through interviews, roundtable discussions, workshops with leadership, management, and staff, Perry Group used its assessment tools to review the current digital maturity at the Region.

These groups participated in a series of workshops and meetings to clarify digital service expectations that shaped the Strategy and contributed to the vision and principles. The results have been further informed by extensive stakeholder consultation, including community groups, and resident consultations, through current discussions as well as recent engagements completed by the Region.

This Strategy is based on the learnings about the current state of service delivery and digital capabilities that provided a baseline understanding of what the current capabilities are and where the opportunities for improvement exist.

Next, we worked closely with leaders from across the organization to develop a clear vision and new principles for service delivery that set the stage for building world-class customer-centred service experiences that are the foundations for the plan. We worked across the organization to translate these vision and principles into a set of strategic activities and actions that position the Region to build the culture and deliver transformation initiatives to realize the vision.

So, with this work complete, the Strategy comes into full focus with the “what does Service Transformation mean for us” fully defined. This is that document – outlining “what” needs to be done.

1.4.3 Next Steps

The next phase of the transformation journey – after this Strategy has been reviewed, socialized and approved – will include the development of a detailed implementation plan, identifying the various projects and initiatives to be completed in order to meet the vision and goals set out by this Service Transformation Strategy.

The implementation plan will define how to start work on real transformation work as soon as possible, build the necessary digital capacity, and identify recommended timing, estimated costs and resource needs to successfully adopt service transformation.

Recommendations for a future operating model – governance, organization, policy and process changes to provide appropriate resourcing that will be well-positioned to deliver this plan – will also be included in this final phase of the plan.

2.0 Regional Context

2.1 Strategic Links

The Region of Waterloo has long -valued service, innovation and collaboration – three of the five Regional values (the other two are respect and integrity) – with a focus on inclusion and engagement with the public.

The 2023 budget theme is “Building World Class” which reflects the community and organization expectations that the Region is a leader in service delivery and performance. The organization’s success requires investment in technology that delivers improved user outcomes and greater operational efficiency, allowing us to build capacity for service delivery that meets changing community needs.

The cost of providing service is increasing due to growth and the changing demographics of Waterloo Region. Digital technologies offer solutions that can reduce the service delivery costs while improving the user experience with 24/7 access to self-serve and service information and increasing capacity for staff to focus on value-added service delivery.

The methodologies recommended to deliver digital transformation follow the same principles as the Client Experience Framework and change management methodology already adopted by the Region with a focus on user -centred design, collaboration and engagement.

2.2 Regional Challenges

The Region faces significant pressures in the current environment, including ongoing impacts from Covid-19, inflation and significant economic challenges for many, housing supply, growth and increasingly complex community needs.

Recent community survey results indicate that most respondents expect services to be maintained with limited tax increases. This means we need to deliver efficiencies into our service delivery operations and maximize our technology infrastructure funding.

Corporate technology investments supporting multiple digital services are vital to simplifying the user experience and realizing a solid return on investment. This investment approach requires robust and aligned leadership to deliver solutions for increasingly connected and complex problems that bridge traditional service delivery silos and operational divides across departments, partners, local municipalities and other levels of government.

The Region demonstrated its ability to shift priorities and find new ways of working during the pandemic. This ability needs to be institutionalized to protect the Region's investments from the increasing rate of change in technology and community expectations.

Shifting to more Agile methodologies of project delivery requires changes in funding and organization structure to enable multi-disciplinary teams to deliver smaller improvements to services and service features quickly and more frequently, embracing risk and learning by doing. This shift in project delivery models will also support the Region's recent investment in Client Experience and Change Management Frameworks.

Demand for digital services extends beyond users who rely on Regional services – staff also expect simple, automated and efficient tools in the workplace – and so digital transformation also has a huge role to play inside the organization.

For instance, recruitment and employee retention are critical in today's marketplace as the competition for employees intensifies and today's digitally-savvy students join tomorrow's workplace. The Region competes for skilled resources, not only with other municipalities, but with a strong tech sector. Applicants and new members of the Region's workforce expect automation and collaboration technologies that enable them to spend their work time on value-added activities rather than manual processes.

2.3 Community Expectations

Broadly speaking, access to technology is high in Ontario, with 92% of people online and over 76% using a smartphone. 88% of Canadians bank online, 85% of people during the pandemic have shopped online, and 74% have used a government service online.

Our community has high expectations for municipal services, expectations that have only grown during the pandemic given the shift to digital services across other industries. Waterloo Region has long been an innovation and technology capital of Canada, with the world's second highest start-up density after Silicon Valley[1]. Strong post-secondary institutions and research centres in the region have also contributed to a younger, more skilled, tech-savvy demographic that expect digital experiences on par with the non-government services they use daily.

[1] https://www.regionofwaterloo.ca/en/doing-business/innovation-culture.aspx

The recent community survey identified that, offering online services is one of the top three key drivers of overall satisfaction with the Region of Waterloo services, with 75% of respondents saying the Region should offer more services online, 74% satisfied with the Region's performance in offering online service, and 92% rating the Region's website as useful.

The ability to provide service in additional languages online is a primary request with 84% of respondents. The demographic research within the survey illustrated the particular importance of digital services to the 18-34 age group and newcomers to the Region. It is important to note that 60% of respondents aged 55+ were also interested in more services online, speaking to the growing digital literacy across demographic groups in Canada.

During the pandemic, the Region received a strong signal from the public about their digital preference. When asking people to register to be pre-notified of vaccination appointment availability, 95.6% of those who took up the option requested digital notification (email or SMS), with just 4.4% opting to be notified by phone.

Another example related to the pandemic was scheduling Covid-19 vaccinations in specific Region-managed clinics that allowed for self-scheduled appointments (this does not include vaccines administered at long-term care homes, pharmacies, primary care physicians, the "vaccine bus", etc.). From the beginning of the vaccination program until the end of 2022, given the choice to schedule their Covid-19 vaccination either online or over the phone, more than 90% used the online self-service option[2].

In fact, high adoption of digital channels is common in various other services offered by the Region, for instance, all licensed childcare spaces are registered 100% online. For Grand River Transit (GRT), 83% of fares are purchased digitally self-serve (either via the web or at platform ticket vending machines). All applicants for jobs at the Region must apply online and have done so for some time.

2.4 An Inclusive Community

Equity, inclusion, and belonging are core to the Region's public engagement and service delivery models. Digital services can improve equity by providing access to information, resources, and services that can benefit people of all backgrounds, for instance, using translation services to offer content in many languages.

[2] Note that, due to limitations of the data, this does not account for walk-ins that might have occurred at these clinics.

Digital services can improve access to services by removing barriers inherent in in-person service channels and help promote civic engagement by making it easier for people to participate in their local government activities.

Designing and delivering digital services **exclusively** would create barriers for those who are less digitally-savvy or who lack access to digital devices so this is not a goal for the Region.

This Strategy is clear that digital service *does not mean* digital-only, that service design must work for all users, providing both direct digital service and assisted digital in the user's channel of choice.

There is work underway at the Region to evolve the Client Experience Framework from an equity-centred design approach that ensures accessibility and inclusion are built into the components of this Framework.

The Client Experience Framework consists of the customer feedback program, policies, guidelines, Service Standards and employee resources and training. This Framework will provide Regional program areas and services with the foundation to deliver services that are accessible, equitable and meet the needs of the community.

The Service Transformation Strategy and Client Experience Framework will work in close connection to develop a set of Service Standards that incorporate accessibility and inclusion so there is greater consistency across the organization in how the Region delivers services to residents.

In addition, the Region will work with key groups, such as the Reconciliation, Equity, Diversity and Inclusion team and GRAAC, to design, test and deliver services that meet the needs of the community.

3.0 The Transformation Opportunity

With this context, there is tremendous opportunity for the Region to apply transformation to its services and its work, to use new and emerging digital capabilities to transform services and the way it operates.

3.1 What is Transformation?

Transformation is an often-used word in this space, but what does it really mean?

In any organization, people are busy *doing*.

The ways that things get done – how services get delivered – has often been built up over many years, passed on from manager to manager, and from staff to staff. Work is often done the way it is because "it's always been done that way", even though the environment in which the work is done might have changed in the intervening years.

Assumptions and policy positions that were true at the time a service was initially setup may have changed, customer expectations may have altered, social norms adjusted, technology capabilities may have emerged – but because people are busy, the way the service runs does not change.

So, in our context, transformation means continuously looking closely and thoughtfully at the things users want to do – get a permit, pay a bill, request a service, tell the Region something, report a problem, book an appointment, buy a ticket – and re-thinking how they could be delivered in better ways by:

- Building each service around what the *user* needs, rather than from the perspective of what the *Region* needs, with a goal of making it easier for the user to get stuff done.
- Using technology capabilities (and organizational capability) to streamline, simplify and automate the handling of the task, ensuring that it can be handled as speedily and as efficiently as possible.
- Ensuring that any barriers (social, economic) to accessing the service are reduced.
- Ensuring that environmental impact of the service is reduced. For instance, by moving to a digital service, the Region could reduce paper use, reduce CO_2 emissions by eliminating physical trips to Regional offices, or can use new data analysis to increase its environmental efficiency in providing services.

So, transformation means not doing things the way they have always been done. It means taking a step back and re-thinking the design of services by applying user, digital, inclusion and environmental lenses.

In some cases, this may mean a radical re-thinking – delivering the service in an entirely new way with a new business model. In other cases, the Region may need to optimize the current service. In some situations, the Region may choose to stop the service entirely (such as when the collection of library overdue fines was ended).

Regardless, it's about putting attention toward looking closely at how the Region operates and challenging itself to deliver services better and to continuously improve the services it offers – thinking of those services as "products" of which it can be rightfully proud as world-class.

3.2 What is a Service?

Municipalities use the term "service" in lots of ways – to describe a team, a collection of functions or a department (e.g., Business Services, Water Services, Paramedic Services, Community Services).

But, for this context and for transformation purposes, a service is not a business function or a team – it is what a user wants to get done – get permission to operate a taxi, build a condominium, make an appointment for a clinic, apply for a grant or a job, report a problem on a regional roadway.

3.3 A Note About Users

Municipalities use many terms to refer to the people who use and rely on their services – public, citizens, residents, customers, consumers, patients, students, parents, caregivers, patrons, clients, and many more.

While all have their own unique situations, relationships, and roles to play from a service design perspective, all of these people are users of a service.

Thus, we use the term "user" to represent those who use the service. When we say, "design with the user, for the user", it's all the people who use the service that we are talking about.

So, partners who participate in service delivery on our behalf are users. Staff who rely on internal services (facilities, payroll, parking, etc.) are users of those services.

Services, whether external or internal, should be designed with and for the user.

3.4 Service Transformation

The Region, of course, delivers maybe more than a thousand discrete services to users externally, internally and to various partner organizations. We don't know exactly how many, as the Region doesn't currently have a list of the services it provides – a recommendation to rectify this is made later in this Report.

What must be understood is that true service transformation will occur one service re-design at a time.

It's this work, service by service, that will deliver the value, unlocking the staff capacity and delivering services that delight – rather than frustrate – customers.

So, while the Region has grand ambitions, we encourage a thoughtful approach, based on standard methods and shared technologies described in this Strategy, but we also encourage the Region to think big and act small and pursue transformation one service at a time.

3.5 The Good Services "15 Principles"

With respect to using services, users want to get stuff done, and they want to get the whole thing done – easily and quickly – not just part it. If they start online, they typically want to complete the process online too.

Think, for example, of buying an airline ticket online – researching, booking, paying for the flight, checking in, receiving the boarding pass on your phone – the whole experience (apart from taking the flight) can be handled without talking to anyone, on a smartphone and in minutes.

Indeed, in 2022, there are a series of conventions and best practices that guide the design of Good Services. In fact, the key characteristics for good service are captured in the following 15 principles.

Services should:

1. Be easy to find.
2. Clearly explain their purpose.
3. Set a user's expectation.
4. Enable each user to complete the outcome they set out to do.
5. Work in a way that is familiar to the user.

6. Require no prior knowledge to use.
7. Require no knowledge of organizational structures.
8. Require the minimum possible steps to complete.
9. Be consistent throughout.
10. Have no dead ends.
11. Be usable by everyone, equally.
12. Encourage the right behaviours from users and service providers.
13. Able to quickly respond to change.
14. Clearly explain why a decision has been made.
15. Make it easy to get human assistance.

Many digital service organizations (Google, Microsoft, Netflix, Amazon) and traditional service providers (Indigo, PC Express) now design their products using these principles, and governments have adopted and applied this thinking to their work.

In fact, the 15 principles[3] cited above were developed by Lou Downe, one of the leading service designers on the UK's digital services team.

3.5.1 Good Services are Complete Services

Complete services increasingly involve a combination of online and physical aspects that combine to provide the whole experience.

Think back to the airline ticket – of course there is a physical aspect to that service, taking the flight – but the complete experience includes the digital and the real world.

Many other digital experiences follow the same pattern – ordering from Amazon or Indigo, requesting an Uber ride, or booking an Airbnb.

[3] Read more about Good Services at https://good.services/.

In fact, many Regional services involve a combination of the virtual and the physical. For some, the reminder on their cellphone of tomorrow's garbage collection is as important a part of the experience of the service, as the physical collection is.

So, as the Region re-thinks and re-designs services it must think about service design, applying the 15 principles, and designing complete services and complete experiences.

3.6 Potential Service Transformation Benefits

By re-thinking and re-designing services in this way, the Region can expect a raft of benefits.

- Increased internal efficiency, productivity and the unlocking of existing staff capacity, as unnecessary and non-value-added process steps are removed, digitized, or automated, and duplication of effort eliminated.
- Removal of friction, simplifying processes and improving staff experiences – coincident with an increase in the meaningful value-added work that staff are engaged in – is expected to contribute to an enhanced Regional reputation, aiding staff recruitment and retention.
- Improved customer experiences, better meeting community expectations and responding to a key driver of resident satisfaction, which will build customer trust in the services the Region offers.
- Passive and active collection of data will provide new service and performance insights, allowing the Region to take actions to improve service, efficiency, test strategies and target resources to the areas of key need.
- Positioning the Region to scale as it grows without needing to significantly add to supporting headcount.

3.6.1 Service Cost Driver

While the benefits noted above are strong, it is important to note that digital services are significantly cheaper for the Region to deliver as the table below illustrates.

Table 2: Average Cost of Service Delivery by Channel, Showing Significantly Lower Cost for Online Delivery

Channel	Cost Per Transaction
Digital / Web / Online	$0.10
Phone	$4.00
Face-to-Face	$6.50

Given the propensity of the community to adopt digital service offerings provided by the Region, the business case for moving services to a digital mode is not just about service improvement, but a financial responsibility that cannot be ignored.

3.7 An Example of Potential Transformation – Garbage Bag Tags

Let's take the opportunity to look at a real transformation opportunity.

Albeit small, it is representative of the potential that exists to take a seemingly simple process, re-think and re-design it, to make it better, more efficient, and more effective.

The purchasing of a simple garbage bag tag – required if a resident wishes to put out more garbage than the allowable limit. The intent of this service is to gently discourage excessive garbage disposal – creating sufficient friction to give users pause for thought, while giving an option for those who truly need to dispose of a larger than normal amount.

3.7.1 Current State

There are 60,000 bag tags sold annually, five tags per sheet, making for over 11,000 transactions, via 40 physical locations and over-the-phone.

There is also an online form available for customers to request and pay for garbage tags.

Managing this service involves six different systems and various subprocesses, including for requesting medical exemptions, handling inventory, and a status inquiry process for users to find out when they will receive their tags.

Currently, only 30% of the tags are sold online, and there can be a 4-week turnaround for users to receive their tags for purchases made online.

Online orders are received via an online form that submits a message to a customer service agent, who re-types the information into the CRM for fulfillment.

Reviewing the service, each activity and process step revealed numerous opportunities to simplify and streamline the offering.

3.7.2 Simplified State

A quick approach to improve and simplify the process could:

- Integrate the online form with the CRM system (to eliminate unnecessary re-typing of information by administrative staff).
- Adjust processes to speed fulfillment of bag tags to better meet user expectations of an online service and reduce the unnecessary contacts from customers to find out the status of their request.
- Actively promote the online service over other channels, with a goal of achieving 80%+ adoption (more in line with the adoption of other online services offered by the Region).

By making these changes, the Region could reduce the time to fulfill requests, better meeting customer expectations, while saving administrative staff time, and eliminating unnecessary contacts that are frustrating for customers and staff.

3.7.3 Fully Transformed State

A more comprehensive potential digitally transformed state could move away from physical tags entirely to a digital tag concept.

In this situation, a purchase of a digital tag would simply flag the property in the collection database as having paid for additional bag pickup. The service could be offered multi-channel – online, via a call to the SFCC, or at any Regional counter – for those with a channel preference.

This allows the Region to eliminate physical tags and related inventory management and fulfillment activities. The transaction can become a fully digital one.

The recommended future process flow is depicted below:

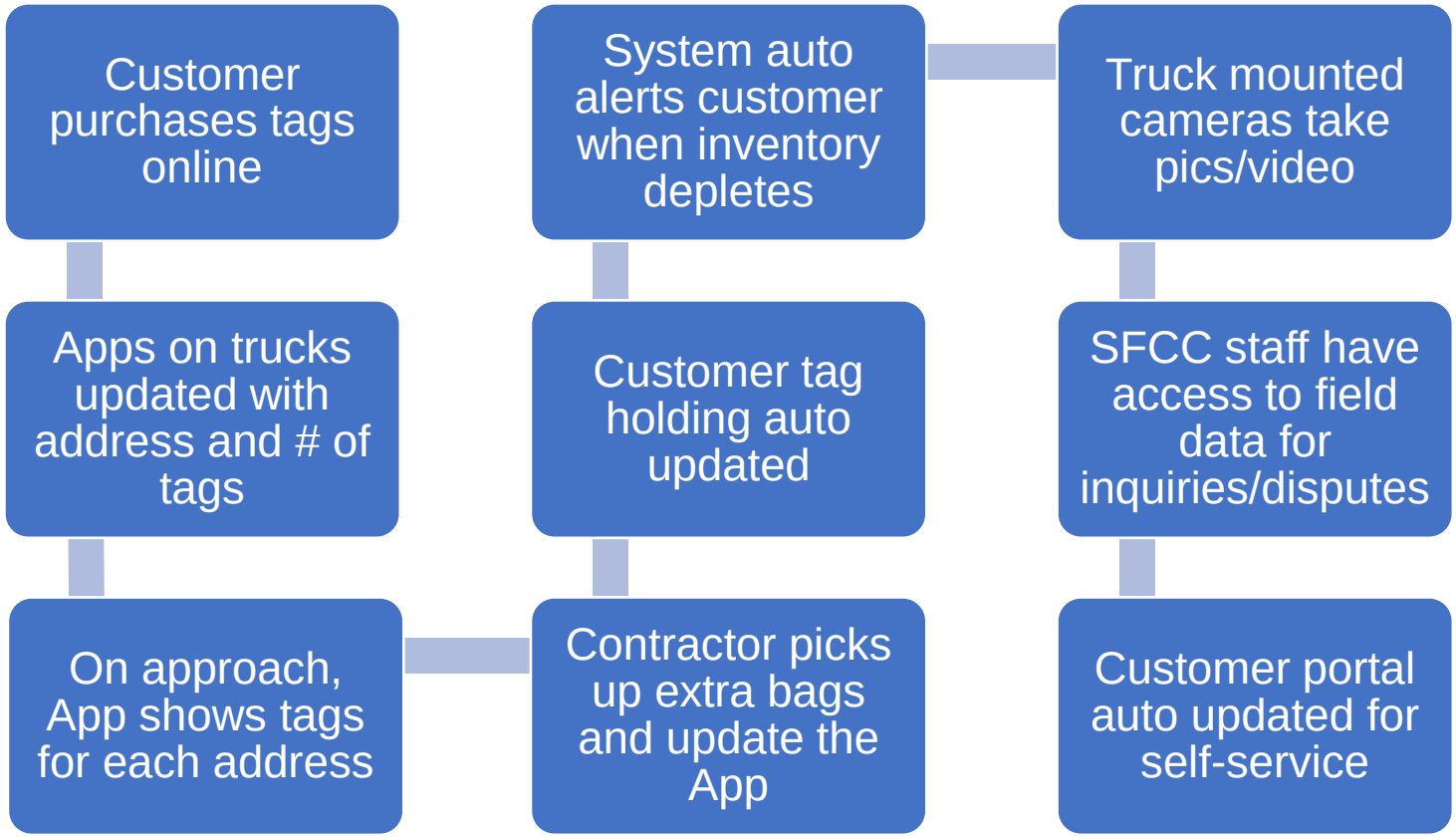

Figure 1: Future Garbage Tag Process Flow

The solution requires that:

- Waste collection contractors be equipped with digital capabilities in the field (a mounted smartphone/tablet, and access to the collections database).
- There be an online service that allows customers to purchase garbage bag tags online and have them assigned to the customer address.

- A collections database, with the household tag inventory, be automatically updated in real-time with purchase data, and available in the field to the contractors.

There are other related advantages to the proposed solution as well:

- Truck mounted cameras could capture valuable data for liability and complaint resolution purposes.
- The ability to re-use the technology for other services or purposes (for example, a digitally-connected truck can report its location in real-time and be tracked).

As vehicles travel all regional roads, cameras on vehicles could be used for various future purposes – to monitor road conditions, to assess weather conditions, to collect regional and municipal assets and their conditions, etc. The online service could be re-used for other garbage-related services, such as bulk item pickup requests, etc.

The end product could provide the following benefits:

- Enhanced customer experience.
- Reduced turnaround time.
- No physical mail outs.
- No physical tags.
- No inventory management.

Based on our estimates, such a service transformation could reduce staff administrative time for running the program by approximately 2,210 hours each year.

3.8 Assessing Additional Transformation Opportunities

The garbage bag tag is just one example that we looked at.

To simulate and confirm the theoretical benefits that could be achieved through transformation efforts, the consulting team worked with specialists in various business areas to review a selection of additional services.

The purpose of these assessments was not just to identify specific opportunities to transform service but also to identify the common elements and capabilities the Region needs to invest to transform all services.

3.8.1 Service Identification and Review

To select high-potential candidates, the consultants identified an initial candidate list of 26 high-volume services, and worked with Regional staff to develop a selection criterion using the following attributes:

- Most requested online services by citizens.
- Customer segments impacted.
- Benefit to customer/staff.
- Success rating.
- Readiness.
- Number of departments benefited.
- Whether the service represents a common pattern or solution that could be re-used by other services.

The consulting and project teams worked together to score the 26 services using the criteria and decided on the following services to review:

1. Waste – bag tag purchase.
2. Service First Contact Centre – service request ticket process.
3. Children Services Portal Service.
4. Student immunization tracking process (including compliance notification).
5. Roads service requests.
6. Housing maintenance requests.

For each of these services, the consulting team led service owners and staff involved in delivering each of the services through a service review exercise.

Using Lean Business Process Optimization methods and applying a Digital First lens to these services, the teams sought to understand the current state and identify a target transformed state built around user needs and to estimate what benefits could be achieved by moving to a transformed state.

3.8.2 Common Opportunities Identified

Detailed analysis of each service, its target state, and recommended strategies to realize the target state (alongside the benefit calculations) have been provided separately to the Region.

Looking across the six service reviews, a set of common and significant opportunities were clear:

- Unlocking staff capacity by simplifying and reducing unnecessary, non-value-added process steps.
- Increasing the speed of delivery of services through simplification and real-time process management.
- Improving the customer experience by offering online, self-service capabilities.
- Sharing common patterns, technologies, capabilities, and data to transform all Regional services.
- Using data collected from customers as a by-product of delivering the service digitally for service owners to make informed and better decisions and to identify ways to improve their services and other services that can leverage this data.

The common opportunities listed above could be achieved by implementing the following changes:

- Implement self-service for customers through a citizen/customer portal where customers are able to apply/request/pay/check status of service requests online anytime/anywhere.
- Extend the CRM system to the departments that don't have a tracking system today and enable end-to-end service request management within the CRM.
- Consider SFCC as an extension of the departments. Have service owners share the required information and access with SFCC staff so that they are able to play a frontline role on behalf of the department.
- Automate the processes so that systems perform many of the manual tasks performed by staff today.
- Streamline the business processes so that low-value and duplicate tasks are eliminated, and repeatable administrative tasks are automated.
- Integrate systems so that the handshake between departmental systems is automated and the manual data entry and reconciliations are eliminated.

3.9 Estimating Potential Value

The potential value across the organization through applying digital transformation is significant.

The following table identifies the unlocked staff capacity (time saved) for each of the six services that were reviewed by implementing a Digital First approach.

The Quantifiable Efficiency column translates this into a dollar value (as required by the AAF funding). The Quantifiable Efficiencies are calculated using a fully loaded staff cost of $50 per hour. It is important to understand that Quantifiable Efficiencies are not directly cashable savings that can be realized or reallocated immediately. In practice, this represents many small efficiencies, in increments of time spread across many staff. In some cases, this may free up a whole FTE which would allow for reallocation; in other cases, small reductions in effort will free existing staff up to work on additional value-added tasks.

Table 3: Estimated Unlocked Staff Capacity

Service	Annual Transactions	Time Saved (Hrs)	Quantifiable Efficiency ($)
Waste – bag tag purchase	11,000 Transactions 480 Invoices 500 Medical exemptions	2,210 Hrs	$110,000
Service First Contact Centre service request	350,000 Calls	22,500 Hrs	$1,125,000
Children Services Portal Service	1,875 funding letters 13,000 CFA notices	3,260 Hrs	$163,000

Service	Annual Transactions	Time Saved (Hrs)	Quantifiable Efficiency ($)
Student immunization tracking	30,000 Submissions/Inquiries 15,000 Warnings 7,500 Suspensions	5,250 Hrs	$262,000
Roads service requests	3,500 requests	875 Hrs	$44,000
Housing maintenance requests	16,500 requests	2,750 Hrs	$137,000
Total for six services		**36,846 Hrs**	**$1,842,337**
80% Digital Take-up Rate		**29,477 Hrs**	**$1,473,870**

The summary above shows that with an 80% digital take-up rate, the Region could realize a quantifiable efficiency of close to $1.5 million annually.

Our assessment of six representative services, albeit some high-volume transactions, identified the potential to unlock nearly 30,000 hours of staff capacity.

Extrapolate this to a thousand services across the Region and you can quickly see that this is just the tip of the iceberg. There is significant capacity that can be released within the organization through transformation work.

3.10 “Day in the Life” Examples

In a future in which services are digitally-powered and designed to make things easy for users, interacting with the Region should be simple, straightforward and designed around convenience for service users and staff alike.

The following examples are provided to help the reader understand the trajectory that the Strategy establishes, if not the exact solutions that will be implemented.

On her way to work, Aisha sees water pooling at the corner of her street. It hasn't rained so it looks a bit odd. Aisha pulls out her smartphone, takes a photo of the scene and uses the Region's Report A Problem feature on its website to notify the Region of the problem.

The notification is received, automatically categorized, located, and recorded in the Region's Customer Relationship Management system and a request is passed to the Work Management system for resolution.

The Work Management system automatically dispatches a request to a crew in the area who receives it on a device in their work vehicle. As a potential high-priority response, they proceed to the site to inspect the situation. The problem is with a leaking hydrant. Aisha gets an update to let her know that a temporary fix is in place.

On the way home from work, as she passes the corner, Aisha is impressed with the service and feels reassured that the Region is working smartly and efficiently.

A few weeks later, a crew visits the site and replaces the faulty part on the hydrant. Aisha receives a notification that the issue has been resolved and is asked to rate her satisfaction with her interaction with the Region.

She is pleased with the service and rates it highly.

In the background, integrated technologies such as telecommunications, networks, mobile devices and business systems (e.g., CRM, Work Management and GIS systems) are working in concert to allow customer service agents to offer simple access to services and for work crews in the field to be provided with the information they need (asset records, maps and drawings) to fulfill the work order.

Processes and system integrations have been designed across departmental lines to make the end-to-end process simple for customers to interact with and easy for staff to administer.

Marc has moved into a new home in the Region. He calls the Region to inquire about the garbage pickup schedule. The customer service agent helps Marc find the online service on the Region's website and helps him setup a reminder alert.

The agent also shows Marc other services that are available online and provides instructions on creating a citizen profile.

Marc creates a new profile and proceeds to find out when garbage collection day is, when the recycling centre is open, and where he can pick up a new compost bin.

He also realizes there are other services of interest – he signs up for service alerts related to road closures, and transit disruptions, and also checks out licensed childcare providers in the neighbourhood – all with a single visit and login to the Region's website.

Enabling the website to handle multiple transactions from different departments in this way doesn't happen by accident. It has to be planned, processes must be designed, and systems implemented and integrated to allow seamless self-service to citizens.

Ravi is a long-time resident of Waterloo. They are a frequent user of the Region's website. Ravi receives an alert indicating that their daughter, who is starting high school this year, should receive a booster vaccination before September.

Ravi makes an appointment with the doctor for the vaccination. The student immunization record has been updated and an email was received to confirm.

In the background, the doctor's office sends a regular data load to the Region to report all new vaccinations. The data interface between the doctor's office and the citizen portal updates the immunization record of students.

Shelly is a Regional housing tenant. The Region's website provides services that allows Shelly to manage all transactions related to her tenancy. She can manage her payments and receive messages about planned maintenance.

Shelly's kitchen sink faucet has started to leak. Using her smartphone, Shelly creates a maintenance request with the Region through the website. Shelly has granted access to the unit any time for maintenance purposes. The portal re-confirms that Regional staff can enter any time and Shelly completes the request with a picture of the leaky faucet attached to the online form.

The back-office system automatically assigns the request to Wael, a plumber, who is scheduled to visit the same building for another job in the following week. An automatic text message is sent to Shelly confirming that the work has been scheduled with the time and date.

The work order has been generated for Wael automatically.

On the assigned day and time, Wael's task list shows their list of work for the day, and Shelly receives a text message reminder. Wael visits Shelly's apartment, completes the work and updates the Work Management system using their smartphone and heads out to their next job.

Shelly receives a text message confirming that the work has been completed. The confirmation also provides a link to an online feedback form.

Shelly is impressed with the service and provides a five-star rating to the service.

It requires people, process and technologies – working together in sync – to provide the sort of end-to-end digitized services described above.

3.11 Realization of Value will be Incremental

The stories and examples provided here are used to paint a picture of the future that the Region should aspire to and aim for, and that this Strategy is designed to facilitate.

These stories are not dreams of a long-distant, unattainable future. Municipalities and utility providers across Canada are delivering their services *in this way today*.

Of course, transformation does not happen overnight. Transformation is a marathon, not a sprint. It takes a lot longer to achieve transformative change than may be expected, or anyone would care to admit.

In fact, many of the leaders in the digital world – to which the Region is unquestionably compared by service users and from whom the Region is far behind – have been working at this much longer than you would expect.

- Amazon, the torch bearer for great digital services, has been in business for 27 years.
- Google is 23 years young, and
- CIBC introduced their first ABM in 1969, online banking in 1996, and in 2010 their iPhone app was launched.

The message here is that true transformation is challenging ongoing work that requires focus, and long-term commitment.

It is not a single event, a single app, a moment of brilliance or a flash of innovation or inspiration. It is, in practice, the result of thoughtful, focused and hard work, year after year of building improvement on top of improvement, on top of improvement.

It involves significant people power, detailed process reviews and re-design, collaboration with customers, and extensive change management and training for staff.

While the effort is significant, the value of the investment in digitally-powered transformation compounds, year after year, and digital capabilities enable new digital capabilities – creating an ongoing virtuous circle.

City of Edmonton – Compounding Benefits Example – AI Built on Top of Robust Data

In the technology space – when done right – new solutions often build on previous solutions, resulting in exponential benefits from the initial investment.

For example, the City of Edmonton has used nearly a decade of building inspections data to train and deploy an AI model to increase inspection efficiency.

Since 2019, the predictive model has reduced the number of eligible inspections by 37%. Inspections deemed low risk are passed automatically, eliminating unnecessary delays in builder timelines. City inspectors can focus on higher risk and more complicated inspections, that pose greater threat to safety.

The AI model is only made possible by the collection of comprehensive and robust data through the digitization of the building permitting and inspections process.

4.0 Regional Readiness

So, how is the Region positioned to respond to the tremendous opportunity before it?

Before setting any strategy, it is critical to completely understand where you stand – how you got there and what may have inhibited previous efforts to progress.

Through interviews, roundtable discussions, workshops with leadership, management, and staff, Perry Group used various assessment tools to review the current digital maturity at the Region.

The following provides a high-level summary of our observations and assessment results.

4.1 Positives on Which to Build

First, there are numerous positives upon which the Region can build. This includes:

- A strong interest from leadership, management, and staff in becoming more digital. There is enthusiasm and interest in the opportunities that transformation represents and a pent-up demand to begin to move faster.
- The SFCC provides a strong service base – operating 24/7 – around which the Region can build a more consistent service delivery model.
- Evidence and examples of a growing commitment to think differently about services and putting the customer first, early work on Customer Experience (CX) standards as well as performance/user data and tools to better understand requirements.
- Several bright spots around collaboration, including the SFCC, ITS' Business Relationship Managers and the Region's Data Networking Group.

In addition, there has been some interesting digital work, including:

- Transit utilizing mobile payments for fares, recognizing the value of data for the customer experience.
- Public Health data analytics, dashboards, and data transparency during Covid.
- Data certification and analytics tools (Tableau, PowerBI), with staff and management experimenting with data tools.

- Artificial Intelligence experimentation.
- Traffic cameras installed at strategic intersections to collect data such as vehicle traffic, pedestrian, and bicycle counts.
- Online community engagement tool (Engage WR).
- Smart Waterloo Innovation Lab with a focus on children and youth wellbeing through the use of technology, digital services, and data literacy.

Finally, there is a wealth of high-talented and smart staff with strong ideas of what the future should look like for the Region. This Strategy aims to harness and empower these skills to drive service transformation work.

4.2 Challenges and Inhibitors to Transformation

While there are positives, there are also some barriers to transformation that will be critical for the Region to address if it is to advance with an ambitious transformation agenda.

4.2.1 People

We noted from a **people** and organization perspective that the Region:

- Lacks a clearly-defined and shared vision or commitment to a clear “digital” future or to a consistent service model.
- Lacks clear, singular leadership for digital and service transformation – departmental leaders, Customer Service, Communications, IT, Strategic Initiatives, all have leadership to move some initiatives forward, which results in disjointed and duplicative work that, in some cases, is at cross purposes.
- Follows a decentralized approach to the management of technology, innovation, web content management, digital services, data, and customer service. While this presumably is intended to support local responsiveness in business units, we noted that there are limited methods in place for coordination, re-use, and shared learning, often resulting in competing and divergent priorities, overlapping efforts and systems.
- Has a culture that is heavily department-centric, that focuses on differences over commonalities between teams, divisions, and departments, which leads to unique departmental approaches that are expected to make service transformation more complex and expensive to deliver, and inconsistent for users of services.

- Surprisingly, for an organization of its size, has no central web/digital team. Digital skillsets are limited and inconsistently available across the organization, and key digital roles are missing (such as those involved in user experience design).
- Has no assigned data leadership or formalized data management program.
- Lacks some key skills and capabilities in corporate IT, namely around architecture, product management, and security.

4.2.2 Process

We noted from a **process** perspective that:

- Despite the SFCC being in operation for over a decade, the Region lacks a full commitment to a consistent service management approach, with business units optionally utilizing the services of the SFCC.
- Online services and digital processes are seldomly developed end-to-end, resulting in partial online services, with too much manual intervention from staff.
- Many of the Region's processes require offline process steps.
- The Region is not applying service design best practices consistently at scale and not involving users in co-designing services.
- Limited-to-no use of Agile techniques, which means new services or functionality is generally delivered via large-scale, multi-year technology projects.
- Staff identified a growing need for ongoing training and user communities around common digital needs, rather than just via projects.
- Decision chains are too long, and key decisions take too long.
- Technology budgets are distributed, resulting in a lack of coordination, focus and alignment.

4.2.3 Technology

We noted from a **technology** perspective that:

- The Covid experience changed workplace paradigms, with remote, hybrid, and the importance of collaboration taking centre stage – but the Region recognizes it is not responding and taking advantage of these new paradigms fast enough. While some collaboration tools have been made available, staff are unsure when to use them vs. the Document Management system – work is already underway to set the strategy and map the path forward for Document Management.
- The Region has many of the core business solutions that are required in place, however, some need upgrades or replacement (e.g., HR systems) and there are many opportunities for implementing digitized workflows.
- The Region's website is responsive with some customer-centric language, however, there are many opportunities for new digital services, there are many offline processes and too many PDF forms still in use.
- The Region has a CRM in place, but it is limited in scope, not considered a corporate case management platform, and is lacking integrated self-service offerings.
- There is a lack of technology architecture and coordination.
- Key technology solutions are still driven departmentally, with missed opportunities to deliver via portfolios of corporate solutions, with a broad lack of coordination and governance around solutions architecture. Projects that are started as departmental pilots frequently fail to take root as enterprise solutions.
- Data practices and governance are immature. While the desire is there to leverage data more effectively, the Data Governance Framework and data management capabilities and practices are not.
- Supporting technology infrastructure elements (such as network, security, and mobile device management) are in reasonably good shape, but improvements in strategy and implementation around security, BCP/DR, Cloud are required.

4.3 Current Digital Maturity

The Perry Group Digital Maturity Assessment identifies that the Region is an Early Experimenter – the second of five levels in digital maturity.

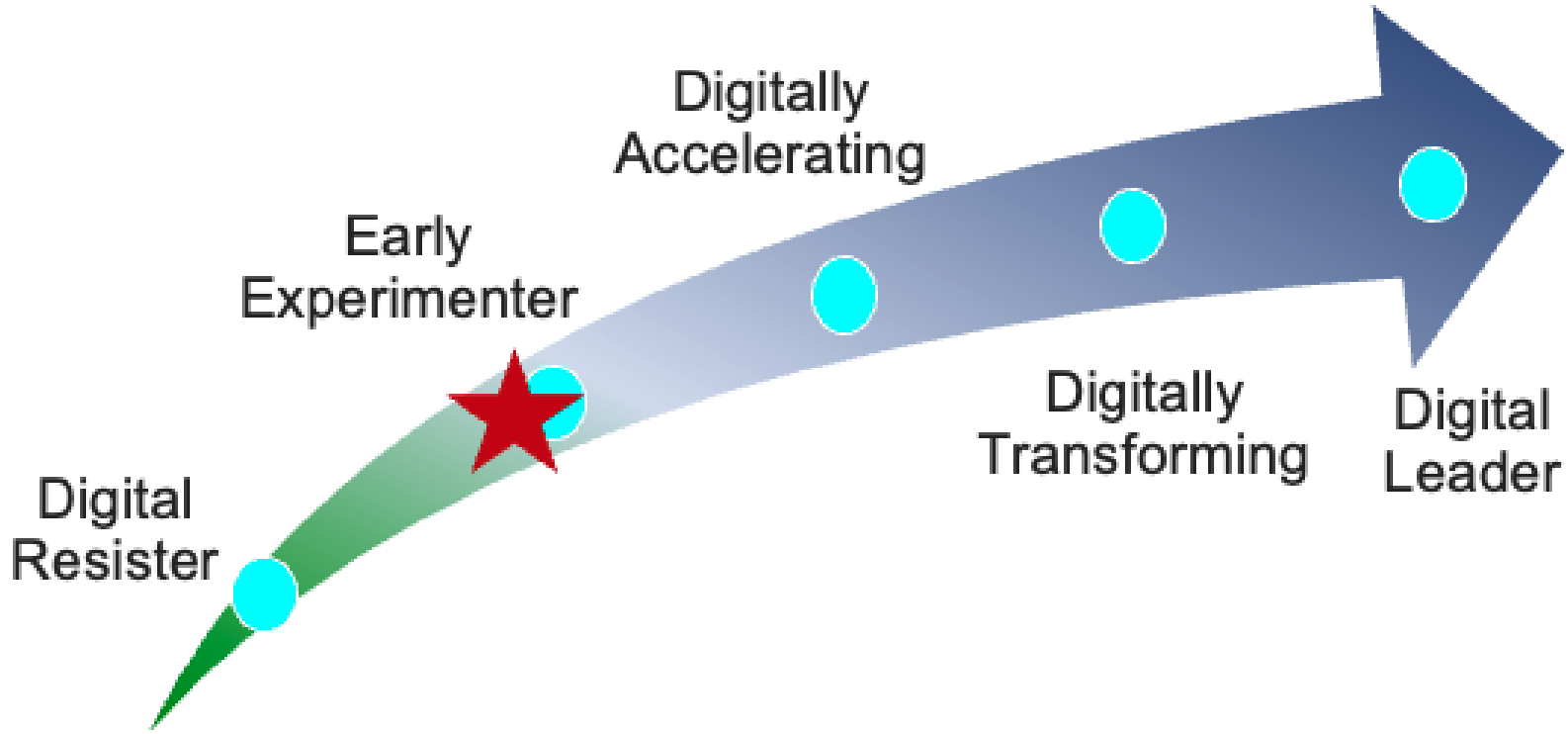

Figure 2: Results of the Region's Digital Maturity Assessment

The evaluation focuses on People, Process and Technology practices, and the Region scored as follows:

- People – 1.6 / 5
- Process – 1.8 / 5
- Technology 2.3 / 5

Looking at the scores across the three assessment categories, we note that the Technology maturity is further along (in the Digitally Accelerating state) while People and Process maturity are lagging.

4.3.1 Establishing the Conditions of Success

These assessment results reiterate that, although technology is an important aspect of enabling transformation, the Region must pay close attention to People and Process areas in order to the build the right conditions for digital to thrive at the Region.

Establishing fertile ground for transformation to take root and building the conditions for success is critically important to establishing a strong digital culture within the organization.

To do this means establishing the right leadership, roles and responsibilities, the operating and organization model, the governance, and change-ready digital culture, along with training teams across the organization on new digital-centric methods and techniques to prosper with digital transformation.

The focus on culture – alongside the delivery of transformation initiatives – will be critically important to the Region's ultimate success.

The Strategy presented over the subsequent sections of this Report is designed to set the vision, then tackle the inhibitors to advance the Region’s digital maturity, and build the culture, capabilities and capacity that will unlock transformation opportunities across the Region.

5.0 The Vision for Service Transformation

The Region is committed to providing high-quality services and in 2023, high-quality service is undoubtedly digital.

So, the Region intends to make digital, where possible, its primary service delivery channel for services that can be delivered digitally[4].

However, the Region will not provide digital-only services. Assisted digital service is the Region's commitment to ensure that anyone who cannot use digital services – either by choice, ability, or circumstance – will be supported to use the service.

Regional staff will always be available on the phone, at the counter, and via other channels to access the digital service on the user's behalf – no one should be left behind in the Region's push to digital service.

5.1 The Vision

The Region plans to re-think and re-design Regional services using human-centred and equity-based principles, and by leveraging digital capabilities to better meet the community's service expectations, while unlocking staff capacity for today's and tomorrow's challenges.

5.2 Service Model

At its heart, the Region is seeking to move more services from back-office, departmental processing to digital channels and the SFCC that operates 24/7.

The goal is a Digital First approach, that designs services primarily for the digital channel, with assisted digital service provided by SFCC, and departments (where necessary).

[4] Many Regional services, of course, involve a trip, a visit, a vaccination, and must be received in person.

5.3 Service Delivery Commitment

The Region already has, in pockets, made efforts in this direction but, to gain the best value for our expected investments in digital service delivery capability, the Region would benefit from adopting a more consistent service delivery model across the organization.

To achieve this, the Region should commit to:

- **Put the user first** – Simplify the user and staff experience, through user-centred service design to build end-to-end digital services.
- **Reduce unnecessary user contacts** – Reduce the number of phone calls, emails, and visits to offices, by providing clear information online heavily promoting online self-service, and resolving inquiries at the first point of contact.
- **Actively push services to digital** – Versus face-to-face, and phone channels, while actively supporting those who prefer not to or cannot use digital channels.
- **Use digitization and automation** – To reduce resource pressures in the back-office to increase process visibility/transparency and enable self-service.
- **Deliberately transfer work** – From back-office (experts) to online self-service and the Contact Centre (service specialists).
- **Gather data about users** – With their consent, around transactions, service delivery, preferences and use analysis of this data to inform future service enhancement.

Rather than these principles being optional and by choice of the service owner, with this service delivery commitment, CLT is making clear that this is the preferred model for service delivery.

In future, as transformation work occurs, services or service areas wishing exceptions from this approach/model must seek the CAO's approval.

5.4 The Service Standards: Principles and Commitments to Guide Transformation Work

The development of this Strategy and the commitments herein are heavily influenced by the work of UK, Canadian and Ontario government digital programs, and the Good Services work of Lou Downe.

The Good Services guidelines and best practices introduced in the Good Services section, should guide the Region's future service design work. The Region has drawn on this work to build out a set of specific-to-the-Region Service Standards to guide future transformation and service design work.

These Service Standards incorporate Client Experience, Accessibility, Equity and Diversity, Digital and Environmental perspectives.

As the Region designs services it will:

- **Understand users and their needs (build services for users and their needs)** – Start with users to define the problem. Do research to develop a deep understanding of who the users are, how they behave and what that means for the design of the service or product. Ensure that equity-centred principles are considered, and the user research activities include people with diverse and/or unique needs.
- **Design the service from start to finish (design complete services for users)** – Understand what users are trying to do and design the simplest, fastest way for them to complete their task and achieve their goal. Services should be designed for Digital First and to ensure users succeed the first time. Consider accessibility and inclusion needs to ensure support is considered at all steps of the service, and all service activities are available in the user's channel of choice.
- **Support those who need it** – Put tools in place across all channels to provide support to people who cannot use digital services or products on their own, i.e., assisted digital support.
- **Be agile and user-centred (build services using Agile and user-centred methodologies)** – Design and build the service or product using an Agile and user-centred approach. Agile is an approach to building services that breaks the work into smaller chunks known as "iterations". Build and test one feature of the service or product at a time and work toward continuous improvement. Define services and success using the user lens, working seamlessly across organizational delivery teams to deliver equitable services to users.

- **Make it accessible and inclusive (build accessible and inclusive services by design)** – Accessible and inclusive digital design is good for everyone. Make sure the service or product is accessible, with no barriers, to all users regardless of their abilities, device, environment, or quality of access. Apply an equity lens to service design, reviewing who might be excluded from each service experience, and build support paths to respectfully deliver services to these groups.
- **Embed privacy and security by design (build services that embed security and privacy by design)** – Identify the data the service or product will use, store, or create. Put appropriate legal, privacy and security measures in place so that users trust their personal information will be kept secure, and their privacy will be respected.
- **Be a good data steward** – Review data requirements and build services that collect only the data required for the service and collect it only once. Follow the rules and best practices when you collect, organize, and manage data, including making data open by default. This is important because it allows data to be available to everyone equally, creating opportunities for the development of better government services, including across government. Be transparent with users about data collection, storage and sharing.
- **Establish the right team** – Put a sustainable multi-disciplinary team in place that can design, build, and continuously improve the digital service or product led by a skilled product manager who is empowered to make decisions. Build collaboration opportunities – for both internal and external users – into the design process. Look for opportunities to partner with external agencies and the business community to improve the user experience.
- **Be consistent (build services that are consistent, user-centric, and available across all touchpoints)** – When the public interacts with the Region, their experience should feel cohesive, positive, and consistent. The user should not need to know about the internal structure and organization of the Region (or other government agencies) to access services. Services should be easy-to-find and be platform agnostic and the purpose of the service should be clearly described. Users should be able to access services using their channel of choice.
- **Actively manage services, measuring and improving performance continuously** – Understand the service performance metrics that should be captured during design, and build performance monitoring and reporting into the solution. Include usage metrics, such as demographics, customer feedback and drivers of satisfaction to monitor user value and facilitate outcomes that promote equity. Monitor service data continuously to inform decision-making, and ongoing service or product improvements. Continuously test the end-to-end service across channels to make sure it remains available to users and free of errors.

- **Use open standards and common government platforms (where available)** – Open standards are created through collaboration and consensus by a community of experts (use, where suitable and possible).
- **Actively reduce the environmental impact of our services** – Service design should, where possible, work to reduce the environmental impact of our services (e.g., reductions in printing and paper use, customer trips to Region facilities, etc.).

The list above communicates the key ideas, but only represents a high-level summary of the Standards. The complete Standards identify a set of expectations and minimum requirements that must be achieved to meet the Standards.

5.5 Using the Service Standards

Service owners and transformation teams must use these Service Standards (outlined above) to guide the design of services to meet the Region's expectations of modern service delivery, which reflects best practices and our community's expectations.

In the early stages, the Region should use the Service Standards as a guideline for all projects, but as the Region's maturity progresses, any new service launched – or any service that undergoes a service re-design, and specifically any services made available on the Region's websites – should be required to meet and demonstrate its ability to meet the Standards.

6.0 Mobilizing the Strategy

Tom Loosemore – one of the founders of the UK's Government Digital Service, and contributor to Digital Transformation at Scale (recommended reading for any transformation leader) – famously points out, "the strategy is delivery"[5]. Strategy without delivery is worthless.

So, it is critical that the Region gets started, builds some momentum, and starts to deliver real transformation by applying the standards, methods and ideas represented here.

6.1 Lighthouse Initiatives: Service Transformation – Building Digital Capabilities One Service at a Time

We have already discussed the importance of the service commitment. So, it is recommended that the Region test, learn, and showcase the potential that completes service transformation offers, by putting the ideas and concepts outlined in this Strategy to work through a series of lighthouse initiatives.

As recommended in the Service Delivery Commitment section above, the Region should actively work in the purposely-selected Waste, Housing, and Roads service areas and, for each service area, we recommend the Region:

- Build a multi-disciplinary transformation team, involving service design, web, technology, and data professionals working shoulder-to-shoulder with the service owner and frontline service delivery staff.
- Train / educate the teams on key concepts, methods, and techniques (e.g., Service Standards, DEIB, climate action, Business Process Optimization (BPO) and service design, user research, Agile project practices).
- Build a service inventory and establish service improvement priorities (using data to drive focus areas).
- Use the service inventory for the functional area to select a single service for transformation and use the service design practices – outlined in this Strategy and guided by the Service Standards – to re-think and re-design the service.

[5] Digital Transformation at Scale: Why the Strategy is Delivery

- Use the Alpha, Beta, Live cycles to launch the new “transformed” service which will involve designing, testing, and then building or configuring required process, technology, web, and data solutions for the re-designed service, along with changes necessary to the operating model to support the newly-designed service model.
- Actively evolve, iterate, and enhance the service as an active product.
- Repeat for the next service.

We intentionally recommend starting by working in areas where some of the services are already fulfilled by SFCC, (e.g., Transportation Requests/Complaints, Waste Management services) as that will position the Region to utilize that resource while creating capacity within SFCC to bring new services from back-office service areas, and move them online, establishing a virtuous circle.

As part of each initiative, we will build out new and reusable digital capabilities that will be made available to other services as and when they transform.

6.1.1 Scaling Up

The concept here is to test, learn and prove the value of transformation work – on a small scale, in several focused areas – by establishing three transformation teams.

Subject to the success of these teams and with the learning from their work, the Region can expect to scale up the pace of transformation work in years 2, 3 and 4 by adding transformation teams, either into the existing areas of focus, or into new business areas that are keen to adopt the approach (or in areas that CLT determines warrant attention).

6.2 Areas of Focus

Alongside these lighthouse initiatives, there are a series of focus areas – in which the Region must also build new capacity and capability – to support the transformation initiatives and to support the development of a stronger digital culture within the organization.

6.2.1 Digital Services

The Region must build a new capability around the design, delivery, and product management of digital services. To this end, the Region would benefit from:

- Formally establishing a web/digital team, with requisite skills, capabilities, and capacity to assist with the design, delivery, and operation of digital services with service owners and transformation teams.
- Recognizing the Region of Waterloo and other Region websites as the primary channel for customer interaction and search engines (like Google.ca) as primary access points to Regional services.
- Focusing on responsive web services – over the development of apps – with the planned decommissioning of the Pingstreet mobile app.
- Adopting and consistently applying the Service Standards to all future digital services and service re-designs to ensure that services are consistent and meet our core standards of what a good service should be.
- Developing a Design System[6] identifying consistent styles, components and patterns that can be re-used to simplify design work and ensure consistent user experiences.
- Applying Service Design methods to design end-to-end services, incorporate co-design (with service users) into the service design methodology.
- Establishing consistent user testing methods (recruitment, involvement, incorporating feedback). This is an opportunity for the Region to work directly with the community in the co-design and testing of services, to leverage the work of the lab, the accessibility community, the immigration partnership, and others to seek valuable input.
- Building a body of user research to help know its users better, know the demographics of the user base, allow for improved segmenting and a better understanding of the specific needs of each part of the community, to inform and guide service design work.
- Implementing a reusable set of standardized digital solutions for common patterns that services will be required to use (get information, pay, request, apply, book, tell, notify).

[6] The UK government Design System is a good model to follow – https://design-system.service.gov.uk/.

- Implementing a consistent user feedback service to allow satisfaction data to be aggregated across all digital services and to assess satisfaction between services, to capture complaints and other issues.
- Offering its users a single self-service “portal”, using the Verint CRM portal and exploring single sign on capabilities.
- Using its CRM platform to build a 360° view of service users.
- Reviewing its customer consent agreements and data collection statements to support the 360° view.
- Reviewing and revising its web and social guidelines and good practices, and refreshing content standards, socializing, and training teams on guidelines, standards, and best practices.
- Proactively sharing key insights with service owners, and actively using analytics (web, social, email) and SEO to improve the quality of web and digital services.
- Monitoring Ontario Digital Service work and emerging standards for integration opportunities, with particular interest in the Ontario Digital ID space.

6.2.2 The Modern Workplace

To enable and empower a digital workforce to do their best work, the Region must remove frustrations and frictions that prevent easy collaboration and provide its teams with the tools to work in modern, flexible, and agile ways.

To this end, the Region would benefit from:

- Developing management and staff guidance, best practices, and etiquette, and provide training for staff and management on how to operate effectively in a hybrid workplace.
- Developing and/or revisiting the policies, services, and support structures to facilitate hybrid working, recognizing the varying needs of the Region’s workforce (knowledge workers, frontline workers, customer service agents, field, and mobile workers, executive and management, and external partners).
- Providing robust “work from anywhere” technologies to provide reliable and highly performant remote access, including:
    - Establishing and communicating minimum standards for bandwidth and hardware requirements for accessing services outside of regional networks.
    - Proactively shifting toward a laptop fleet over desktop devices.

    - Ensuring ubiquitous availability of webcams, microphones, and headsets as an extension of laptop and remote work kits.
    - Reviewing who gets allocated smartphones, and whether there is a clear business case for broader distribution of smartphones to staff who have not traditionally received a corporate-issued device.
- Implementing new office and workspace configurations to provide flexible collaboration space, reservable desks, team spaces, hotelling stations, and other setups.
- Continuing to enhance meeting room technology and establishing revised standards for rooms (e.g., size / layout, hybrid meeting cameras, video, voice and recording capability, etc.).
- Setting the strategy and architecture and rapidly implementing Microsoft 365 as the corporate collaboration platform, with:
    - Outlook for email, calendar, and bookings.
    - Teams for team and partner collaboration, one-on-one and group chats, and discussions.
    - OneNote for personal and shared notetaking and personal knowledge management.
    - Microsoft 365 Productivity Suite (Word, PowerPoint, Excel) including mobile device, web browser access and collaborative real-time editing.
    - SharePoint (to replace the internal portal for file storage, document collaboration, large file sharing and transfer with partners).
    - To Do and Planner for personal and team task management and Kanban boards.
- Following the implementation of some short-term enhancements, replace DOCS with SharePoint, establishing a revised corporate information management governance model and modernized approach to document and record management to promote full document lifecycle management from creation through to disposition or archiving.
- Identification and promotion of the availability of recommended “new” collaboration and facilitation tools suitable for hybrid work (and certified for use) and the skills to use them, to include:
    - Online whiteboards.
    - Ideation.
    - Creative and project team tools.

6.2.3 End-to-End Process Automation

In support of the Region's digital aspirations, many back-office processes must be streamlined and simplified. In this area, the Region would benefit from:

- Building a corporate service inventory. Work in this area can begin with transformation work in Waste, Housing, and Roads, but this should expand to the whole organization.
- Using the service inventory in the longer-term to prioritize attention and focus on digital, technology, and data investments.
- Adopting the practice of process design first, ensuring that – at minimum – a process review and conceptual process optimization stage be executed before any technology is implemented.
- Following a formal corporate architecture model to drive reuse of key technology platforms and components to provide consistent user experiences, speed implementation of solutions, and keep costs manageable.
- Repositioning Verint CRM as a key Regional platform, implementing Verint CRM upgrades and the Verint customer portal, and expanding access to the CRM to business units to improve back-office handoffs.
- Building integrations between Verint CRM and core back-office systems, to support Waste, Housing, and Roads, transformation work.
- Implementing a modern HRIS system and transforming HR services into self-service, modern digital workflows.
- Implementing a Development Tracking system, streamlining back-office development, and permitting processes, introducing online self-service capabilities, and delivering data insights of key value.
- Implementing a SCADA systems modernization program for Water and Wastewater.
- Conducting an AP automation "lessons learned retrospective" before revisiting the AP automation second phase, to ensure that true transformative benefits can be achieved.
- Implementing a corporate Retail Management solution, including webstore, and supporting capabilities.
- Setting and executing a Regional Digital Payments Solutions Strategy building on the Region's recent PCI DSS compliance work and building a digital service that can support the required payment patterns.
- Implementing smart water meter reading and the associated infrastructure.

- Establishing a reusable corporate workflow and low code development platform, including suitable governance around the platform, with consideration going to using the Microsoft Power Platform, to enable the creation of simple apps and process automation solutions.
- Building a comprehensive systems/solutions inventory, publishing, and conducting an expert systems review and rationalization program and adopting a solution lifecycle framework to actively manage and communicate the status of application portfolio solutions.
- Establishing an integration platform standard, and building common data interfaces (e.g., from core systems to Finance, from CRM to core systems) to reduce data entry duplication, transposition errors and enable rea-time data analysis.

6.2.4 Data and GIS

There is a broad understanding that the Region sits on a ton of data. While there are pockets of genuinely good data-gathering/usage practices, data is an untapped resource and is a highly-valuable Regional asset from which the Region could derive significant benefit.

In this area, the Region would benefit from:

- Establishing a Regional data program, with an assigned leader, a small supporting team of policy and data engineers, and responsibility for establishing a Regional data work program.
- Completing a data maturity model assessment to baseline the current state and identify areas for focus.
- Assessing current levels of data literacy and building a targeted data literacy/education program, providing data training to leadership, management and staff that would equip them with the skills to read, understand, analyze, and use data to support consistent, rigorous, decision-making.
- Reviewing existing roles, and formally establishing Regional data roles (e.g., data analyst, engineer, scientist), and creating career progression opportunities for data specialists.
- Establishing a Regional data governance model that aligns with technology, digital and information management programs and that draws on existing experience and knowledge. The model should provide the necessary oversight to ensure the work plan supports shared goals and objectives.

- Creating a Regional Data Policy Framework to clarify Regional ownership of datasets, to formally establish the corporate value of data as an appreciating asset, to set out roles (data owner, steward, custodian) and responsibilities, and to set out the data lifecycle and key activities within the lifecycle.
- Confirming the PowerBI platform as the Regional standard for business intelligence, providing training and education to support its broad use and adoption and building out the data catalogue, including key contacts, and extended metadata to describe data holdings and democratize access to data.
- Identifying the Region's most important and most commonly-used datasets across departmental boundaries and pursuing data improvement initiatives to ensure that master data sources that meet the broad needs of regional stakeholders can be met.
- Identifying and publishing (via the data certification program) key corporate data (for example, SFCC service requests, web analytics, budget, and staffing data) that actively promotes internal Open Data sharing.
- Identifying 3-5 key cross-Regional datasets required to support key digital and transformation program initiatives (e.g., Customers (CRM), Employees (HRIS), Addresses (NG-911)), and build joint data project teams drawing on data expertise currently distributed throughout the organization to support the establishment of master data management and supporting practices for these datasets.
- Identifying 3-5 “Regional challenges” to which targeted/focused work in the data space would offer benefit (for instance, how could a data-centric approach help combat homelessness, understand community affordability, or help make Waterloo Region the best community for children and youth?).
- Continuing to expand the use and value of the corporate data warehouse and the data certification program.
- Continuing to build on the Region’s Data Networking Group as a community of practice for sharing data knowledge, experience, good practices, and learning. Establish a digital hub (content, messaging, policy, documentation, collaboration space) to support the Regional Data Networking Group in its goals.
- Continuing on the good work of the Region’s Data Networking Group, by building a regionwide campaign to actively promote data use success stories, data analysis and visualization capabilities, and data heroes who are using data to provide better services to residents.
- Working with the Region’s Data Networking Group to establish shared Regional data standards and good practices, including guidance around data collection, storage, quality, sharing practices and procedures.

- Maintaining and publishing a catalogue and guidance of available data-specific tools, their status and value, and how to access the tools and get training on them (e.g., PowerBI, Crystal, Tableau, ArcGIS StoryMaps).
- Establishing a corporate Wikipedia-style data site that provides open access to up-to-date master data about the Region and key metrics that should be used by all (e.g., census data, population, demographics, community growth, budgets, staffing) in reports to Council, the province, budget projections, etc.
- Working with WRPS and area municipalities to share data management practices and experiences.
- Considering the establishment of a Waterloo Region Data Partnership including area municipalities, conservation authorities, utilities and WRPS (learning from work in York Region on their York Information Partnership could be valuable here).
- Conducting a regulatory data sharing review (in partnership with Information Management and Privacy), to formally confirm and document what data sharing restrictions apply to Regional datasets.

6.2.5 Secure, Robust, Resilient and Interoperable Technology

Finally, as the Region becomes more reliant on digital and technology, security, resilience, and interoperability become increasingly critical.

In this regard, the Region would benefit from:

- Executing on its planned migration of its core computing infrastructure from the Region's outdated datacentre to a world class co-location datacentre facility. This will reduce facility management pressures and capital costs at Regional HQ, while also dramatically enhancing redundancy, resilience, and security.
- Establishing the appropriate architecture and strategy to support the adoption of Microsoft 365 as the corporate collaboration platform, ensuring that suitable security, compliance, threat protection, and device management controls are in place.
- Setting the Regional Unified Communications Strategy (in light of the introduction of Five9, Teams and increased needs for smartphone and softphone capabilities associated with the introduction of modern, hybrid working practices).
- Implementing a corporate Identity Management (IM) solution to support simplified staff experiences through SSO (single sign on) and improved security through ID management and two-factor authentication.

- Developing and resourcing a formalized security program and engaging a third-party managed security service provider to provide independent and round-the-clock monitoring, detection, and response, as well as security advisory services.
- Implementing an education program to share and promote security best practices for Council, leaders, managers, and staff, as well as stakeholder teams and groups like Procurement, Corporate Communications, Corporate Security, and others.
- Developing a Regional Cloud Adoption Strategy, identifying the Region's Cloud posture, setting necessary policies and standards, and laying out the decision tree for evaluating Cloud options.
- Enhancing and extending the Region's Business Continuity and Disaster Recovery Strategy, plans, provisions, and systems.

The projects identified in the Areas of Focus section, in the near-term at least, should draw upon the ideas and concepts that are put in place to support the lighthouse projects and project teams should receive education and training around techniques and methods that could be relevant (such as user research and testing, Business Process Optimization, co-design with users, Agile project methods). But these project teams will not be required to *comply* with these methods as transformation teams will be.

7.0 Building a Transformation Culture

“Culture eats strategy for breakfast” is the often-quoted Drucker maxim, that reminds us that organizational culture and people will be the key determinants in the success of the Region’s transformation efforts.

To become a transformed, service-focused, digital organization, the Region must build a culture that is more open to change, that is digitally-savvy, focused on process management, and that uses data and insights to manage service and service improvement.

7.1 Mindset and Approach

It all starts with the right mindset.

The Region and its leadership should actively work to promote and cultivate a digital mindset throughout the organization – one where Councillors, leaders, service owners and teams consistently and continually apply the service and digital, equity and climate lenses to thinking about service and service design.

Then, there is a need for staff, management, and leaders to recognize the transformation imperative and to begin personally work on developing:

- A readiness, willingness, and openness to change.
- A curiousness about new ways of doing things – questioning the status quo and looking for better ways of doing things, willing to experiment and try things.
- An ability to work directly with service users.
- A focus on customer experience and designing services for users.
- A willingness and aptitude for working collaboratively.
- A readiness to work across organizational (departmental and team) and sectoral (area municipalities, partners, agencies) boundaries to solve problems and take advantage of opportunities in new ways.
- A willingness to think big and act small – breaking big, transformative change into smaller, more manageable components delivered incrementally instead of all at once.
- A willingness to work in the open – sharing work, being transparent, welcoming feedback and input.

- A bias to action and a willingness to try and experiment in situations where there is uncertainty.
- A willingness to recognize and accept more risk than has previously been the norm, and to look for new ways to accept or mitigate risks in favour of action.
- A willingness to be humble, to recognize value in progress, and to be OK with less than perfection (after all, 80% is still an A-grade).
- A willingness to accept that failures will happen and to learn from them.

These are the skills and capabilities that will help people prosper in the digital age. Regional leaders can and should help cultivate and model this approach and these behaviours.

7.2 Invest in a Formalized Digital Education Program

This should be backed up by an investment in education – helping leaders and staff throughout the organization learn about, understand and equip themselves for the change ahead.

The Region should develop a formal and structured Corporate Digital and Service Transformation Education program to help both inspire leaders, managers and service owners as well as to equip them with the knowledge about what makes for successful transformation work.

This should focus on:

- Formal and informal education for leaders (all commissioners, directors and managers and supervisors should participate in digital and data literacy programs).
- External speaker programs (e.g., TEDx Waterloo Region) – this is a great opportunity to lean on and learn from the community, working with Communitech and other leaders in the community could bring extremely valuable insights into the organization.
- Lunch and learns (internal shared learning and experiences).
- Informal and frequent communications that include easily and quickly consumable tips and concepts that relate to transformation topics (digital, technology, REDI, climate) and include FAQs, “did you know”, etc.

In addition to the commitment to formal education, there is great power in networked knowledge and sharing of experiences and learning from staff on the ground.

We recommend that the Region consider establishing a range of Communities of Practice around key topics (e.g., data, GIS, digital service, process optimization and service design).

What is a Community of Practice?

A Community of Practice (CoP) is a group of self-identifying people who share a common interest in a topic area or domain.

They may work in a domain, work adjacent to a domain, or are interested in a domain. They come together digitally (using mailing lists, Teams channels, virtual meetings) and in-person (roundtables, workshops, lunch and learns) to share experiences and knowledge, learning, and good practices.

A strong community fosters interaction and encourages a willingness to share ideas.

7.3 Hire for Digital Aptitude and Skills

Further to training and educating the current workforce, the Region should also ensure that new hires arrive with the digital skills and aptitudes that are required.

Leaders should have a digital mindset, a process focus with experience of Lean or continuous improvement disciplines, experience in using data to drive service improvement, and experience in leading large-scale digital change, alongside their domain expertise and experience.

Staff should generally be comfortable using modern technology, open and flexible to change, ready, willing, and able to use technology to do their jobs.

The Region should look to update job descriptions and recruitment ads to reflect modern, real digital skill requirements (experience with Word, PowerPoint and Excel should no longer be the baseline requirement). Some roles will also need an understanding of basic or advanced Agile concepts and methodologies.

The Region should also anticipate needing to create new digital-specific roles that are not currently present in the organization. Further work in this area will be undertaken as the target operating and organization structure is developed, but at this stage, opportunities exist for the Region to add the following roles and skills:

- Digital Program Lead and a Web and Digital Team (including User Researchers, User Experience Designers, Developers, and Content Designers).
- Data Program Lead, Data Engineers, and Data Scientists.

- Enterprise Architect, Product Managers, Security Specialists, Cloud Specialists, Integration Specialists.
- Business Analysts and Service Designers.

Work to finalize Regional staffing requirements is underway.

7.4 Accountability for Services and Their Transformation

Citizens have expressed their preferences and with this Strategy, the Region has made a commitment that services should be digital.

Each service that the Region offers should have an identified service owner.

It should be clear to everyone that the service owner is wholly responsible for the provision of the service – its operation, its quality, the performance of the service and customer satisfaction – and its availability as a digital service.

Service owners are **accountable** for delivering their service digitally, but they are required to work collaboratively with their strategic transformation partners, and to the Service Standards that has been set within this Strategy to make that happen.

Service owners will also be expected to continuously challenge the status quo, and to be constantly and iteratively looking for opportunities to further improve their service.

The service owner has a proactive role to play – not as a figurehead but as someone who is actively guiding and evangelizing the realization of the business capabilities as well as eliminating the barriers that impede achievement.

7.5 Multi-Disciplinary Teams – Not Silos or Heroes

While service ownership is an individual accountability, transformation is a team sport. The Region needs the right people, with various skill sets and perspectives to come together to execute on Service Transformation initiatives.

Transformation teams are small and focused, collaborative and empowered. They are multi-disciplinary groups of people with a mix of skills, experiences and perspectives. They are to lead the re-design of services in the Digital First vision. They will use and embody the new methods discussed – user research, service design, digital delivery and Agile.

Transformation teams should include the service owner, staff from business areas, with web, data, tech, process, and customer service experience.

A common framework for membership revolves around a core team of three – product lead/owner, analyst and developer, but a more fulsome team may include the following roles.

- Product Lead.
- Business Analyst.
- Application Specialist / Developer.
- Service Owner / Manager.
- Subject Matter Experts.
- Designer (UX).
- Communications/Engagement (if not managed by Product Owner).

7.6 Digital Methods

7.6.1 Adopting Agile / Scrum

Doing projects well requires project management discipline – this is a proven and widely known fact. The waterfall method – build the specification, plan out all the activities, run the project according to the agreed plan – has long been the accepted best practice model.

Agile is a different approach to work that focuses on breaking larger initiatives into smaller work packages. It focuses on collaboration over long requirements lists, cross-functional and multi-disciplinary teams coupled with direct and regular communication, reducing the work in progress to ensure team focus, responding to change over following a plan and iterative approaches, involving short work sprints.

The Agile approach is well-suited to and broadly adopted by digital and transformation teams the world over.

The Region should actively adopt Agile, and the Scrum methodology specifically for its transformation initiatives. Each transformation team and a collection of supporting teams in technology, web and customer service should receive training in Scrum.

The waterfall project management method will continue to be used for many projects across the Region, not the least of which is construction and engineering projects of course, but also various technology initiatives.

As the Region expands the number of transformation teams and grows its familiarity with Scrum methods, it will likely want to train people beyond transformation teams and extend the use of Agile practices into other areas of the organization – but this is a good place to start.

7.6.2 Moving to a More Product-Centric Approach

There is another important change in approach that the Region should also incorporate into its service management practices.

Traditionally, the Region (and most municipalities, for that matter) fund projects. As discussed above, project funding and the waterfall approach is well-suited to one-and-done initiatives, but less well-suited to the ongoing evolution and continuous improvement of services (and digital services, specifically).

Imagine if the iPhone or Facebook or LinkedIn hadn't changed since their launch.

Each of these examples are products that evolve day-by-day, week-by-week, year-over-year, with added features and capabilities that make them easier to use, more sticky and more delightful.

While the Region is not attempting to be the next Facebook, the Region's services are products, and they too must evolve. Because user and staff expectations change, social norms adjust, technology capabilities change, the Region's services need to adjust accordingly.

It is recommended that the Region adopt a more product-centric approach to managing – at least initially – its transformation initiatives. It can do this by funding teams, rather than projects (as recommended) and allowing them to launch and evolve products and services.

In the longer term, the product management approach should be brought to the Region's technology products and services, and to its services at large.

7.6.3 Embedding Service Design and Business Process Optimization into Regional Practices

Transformation work will rely on service design and Business Process Optimization techniques and approaches.

The Region should train service designers and business analysts (who will work on transformation projects) in both service design and in Lean (or a similar process design and process improvement discipline).

The training provided by the School of Good Services[7] is recommended for service design. A variety of Lean and Business Process Optimization learning programs are available in the marketplace.

More broadly speaking, these skills are highly valuable, and a process review and optimization stage should precede all business solution projects, regardless of whether or not they are transformation initiatives.

7.6.4 Applying User Research to Put Users at the Centre of Service Design

There is an important concept in service design that “you are not your user”.

It is important to remember that people who work at the Region have knowledge, experience, and expertise that the user of the service simply does not have.

When designing services without recognizing this fact, services make assumptions about the knowledge of users, using acronyms and terms that users may not be familiar with, or ending up with a service that is too complicated for the average user, frustrating more than delighting them.

To counteract this, service designers and service owners should actively involve users in the design of services so that they better match the needs of those users.

It is recommended that the Region’s service design work actively involve users of the service at three stages:

- **Discovery** – In framing and understanding the opportunity, the Region should conduct user interviews, focus groups, build journey maps, and conduct empathy mapping to help transformation teams better understand the users of the service, their situations, to understand the user experience, the points of friction and frustration. This understanding will help build better services and better products that more closely meet the needs of the users.
- **Design (Alpha, Beta)** – There is value in seeking early feedback from users on paper prototypes, on mock-ups and on early minimum viable products (MVP) that teams have worked on. Seeking early feedback ensures that teams are heading in the right direction and the service will meet user expectations.

[7] http://good.services

- **Testing and Iteration** – The way users actually interact with services is very different than how we often expect. Where possible, the Region should look to test prototypes, alphas, and betas of products with real users in a usability lab-type environment.

These are novel approaches and methods for the Region, that has not typically involved users in this way, that has relied on surveys and other forms of input, over direct conversations with users.

It is recommended that the Region seek external support to develop this practice and anticipate that usability and user researcher skills will be available at the Region.

7.6.5 Following a Corporate Technology Architecture

Architecture is about defining a common playbook and set of tools that the Region can use to address digital opportunities.

Identifying the default solutions or components to use to meet a digital need will help the Region move faster, reduce decision times, and reduce complexity. It will also help focus teams on commonalities over differences helping to build a more consistent service experience for customers and staff.

Having a technical architecture to support digital transformation is no different than having an architectural plan to build a house – it is a blueprint that teams can use to ensure they are building the right thing in the right way.

To support the development of a digitally-focused technology architecture, it is recommended that the Region:

- Set up an architecture program, including establishing a lead digital or enterprise architect role and supporting staff.
- Use the vision and service standards defined in this Strategy to guide the establishment of baseline standards for information and data, application and integration, technology and security that must be met when implementing technology and digital solutions.
- Continue to use the IT Business Relationship Manager (BRM) model to coordinate the intake of ideas, exploration of opportunities and sourcing of solutions with the architecture function.
- Require that all transformation and technology initiatives work with the lead digital architect to ensure reuse of existing patterns, services and capabilities, and alignment to standards, and establish a process for dealing with exceptions.

- Ensure the architecture program has teeth by ensuring that requests for exceptions or deviations from the agreed architecture require escalated approvals.
- Adopt and apply reusable service patterns to design and build digital services. Use transformation initiatives to establish solutions and services for the common digital patterns (get information, report, request, apply, tell, pay, book). By building the components that make up each of these patterns, the Region can establish a toolkit that will help to deploy new digital services more rapidly.
- Focus investment in technologies that will support reuse and reduction of technical debt. Commit to a handful of enterprise platforms to be at the core of the digital transformation architecture. Where these are known, they are identified below:
    - GHD iCreate and website hosting (at least in the medium-term) as the corporate website, knowledge base and microsite solution.
    - CRM (Verint) should form the basis of the online portal for service requests and forms, which should be routed to the CRM.
    - CRM (Verint) should be the corporate CRM solution (at least in the medium-term) and primary method for service requests and managing the customer relationship.
    - Five9 for contact centre technology.
    - Microsoft M365 as the collaboration and productivity suite.
    - GIS (ESRI) as the primary geospatial and mapping application.
    - PowerBI Platform (including PowerBI Pro, Azure Data Catalogue) as the Region's BI platform.
    - Retail Management system as the corporate POS, webstore, and retail solution (TBD).
    - Payments (TBD).
    - Integration technology (TBD).
- Build a comprehensive solutions inventory/catalogue identifying common capabilities and patterns available in each solution. Tie each application to the MTM service categories. Capture and track the relevant information for each solution to enable proper system lifecycle management.

7.7 Invest in a Digital Training Program

As the Region increases the pace at which it introduces change, it must ramp up offerings of digital training for staff on new tools and capabilities particularly around new collaboration capabilities as they are introduced – and on an ongoing basis – through projects and digital Communities of Practice.

The Region should develop a digital tools and training program, including providing training on:

- Modern technologies (Teams, Microsoft 365, new collaboration tools, Kanban).
- Agile / Scrum methodology.
- Lean / Business Process Optimization.
- Service Design.
- Journey Mapping, Empathy Mapping, Usability Testing.

7.8 Work Openly and Celebrate Success

Transformation teams should work openly and communicate freely about what they are doing and the progress they are making – blogging and weekly notes are common in digital teams and should be actively encouraged.

We want and need to catch the interest of others around the Region who might benefit from the work being done, even if they are not currently/actively looking to do so.

When the Region has done good work (e.g., shift scheduling, data certification) it should do a better job of sharing and celebrating what has been achieved.

Corporate awards programs should actively highlight successful digital transformation work, and Regional teams should work in the open, blogging and openly communicating about the work they are doing.

8.0 Measuring Progress

To monitor progress, it is important for the Region to measure what matters. As such, we recommend that the Region focus on two areas – delivery and culture.

8.1 Core Measures – Transformation Delivery

8.1.1 Service Transformation

Over the next four years, the Region should target moving three, then five, then eight, then 10 of its highest-volume services to an online, Digital First model. Each of these services should meet the Service Standards.

The Region should regularly measure and report on:

- The number of services offered by the Region that meet its Service Standards and are offered Digital First.
- The number of services that have been actively moved from back-office to SFCC-supported.
- The number of internal services offered by the Region that meet its Service Standards.

8.1.2 Digital Take-up

The Region aims to drive traffic to digital channels because they provide a better experience for users and require less work for staff.

The Region should measure and report on:

- For each service, the % of people using the digital service against those using non-digital channels.

The Region should also gather the following metrics:

- Number of unique online users/transactions.
- Monthly/annual active users.
- New vs. returned users (retention).
- Bounce rate and channel switching.

- Demographic-specific adoption rates.

8.1.3 User Satisfaction

The Region should strive for a 90% user satisfaction rate with respect to the use of digital services.

To track this, the Region should measure and report on:

- Service completion vs. abandon rates.
- Customer feedback (using a common and consistent feedback tool).

8.1.4 Digital Return On Investment (ROI)

To ensure that the value of digital services is there for customers and the municipality, the Region should measure and report on:

- The savings achieved through each transformation / Digital First service re-design (cross-referenced against initial assumptions and calculations from process re-design work).
- The cost per transaction (pre- and post-launch, quarterly post-launch, and then annually), calculated for each digital service.[8]

The Region should also build and actively maintain a benefits realization register for all service transformation work so the value of the program can be effectively tracked and communicated.

8.2 Core Measures – Culture

Digital transformation requires a commitment across the organization and therefore requires support, training and engagement opportunities for staff.

[8] See https://www.gov.uk/service-manual/measuring-success/measuring-cost-per-transaction for more details on calculation methodology

8.2.1 Digital Literacy and Education

The Region wants to provide digital literacy programs to staff to build engagement and consistency in digital service delivery.

To track progress, the Region should measure and report on:

- Staff digital literacy rates (measured via surveys).
- The number of staff digital literacy/education events and participation rates.

The Region should also gather metrics on the usage of digital resources, such as:

- Traffic to digital resource libraries.
- Downloads/access to digital tools and self-guided training.

8.2.2 Training

The Region plans to provide digital service design training programs to develop internal skillsets and build competency. To track progress in this area, the Region should measure and report on:

- The number of training events and participation rates.
- % of staff trained.
- % of departments with trained staff.
- % of leaders trained.

8.3 Additional Measures

8.3.1 Application Rationalization

The Region should reduce the number of applications it runs. It should measure and report on:

- The number of expert systems, relative to a baseline.
- The number of expert systems against a set goal (e.g., reduce the number of applications by 25%).

8.3.2 Service Implementation

The Region should reduce the number of services it introduces or relaunches as offline-only or partially-online, without back-end digitization or automation.

The Region should measure and report on:

- The % of forms available online that are non-integrated (e.g., PDF and webforms) vs. fully integrated, Digital First services.
- The number of digital training sessions (year-over-year comparison).

9.0 Next Steps

With this Strategy, we have laid out why we think it is important and imperative for the Region and what the Region should do to respond to the transformation opportunity.

The vision and strategic trajectory are laid out, the key activities and areas of focus identified.

The next task for the Region is to determine how it can act on the strategic vision.

9.1 Develop a Digital Operating Model

The Region must develop a transformation operating model that will position it to deliver against the Service Transformation vision.

The operating model should include:

- The appropriate leadership and organization model, with the requisite skills, capabilities, and capacity, aligned in an effective way to lead and execute on the transformation work ahead.
- A comprehensive governance model to oversee transformation, digital, data, technology, and customer service programs.
- An appropriate budget allocation and management model that supports the funding of teams, and products over projects.
- Supporting processes (prioritization, portfolio reporting, project, and product delivery).

The consulting team will work closely with the Region's leadership to develop this operating model.

9.2 Select, Sequence and Fund Service Transformation Programs

As noted earlier, it is recommended that Waste, Housing, and Roads areas be the targets of the Region's first multi-disciplinary transformation teams.

These lighthouse teams, as well as the required internal service teams, need seed funding to secure the necessary resources, to free up subject matter experts and to implement required technologies to support transformation efforts.

9.3 Develop a Service Transformation Implementation Plan

While we have espoused investing in transformation teams, there is also a large portfolio of technology, digital and data initiatives that must also be pursued. Some of these initiatives are foundational in nature, and many must be sequenced in the right order because of various dependencies.

The consulting team will work with the Region to develop a costed, prioritized and resourced implementation plan that can be integrated into the Region's future capital and operating budget plans.

10.0 Conclusion and Call to Action

At the centre of Canada's technology triangle and with a community that clearly demonstrates a strong and proven desire and willingness to use digital services, service transformation through a digital lens is a logical and obvious direction for Waterloo Region to chart.

Furthermore, facing significant budget pressures and on the cusp of significant growth, service transformation work and this Strategy represents a thoughtful response, a constructive way forward to unlocking capacity to deliver much-needed services as efficiently and effectively as possible, while equipping the organization with the right capabilities and muscles to scale to meet the demands of its community.

The Strategy recognizes where the Region is today and lays out a realistic and achievable approach to kick-start transformation work, building on existing strengths and capabilities, while incorporating new digital approaches that are proven to be successful at federal, provincial, and municipal governments globally.

By committing to, investing in, and following through on this Strategy, the Region can build a change-ready, digital culture that is more flexible, agile, and be ready to meet the challenges of today and tomorrow head-on.

Indeed, it is the key to being a world-class organization.

Appendix A – Glossary of Terms

Term	Explanation
311	A number to call that provides residents, businesses, and visitors with easy access to non-emergency City services, programs and information 24 hours a day, seven days a week.
AAF	Audit and Accountability Fund – Ontario government funding to support initiatives that focus on increasing digital services, modernization, streamlining and service integration
ABM	Automated banking machine
Agile	An iterative approach to project management and solution development
AI	Artificial Intelligence – A systems capability to learn and react to data inputs based on algorithms and machine learning
Alpha Cycle	A code name for the phase of development that takes place before a product is launched; software that is in its first phase of software testing
AODA	Accessibility for Ontarians with Disabilities Act – A law that sets out a process for developing and enforcing accessibility standards
AP	Accounts Payable – an account that represents a company's short-term debts
ArcGIS	A family of client software, server software and online GIS services developed and maintained by Esri, used to make maps, analyze data, and share and collaborate
ArcGIS StoryMaps	Inspiring, immersive stories built by combining text, interactive maps, and other multimedia content that can be published and shared with your organization or elsewhere
Azure	A Cloud computing platform operated by Microsoft that provides access, management, and development of applications and services
Back-office	An office or department where work is carried out to support the business of an organization, rather than being customer-facing
BCP	Business Continuity Plan – A document that outlines how a business will continue operating during an unplanned disruption in service

Term	Explanation
BCP/DR	Business Continuity Planning / Disaster Recovery – A set of policies, procedures and practices that are designed to assist an organization to recovery from a significant IT failure
Beta Cycle	Code name used to signify that a software product has moved into its second phase of testing and is ready for external use by customers or clients
BI	Business Intelligence – Refers to technologies, applications and practices for the collection, integration, analysis and reporting of business information, and is designed to support better business decision-making
BPO/BSO	Business Process/Service Optimization methodology – A process review methodology developed and used by Perry Group
BPR	Business Process Re-engineering
BRM	Business Relationship Manager – Serve as translators for IT work and gather valuable intelligence that can improve how decisions are made regarding investments, resource allocation and strategic alignment
BRM Model	BRM Competency Model – Lists the competencies and traits that can be expected from people who perform the role of a Business Relationship Manager, regardless of their title.
CAO	Chief Administrative Officer
CAPEX	Capital Expenditure
CIBC	Canadian Imperial Bank of Commerce – a Canadian multinational banking and financial services corporation headquartered at CIBC Square in the Financial District of Toronto, Ontario
Cloud	A term used for IT infrastructure and services located outside of the corporate network and accessed over the internet
CLT	Corporate Leadership Team
Communitech	An innovation centre in Waterloo Region (a member of the Ontario Network of Entrepreneurs funded by the Ontario Government) helps tech companies start, grow and succeed.

Term	Explanation
CoP	Community of Practice – A group of people who share a common concern, a set of problems, or an interest in a topic and who come together to fulfill both individual and group goals
CRM	Customer Relationship Management – A generic system for case management that can be used for handling customer enquiries. *Note that the C in CRM is used differently in many municipalities – Citizen, Client, Customer, and Constituent*
Crystal Reports	SAP solution that helps you analyze data by creating richly-formatted, pixel-perfect, and multipage reports from virtually any data source, delivered in multiple formats
CSPS	Children Services Portal Service
Customer	Refers to users of the municipality's technology and digital services, including residents, businesses, visitors, Mayor and Council, the workforce and our partners
CX	Customer experience
Data	Information in an electronic form that can be stored and used by a compute, typically collected to be examined and considered and used to inform and help decision-making
Data Catalogue	A detailed inventory of all data assets in an organization, designed to help data professionals quickly find the most appropriate data for any analytical or business purpose
DeepL Translate	A tool to translate text and files instantly, using Neural Networks to grasp subtle meanings of sentences, translating them to a target language with machine translation quality
DEIB	Diversity, Equity, Inclusion, and Belonging – a pillar for business and Human Resources strategies as companies turn their focus to building inclusive workplaces that drive sustainable growth and innovation
Digital	Refers to a mindset, mode of operating, and delivery of services that takes advantage of modern technologies (web, app, social, mobile, data). These deliver improved experiences, business efficiencies and insights

Term	Explanation
Digital First	Engineering, architecture, platform, technology, content, experience, culture – all striving to reimagine and reset outdated business practices and conduct business in an online “anywhere, anytime” manner that takes full advantage of burgeoning technologies
Digitized	The automation of manual and paper-based processes, enabled by the digitization of information and workflows, moving from an analog (often paper-based) process to a computerized process
DOCS	Opentext eDOCs EDMS. The Region currently used version DM16
DNWG	Data Networking Group
DR	Disaster Recovery – A set of policies, procedures and practices that are designed to assist an organization recover from a significant IT failure
DRI	Directly Responsible Individual – The person ultimately accountable for a service, a product, or a project
Drucker	Peter Ferdinand Drucker was an Austrian-American management consultant, educator, and author, whose writings contributed to the philosophical and practical foundations of the modern business corporation
DSC	Digital Steering Committee
DTGC	Digital and Technology Governance Committee – Corporate governance committee for information and technology decision-making
Engage WR	Online community engagement tool
EOL	End of life (i.e., software, hardware, equipment, etc. that is outdated or no longer supported)
Esri or ESRI	International supplier of geographic information system software, web GIS and geodatabase management applications

Term	Explanation
Experience	Refers to the overall experience of a person using a service, especially how easy or pleasing it is to use
Facebook	An online social media and social networking service
Five9	A leading provider of Cloud contact centre services
GHD	A global network of multi-disciplinary professionals providing clients with integrated solutions through engineering, environmental, design and construction expertise
GIS	Geographical Information Systems – Systems designed to capture and report on all types of geographical data, including spatial data
GRAAC	Grand River Accessibility Advisory Committee – a cross-disability municipal advisory committee whose members advise the municipal Councils of the Cities of Kitchener and Waterloo, the Region of Waterloo and the Townships of Woolwich, Wellesley, Wilmot, and North Dumfries
GRT	Grand River Transit (Region of Waterloo)
HQ	Headquarters
HR	Human Resources
HRIS	Human Resource Information System – Corporate wide system for managing the human resource management processes such as employee records, training certifications, etc.
iCreate	The Region's Content Management System, used to author, edit, and approve content to be posted to the Region's website
ID	Identity Document – a document used to verify a person's identity

Term	Explanation
IM	Identity Management – ensures that authorized people – and only authorized people – have access to the technology resources they need to perform their job functions
IT	Information Technology
ITS	IT Services (department/division)
ITSM	Information Technology Service Management – The standards and processes used to define how IT delivers services
Kanban	A Lean scheduling system for minimizing work in progress
Lean	A method that provides organizations tools to improve the capability of their business processes to increase performance and decrease process variation, leading to defect reduction and improvement in profits, employee morale, and quality of products or services
LinkedIn	A business and employment-focused social media platform that works through websites and mobile apps
Live Cycle	Part of the Software Development Lifecycle following design, alpha and beta testing when the software goes into live production
M365 (formerly Office 365 or O365)	Microsoft Cloud-based office productivity suite which includes email and calendar, messaging, collaboration, and office suite
MDM	Mobile Device Management – the management of remote devices.
MOSA	Municipal Online Services Assessment – Perry Group's generalized assessment to articulate a target state for the digital experiences that municipalities could, and arguably should, deliver to citizens based on industry best practices
MTM	Municipal Technology Model – Perry Group's generalized architecture used for assessing municipal technology environments

Term	Explanation
MVP	Minimum Viable Product – a version of a product with just enough features to be usable by early customers who can then provide feedback for future product development
NENA	National Emergency Number Association – an organization whose mission it is to foster the technological advancement, availability, and implementation of a universal emergency telephone number system
NG911	Next Generation 911; enhancements to 911 services to a) move to digital and b) handle text messaging, multimedia and other
OneNote	A Microsoft tool – digital notebook that automatically saves and syncs your notes as you work; type information in your notebook or insert it from other apps and web pages; take handwritten notes or draw your ideas
PC	Personal Computer
PDF	Portable Document Format – a file format that provides an electronic image of text or text and graphics that looks like a printed document and can be viewed, printed, and electronically transmitted
PGC	Perry Group Consulting
Pingstreet	A location-based discovery tool that provides you with real-time access to garbage and recycling calendars, current events, local government info, social media, etc.; allows you to report a problem and improve your neighbourhood, connect with your community through Twitter and Facebook feeds, and stay up-to-date on the latest news and events
Planner	A Microsoft tool – a lightweight, mobile, and web-based application to create plans, assign tasks, chat about tasks, and see charts of your team's progress
POS	Point of Sale – the time and place at which a retail transaction is completed
PowerBI	Connecting and visualizing data using a unified platform
Power Platform	A Microsoft tool – a line of business intelligence, app development and app connectivity software applications

Term	Explanation
REDI	Respectful Environments, Equity, Diversity, and Inclusion
RFP	Request for Proposal – a business document that announces a project, describes it, and solicits bids from qualified contractors to complete it
ROI	Return on Investment – a calculation of the monetary value of an investment versus its cost
RoW	Region of Waterloo
SCADA	Supervisory Control and Data Acquisition – a computer-based system for gathering and analyzing real-time data to monitor and control equipment that deals with critical and time-sensitive materials or events.
Scrum	A framework for project management that emphasizes teamwork, accountability, and iterative progress toward a well-defined goal
SDAF	Streamline Development Approvals Fund – provincial grant program
SDLC	Software Development Lifecycle – a process used by the software industry to design, develop and test high quality software
SEO	Search engine optimization – the process used to optimize a website's technical configuration, content relevance and link popularity so its pages can become easily findable, more relevant, and popular toward user search queries, and as a consequence, search engines rank them better
SFCC	Service First Contact Centre
SMS	Short Messaging System – Cell-phone-based text messaging
Sprint	Sprints are time-boxed periods of one week to one month, during which a product owner, scrum master, and scrum team work to complete a specific product addition. During a sprint, work is done to create new features based on the user stories and backlog. A new sprint starts immediately after the current sprint ends
SR	Service Request – A formal request from a user for something new to be provided

Term	Explanation
SSO	Single Sign On – A session and user authentication service that permits a user to use one set of login credentials
SWRIL	Smart Waterloo Region Innovation Lab
Tableau	Business intelligence, data certification and data analytics software
TBD	To be determined
Technology	A short form for Information Technology (IT), it is the use of computers and computing systems to store, retrieve, transmit, process, and manipulate data or information
Tedx	A program of local, independently-organized events that bring people together to share a TED-like experience
To Do	A Microsoft tool – a Cloud-based task management application that allows users to manage their tasks from a smartphone, tablet, and computer
UX	User Experience – the process that design teams use to create products that provide meaningful and relevant experiences to users. UX design involves the design of the entire process of acquiring and integrating the product, including aspects of branding, design, usability, and function
Verint	Software for customer engagement management and business intelligence, aiding data analysis, particularly with large datasets
Web Analytics	The measurement, collection, analysis, and reporting of web data to understand and optimize web usage
Wi-Fi	A wireless networking technology that uses radio waves to provide wireless high-speed internet access
Wikipedia	A multilingual free online encyclopedia written and maintained by a community of volunteers through open collaboration and using a wiki-based editing system
WRPS	Waterloo Regional Police Services

Appendix B – Supporting Materials

Throughout the project, a set of reports, assessments and tools were provided to the Region as part of the Perry Group work. The following artifacts have been made available to the Region's project team.

Discovery

- Discovery Report.
- Staff Survey Analysis Report.
- Digital Strategy – Municipal Trends and Best Practices.
- Municipal Technology Model – Assessment Results.
- Municipal Online Services Assessment.

Strategize

- Digital Service Recommendations from BPO work (reports and presentation).
  - SFCC Call Intake.
  - Children Services Portal.
  - Student Immunization Reporting.
  - Roads Service Requests.
  - Waste – Bag Tag Sales.
  - Housing Maintenance Requests.
- 15 Digital Service Standards.
- Change Management Framework.
- Proposed Digital Architecture.
- Information and Data, Application and Integration, Technology and Security Principles.
- Common Digital Patterns.

Plan

- Detailed workplan

Appendix C – Table of Figures

Produced by

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Our reports have been designed to meet AODA guidelines, and we strive for accessibility compliance.

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