



**Information Technology Services Department**

**TO: Budget and Corporate Services Committee**

**SUBJECT: e-Government Strategy: Towards a Digital City**

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Report Number: IT-03-11

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Report Date: November 24, 2011

Ward(s) Affected: 1  2  3  4  5  6  All

Date to Committee: December 13, 2011

Date to Council: December 19, 2011

**Recommendation:**

Approve the e-Government Strategy subject to approval of the 2012-2021 Proposed Capital Budget and Forecast and the 2012 Current Budget.

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**Purpose:**

- Address goal, action or initiative in strategic plan
  - Establish new or revised policy or service standard
  - Respond to legislation
  - Respond to staff direction
  - Address other area of responsibility
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**Reference to Strategic Plan:** Excellence in Government

**Executive Summary:**

People of Burlington are more connected and technology proficient than ever and their expectations of City service delivery are on the rise. They are used to accessing internet based services that are convenient, always on and accessible from their banks, utilities, retailers, and phone and cable companies. Increasingly they expect the same of their City services.

The City is providing adequate online service delivery in comparison to other municipalities, but needs to evolve its model to remove the risk of falling behind. The e-Government Strategy proposes that Burlington be positioned as a Digital City – a city that uses technology to its full potential and fully engages the community in delivering excellent, innovative and efficient customer service. This innovative model will provide Burlington a competitive advantage for attracting knowledge and technology based business and community initiatives.

City services, along with the people, processes and technology that support their delivery, must be designed and built to work together to support customer focused service. Existing business processes which evolved to address the needs of the City must be re-engineered around the needs of the customer. The projects recommended in the e-Government Strategy represent business transformation projects supported by technology, which will have significant impact on service delivery, processes and use of resources.

The e-Government Strategy presents four strategic cornerstones for successful delivery of an effective e-Government program:

- 1. Build a Customer First Service Delivery model**  
Design and build programs and services in a truly customer first way.
- 2. Build a Customer Centric Technology Architecture**  
Build a core foundation based on new and enhanced portal technologies that deliver more robust, flexible and updated functionality and provide integration to a Customer Relationship Management system.
- 3. Prioritize an Internet First model, while supporting channel choice**  
Design services so that the Internet is the primary service channel over other costly channels, while supporting and enabling delivery through conventional channels.
- 4. Embrace Open Government, Citizen Engagement and Government 2.0**  
Embrace Open Government and Open Data initiatives to encourage participation, interaction and transparency.

The strategy requires an investment of approximately \$2 million in technology and resources over the next three years. This will build the technology platform to power the e-Government and online service programs for the future.

The e-Government program will deliver a range of services and benefits. Some of these benefits are tangible (faster, more convenient, more cost effective services) while others are less tangible (increased customer satisfaction, increased transparency and engagement). The program is expected to achieve incremental productivity benefits across many departments as well as reductions in printing, mailing, filing and archiving costs. Furthermore, customers benefit from significant time savings, and the number of trips to City facilities can be reduced considerably.

The e-Government strategy identifies a vision and approach to delivering streamlined customer first services, powered by technology and delivered primarily via the Internet. This strategy represents an opportunity to realize many of the objectives and initiatives outlined in the City's new Strategic Plan. The strategy is viable and realistic, and requires leadership combined with smart investment in appropriate foundational technologies to achieve. Delivering the programs recommended in the e-Government strategy will position the City as an intelligent community – a digital city that fully embraces and harnesses the power of technology to enable 21st century government services. Executive Committee supports the strategy as a key corporate initiative to address in 2012.

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## **Background:**

**In 2001**, the City of Burlington initiated efforts to enhance online service delivery with the Electronic Service Delivery (ESD) Strategy and subsequent implementation of a new website and on-line services in 2002/2003. Since that time, the municipal sector has seen continual upwards growth in demand for high quality, diverse online municipal services.

**In 2007** Future Focus VII Strategic Plan identified the need to further explore opportunities to raise awareness of city services through different forms of communications technology and offer additional opportunities for citizens to provide their views to Council.

**In 2008**, the council approved IT Business Strategy (2008-2011) which included the development of an e-Government Strategy as a key deliverable of this important council objective. E-Government is an emerging trend in the public sector that leverages information technology to directly engage customers in the provision of government services and information.

**In 2010**, the structure of the e-Government initiative took a three stage approach:

- Stage 1: Policy and Principles – Complete: Council Approved July 2010
  - Stage 2: Strategic Plan – Complete: Represented in this 2011 report
  - Stage 3: Implementation – Planned 2012 – 2014
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The e-Government Policy approved by council in 2010 (IT-4-10) identifies six principles that guided development of this strategy.

- Customer First Service
- Access
- Value
- Privacy and security
- Corporate leadership
- Collaboration

(see Appendix A: e-Government Principles for additional details)

**In 2011**, following 2010 council approval of the Policy, the City of Burlington's e-Government Project team was assembled to begin Stage 2: e-Government Strategic Plan. This corporate team consisted of representation from each division and was co-chaired by the Directors of IT Services and Transportation. This corporate team guided the development of an RFP and selection of a vendor to support the work required during this stage. Through collaborative efforts, the project team secured and guided the efforts of the consulting firm Prior & Prior to develop "Towards a Digital City: An e-Government Strategy for the City of Burlington".<sup>1</sup>

As evidence of the project team's commitment to the e-Government principles of Customer First Service and Collaboration, the e-Government Strategy was developed through both staff and public consultation.

**2011** has seen the recent Council approval of the Strategic Plan "Burlington: Our Future". The innovation, service enhancements, and efficient, financially prudent online service delivery resulting from e-Government align directly to Vibrant Neighbourhoods, Prosperity and Excellence in Government.

The direction and recommendations proposed in this e-Government report represent a significant step forward in the provision of services in today's technological and business environment. This strategy seeks to transform the way the City of Burlington delivers service in a manner that is manageable, responsive and sustainable.

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<sup>1</sup> A copy of the Prior & Prior consultant report (Towards a Digital City: an e-Government Strategy for the City of Burlington) is available upon request.

## Discussion:

A 2005 Statistics Canada Study on Canadian Internet Use indicated that 52% of individuals said that they were searching online at home for information on Canadian Municipal, Provincial or Federal government. By 2009, that number had jumped to 56.5%. Similarly, 22.6% of individuals in 2005 indicated that they were communicating with Canadian Municipal, Provincial or Federal Governments online and by 2009, that percentage had increased to nearly 30%<sup>2</sup>.

While the needs and expectations of citizens grow, the challenges faced by municipalities grow as well. Cities across Canada face challenges to realize greater operational and cost efficiencies, while working to meet rising expectations of our citizens and businesses to be convenient and accessible. Responding to these challenges requires that e-Government service delivery move beyond minor additions to the website.

The council approved e-Government Policy calls for an e-Government Strategy that will address:

- The needs of our customers
- The technology that supports service to those customers
- The integration of various technological components
- The opportunity to benefit staff through improved internal business processes
- The improvements to customer service delivery that can be realized by improving internal business processes
- How the organization will manage and sustain a comprehensive e-Government program

The discussion that follows responds to the policy drivers listed above, and outlines the needs, recommended solution and benefits unique to the challenges and opportunities Burlington now faces.

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<sup>2</sup> Stats Can, CIUS Study, CANSIM Table 358-0130

## 1. ASSESSING OUR CURRENT STATE

In order to design an e-Government Strategy that will take Burlington into the future, full assessment of our current state was required. To develop the strategy, the project team undertook the following activities:

- Peer benchmarking against the e-Government efforts of other municipalities
- Review of data and documentation about online service as it is currently delivered and utilized by our citizens
- Consultation with the public through surveys and focus groups (see Appendix B Public Consultation results)
- Consultation with city staff on their needs and expectations

Benchmarking indicated that Burlington currently delivers a mid-range e-Government service offering in comparison to other municipalities. However, when upwards growth demands are also taken into consideration, it is clear that merely maintaining status quo will quickly lead to a broader gap when assessed against other municipalities. The review of Burlington's current state identified the following eight, core organizational needs related to e-Government:

1. Address existing online service gaps
2. Respond to the growing expectations of our citizens for online service delivery
3. Move from internally focused service delivery, to a customer first focus
4. Ensure enhancements to service delivery are sustainable through business process improvement and change management
5. Update web technology to improve functionality and capacity
6. Address Open Government.
7. Enhance Burlington's reputation as an innovative leader in online service delivery

### NEED 1: Address existing online service gaps

The City currently provides a number of services online related to information delivery, submission of requests and full or partial online transactions. In many cases uptake grows each year. In the example below, online parking exemption use has increased from a 30% share of online uptake in 2007, to a 60% share in 2010.

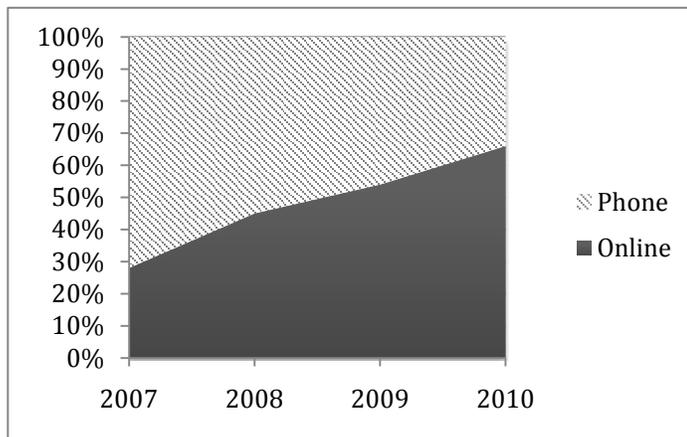


Figure 1: Growth of the online parking exemption uptake

While the City provides adequate online information and services, there is greater potential to deliver services and information. Not all services experience a high level of usage. Uptake varies widely across service types:

- Overnight Parking Exemptions – 66% of all transactions are online
- RecExpress – Recreation Program Registration – 44% online
- Parking Ticket Payment – 43% online
- Dog Licensing – 23% online
- Business Licenses – 5-10% online
- Building IVR Service - < 1% via automated telephone service

A number of these services work well and are widely used, but some services are showing their age and must be refreshed. As well, a number of areas require enhancements, updates and in some cases, replacement, to meet current and future expectations. Survey results indicated that 43% of respondents experienced problems with online services most or some of the time. (Specific areas for improvement are provided in Appendix B: Public Consultation, Table B-4).

This can be contrasted with the finding that a large proportion of those surveyed, both citizens (67%) and business (70%) express a preference to carry out interactions and transactions with the city online. In general,

current uptake for online services in Burlington is lower in comparison to other municipalities. For example online usage of RecExpress, is 44%, whereas the average uptake in other municipalities for services similar to RecExpress is between 50-60% with some seeing uptake in the 70-80% range.

## **NEED 2: Respond to the growing expectations of our citizens for online service delivery**

Municipalities need to keep pace with citizen expectations. A 2008 City of Ottawa Task Force studied e-Government options. The report asked: "Why can citizens bank online 24/365 but they still have to line up in person for many routine city services?" The conclusion: "the city needs to shift its mindset to design and deliver services in ways that citizens and businesses want."<sup>3</sup>

The e-Government survey conducted by the City of Burlington indicated that up to 67% of residents have indicated a preference to do business with the City online. The City needs to ensure web services keep pace with capabilities and norms of the broader Internet.

Use of the Internet has exploded since Burlington last undertook enhancement of online service delivery through the Electronic Service Delivery (ESD) Strategy. Statistics Canada's 2010 Canadian Internet Use Study reported on this upwards growth trend. The report finds that:

- 2010 - 81% of households in Ontario have access to Internet at home (the study notes that it is a higher proportion in more prosperous areas)
- 2010 - 90% of people have Internet access from any location (e.g. work, school, other). Increasingly Canadians also access the Internet while on the move
- Today, 30% of Canadian cell phone users have mobile access to the Internet

A recent CRTC report<sup>4</sup> suggests that by 2014, 50% of all cell phone users will have 'smart phones' capable of accessing the Internet. Supporting this trend, mobile access to the City's website has grown by 5% to nearly 8% in 2011.

The provision of online services is an expectation of citizens. Given this growth, it is reasonable for Burlington to assume these trends would result in increases in uptake on e-Government services.

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<sup>3</sup> <http://ottawa.taskforcereport.ca/>

<sup>4</sup> *Navigating Convergence II: Charting Canadian Communications Change and Regulatory Implications* report, CRTC (2011): <http://www.crtc.gc.ca/eng/publications/reports/rp1108.pdf>

**NEED 3: Move from internally focused service delivery to a customer first focus**

The way Burlington currently delivers services is based on organizational structure, processes and timeframes. This approach may often require that customers tailor interactions with the City so that internal processes run smoothly, rather than on what serves the customer best.

The result is that customers may deal face to face with a number of City departments to complete one task, expending time and energy to interact with municipal government. If the City aspires to provide great customer service to its citizens, it must deliver programs and services to support customer needs.

To make customer first services possible both e-Government and Customer Service Programs must be tightly aligned. Governance is required that supports the shift to a customer first focus and promotes the continual growth of e-services.

From the perspective of our citizens and businesses, the experience of interacting with the City of Burlington should be seamless:

- Across all channel types – Web, Phone, In person
- Across all transaction types – Information Requests, Submissions, Payment
- Internally from the front line service providers to behind the scenes business processes
- Across all city organizational units

**NEED 4: Ensure enhancements to Service Delivery are sustainable through business process improvement and change management**

In order to support and sustain new or existing online services, the entire operational context of an online service needs to be considered and modified to ensure the longevity of that service. Two key factors to ensure that online services are successfully sustained and viable include Business Process Review and Change Management.

*Business Process Review*

Exposing services online demands strong management of underlying business processes. Implementing new e-services requires detailed review of the processes necessary to digitize and support that e-service. This will provide opportunities to streamline

existing processes, eliminate manual steps and deliver a more effective outcome to the customer.

### *Change Management*

Change management is another important component of successful enhancements. The probability of meeting project objectives is best when staff understand why change is occurring, are involved in both the solution and the change, and provide a coalition of support. Senior managers and service delivery managers, along with staff, must be positioned for success to achieve the e-Government vision and to persuade internal stakeholders to consistently think “Internet first” for delivering new and existing services.

The e-Government Program should support ongoing awareness and education regarding the capabilities of technology and online services. Implementing change and overcoming obstacles requires effective management and governance. The expectations of service delivery managers should also be clearly articulated. This will be an important element of introducing and managing the cultural change necessary to deliver e-Government.

## **NEED 5: Update Technology to improve functionality and integration**

Web Technology and the functionality it provides are evolving rapidly. New technologies, tools, and applications are developed and adopted quickly. Limitations of the current City of Burlington web environment inhibit our ability to deliver reliable, user friendly e-services with the functionality expected by our customers.

At the City of Burlington, improvements to web technology have been made incrementally. The current web environment has been constructed by adding a component, and then another, until managing the complexity of the technology becomes overwhelming. The resulting complexity gets in the way of quick deployment of new functionality. Because this complex environment and the various tools have in some cases not been reliable, staff hesitate to implement further.

Moreover, investments made over the last ten years in web technology and web services, such as content management systems and electronic payment processing, are now reaching the end of their useful life. In evaluating the current state of our web environment against the e-services initiatives desired by citizens and staff, limitations of our current web environment include:

- A Content Management System that cannot support personalization, sophisticated notification or a single user account
- e-Payment tools that do not provide the required functionality (i.e. no shopping basket or user profiles)
- A current electronic forms solution that is not flexible, configurable, simple to manage or user friendly
- Limited ability to integrate web with other internal business systems
- A Community Calendar that does not meet current technical and customer requirements
- A web environment that will need to integrate with an updated GIS system in order to provide location-based personalization
- Limited capacity to support open data. The current infrastructure could manage publishing open data over the short term but a more robust open data platform will be required to support increased use, querying and real time updates

Improvements to functionality (software) and capacity (hardware) will support Burlington in overcoming these limitations. Improved functionality will provide the ability to deliver the kinds of new software improvements citizens expect and improved technical infrastructure will help us keep pace with increasing demand.

A portal solution to replace the current Web Content Management System is central to the needs expressed by customers and staff. A portal platform would provide the software and tools necessary to deliver reliable, customer centric e-services that are fully integrated with internal business systems. Portal functionality will include: web editing capabilities; electronic notifications/alerts; mobile device support; user authentication and personalization; user identity management; electronic payment processing; electronic forms linked to back office systems; and electronic billing.

The portal platform will enable service delivery managers and IT staff to conceive and implement e-services in an affordable manner with less effort and with a quicker turnaround. Current technologies inhibit the City's ability to be flexible and agile, making it essential that the City rebuild its web foundation.

## **NEED 6: Address Open Government**

**Open government:** a governing doctrine which holds that citizens have the right to access the documents and proceedings of the government to allow for effective public oversight.<sup>5</sup> The underlying theme of Open government is transparency.

**Government 2.0:** embracing new technologies of the Web and applying them to government processes.

Craig Thomler, an authority on Government 2.0 in Australia defines Government 2.0 in the following way: “Government 2.0 grew out of Web 2.0 in an attempt to define a new approach to governing which provides governments and their citizens more direct and immediate ways to communicate, engage and collaborate enabled by Web 2.0 principles and tools.”

The need for Burlington to address Open Government and Government 2.0 lies in the power of these concepts, when deployed and sustained effectively, to facilitate multiple conversations at various levels. Empowering our citizens and enabling conversations between elected officials and citizens, as well as staff, service providers and users can result in shared decision making and shared ownership of the vision for Burlington.

The Shape Burlington initiative pointed out that “Burlington is using traditional models in a new age”. An overwhelming majority of respondents to the Burlington e-Government Survey (92%) want to see means of input, feedback, interaction and two-way communication as part of the City’s website and e-Government strategy.

## **NEED 7: Enhance Burlington’s reputation as an innovative leader in online service delivery**

Benchmarking conducted as part of the Prior & Prior report identified that Burlington is currently positioned in the mid-range of what other municipalities offer in terms of e-Government. However, in the face of exponential growth in uptake and the concerted e-Government efforts underway in many other municipalities, maintaining the status quo at the City of Burlington could very quickly result in larger gaps between the City of Burlington and other municipalities.

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<sup>5</sup> [http://en.wikipedia.org/wiki/Open\\_government](http://en.wikipedia.org/wiki/Open_government)

The City can promote innovation by demonstrating a commitment to advancing technology to enhance citizens' customer service experience. Many large municipalities like Ottawa, Toronto, Mississauga and countless others around the world are leading transformative changes through the alignment of e-Government, 311, and CRM (Customer Relationship Management) systems. With the implementation of e-Government the City could pursue the collaboration of online service delivery with CRM and Halton 311 to achieve a similar model.

While many of these examples are larger municipalities, a similar but scaled approach is valid for all municipal organizations. Cities like Newmarket, Oshawa, and Markham have invested in building customer service driven organizations. Oakville is in the process of building the "Service Oakville" program and is in the process of selecting a CRM solution. This is a model that would be appropriate for the City of Burlington to pursue.

Cities that have introduced innovative solutions, such as smart phone applications for customer reporting (Boston, NYC, San Francisco) have been able to do so because of investment in underlying web and internal technology and organizational infrastructure that supports this innovation.

Innovation in City services would also appeal to Burlington residents and the broader community looking to invest or reside in a technology enabled city. This is directly related to initiatives identified in Burlington's Strategic Plan to:

- *Develop a comprehensive customer service strategy* which will drive and support improvements in online service delivery
- *Develop and implement an innovation strategy for City operations* to identify opportunities for improved service delivery and efficiencies
- *Review business development and planning processes to improve efficiency and customer service*
- *Improve transparency and ease of access to information*
- *Expand the tools used for city communications* to inform and engage Burlington citizens

## 2. THE SOLUTION: A TRANSFORMATIVE E-GOVERNMENT STRATEGY

The vision of e-Government is to move Burlington towards becoming a Digital City, leveraging current and future tools and technologies to deliver excellent service and a truly great customer experience. To describe the proposed solution, this section will define the cornerstones of the e-Government Strategy, the foundational projects for the strategy and critical success factors.

### 2.1 Strategy Cornerstones

The vision and strategy for e-Government in Burlington rests on four cornerstones to address stated needs. e-Government at the City of Burlington will be:

Customer First	Technology Enabled	Internet First	Transparent & Involved
<ul style="list-style-type: none"><li>• <i>Focus on building a customer first service model</i></li></ul>	<ul style="list-style-type: none"><li>• <i>Build a customer centric technology architecture</i></li></ul>	<ul style="list-style-type: none"><li>• <i>Prioritize online services over other channels, while offering multi-channel choices</i></li></ul>	<ul style="list-style-type: none"><li>• <i>Embrace open government and public involvement initiatives</i></li></ul>

#### **Customer First:** Focus on building a customer first service model

The e-Government Strategy should be transformative. It should change the way the City delivers service by creating an organization that designs service from the customer perspective. e-Government is more than a new website or adding a few new e-services online. It involves developing and delivering services with technology that respects the preferences of customers and puts their needs first. A customer first service model ensures consistent service delivery across all channels, and a consistent focus on customer needs across all services.

**Technology Enabled:** **Build a customer centric technology architecture**

It is critical that the City implement the right technology platforms to support customer centric service delivery. This can only be achieved where the data, processes and technologies are standardized and can be rapidly configured to support new and changing needs. Delivery of these components should occur in coordination to allow for integration and balanced progress between technology and organizational processes/change management.

The major components of a Customer Centric Technology Architecture consist of:

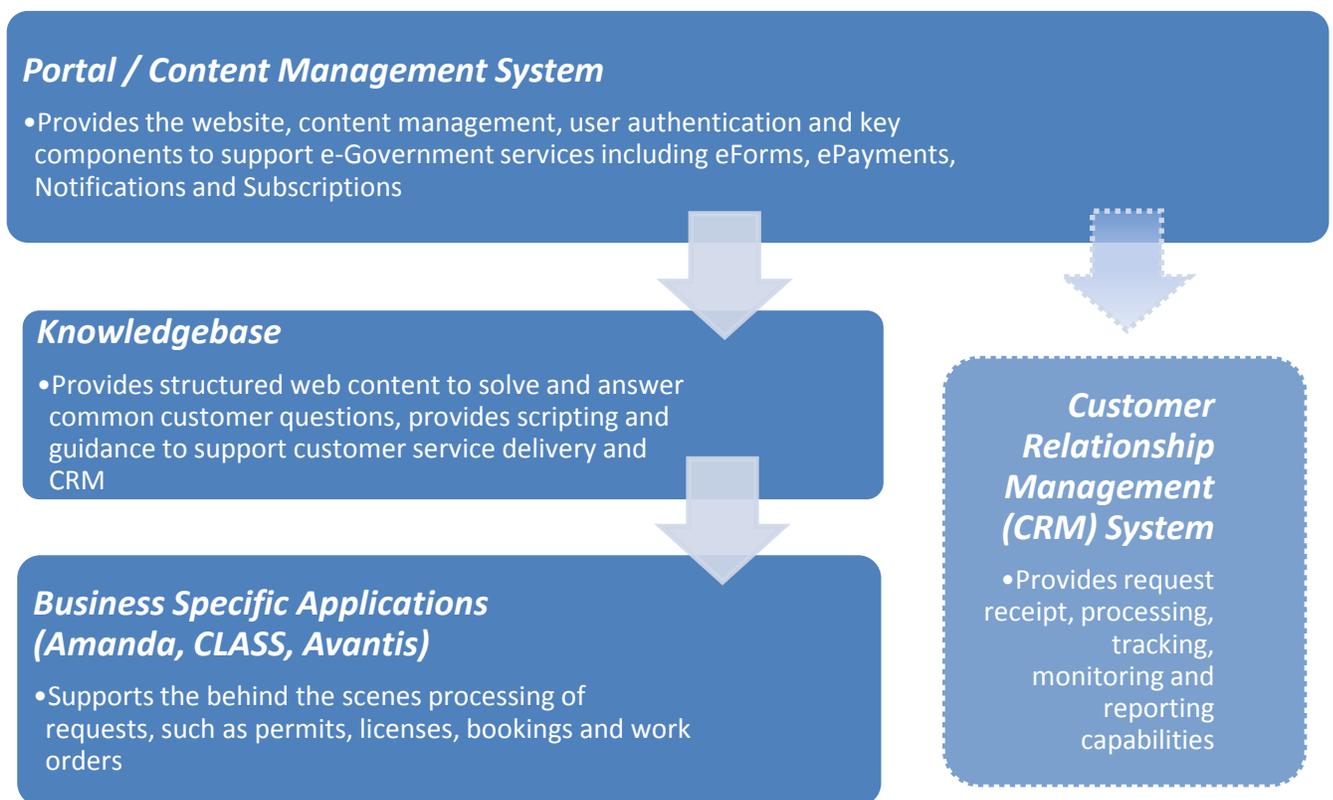
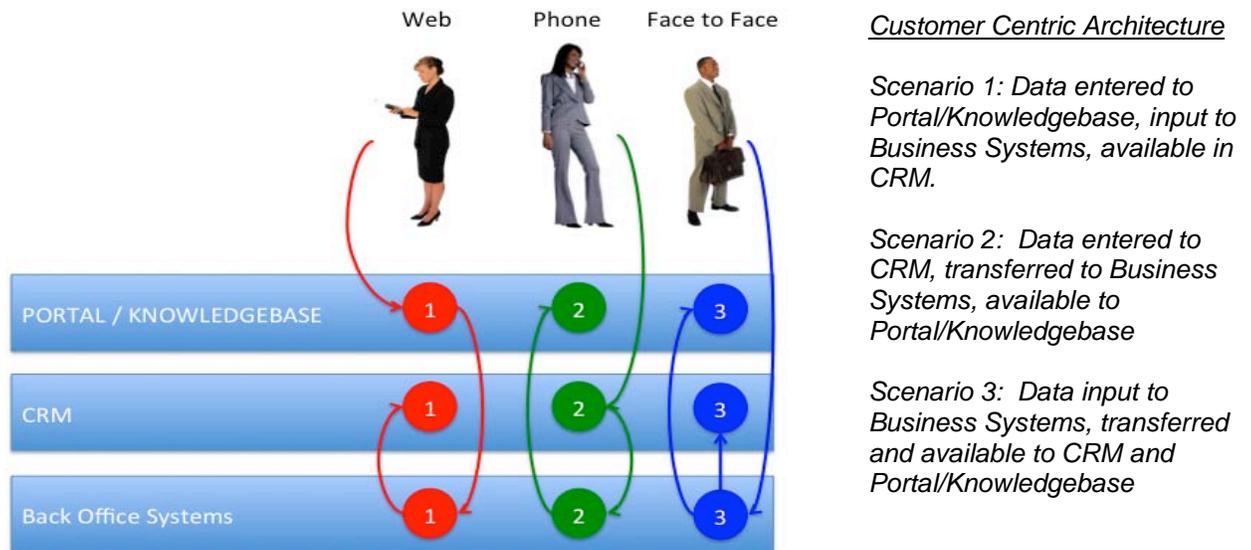


Figure 2: Customer Centric Technology Architecture

Figure 3 below illustrates how the key layers of a customer centric technology architecture work together to shape customer experience.



**Figure 3: Interaction patterns across customer access channels and technology foundations**

Scenarios 1, 2 and 3 represent different patterns of interaction between customers and the city, across a variety of channels and how the technical architecture behind the scenes supports and automates those interactions.

### *e-Government and CRM*

A key component of technology integration is the implementation of a Customer Relationship Management (CRM) system and shared knowledgebase. A CRM solution will provide the organization with the ability to capture, track, monitor, and report on requests or calls received by the City from the public.

The scope of such an implementation needs to be well defined and should be driven by strategic goals established within the corporate customer service strategy. Once implemented, a CRM system provides the capability to integrate with the City's web site allowing members of the public to submit service requests. A CRM solution is a critical integration point with e-Government, but is out of scope of the e-Government program. The e-Government program will build the necessary foundation upon which the CRM system can function and, therefore, should be implemented in advance. A CRM implementation is planned for 2014.

**Internet First: Prioritize online services over other channels, while offering multi-channel choices.**

Studies indicate that the cost of delivering services online is significantly lower than other channels such as walk-in, telephone (live agent) or e-mail<sup>6</sup>. This strategy recommends "Internet first" to optimize use of this cost effective channel. Shifting customers to the web channel is a necessary piece of realizing any long term savings. The following steps are necessary to support the channel shift:

*Promote online services more aggressively*

The City should focus on increasing promotion of the ability to carry out services online across all channels. Cross-promotion of various online services should be a part of this initiative. Highly trafficked services such as RecExpress, Parking Exemptions, and Parking Ticket Payments could be used to cross promote other online services.

*Offer choice in service delivery channels*

Multi channel choice must be retained. While many survey respondents indicated a strong personal preference for using services online, it must be acknowledged that use of online services is still in the growth and adoption phase amongst certain populations within Burlington.

This strategy will not result in marginalizing customers, but rather adds choice for customers and expands the channels through which service is available. It lays the foundation for growth while positioning e-services for the next generation.

**Transparent and Involved: Embrace open government and public involvement initiatives**

The City of Burlington's e-Government Strategy should lay the foundation for growth in openness, transparency and participation from our citizens. e-Government improves our ability to conduct meaningful, two-way communication with the community. There are two tangible components of a transparent and involved public that are directly supported by e-Government:

*e-Participation and Public Involvement*

The City has already made a commitment to increased public involvement and engagement with the creation of the new Public

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<sup>6</sup> Research from The Gartner Group and Yankee Group (2010).

Involvement Coordinator (PIC) role in 2011. This position will shape the role the web will play in public engagement. This strategy recommends broader use of the web and social tools to support public involvement initiatives. Using technology tools including social media, video, mapping, commenting and blogging, will improve information flow from the City and create new, convenient ways for the City and its citizens to consult and collaborate.

### *Open Data*

Increasingly municipal governments are embracing Open Data, publishing a wide range of municipal information previously unavailable to the public in an accessible form. This allows the public to perform their own data analysis and provide useful; insights or new applications that may be used by others in the community.

A number of large municipalities, including Vancouver, Edmonton, Ottawa and Toronto, along with small to midsized municipalities such as London, Mississauga, Windsor, Medicine Hat, and Nanaimo, have published open data catalogues. Open Data enables new opportunities that the City alone may not have the resources to pursue. As a result, enhancing open data offers the potential to offset some e-Government demands.

## **2.2 Foundational Projects**

e-Government is a program that requires co-ordination and guidance to ensure projects and initiatives within the program share a common vision and realize efficiencies. A set of foundational projects under the e-Government Program umbrella have been prioritized (See Appendix C: Prioritization Methodology) and identified as projects that deliver the broadest benefit to the organization, address multiple service areas and yield rapid, positive impacts on the quality of the customer experience.

The central initiative of this strategy is the Web Portal, which will be the primary focus for 2012/2013. Capabilities within a Portal Platform unify and integrate both current and future functionality. This allows the city to set the foundation for improvements to customers and the organization, while continuing to refine business processes and develop new e-services.

In addition to being the key to changing how the customer interacts with the City of Burlington, the Portal platform will also begin the work of integrating disparate business systems behind the scenes, realizing many benefits for the

organization internally as well as well as externally. Implementation of the Portal platform has been divided into two phases.

- Portal Year 1: Includes Content Management System, user profiles, personalization, content categorization (FAQ / Knowledgebase) and multi-navigation schemes
- Portal Year 2: Includes e-Billing, e-Payments, e-Store, e-Forms and Notifications

Figure 4 represents the e-Government Program and the project bundles that are prioritized for implementation in 2012, 2013 and 2014. The potential deliverables that can be achieved with each project bundle are outlined in Appendix D: Proposed Project Bundles and Deliverables.

## e-Government: Project Bundles

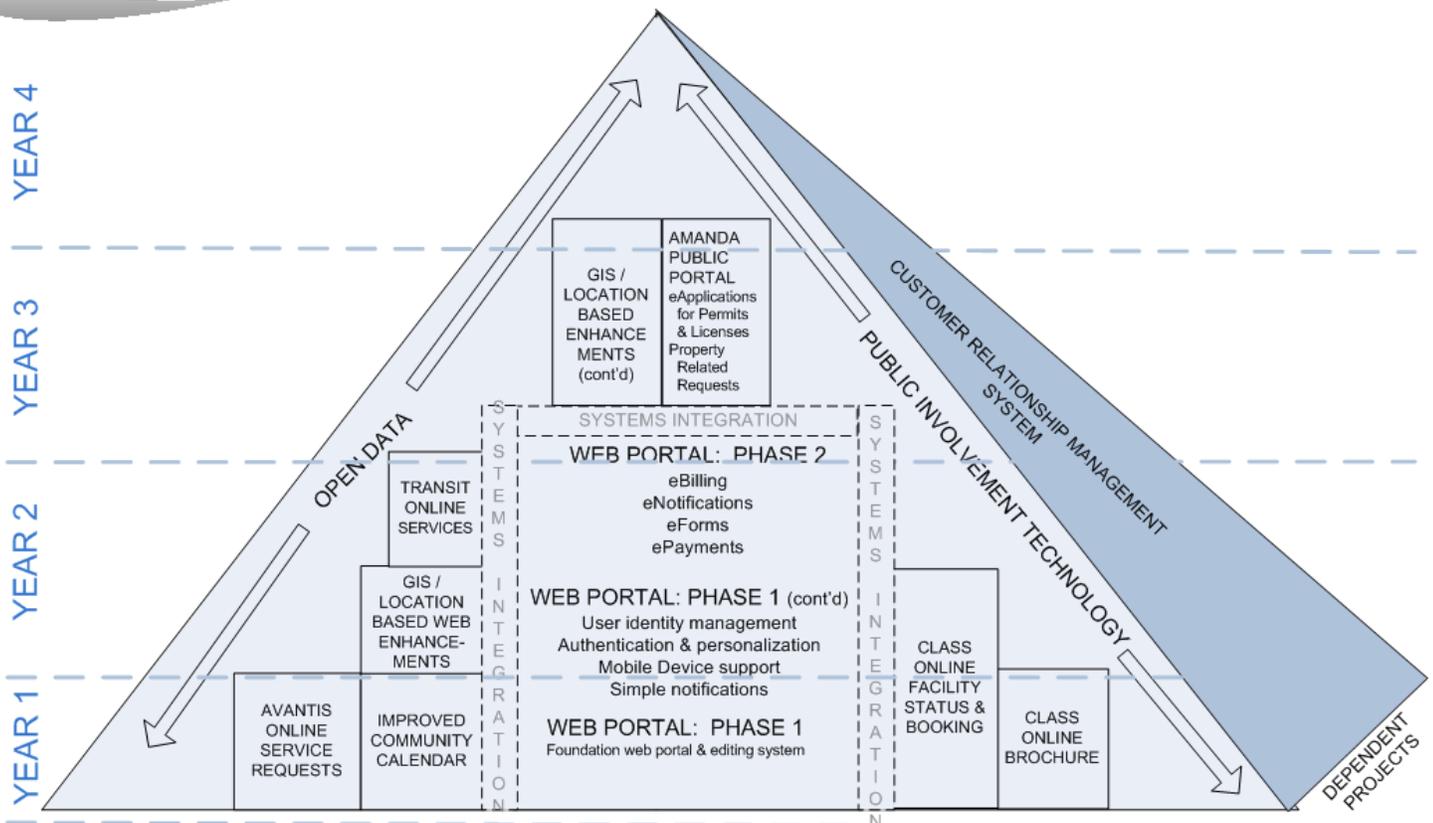


Figure 4: Project Bundles

Table 1 “Transformed Customer Experience” demonstrates how these core foundational technology projects transform customer experience in a digital city.

<b>Current State Customer Experience</b>	<b>Digital City Customer Experience</b>
<b>A customer wants to pay for their swim membership and renew their dog license but must navigate to different sections of the web site and pay for each item separately.</b>	A customer pays for their swim membership, then goes on to add another service to their shopping basket, the dog license renewal, and completes the transaction by entering their payment information only once. They can also access their payment history and be notified of new services that can be paid for online when they become available.
<b>Customers visit or call the city to find out about planning applications, incurring parking fees and/or expending significant amounts of personal time</b>	Customers can search planning applications online using map and keyword searches to find out proposal details, timelines and decision status. Customers may also use the application number to query planning applications.
<b>Builders/contractors contact city staff by phone to apply for or enquire about the status of their building permit application</b>	Builders will be able to apply for certain building permit applications online. Builders can track their building permit status, access inspection results and schedule inspections on the website.
<b>Customers phone or e-mail the city to report a problem, such as a tree damaged or down, or road damage. Customer service staff must manually record and distribute information to the right staff to resolve the issue.</b>	Customers can complete an online form to report a problem 24/7. The form includes the information the city needs to address the issue and relays the information to the right department. Customers view existing requests they have submitted or that are in their neighbourhood. Future phases will include the ability for customers to submit requests to the City via mobile phone.
<b>Customers are presented a variety of static PDF maps (such as Downtown Parking Lots, City Park locations, trail maps) and the current interactive mapping generally requires them to search through various city developed map views.</b>	Customers will be provided user friendly location and feature based search capabilities so that they can query a particular geographical area, such as a Ward or postal code, to display a map based view of facilities, trails, road closures or city notifications applicable to that area.
<b>Customers contact 311, City Hall and are directed to one or more departments to obtain information or help on commonly asked questions. Contacting different people may provide different answers.</b>	Information collected through frequent enquiries is collected to develop a knowledgebase, which is then used to display online Frequently Asked Questions (FAQ's) or a searchable knowledgebase that the staff or public can access 24/7.
<b>Citizens who visit the city's web site may be presented with information or opportunities to participate in city discussions related to the Strategic Plan or public information meetings that affect their community. The public may also be notified through newspaper or similar ads.</b>	In the initial phases, the City has implemented web tools to allow the public to generate and vote on ideas related to the strategic plan or neighbourhood development. Citizens can subscribe to notifications to be alerted (via Twitter or e-mail) if there is an event they have indicated an interest in or affects their neighbourhood. Customers can manage these interactions / notifications from a single portal. They do not need to visit the web site to search for these events.

Table 1 Transformed Customer Experience

## **2.3 Critical success factors**

Implementing a program of online services with new technology is challenging when online services goals have not been prioritized, staff are not dedicated to achieve specific goals, and a corporate strategic direction is not fully established. The following factors are critical to a successful e-government transformation.

### *End to end business process review*

To deliver convenient, end-to-end customer e-services, underlying processes need to be streamlined to support electronic tracking and service delivery. This will identify opportunities to improve existing functions and eliminate manual steps to deliver service more effectively.

### *Governance and sustainment models for the e-Government program*

To be successful, the commitment to far-reaching business process transformation and end-to-end digitization must be led from the most senior offices within the City. In the past, e-services have been introduced in an ad-hoc way with varying levels of success. Organizational ownership and accountability will ensure commitment and sustained adoption.

If approved, the e-Government program will be managed from the office of the General Manager, Corporate Services. This governance model ensures that all of those involved in the service delivery chain are represented, engaged and understand the vision of the e-Government Program.

The e-Government Strategy also recommends a Program Manager role be created to steward the program, proactively address risks and support ongoing organizational awareness regarding the possibilities and capabilities associated with e-Government.

### *Defined Measurements, Targets, and Performance Monitoring*

The e-Government program will define performance indicators to measure effectiveness. This would ensure that e-Government is delivering on the organization's objectives and allow for accountability and proactive planning. e-service uptake targets should be set, communicated, and reported to those overseeing the program. Measurement and tracking would occur during program implementation as well as on an ongoing basis.

*Provide the time, staff resources, training and investment needed to ensure the success and sustainment of the program*

e-Government is a comprehensive program that requires dedicated staff from several departments during various phases of implementation. This strategy recommends funding to backfill existing positions (see Financial Matters section). This allows experienced subject matter experts to contribute to the initiative while maintaining organizational service levels.

As mentioned, previous efforts to move toward e-Government have been sporadic in their progress. Organizational hesitation to invest in developing and implementing online service has slowed Burlington's movement towards becoming a digital city. This resistance is due in part to the lack of proper time or resources available to support staff in making the shift. Training and other investments should be made to ensure the long term viability of e-Government.

*Scope Control*

Transformational initiatives of this size require active monitoring and management of scope in order to remain focused on delivering on the program objectives. It will be incumbent upon program leadership, governing committees and the organization as a whole to ensure that the scope for e-Government remains focused on key deliverables.

*Rapid response to issues and challenges*

Leadership support is required to address challenges or resolve conflicts that may be encountered during implementation of the e-Government program. Timely resolution of issues is required to ensure that the project and programs stay on track and deliverables are achieved on time and within budget.

In support of this, the Program Manager should develop an e-Government body of knowledge that documents the objections, limitations and obstacles that projects have faced (such as processing of large payments, handling of large files, dealing with privacy issues and other challenges), along with identifying the strategies used to overcome those issues and creating an environment that allows for peer to peer support.

### **3. THE BENEFITS: SAVINGS, SERVICE IMPROVEMENT & OPERATIONAL EFFICIENCY**

Numerous e-Government initiatives across the public sector attest to the benefits and long term cost avoidance that can be realized by e-Government. The benefits may be tangible (faster, more convenient, more cost effective) or less direct (increased customer satisfaction, increased transparency and engagement). They may be internal to the organization, external, or both.

At a high level, the benefits of e-Government can be grouped into savings, service improvements and operational efficiencies.

#### **Savings**

- Reduced hard costs for printing paper forms.
- Reduced hard costs for paper bill distribution (printing and mailing)
- Cost avoidance on maintaining outdated systems

#### **Service Improvements**

- Convenient access anytime, anywhere
- Single online window into all transactions with the City
- Reduced need to visit City Hall to access services (reduced environmental impact and downtown parking pressures)
- More transparency into processes (allows customers to see progress of tasks / requests)
- More proactive notification of progress on an enquiry and a reduced need to follow up City Hall to find out the status of a request
- Improved analytic reporting to inform decision making and planning

#### **Operational Efficiencies**

- Increased proportion of customers self-serving reduces staff time taken to support customer information requests and status enquiries
- Reduced internal staff time associated with paper records management costs (filing and archiving)
- Reduced time dealing with incorrectly filled forms and errors due to upfront digital validation
- Reduced staff costs of data transposition from forms into back office processing systems

When considering benefits, it is also important to understand that the benefits of the transition, whether they are savings, service improvements or operational efficiencies, are not one-off benefits. They are benefits that will continue to expand over time as both the number of services available online grows, and uptake of those services grows. Figure 5 below illustrates the growing operational efficiencies over time.

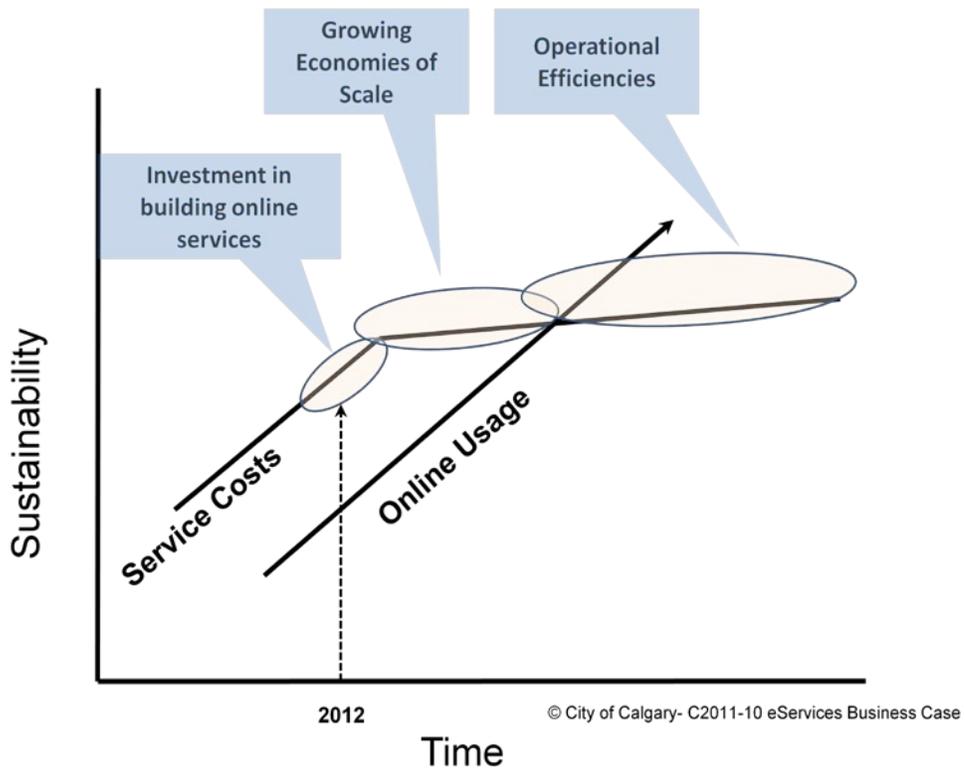


Figure 5: e-Services Return on Investment over time

## Financial Matters:

e-Government is a transformative initiative that requires effective program management, departmental expertise, business process reviews, and enhanced technology. To be successful the program requires funding to support all facets of implementation.

The following is required to implement the technology components of the program\*.

Component	Cost
Web Portal & related technology components	\$ 800,000
AMANDA Online services	\$ 180,000
Community Calendar	\$ 10,000
Open Data technology	\$ 40,000
Public Involvement technology	\$ 20,000
CLASS / Recreation online services	Other source
Avantis enhancements	Other source
Transit online services	Other source
GIS enhancements	Other source
Total	\$1,050,000

**Table 2: Technology Costs**

*\*Note: some technology components have been funded from other sources including existing or future related capital projects.*

Approximately \$310,000 or 30% of the above technology costs represent planned or future lifecycle replacement costs<sup>7</sup>. In addition some of the technologies are key to supporting current strategic initiatives, such as improved public involvement and open data.

A number of the projects and activities will be handled using existing staff. However the following dedicated resources are required to provide technical and departmental subject matter expertise. These contracted positions will ensure commitment and continuity within the program, and allow service levels to be maintained in the affected departments. The positions are funded through the 2012 Proposed Current and Capital budgets.

Position	Dept	# of Staff	Duration (Yrs)	Cost
e-Government Program Manager	GM Office	1	3	\$ 300,000
Web Specialist	Clerks	1	1	\$ 90,000
CLASS business process management expert	Parks & Recreation	1	1	\$ 100,000
Business Analyst	ITS	1	2	\$200,000
Application Analyst	ITS	1	2.5	\$200,000
Total		5		\$890,000

**Table 3: Staffing Costs**

<sup>7</sup> Includes Content Management System (CMS) for web editing, online Event Calendar and Payment Server for processing online payments.

### Total Financial Impact

The total cost to implement the e-Government program, including technology (\$1,050,000) and resources (\$890,000) is \$1,940,000.

The efficiencies gained from increased use of online services supports potential cost avoidance, whereby staff resources are deployed more efficiently and new staff are not required to support manual processes. This program represents the opportunity to implement online services in a coordinated manner. The initiatives of the Strategy represent business and technological improvements that would likely occur given the current technology and consumer environment. The cost of not addressing online services through the e-Government Strategy could potentially be higher if the foundation systems are not provided, if the outcomes, technology and implementation plans are not aligned, and if the City reacts to ad hoc online customer needs rather than developing a cohesive program.

### Source of Funding

To implement the e-Government program, capital funding has been requested within the 2012 Proposed Capital Budget & Forecast as follows:

Request	Source	Year	Amount
Hardware, software and technology implementation costs	Prior approved e-Government Capital Budget funding (CA0035 & CA0046)	2009 & 2011	\$ 255,000
Hardware, software and technology implementation costs	2012 Proposed Capital Budget & Forecast	2012	\$ 670,000
		2013	\$ 285,000
		2014	\$ 240,000
Business Analyst	2012 Proposed Capital Budget & Forecast	2013 to 2014	Included in above
Application Analyst	2012 Proposed Capital Budget & Forecast	2012 to 2014	Included in above
		Total	\$1,450,000

**Table 4: Capital Budget Funding**

Funding from the following sources is required to sustain the departmental staff required over the project's three year duration. These positions will be brought forward in the 2012 budget in conjunction with the Workforce Planning exercise.

Request	Source	Duration	Amount
e-Government Program Manager	2012 Proposed Current Budget	2012 to 2014	\$ 300,000
Clerks Web Specialist	2012 Proposed Current Budget	2012	\$ 90,000
Parks & Recreation CLASS business process management expert	2012 Proposed Current Budget	2012	\$ 100,000
		Total	\$490,000

**Table 5: Current Budget Funding**

The following summarizes the requirements for the e-Government program:

Request	Source	Amount
Technology & resources	2012 Proposed Capital Budget & Forecast and prior approved capital	\$1,450,000
Resources	2012 Proposed Current Budget	\$ 490,000
		\$1,940,000

**Table 6: Summary of Funding Requirements**

Approximately \$14,000 will be required for IT setup costs for the contract positions, and will be accommodated in the appropriate staffing budgets. Additional funding may be required to allocate the required workspace for dedicated contract staff during the three year implementation period; staff are currently assessing the available options.

### **Other Resource Impacts**

Due to the broad scope of e-Government, five dedicated staff positions have been identified within the budget to provide commitments for key areas of the program.

In addition, existing staff will be assigned to participate throughout the program to plan, develop, test and implement various components. In some cases resources will be dedicated to the project for a specified period of time. In other cases, resources will participate periodically as required. While the e-Government program is expected to require expertise from all departments, the following departments will need to commit specific staff to the project implementation schedule and deliverables:

- Clerks
- Engineering
- Finance
- IT Services
- Parks & Recreation
- Planning & Building
- Roads & Parks Maintenance

Detailed implementation plans will be developed for the e-Government program and for each project within the program to support the allocations while ensuring that service levels are maintained.

The following operating impacts have been forecast in the 2012 Proposed Capital Budget and Forecast to address licensing and maintenance costs.

Year	Amount
2013	\$ 18,500
2014	\$ 80,000
2015	\$ 35,000

**Table 7: Forecast Operating Budget Impacts**

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### **Environmental Matters:**

The implementation of e-Government technology will result in efficiencies that impact our business and customers. By enabling online technology, the City is expected to achieve:

- Savings in the cost of paper due to the reduced reliance on paper forms;
- Reduction in waste and storage associated with paper forms;
- Reduced trips to City facilities to obtain information or complete a transaction, resulting in less vehicle emissions and a reduced impact on downtown parking.

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### **Communication Matters:**

Public and staff consultation have been a key component in development of the e-Government strategy and will be a key component in its delivery.

Staff across the organization will be informed of the strategy and the impacts to their department. Information will be provided to the public through web updates. Participants of the focus group sessions in particular have requested and will receive the final e-Government Strategy report prepared by Prior & Prior Associates.

Ongoing communication is critical to the implementation, effective promotion and education of staff and the public. The implementation program will address:

- Promotion of the Internet First model, with the message that other channels of service will be maintained
- Program and project updates to and between Senior Management and Council

- Regular communication to internal stakeholders regarding new service launches and project progress
  - Training programs for staff to facilitate new business processes and effective use of new systems
  - Improved business processes which enable inter-departmental communication in the delivery of customer services
  - Aggressive marketing and promotion to the public with the launch of each new e-Government service that will promote and sustain uptake
  - Specific deliverables related to public involvement and an ongoing commitment to two-way communication in collaboration with the Public Involvement Coordinator
  - Performance measures to monitor progress and sustain the e-Government program beyond the three year implementation period.
- 

### **Conclusion:**

In conclusion, it can be seen from the identified needs across the organization, along with the broad scope of the solution that is recommended, that e-Government is much more than technology.

As a significant corporate initiative, e-Government will impact all aspects of how we do business and should therefore involve all aspects of how we do business; from front line channels to underlying technical infrastructure, through a collaborative effort and with a centralized, corporate level approach to governance.

The e-Government strategy aligns with the direction and goals of the City of Burlington's Strategic Plan. By approving this Strategy the City of Burlington will be able to transform the way online services are delivered to the public, achieve efficiencies in operations, provide convenience to its customers and provide a sustainable model for ongoing electronic service delivery.

Respectfully submitted,

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**Appendices:**

- A. Summary of e-Government Principles
- B. Public Consultation (Survey & Focus Groups)
- C. Prioritization Methodology
- D. Proposed Project Bundles and Deliverables

**Notifications:**  
(after Council decision)

Name	Mailing or E-mail Address

**Approvals:**  
\*required

\_\_\_\_\_  
 \*Department      City Treasurer      General Manager      City Manager

To be completed by the Clerks Department

Committee  
Disposition  
& Comments

01-Approved   02-Not Approved   03-Amended   04-Referred   06-Received & Filed   07-Withdrawn

Council  
Disposition  
& Comments

01-Approved   02-Not Approved   03-Amended   04-Referred   06-Received & Filed   07-Withdrawn

## APPENDIX A: SUMMARY OF E-GOVERNMENT PRINCIPLES

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<b>Customer First Service</b>	Ensuring customer service is timely, transparent, engaging and supports the City's customer service principles.
<b>Access</b>	Ensuring there is choice in delivery platforms, that service is inclusive for all, that service is user friendly and that there is promotion for greater awareness of the services available.
<b>Value</b>	Ensuring that services provided are sustainable, strategic, a responsible investment, accountable, and deliver measurable results while supporting the city's environmental direction.
<b>Privacy and Security</b>	Ensuring all services will be compliant with legislation including protecting individual privacy, maintain the city's integrity, protect corporate data and mitigate risks.
<b>Corporate Leadership</b>	Supporting the services will take leadership and commitment at all levels for its success.
<b>Collaboration</b>	Encouraging collaboration between departments and levels of the City will maximize the effectiveness of the services provided.

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## APPENDIX B: PUBLIC CONSULTATION (SURVEY & FOCUS GROUPS)

As part of the development of the e-Government Strategy, the project team ran a public survey (online and offline), which was promoted through City facilities and the usual media channels (including Twitter and Facebook promotions). Email notifications were sent to a wide variety of city mailing lists to encourage participation. The survey ran between 1<sup>st</sup> June 2011 to 30<sup>th</sup> June 2011 with 120 responses received (115 electronically and 5 paper survey responses). As part of the survey, 28 people indicated an interest in participating in focus groups.

**Table B-1: How frequently survey respondents interacted with the city**

		<b>Response Percent</b>
<b>Daily</b>		11%
<b>Weekly</b>		23%
<b>Monthly</b>		35%
<b>Yearly</b>		16%
<b>&lt; once a year</b>		14%

The responses to the online survey unsurprisingly indicate a preference for online and email interactions with the City over in person and telephone based interactions. Interestingly, service via phone is the service channel that is indicated as the least preferred channel.

**Table B-2: Survey responses - Service channel preference**

<b>Channel</b>	<b>Most Preferred</b>	<b>Preferred</b>	<b>Not Preferred</b>	<b>Avg</b>
Online (website)	67.02	28.72	4.26	2.63
By Email	35.48	56.99	7.53	2.28
In Person	20.00	43.33	36.67	1.83
By Phone	7.95	54.55	37.5	1.70

We asked whether users of e-Government Services have had any problems interacting with the City online. The responses suggest that a significant number of those that are using e-Government services experience problems, such as being unable to find the information that they are looking for (navigation and search), finding out of date information and system errors/freezes (using RecExpress and online payments tools).

**Table B-3: Survey responses: Summary of problems experienced online**

Always	Most of the time	Some of the time	Rarely	Never	% not interacted with the city online
0	3.09	40.21	31.96	17.53	7.22

The following table provides existing service areas sorted by level of user satisfaction. These highlight areas that need improvement. Based on our understanding, we can speculate that these are the services which are hardest to use, provide an incomplete service (that requires offline interaction) and/or have been prone to problems and errors.

**Table B-4: Survey responses - Areas for improvement**

	% of respondents using the e-Service	Average Satisfaction Rating (1-3)
Building Inspections Automated Phone Service	6.02	1.40
Permit Application (Pool, Signs)	6.9	1.67
Presto – Ticket Purchase	4.71	1.75
Online Mapping	64.44	1.84
Bylaw Search	64.04	1.86
Donations	10.84	1.89
Parking Ticket Payment	28.74	2.00
License Application or Renewal (Dog, Personal, Food, Tobacco)	17.05	2.00
Bids & Tenders	8.33	2.00
Council delegation	28.41	2.04
Property Assessment Query	26.97	2.04
Burlington Transit – Trip Planning	51.14	2.13
Webminder / Email Alerts	51.76	2.18
Parking Exemption	18.82	2.19
BizPal	11.9	2.20
Events Calendar	93.48	2.23
Council/Committee Video	29.07	2.24
Elections – Find a polling location	62.07	2.24
RecExpress – Program Registration	44.32	2.31
Online Surveys	69.32	2.34
Property Information Request Application	9.09	2.37
Elections – Vote online – advanced polls	41.86	2.42

The survey has defined a set of citizen priorities for new e-Government services, which were carried forward into the evaluation phase of the project.

**Table B-5: Survey responses – Priorities for online services**

Services	Average (1-5)	> 4 – V. Important 3-4 Important 2-3 Neutral 1-2 Unimportant	
Access to General Information - information about city services	4.59		
Road Information - snow clearance status, road works & diversions	4.35		
Online Community Event Information - calendars of community events	4.30		
Recreation/Leisure Program Registration - improvements to registration, online brochure, tee time booking, online membership management	4.30		
Report a Problem/Make a Service Request - potholes, streetlights, property standards	4.29		
Open Data - open access to city data (e.g. transit routes and schedules)	4.24		
Subscribe to Notifications - news, notices, events, projects in my neighbourhood, facility closures	4.23		
Pay Bills Online - pay taxes, fines, other invoices	4.19		
Forms & Registrations - secure online forms for applications and registrations (not pdf forms)	4.13		
Transit - trip planning, real time GPS, ticket purchases	4.04		
Parking Ticket Payments and Permits - pay tickets, overnight parking	4.02		

A number of focus group sessions were conducted to provide more detailed feedback from citizens and businesses in Burlington. Each session targeted specific subject areas and interest groups: community; business; engagement; and, open data. There were no attendees at the business and engagement focus groups however some feedback relevant to these areas were gleaned from other groups. Following is a summary of the collective priorities established through the sessions.

**Table B-6: Priorities for online services**

1. Crowdsourcing / Engagement / Interactivity 2. My Property / My Neighbourhood 3. Improved Website Usability / Navigation / Search 4. Improved Website & e-services Promotion 5. eForms (including permits, licenses) 6. Single User Account	7. Request and Track Service Requests 8. Events Calendar 9. User Friendly GIS / Open 10. Improved Notification capabilities 11. Open data
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## **APPENDIX C: PRIORITIZATION METHODOLOGY**

The e-Government Policy identified certain principles to underpin the development and delivery of e-Government Services.

Using these principles as a basis, an evaluation scheme was developed to help in identifying the priority initiatives for the overall program. The following criteria were used (e-Government principles noted in brackets):

- Potential reach of the service (Customer First Service, Access)
- Potential number of transactions (Value)
- Internal productivity savings (Value)
- Customer savings / benefits (Customer First Service, value)
- Reduction in customer visits to City Hall (Customer First Service, Value, Access)
- Identified as a customer priority (through survey and focus groups) (Customer First Service)
- Supports increased transparency / eParticipation (Customer First Service)

The evaluation criteria were weighted to ensure that projects that delivered demonstrable internal savings, and could therefore demonstrate a reasonable return on investment, were prioritized. In order to achieve the most effective return on investment, a number of 'bundled projects' were identified, where the implementation of a technology solution would enable a significant number of e-services. For instance, implementing the Amanda Public Portal solution would enable a number of services related to the provision of some online building permit applications, the online tracking of development application status, Property Information Requests, Freedom of Information requests, and marriage and death certificate requests among others.

The e-Government program is the result of the application of this methodology against the needs identified during public and staff consultation.

## **APPENDIX D: PROPOSED PROJECT BUNDLES AND DELIVERABLES**

The following outlines the potential deliverables associated with e-Government. Some of the functionality associated with a project bundle may be dependent or integrated with other project bundles.

### **Web Portal Implementation**

This solution will provide a set of software modules that will simplify the overall management of the portal and all of the component parts required to deliver the city's e-Services.

- Content Management System to manage the City's website
- User registration and identity management / single sign on
- Authentication and authorization
- Personalization of the web content delivered to the user
- Mobile Device Support
- Allow user to subscribe to or access Notifications / Alerts / SMS / Twitter (e.g. to provide status on planning applications, licenses, road works, bus route changes)
- Improved capability to subscribe to and be notified of recreation program Waiting Lists
- Improved e-Payment system (including debit/credit processing, online store, shopping basket for multiple payments, pre-authorized payments, e-Post support, transaction history)
- Billing (bill / account presentment to customers for tax billing and other transaction items e.g. fines, payments to vendors, tax receipts, etc.)
- Tax Payments – sign up to monthly payments online, pre-authorized plans or e-Post
- e-Forms (including form library, form version control, save and resume forms functionality, user profiles, form validation, reporting, workflows and integration tools)
- Events Registrations
- Online submission of customer requests, compliments and complaints (in coordination with AMANDA/CRM/Avantis/Other applications)
- Allow citizens to apply online for the windrow program
- Allow citizens to submit and track insurance claims online
- Allow online review or booking of advertising space
- Access to information through a FAQ Database / Knowledgebase

## **AMANDA Public Portal**

The implementation of AMANDA's Public Portal capabilities will support the following functions on the web site.

- Public development approvals search
- Public search of planning applications (including access to application drawings, plans and map based interaction)
- Developer tracking of development application status
- Track building permits
- Schedule building related inspections
- Apply for Permits (building, signs, construction, engineering)
- Apply for Marriage Licenses and Death Certificates
- Apply for and renew other personal or business licenses
- Request and track Property Information Requests
- Access My Securities / Letters of Credit
- Submit FOI requests

## **CLASS**

Specific projects involve implementing enhancements to CLASS capabilities to support the following.

- Implementation of the online brochure to provide an additional incentive for using the RecExpress online service
- Implementation of the facility availability search and booking capabilities
- Implementation of the capability to book tee times at Tyandaga
- Assist the automated processing of receipts & tax credits via email
- Implement online CLASS membership management & renewal capabilities
- Online service to pull live data from CLASS to provide current status of sports fields and facilities online

## **Transit Online Services - Trapeze**

The Transit Master Plan will determine the details and priorities for the Transit projects. These rely upon significant technology investments and would be funded outside of the e-Government budget. The following projects have been identified as potential e-Government projects.

- Real time bus status, where's my bus and stop announcement allows customers to track the location of the city's buses, identify when the next bus will arrive, and be alerted to any changes in schedule or delays
- Online management (request / cancellation) of Handi-van services which is currently managed manually

- Provide online trip planning by developing improved capability to export the PRESTO scheduling data more simply and more frequently, then use Open Data as a means to get this information out to customers. This is an alternative to implementing the Trapeze module to support online trip planning.
- A variety of other requirements (e.g. booking dial-a-ride and requesting travel training) can be handled via the e-Forms element of the portal project.

## **Avantis Service Requests Online**

Avantis has a Call Centre module which can provide the necessary functionality to allow a customer to submit a service request for certain park or road related problems (assets) online. This project would activate and implement the necessary e-Forms and software to allow Avantis to receive and manage potential work requests from the public.

## **GIS and Location Based Enhancements**

A large number of people who responded to the survey were interested in seeing enhancements to the public facing GIS and location based services. The following are key areas recommended for online enhancements

### 1. GIS Mapping Enhancements

- Upgrades and enhancements to the GIS tools to make them simpler to use (think more like Google Maps than a complex GIS application)
- These tools can then be linked to other applications (e.g. planning, searches, facility locations, etc).

### 2. Where's My Nearest?

- Allow customers to find out where the nearest something is, e.g. bus stop, ticket vendor, recreation facility, park, etc. The results should be returned as text, with the ability to get to a corresponding map that shows the location.

### 3. My Property / My Neighbourhood

- An extension of the 'where's my nearest' capability to describe the services that are delivered to a particular location or neighbourhood e.g. public works in progress or elected councillors.
- This custom developed application would rely on GIS tools and spatially related data that is stored in a variety of existing systems such as AMANDA. The user can see individual projects, facilities, parks, locations and other items displayed on a map and can also drill down to find more information on that item (including pictures, text, video).
- This type of project has significant potential for regional co-operation (e.g. pulling together crime information, health data, garbage collection and community services) to deliver enhanced, coordinated services to the public.

#### 4. Road Closures / Snow Clearance

- Publishing road closure data via the GIS
- Providing road ploughing priority maps that can be updated more easily instead of PDF maps

### **Community Calendar**

A new community calendar should be implemented that allows many partners in the City to contribute to a common calendar that can become a comprehensive, go-to resource for the community as a whole. Some of the key requirements include:

- The ability to syndicate / publish the content of the calendar to many different websites
- The ability for the calendar to be managed by several agencies
- Support various web based calendaring standards (iCal, RSS, CalDav, hCalendar)
- Allow category based subscription preferences
- Support download for offline viewing

### **Systems Interoperability and Integration**

It is critical that the city has a unified set of technology tools which can act as one. This will ensure that chosen solutions can share information and data, that customer driven processes can span multiple applications, and that individual solutions are capable of fully integrating. The web tools developed and implemented should allow a user to move between each of the tools to obtain the information they require. For example, a user accessing the My Neighborhood tools should be able to seamlessly jump from that page to the detail pages of a planning application, or to an event's details. From the GIS application, a user should be able to open details of a planning application, or building permit, or license application. From the planning application page, the user should be able to jump out and see the application on the map.

Implementing solutions that support these capabilities provides flexibility and allows for unplanned integrations and unseen benefits (e.g. allows for tweeting links to specific details of city applications or projects, allows the posting and searching of QR codes, and a variety of other opportunities).