CITY OF HAMILTON

CITY MANAGER'S OFFICE AND CORPORATE SERVICES DEPARTMENT
Financial Planning and Policy

TO: Mayor and Members General Issues Committee	**WARD(S) AFFECTED:** CITY WIDE
COMMITTEE DATE: November 20, 2013	
SUBJECT/REPORT NO: Web Redevelopment Strategy Update (CM12008(b)/FCS12055(b)) (City Wide)	
SUBMITTED BY: Mike Zegarac Acting General Manager Finance & Corporate Services and Chris Murray City Manager **SIGNATURE:**	**PREPARED BY:** Jay Adams, 905 546-2424 ext.2221 Jane Lee, 905 546-2424 ext. 2654

RECOMMENDATION

That Report CM12008(b)/FCS12055(b) Web Redevelopment Strategy Update be received and the funding request in the amount of $1,350,200 be referred to the 2014 Capital Budget deliberations

EXECUTIVE SUMMARY

Work on the redevelopment of the City's website began in 2012, following   Council's approval in principle on July 12, 2012 of the outcomes and strategies for the Web Redevelopment Project outlined in Report CM12008/FCS12055.

The goals of the Project are to:

- Improve the City's online image
- Improve communication to citizens and opportunities for engagement
- Improve online customer service
- Enable the city to provide services at a lower cost

In addition, the following principles were established to guide the redevelopment of the website:
- citizen-centred;
- AODA compliant;
- meet the City's business unit needs;
- employ evidence-based decision making;
- become a properly structured/resourced service channel;
- be easy to maintain and update;
- enable efficiency gains;
- prioritize efforts based on use by citizens/business and position us for the future; and
- be mobile-enabled and facilitate open data.

Three streams of work were identified within the strategy to achieve the project goals:
1. Establishing governance for the website
2. Rebuild of the website
3. Enhancing top online services

Based on the approved funding in 2012, the work was divided into two phases:

- Phase One – Rebuild of the website, enhancing one online service and establishing a governance model for the ongoing maintenance and sustainability of the new website
- Phase Two – Completing the enhancement of the remaining top online services, migration of all existing City services to new technology platform, consolidation of separate websites (where warranted), and development of a citizen-focused e-newsletter

Phase One work is well underway and is expected to be completed in the second quarter of 2014. Progress to date includes: completion of the Web Technology Assessment; establishment of project governance; review of all online content with achievement of a 25% reduction in the number of pages; interim improvements to the search engine; development and user testing of website architecture; completion of business requirements and drafting of functional specifications for the new website; commencement of policy reviews and governance model review; revisions to web pages to prepare for conversion to new accessible platform for AODA compliance; and hiring of a Visual Design consultant with development and testing of visual designs underway. Initial scoping of the business requirements and goals of the top six online services is also underway. Work toward enhancing one online service will commence in

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Phase 1, and may continue into Phase 2 depending on the complexity of the work required.

Phase Two will focus on the delivery of online services; improving citizen and business access to the top online services. The six online services selected for a comprehensive review during the web project include bus schedules, recreation programs, animal licensing, business services, taxation services and Clerks services. These online services were identified based on the needs of citizens (using analytics from a number of sources), as well as selection criteria, including opportunity to improve the service experience for citizens/businesses, opportunity to migrate to self-service channels and an opportunity to increase revenues or enable efficiencies. Clerks services were not initially identified in June of 2012 and have been added as a top service.

Additional funding is required to complete Phase Two of the Website Redevelopment Project and a request of $1,350,200 has been put forward for consideration in the 2014 Capital Budget process. These additional costs relate to redevelopment of the top online services and integrating the technology used to provide these services with the City's updated website.

The Web Redevelopment and Service Channel Sub-Committee, which has a mandate to provide oversight and governance for the project, has been provided with regular updates. The Sub-Committee is chaired by Councillor Powers, with Councillors Collins, Partridge and Pearson being the other members.

The Web Redevelopment Project is transformational for the provision of City Services by moving to a citizen-centred, service-based design. Demand for online services continues to grow and investment in this critical service channel is essential to meet these expectations from the community.

Alternatives for Consideration – See Page 10

FINANCIAL / STAFFING / LEGAL IMPLICATIONS (for Recommendation(s) only)

Financial: Staff originally estimated the total redevelopment of the City of Hamilton website and top online services would cost $2,455,000. Funding in the amount of $954,800 is already in place, with approval of $575,000 from Council in June, 2012, and previous approvals in 2010 and 2012 of $379,800 for search and other website improvements. Under the original request, this would have left an unfunded cost of $1,500,200. The total estimated cost of the redeveloped website has been reduced to $2,305,000. With funding in place of $954,800, the amount of funding being requested is now reduced to $1,350,200, with a recommendation for the remainder of the funding to be considered in the 2014 Capital Budget.

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The allocation of the 2014 capital budget request is as follows:
- External consulting (redevelopment of top five (5) online services, process redesign, support, prototype development, usability testing, integration with back-end systems where possible and desirable, assistance with AODA compliance) - $825,000
- Internal resources/staffing for Phase Two (Project Manager for top online service projects, student) - $160,000
- Other capital (training costs, backfilling of staff assigned to the phase 2 top task projects and completion of content re-writes and assistance with testing and conversions to achieve AODA compliance for all web pages) - $365,200

In the long-run, a redeveloped website will create increased opportunities for process improvements and additional revenues. These opportunities are discussed in more detail in *Appendix A – Business Case for the Redevelopment of the City's Website.*

Staffing:
Two (2) temporary full time positions are being filled for 18 months to support this initiative, as well as two students.   One temporary full time position is in place for Phase One and the second will be added in the near future to manage the improvement of top services online in Phase Two.

A temporary governance structure and staffing model is in place to manage the redevelopment of the City's website and the Web Redevelopment Strategy Team reports to the Service Delivery Strategy Team. Each department has provided a departmental coordinator (Web Agent) and has temporarily redistributed work to ensure the content changes and preparation for the new platform proceeds. Departmental staff are assisting with the content reduction and re-write of the web pages to prepare them for the new platform and for conversion to address AODA standards.

Legal: There are no legal implications regarding the recommendations.

HISTORICAL BACKGROUND (Chronology of events)

The Web Redevelopment project is being completed under the umbrella of the Service Delivery Review work that was initiated in 2011. Council approved the Service Delivery Review Plan in June 2011 (Report CM11009/FCS11056), which initiated the process to:
- Develop service profiles for all City services
- Review opportunities for service improvements and cost savings
- Advance three internal service efficiency initiatives: call handling consolidation based on a review completed in 2010; redevelopment of the City's website; and a strategy to address information technology (IT) functions and governance.

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The City of Hamilton has also identified "Valued & Sustainable Services" as a strategic priority (*Strategic Plan 2012-2015*) and has laid the groundwork for delivering high quality services that citizens need, while balancing fiscal realities.

One essential requirement for delivering sustainable services is a well-functioning, web-based platform and strategy. Citizens and businesses are increasingly expecting convenient, easy-to use, access to online services (refer to Appendix A of report CM12008, FCS12055 – selected data from *Citizens First 5* and *Taking Care of Business 3*). Government organizations not only see web-based service delivery as a citizen need but also as a means to find efficiencies through automating business processes and enabling self-service.

The following motion from the General Issues Committee on June 28, 2012 was approved by Council on July 12, 2012:

a) That Council, in principle approve the outcomes and strategies outlined in Report CM12008, FCS12055;
b) That Council approve phase 1 of the City of Hamilton website redevelopment project, beginning with the governance plan, creation of a web redevelopment team, a business case including savings and revenues expected and related aspects, at a cost of $575,000 to be funded from:
    i. $475,000 from the "Organization-Wide Service Improvements for Telephone and Online Project";
    ii. $100,000 from the unallocated Capital Reserve 102020;
c) That staff report back on clear deliverable items and how their implementation affects the overall project funding;
d) That Staff report back to the General Issues Committee upon completion of this work, prior to the 2013 budget deliberations;
e) That a Web Redevelopment Sub-Committee, be established with a membership of 4 Members of Council, to meet at the call of the Chair.

An Information Report was provided to the General Issues Committee on June 19, 2013 to provide a general update. Subsequently, an Information Update was provided to the members of Council in July 19th, 2013 on completion of the IBM Web Technology Assessment, which outlined the recommended technology platform for the new website.

POLICY IMPLICATIONS/LEGISLATED REQUIREMENTS

New or revised policies are being developed as required for the City's website, including the website Terms of Use, Accessibility Statement and Privacy Statement. Internal operating policies and procedures will be developed or redeveloped to provide for ongoing maintenance of the website, including criteria to establish under what

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circumstances new websites (separate from the City's website) would be permitted, a standard process for developing online information and services, and outlining the governance framework for future decision-making related to the City's new website.

Based on the Ontario Regulation 191/11 – Accessibility for Ontarians with Disabilities Act, 2005, the City of Hamilton is required to make its Internet websites and web content conform with the World Wide Web Consortium Web Content Accessibility Guidelines ("WCAG") 2.0, initially at Level A, and eventually increasing to Level AA. New websites and web content must conform with WCAG 2.0 Level A by January 1, 2014. All websites and web content must conform with WCAG 2.0 Level AA by January 1, 2021 (subject to some limited exceptions). These guidelines require that all new internet websites and web content on the City of Hamilton website since January 1, 2012 conform with World Wide Web Consortium Web Content Accessibility Guidelines (WCAG) 2.0 Level A by January 1, 2014.

By undertaking the web redevelopment project at this time, the City has an opportunity to achieve AODA compliance and avoid future costs associated with meeting our obligations. When meeting these standards, all citizens benefit from a website that is streamlined, well organized and easy to use.

RELEVANT CONSULTATION

1) Consultations with Web Redevelopment and Service Channel Sub-Committee

In addition to the one-on-one consultations with several Councillors in early 2012, the Web Redevelopment Team has continued to update and obtain feedback from the Web Redevelopment and Service Channel Sub-Committee, which was established by Council in July, 2012. The Sub-Committee has been updated regularly on the progress and implementation steps of the website redevelopment initiative, and the members of the Sub-Committee continue to provide insight and feedback to assist with the work of the Web Redevelopment Team.

2) Citizens and Businesses

As the website redevelopment initiative moves forward, there have been various consultation and information opportunities made available to the City's citizens and businesses.
- Website Redevelopment initiative open house (February 2013)
- Web Technology focus groups (hosted by IBM while undertaking the Technology Assessment Review) (April 2013)
- Seniors Advisory Committee
- Advisory Committee for Persons with Disabilities – Integrated Standards Subcommittee

- Tenants Advisory Committee
- Open for Business Sub-Committee
- Procurement Presentation arranged for possible future vendors (July 2013)
- Creation of citizen panel and business panel for providing feedback and to assist with citizen testing (architecture testing, wireframe testing, design concept testing, etc.) (September 2013)
- Public Open House and online survey regarding initial design concepts (November 5th, 2013)

3) Service Delivery Review

The Service Delivery Strategy Team, which is a cross-departmental team of director level staff that was established for the Service delivery review, has been overseeing the implementation of the Web Redevelopment Project to ensure appropriate connections are being made to other work being done to improve service to citizens and businesses.

The Web Redevelopment Project is linked to the review of other service channels, particularly the Call Handling Review. Accordingly, this project was one of three initial projects assigned to the Service Delivery Strategy Team, in addition to the development of the Service Profiles for all City services and IS Governance. Recent literature about service delivery has advised that it is important to manage the service across all service channels.

Better data collection regarding the type and frequency of calls to the City in a centralized service, would enable the identification high-volume calls that are routine in nature and that are suitable for automation as a self-service option for the City's website.

4) Internal consultations

The Web Redevelopment Team has undertaken two surveys to document usage of the City's website – one of web authors and one survey made available for all City staff.

The City's Extended Management Team (General Managers, Directors, Managers and Supervisors) has twice heard presentations and provided feedback and questions about the web redevelopment project and process.

Business requirements have been documented in with the inter-departmental Web Redevelopment Team and the Service Delivery Strategy Team. Finally, the following departments/divisions have been consulted regarding opportunities for enhancements to online services within their purview as part of the initial scoping of requirements for improving the online performance and satisfaction with the City's top online services (discussions for each area are at various stages of scoping):

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- Public Works – Transit
- Corporate Services – Taxation; and Clerks agendas, minutes and Elections
- Planning & Economic Development – Business Services; and Animal Services
- Community Services – Recreation

ANALYSIS / RATIONALE FOR RECOMMENDATION
(include Performance Measurement/Benchmarking Data, if applicable)

In the June 2012 decision, Council requested an update on deliverable items and how their implementation affects the overall project funding. A Business Case for the redevelopment of the City's website is attached in Appendix A.

Phase One includes the following improvements/outcomes with the funding already allocated to the project:
- Determination of the optimal delivery model (options, costs, benefits, risks) for technology hosting, platform and redevelopment of the City's website;
- Delivery of a new City website, including hosting, software, hardware and/or licences;
- Streamlined and updated content with a new visual design (common look-and-feel) that is AODA compliant based on standards and guidelines;
- Mobile-enabled website
- Improved search results and navigation, based on usability testing and analytics;
- Improvement of one online top service, including prototype development and usability testing;
- Development of a governance model and operating impacts for the ongoing operation and maintenance of the City's website.

Phase Two would include the following improvements/outcomes (yet to be funded):
- The remainder of the top six online services used by citizens on the City's website will be redeveloped/improved, including prototype development and usability testing;
- Assessing and redeveloping/acquiring new tools where warranted for each of the online forms, and applications to ensure they are integrated into the new platform and that they work well for citizens;
- Development of an integration strategy in order to address how the City's online services integrate with the legacy back-end systems;
- Development of a citizen-focused opt-in e-newsletter.

Where Phase One is primarily about building the new platform which is mobile-enabled and facilitates accessibility requirements, has a common look and feel, a new visual design, improved search engine, new format and reduced content (which facilitates easy access to information and services), Phase Two will focus primarily on the delivery

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of online services; improving citizen and business access to the top online services. The six online services selected for a comprehensive review during the web project include bus schedules, recreation registration and access to program information, animal licensing, business services, taxation services and Clerks services. These online services were identified based on the needs of citizens (using analytics from a number of sources), as well as selection criteria including an opportunity to improve the service experience for citizens/businesses, opportunity to migrate to self-service channels and an opportunity to increase revenues or enable efficiencies.

Delays in upgrades to Trapeze, the Transit technology system, have necessitated the review of other top services for improvement in Phase One. The remainder of the top online services are to be improved in Phase Two. The budget to improve each of the top online services includes improvements to usability and accessibility. As many of these systems are proprietary third-party applications, they may require specialized technical skills to make the changes to the systems to achieve improved success for citizens and businesses, and will require involvement of staff who are subject matter experts in each of the functional areas. Each of the services may also require process modifications, back-end technology enhancements (e.g. CLASS, Trapeze, Hansen, etc.) and other changes to support the service improvements.

The improvement of the City's website will be incomplete if the top online services are not addressed. The current website is built on old technology which is no longer supported, and the City is significantly behind in the technology of its web presence and in the way that we utilize the website. In the early days, a website was for communications, and it evolved in the early 2000s into a service channel. With the advent of social media, the website became an avenue for connections and two way communications, changing the way the website is used and accessed by our citizens. With the Web Redevelopment Project, the City is not only catching up, but trying to position the City for future technological changes. Completing the work proposed in the Web Project will allow the City to be in a better position to respond to future changes, and to continue to make improvements into the future. The Web Project has the capability of enabling transformation, of requiring services to be planned for citizens first, for considering digital first design of communications, services, and information.

The rebuild and redevelopment of the City's website based on the project outcomes will position us well for the future and is a foundational step in allowing the City to better serve our citizens and businesses in a more efficient and effective way. Improved effectiveness can be achieved in the future as a result of migrating routine calls and visits to the self-serve online channel. The improvement of online services will take note of any opportunities where improvements to the website could create opportunities to increase revenue. Changes in approach in future communications and marketing will be possible, to allow for a digital first approach – designing first for the online presence, and supplementing with print, mail and advertising. This change allows for future

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reduction in mailing, handling, printing and advertising costs. The new platform and technology will also allow, in the future beyond Phase Two, identification, planning and implementation of new and cost-effective online services. Success of this project should also position us well for future consolidation of multiple websites and associated spending.

The rationale for the redevelopment of the website is as follows, with more detail found in Appendix A.

1. **Improving customer service, with potential for increasing opportunities for revenue**
   a. Make it easier to find, access and use the City's most-requested online services
   b. Increase convenience for citizens and businesses
   c. Improve the visual look-and-feel of the City's digital properties
   d. Improve communications to citizens and businesses
   e. Increase overall uptake of City services, including revenue-generating services
   f. Review opportunities for advertising and sponsorship revenue
   g. Review impact of transactional convenience fees
   h. Review the most-requested online services
2. **Complying with legislation and managing risk**
   a. Comply with Accessibility for Ontarians with Disabilities Act (AODA)
   b. Enable comprehensive website security and privacy through technology platform modernization
   c. Adopt a comprehensive website policy framework to manage risk
3. **Enabling innovation and collaboration**
   a. Explore opportunities for open-source and alternative service delivery
   b. Meet demand for mobile service delivery
   c. Improve systems development methodology for online services
4. **Enabling the City to manage or avoid costs in the future**
   a. Streamline and consolidate content
   b. Leverage a single, common technology platform
   c. Reduce advertising, mail and printing costs
   d. Shift service to self-serve channels

ALTERNATIVES FOR CONSIDERATION

(include Financial, Staffing, Legal and Policy Implications and pros and cons for each alternative)

An alternative available for this phase of the project would be to stagger the implementation of improvements to the top online services over several years. Phase Two of the project will see improvements made to the top online services used by

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citizens and businesses. One service is to be improved in Phase One (Clerks Services and Animal Licensing are under review for this work in Phase One). The top services which our citizens and businesses utilize online are as follows:

- Clerks Services
- Animal Licensing
- Transit services
- Recreation
- Taxation
- Business Services (linked to the Open for Business Strategy)

Each of these services, being the most heavily accessed by citizens and businesses, will be reviewed to ensure that improvements are made so that they are easily and successfully usable by citizens, accessible, and that they support the business goals of the City. Should the redevelopment of these online services be delayed until funding is available, the challenges faced by citizens when using the City's website would not be resolved and further ongoing improvements and development of online services would be delayed. The intent of the project funding for Phase Two is to allow the redevelopment of the top online applications so that further improvements to the website can be planned for future years. Ongoing plans for further improvements, further automation of website maintenance activities, and further development of online services or improvements to additional online services will be developed as the most used services are improved, should funding be provided.

ALIGNMENT TO THE 2012 – 2015 STRATEGIC PLAN:

Strategic Priority #2
Valued & Sustainable Services

WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.

Strategic Objective
2.1   Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.
2.2   Improve the City's approach to engaging and informing citizens and stakeholders.
2.3   Enhance customer service satisfaction.

APPENDICES / SCHEDULES

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Appendix "A" to Report CM12008(b)/FCS12055(b)

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Business Case for the Total Redevelopment of the City's Website

In June 2012, the City of Hamilton adopted a two-year plan for the total redevelopment of the City's main website, www.hamilton.ca. The current website has been in operation since September 2005, and is built on a technology platform that was initially released in 2003 and has since surpassed its supported end-of-life from the manufacturer. In June 2012, Council approved a phased approach to the redevelopment project and requested that a Business Case be developed to provide details for the return on investment (ROI) for the new City website.

There are four main benefits that would be achieved from the investment in the redevelopment of the City's main website:
1. Improving customer service, with potential for increasing opportunities for revenue
2. Complying with legislation and managing risk
3. Enabling innovation and collaboration
4. Enabling the City to manage or avoid costs in the future

Each of these benefits is described in detail below.

1. Improving customer service, with potential for increasing opportunities for revenue

The main focus of the website redevelopment project is to improve the experience for citizens, businesses, tourists and other visitors to the City's main website. This will be accomplished in a number of ways.

(a) Make it easier to find, access and use the City's most-requested online services

The improvements to the website will result in measurable targets being achieved in three areas related to ease-of-use of the City's website:

i. Important information about City programs, services, news and announcements, along with Council-related business and initiatives, will be easier to find through improvements to the website information and search engine. The current website search engine receives over 250,000 searches annually, and significant evidence exists that the results for citizens and businesses are not performing adequately. Through improvements to the organization and layout of online information, combined with better management of the website search technology, search results will be dramatically improved. Additionally, search results will regularly be reviewed, updated and retested, to ensure ongoing improved performance. This will result in less frustration for citizens and businesses.

ii. The publishing of information and online services to the new City website will be governed by comprehensive policies, standards and guidelines that ensure the website is compliant with the *Accessibility for Ontarians with Disabilities Act* (AODA). The AODA requires that all municipal websites meet a certain standard for accessibility for people who have disabilities and who use one or more assistive technologies when accessing the Internet.

The number of people with one or more disabilities is growing, particularly as the population ages. The AODA legislation also benefits people with temporary disabilities (e.g. a broken dominant arm) and people with cognitive or learning disabilities. An important secondary benefit of adopting the rules within the AODA is that improvements to the new website will make it easier to access for **all people**, regardless of their level of disability or ability. For example, accessibility improvements will make the website easier to use for people with low levels of education and literacy, for people whose first language is not English, and for people who prefer larger text, all of which are not strictly physical or cognitive disabilities. Beyond the AODA, the City will involve local citizens with disabilities in the development of information and online services to ensure that the City is not only compliant with technical requirements of the legislation – the City will also ensure that the website is genuinely performing well for citizens with disabilities.

iii. There is evidence that several of the City's online services are not performing as well as expected for citizens and businesses. This evidence can take several forms, including:
- Usability research with citizens and businesses which demonstrates that online services are difficult to find, access and use
- Website metrics demonstrating poor uptake of online services and reliance on offline service channels (telephone, in-person, mail, fax, etc.)
- Surveys and feedback from citizens and businesses providing complaints about the difficulty in using the City's online services
- Unfulfilled targets and measures related to program delivery (e.g. lower than desired numbers of licences registered for pet dogs, unreported neighbourhood concerns, etc.)

Through adopting a citizen-centred approach to improving online services – an approach that engages citizens and businesses throughout the design process – the City will ensure that its investments in new and improved online services will result in increased uptake of online services, improved experiences for citizens using the website and improved feedback from citizens about their experiences. It is also anticipated that based on the improved ease-of-use of the City's website, over time the City will also realize higher program delivery targets, particularly with a focus on revenue generating programs and programs related to improved quality of life for neighbourhood residents.

(b) Increase convenience for citizens and businesses

Increasingly, citizens and businesses are expecting increased access to online government information and services. It is becoming less and less acceptable to have lower levels of service online than are available through other service channels. In fact, citizens and businesses are often expecting *better, faster and more convenient* service online. Based on research from *Citizens First 6*, there is a trend toward adopting more self-service than ever before, with the Internet and telephone channels preferred almost equally. Additionally, citizens are expecting to be able to access the City's services 24-hours a day, 7-days a week, 365-days a year.

A fast emerging trend is seeing greater adoption of mobile devices to access government services and increased use of governments' mobile websites. Through the investment in a new design and a new robust technology platform, the City will be able to deliver increased

convenience for citizens and businesses, enabling them to access the City's website on any device, using the browser of their choice, and at any time, day or night.

(c) Improve the visual look-and-feel of the City's digital properties

The City's *Identity Standards Guide* was adopted in 2002. Since that time, significant shifts have occurred in how organizations communicate and integrate their brand identities through digital properties, including on websites, through social media, in e-newsletters and other web-based forms of communication and service delivery. As a result of this evolution in technology and communications, a gap has developed in the ability of the City to effectively guide the expansion of the City's brand into its digital properties. Consequently, the City's online brand identity has become fragmented and inconsistent, preventing citizens and businesses from experiencing a cohesive, high-quality impression of the City and its online service delivery through its digital properties.

This brand dilution is only exacerbated by the previously described under-performance of its online services, which has resulted in the website providing negative value toward the City's overall brand identity. Through the investment in a revitalized, consistently applied, high-quality online visual identity, the City will be able to ensure that its digital properties provide positive value to its overall brand identity. Visual assets created through the website redevelopment project will also be usable across other digital communications platforms, including through e-newsletters and social media.

(d) Improve communications to citizens and businesses

A key component of the web redevelopment project will include a significant reduction in the overall amount of content on the City's website, while not removing any important information for citizens and businesses. This streamlining of online information, combined with a re-write of a substantial amount of the information, will make it easier for citizens to read and understand the information about our online services. If online information is written in a way that is confusing or difficult to understand for citizens, this ultimately may lead to frustration for citizens, or inconvenience if they have to use another service channel to get the information they need. Additionally, this impacts the City's bottom line, because two or more service channels were used to satisfy a single citizen task – which could have been resolved with just one self-serve option, if the information was easier to understand. Through the web redevelopment project, the City's online information will become easier to read and understand for the average website visitor (as assessed using the anticipated literacy levels of the average reader of the specific subject matter being reviewed). A secondary benefit of this content revision exercise is that the information will also be easier to read for people whose first language is not English, and will be more accurately translated using automated translation tools (such as Google Translate).

In addition to improving the quality of content, there will also be new methods of delivering that content to citizens. Through the website redevelopment, a new citizen-focused opt-in e-newsletter will be created and sent regularly to citizens who subscribe. Greater coordination of information across departments and program areas will also result in improved access to information in a variety of contexts, for instance at the ward level. As an example, coordinated

information will enable citizens to find out about important public meetings and consultations affecting their neighbourhood, or related to the subjects for which they have an interest.

Through the adoption of a modern technology platform, the City will be well positioned to explore future opportunities to advance two-way methods of communication and engagement with citizens and businesses. In fact, during one focus group, it was suggested that it might be more important to use the terminology "improve communications *with* citizens and businesses," highlighting the growing involvement of two-way communications and citizen engagement within the digital communications platforms.

(e) Increase overall uptake of City services, including revenue-generating services

The original business objective for improving online experiences was to facilitate migration of customers from higher cost service channels (telephone, in-person, mail) to the lower cost, self-service online channel. However, numerous studies of major online retailers, telecommunications providers and banking institutions have demonstrated that an effective online service channel can actually increase the total sales of a business. Not only can businesses provide service more efficiently, they can also deliver higher total sales by creating great online experiences. This phenomenon is an opportunity that is also available to government.

Negative online experiences can lead to frustration and higher rates of abandonment, when a citizen abandons a transaction mid-way through due to confusion, frustration or inability to complete their task easily. Over time, multiple negative experiences can compound, resulting in a complete avoidance of self-service options, even when those options are relatively high quality or easy to use. The distrust that builds over time from using poorly performing individual online services can cause citizens and businesses to avoid even attempting future online transactions on the City's website. For this reason, it is vitally important that all of the City's online services meet a minimum level of quality, accessibility and usability.

Conversely, by improving the experience for citizens and businesses when using the City's online services, the City can ensure a high level of trust and confidence in the reliability of those services, which can lead to higher overall uptake of the City's services. If a citizen or business has a positive experience, they are more likely to recommend that service to others and more likely to return to the website in the future to complete the same task, as well as other similar tasks. Further, they may also be more inclined to consider other City services, knowing that the online experience is a fast, easy and convenient way to learn about and obtain those services.

This condition may be most beneficial when it relates to revenue generating services where the City has sufficient supply to meet a higher demand – for example, increasing the fill-rate of the City's drop-in recreational programs, providing more dog licence registrations and providing more tours of museums – all of which generate revenue for the City. Beyond these revenue generating opportunities, this condition of increased trust and confidence also has benefits at a neighbourhood level, by increasing the likelihood that citizens will report neighbourhood concerns such as graffiti, illegal dumping, infrastructure repair needs and similar service options. This allows the City to respond more effectively to these concerns,

which in turn leads to higher quality of life for residents. Finally, an improved online experience can also have community-wide impacts, through the attraction and retention of new businesses, residents and immigrants to the city, which supports the City's economic development strategy.

(f) Review opportunities for advertising and sponsorship revenue

In March 2013, Ken Roberts (former Chief Librarian for the Hamilton Public Library) conducted a literature review of municipal governments in North America who are engaged in advertising, to explore opportunities for revenue generation through the City's website. Based on the literature review, four advertising options were studied:

- *Sponsorships* – promotions related to a specific City service or program area or event co-sponsored with the City, usually inclusive of a sponsor logo or co-branding, and arranged as part of a sponsorship agreement
- *Retail Banner Ads* – one or more banner ads per page on the City's website
- *In-House Banner Ads* – cross-promotion of existing City programs/services, with an emphasis on revenue-generating programs including recreation, museum tours and animal licensing
- *Video Ads* (YouTube) – ads play at the start of a City-produced video

After a thorough analysis of financial implications and projections of the revenue potential of each option, it was determined that retail banner ads and video ads were not promising sources of revenue for the City. The market for retail banner ads has softened in recent years due to increased inventory, as more and more news and entertainment resources move online, increasing the retail ad space and resulting in lower "cost per click" values. The website traffic required to generate enough revenue to offset the costs of managing a retail advertising program will not be generated by the City's website in the foreseeable future. Additionally, there is a potential risk for retail advertising in an online context to be perceived negatively by some citizens. There are currently only a handful of municipal governments with retail ads on their websites in all of North America, and these are predominantly situated in a tourism context, displaying hotel and local attraction advertisements.

Based on the analysis, the two most promising opportunities exist in increased sponsorship opportunities related to City programs and events, as well as the use of in-house banner ads, cross-promoting existing City services, with an emphasis on the promotion of revenue-generating services. The benefit of both of these two options is that there is a relatively low cost to implement and manage them. Both options result in increased promotion of the City's own services, which negates most of the risk of being negatively perceived by citizens.

As a result, it was recommended to the *Web Redevelopment and Service Channel Sub-Committee* that the City continue to explore online sponsorship opportunities and develop a more comprehensive in-house advertising program, focusing on revenue-generating City programs and services. As part of this recommendation, staff would develop resources for Departments to assist them in promoting sponsorship initiatives of City programs and events through the City's website. Additionally, staff would review existing City policies for necessary revisions to include website sponsorship and in-house advertising where necessary. Staff

would continue to monitor online advertising and sponsorship trends to assess for future revenue or cost-reduction opportunities.

(g) Review impact of transactional convenience fees

In March 2013, Staff reviewed a number of municipalities to determine which communities were charging transaction or "convenience" fees, in addition to regular fees for online services. Staff reviewed Ottawa, Toronto, Windsor, Calgary, Edmonton plus a dozen others. Where a service was available in the community, most were not charging additional transaction fees. The one exception was parking tickets and POA fines, where several were charging a transaction fee. This was largely owing to the fact that there is a single dominant supplier of the service and the supplier encourages municipalities to cost-recover by charging a transaction fee. According to the *E-Government Adoption in Canadian Municipal Governments* (2007, Reddick), only 13.4% of municipalities were charging some form of convenience fee.

In the past, the City has charged transaction fees for a number of services. However, the City is currently only charging online transaction fees for animal licensing, parking tickets and POA fines. The fees for animal licensing ($1.86 per transaction) go into the general revenue account for the City, and generate approximately $7,000 annually. The fees charged for parking ($1.50) and POA fines ($3.00) largely go to the vendor, with the City receiving a nominal commission on each transaction.

In recent years, governments have moved away from charging separate transaction fees for online services, recognizing that the additional transaction fee can actually be a barrier to the adoption of self-service channels, which ultimately can lead to citizens using higher-cost full service channels instead of the lower-cost online channel. In addition, the City has received a high number of complaints from citizens who are upset that they have to pay an additional fee for a lower-cost service, and they are especially frustrated when they have to pay an additional fee for an online service that is not performing as well as expected. Based on a number of complaints, transaction fees were removed from recreation and museum services.

As a result of this analysis, the *Web Redevelopment and Service Channel Sub-Committee* has approved the staff recommendation for the removal of convenience fees for online City services, beginning with the services where there are no contractual obligations with a third party (e.g. animal licensing). Staff will review options and financial impacts of removing fees on parking and POA fines when the existing contract expires. The removal of the animal licensing transaction fees will take effect upon approval of the 2014 User Fee By-law.

(h) Review the most-requested online services

In the *Website Redevelopment Strategy* approved in June 2012, staff recommended a thorough review of five of the City's most requested online services, including transportation, recreation, animal licensing, business and taxation services. Based on the significant impacts of the AODA on Clerks' legislative and election services, these two services have since been added to the scope of the overall project. These six services were recommended for review based on a number of criteria:

- Opportunity to improve customer service to citizens and businesses
    - High use by citizens or businesses, with evidence of usability or accessibility problems
    - Example: bus schedules, animal licensing, business services
- Opportunity to reduce costs or find efficiencies
    - Increase self-service and decrease # of contacts through phone, mail, email, walk-in
    - Decrease print/advertising costs such as calendars, guides, brochures, newspaper ads, billboards
    - Example: recreation services, taxation services
- Opportunity to increase use of program or service
    - Example: graffiti reporting, tree planting, plus many others
- Opportunity to increase revenue
    - Example: recreation registrations/drop-in programs, animal licensing, museums

Members of the *Web Redevelopment and Service Channel Sub-Committee* requested a comparison of the City of Hamilton's online services relative to other similarly sized municipalities. The chart below demonstrates that Hamilton is relatively on par with other municipalities in terms of the number of online services offered – however in the review, most municipalities contacted were not able to provide strong measures of performance related to these online services. In summary, while the services were available in other municipalities, it was uncertain whether it was performing well for citizens and whether there was high adoption of the online service.

Services	Hamilton	Ottawa	Toronto	Windsor	Calgary	Edmonton
Parking tickets	♦	♦	♦	♦	♦	♦
POA tickets	♦	♦	♦			
Parking permits			♦			E
Recreation program registration	♦	♦	♦	♦	♦	♦
Facility bookings		♦				
Museum e-tickets	♦					
Pet license	♦	♦	♦	♦	♦	♦
Marriage licences			♦			
Food handler certification		♦	♦			
Business licence / permit			♦		♦	♦
Establishment license	♦		♦			
Building permit / inspections						♦
Zoning Verification Request	♦					
Filming permits			E			
Purchase bids (call) documents	♦	♦	♦		♦	♦
Utility bill			♦			
Electricity bill			♦			
e-Store	♦				♦	
Purchase books and documents	♦				♦	
Purchase composter					♦	
Purchase maps					♦	
Purchase transit passes & tickets					♦	
Purchase photos					♦	
Purchase property information					♦	
Purchase tabular data					♦	

* E = email form option available

The rationale for review and improvements to the six services are explained below, as well as details regarding the potential benefits of the reviews.

- **Recreation:** Consistently in the top five of online tasks for citizens – 12% of total traffic to the website annually; Generates revenue; 80,000+ citizen transactions per year – high level of emotion due to competitive nature of registrations; Citizen complaints have been received (publicly and by Councillors).

- **Transit:** Consistently in the top five online tasks for citizens – 9% of total traffic to web; User-pay service; Existing usability tests demonstrate opportunity for improvement; Opportunities for call reductions, use of mobile could be investigated.

- **Taxes:** Consistently in the top ten online tasks for citizens – 3% of total traffic to web; High volume of emails requesting service; New service opportunity - desirable to Council and citizens.

- **Animal licensing:** Evidence of usability problems; Low take-up of the online service; User-pay service; Citizen complaints related to the charge of an additional convenience fee.

- **Business services:** Evidence of problems with BizPal; Currently undergoing investigation as part of Open for Business; Council priority; Some services generate revenue; Essential for the City to compete with other municipalities for respective share of the assessment base.

- **Clerks legislative and election services:** This service area was added to reflect the extra work required to meet the provincial AODA requirements due to the complexity and volume of materials in this section.

Beyond these six service areas, all of the City's online services will eventually be reviewed for enhancement opportunities as part of the migration to a common new website technology platform, combined with a commitment to the ongoing creation and enhancement of online services as part of a continuous improvement program for the City's website. The web redevelopment project will establish the foundation for future service enhancements through improved opportunities for integration and increased usability and accessibility. Staff will provide further recommendations regarding the long-term management and sustainability of the website in 2014.

2. Complying with legislation and managing risk

The City's website properties and online services are governed by a number of regulatory requirements mandated by the federal government, the province of Ontario and the payment card industry. These requirements govern issues related to the collection and storage of private citizen information, the ability for all citizens to fully access all parts of a website and assurance that governments are doing everything reasonably possible to secure public infrastructure.

The website redevelopment project will enable the City to comply with legislated requirements and manage risk more effectively, as detailed below.

(a) Comply with Accessibility for Ontarians with Disabilities Act (AODA)

Many municipalities in Ontario have undertaken recent website redevelopment projects to support compliance with the AODA. Generally speaking, by January 1 2014, municipalities must comply with the AODA legislation. One of the regulations is the Integrated Accessibility Standard (O. Reg. 191/11), which includes the Information and Communications Standard, setting out the requirements for web accessibility. This regulation requires that new City

websites and online services adhere to the World Wide Web Consortium Web Content Accessibility Guidelines 2.0 Level A (often abbreviated to WCAG 2.0-A). There are a number of complex details related to the legislated obligations and staff has been reviewing the directives from the Province and determining the best path forward to achieve full compliance, in the most effective and efficient way possible. Where possible and practical, the City of Hamilton will comply with Level AA of the guidelines, to avoid future effort before the next deadline for the higher level of legislated compliance.

There are a number of ways that accessibility will be improved on the new website. By adhering to the technical guidelines, the City will ensure that the new website is more accessible for people who use assistive technologies when accessing the Internet. This level of technical compliance includes support for screen readers and magnifiers, colour contrast selectors, text size controls and other accessibility aids. Additionally, the guidelines not only improve the experience for people with disabilities, they generally improve accessibility and usability for all people who visit the website.

Within the six service review areas, additional consultation, design and testing with people with disabilities will ensure that the City's website is not only technically compliant with the AODA legislation, but that it is also genuinely and measurably more usable for people of all abilities.

Ensuring compliance with the AODA and ensuring overall improved accessibility will require the City to review its publishing and application development processes, with emphasis on establishing comprehensive processes so that lasting and long-term improvements are realized and sustained.

(b) Enable comprehensive website security and privacy through technology platform modernization

According to *WhiteHat Security Inc.,* websites are now the number one target of choice for attacks by highly adept hackers. Their attacks have moved from the well-defended network layer to the more accessible Web application layer, which people use every day for shopping, banking, accessing government services, booking travel, and many other activities.

Governments that lack adequate protection for securing their websites risk theft of data, malware infection, loss of citizen confidence, and regulatory requirement failures. Certainly, no government today can afford having a reputation that its websites are open to hackers.

In addition to ensuring technical security, the City must also ensure that the collection and storage of private citizen information is managed and controlled effectively. Several issues related to the safe use of private information are incorporated into legislation at all levels of government and the private sector, including:
- Ontario's Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c.M.56 ("MFIPPA")
- Ontario's Personal Health Information Protection Act, 2004 ("PHIPA")
- Federal Personal Information Protection and Electronic Documents Act, SC 2000, c. 5 ("PIPEDA")
- Federal Bill 31 – the Health Information Protection Act, 2003

- Municipal Act, 2001, S.O. 2001, Chap. 25.
- Compliance with the Payment Card Industry (PCI) standards and guidelines

The City's existing website technology is no longer supported by the manufacturer. As a result, as more time passes, critical security updates to address ever-evolving security threats are no longer available. This places the City at an ever-increasing risk.

Through the modernization of the City's website technology platform and effective governance of the City's network and hosting infrastructure, the City will ensure that it is able to manage risk related to hacks, malware and denial of service attacks. Additionally, through adherence to relevant privacy legislation and protocols, the City will ensure that private citizen and business information is managed and controlled using strict procedures. Staff will provide further recommendations regarding the long-term management and sustainability of the website in 2014, including recommendations related to lifecycle of software, hardware and support.

(c) Adopt a comprehensive website policy framework to manage risk

According to *WelchmanPierpoint*, web policy refers to a set of legal, compliance-related, editorial and technical constraints for website development. A mature approach to establishing Web Policy considers the full range of web-based interactions a government organization can have with citizens, businesses, stakeholders and the world. Web policy considers what constraints and practices may need to be put into place in order to protect the City from risk, ensure that the City is in compliance with any relevant regulatory concerns, and otherwise operating within the bounds of the law and good practices.

Web policies guide the City's web team by putting into place the constraints of web development. These constraints are mandatory: meaning that all those who develop content, data, and applications for the City's website must adhere to these policies whether those contributors are staff or an external vendor team. Most government organizations have an incomplete set of web policies that may focus on security and privacy concerns or a set of best practices or web standards that may be inadequate to govern all aspects of online service delivery and communications.

As part of the web redevelopment project, a new policy framework will be established in collaboration with Council, departmental stakeholders, Legal, Risk Management, Customer Services Access & Equity and Information Technology Divisions. These policy frameworks will govern all aspects of the City's website and digital properties, including online publishing of information and the development and enhancement of online services. Staff will provide further details and recommendations regarding a policy framework for the City's new website in 2014.

3. Enabling innovation and collaboration

The City's website redevelopment project provides an opportunity for the City to catch up to current online service delivery standards, which will improve the perception of the City by citizens and businesses, as well as those outside of the city, including potential tourists and

investors. Beyond these brand-related benefits, the redevelopment project also provides opportunities for advancements in innovation and collaboration, through the adoption of state-of-the-art technology platform and contemporary approaches to developing online services.

(a) Explore opportunities for open-source and alternative service delivery

Cost pressures, increasing citizen demand for open government and engagement, and increasing citizen expectations to receive more and better online services are driving the need for the examination of potential service delivery options to support the redevelopment of the City website.

Prior to implementing the Web Redevelopment Strategy, the City conducted a Web Technology Assessment to examine the options, costs, benefits and risks of various delivery models related to the platform, hosting and development.   The assessment included an examination of open (open-source) or closed (proprietary) platforms; internal and external hosting; third-party or internal development; and governance models related to City's service delivery. The assessment took into consideration a thorough analysis of the City's current website environment, industry trends, staff capacity and the flexibility of the recommended system(s) to adapt as service delivery and citizen demands evolve.

Based on a review of other recent municipal government website redevelopments, there are various approaches that are being taken related to delivery models. Several municipalities have had their websites built and/or applications hosted and technically managed using an external third-party. Some municipalities are leveraging open-source software and structuring their platform and development models to be more open to enable innovation and collaboration. Some municipalities are using more traditional in-house, proprietary systems built with initial third-party development and managed on an ongoing basis by internal staff.

The investment in modern web technology is a critical component of the web redevelopment project and will impact the City's online service delivery for several years to come. The City engaged IBM to provide objective analysis and recommendations to staff.

The Web Technology Assessment was framed around the City's overall web redevelopment goals; these were translated into specific technology requirements in each of the areas of Web Platform, Hosting, Development and Maintenance and Governance. Once these requirements were identified, the outcomes from the public consultations were layered onto the analysis. A list of available options was developed and each of these was then scored against a number of criteria to assess whether and to what degree each would meet the requirements.

Following the evaluations, a selection of peer municipalities was interviewed to understand their experience with the various technology options and models implemented in their organization. Once this had been completed, the benefits, risks, and costs for each option within each of the elements were identified, documented and the report provided to staff.

Following a review of the various options, costs, benefits and risks, including consultation with other municipalities, IBM has recommended and Staff have made the following website technology decisions:

- Adopt an open strategy for platform, data, and processes. Staff believes that integration with internal City applications will be a very significant undertaking that may require some exceptions to this strategy.
- The best fit for meeting Hamilton's web redevelopment goals is an open source Web Content Management System (CMS) platform. The open source CMS that best meets the City's needs is Drupal 7 CMS using the Government of Canada's Web Experience Toolkit (WxT) distribution.
- Use a phased development approach for developing the website, focusing on static content re-write first and gradual addition of transactional capabilities.
- Establish clear policies and review procedures that guide priorities of website redevelopment. Establishment of a strong governance model is a critical success factor in the website redevelopment. Policies include business objectives, key performance indicators, content management, development roadmap, and a new feature intake process.
- After reviewing a number of options, including 1) in-house; 2) dedicated/leased hardware in external data center; 3) co-located in external data center, and 4) open/cloud platform; recommend City uses in-house hosting solution to meet key hosting drivers for the City, including security and data privacy, total cost of ownership, availability, and flexibility. Staff are reviewing specific cost options based on updated requirements and are exploring the feasibility of initially using an external hosting provider for a two-year period, in order to speed up the delivery of the new City website and to allow time for internal City staff to build relevant skills and experience on the new technology platform.

(b) Meet demand for mobile service delivery

The growth and adoption of mobile devices has resulted in a significant shift in the online behaviours of citizens and businesses. Mobile devices now account for over 30% of the traffic to the City's website, and this number is expected to continue to grow as more and more citizens access the Internet through their smart phones, tablets and other mobile devices.

Mobile devices require a different method of developing online information and services. Due to the smaller screen size, websites must be reformatted and reorganized to continue to be readable and easily navigated. Online information and images must be optimized to download quickly over cellular data connections, which often have lower bandwidth compared to home or office Internet connections. Buttons and form controls must be large enough to be clicked using fingers on a touch-screen. Additionally, mobile website visitors generally spend less time reading text and have shorter attention to details, so websites must be designed in more logical and modular pieces.

In order to meet the growing demand for mobile service delivery, a number of important changes are being made to the City's website. First, the City will be adopting a mobile-friendly technology platform. Second, the City will be implementing a design called "responsive design," which enables the City to produce a mobile-friendly layout for content and services. This design will allow a website user to access the City's online information and services, without needing to scroll or zoom on their device. Importantly, a responsive design will work on any device, of any size, using a modern web browser. Finally, all information on the City's

website will be reviewed and where necessary, rewritten to support a user-friendly mobile web experience. In many recent successful government website redevelopments, this content review has taken the form of a "mobile first" design philosophy, which focuses the redevelopment on the mobile device first, and using the same design and content development principles on traditional desktop website experiences.

There are a number of important cautions to mention about this transition to a more mobile-friendly user experience. First, this transition will take time and not all City information and services will be mobile-friendly at the launch of the new website. Several online services use technology that will need to be updated before these services can be made mobile-friendly. Additionally, the City publishes many documents in PDF format, including Council minutes and agendas, and these will continue to be less mobile-friendly. PDF documents are viewable on mobile devices, but generally require some amount of zooming and swiping to be read successfully. Longer documents or documents with large images are particularly challenging to read using a mobile device. Finally, in order to be responsive to the trend toward using mobile devices, particularly mobile smartphones, it will become more important to limit the use of extensive design and images. Mobile experiences are optimized to use less imagery and to focus more on supporting the completion of the citizen's task. This may limit the amount of visual design that is applied to the mobile website experience, in order to make it as usable and accessible as possible.

However, these trade-offs are not expected to negatively impact citizens' satisfaction with using the City's new website once it is launched. A responsive design and improvements to the online services and information will allow the majority of the City's website visitors to have a successful and pleasing experience.

(c) Improve systems development methodology for online services

Many of the City's online services originated as internal service tools that supported the City's offline service delivery. These tools enabled Staff to perform daily tasks, schedule work orders and manage the day-to-day operations of the City. As the Internet revolution resulted in greater demand for online services, many of these software vendors provided an online option to their software bundles. However, in general, providing online service delivery was not always a core skill of these software vendors, and as a result, it has remained uncertain whether many of the online services that the City has invested in have met the quality and performance expectations of the City's website visitors. The City has a growing amount of evidence to suggest that these online services are frequently causing frustration, leading to abandonment and to reliance on more expensive service channels.

For the six service focus areas, a methodology called "user-centered design" (UCD) will be incorporated into the redevelopment process. Governments throughout North America and around the world are commonly adopting UCD methodologies as part of their improvements to online services. The main features of the UCD methodology include a significant focus on analytics as part of the design methodology, as well as the involvement of citizens at all stages of the design process. The UCD methodology employs standardized techniques, which enables software developers to avoid costly mistakes that are often not caught until late in the design process, or worse, after a new online service has been launched to the public and fails.

According to *Usability.gov*, an online resource provided by the United States Government, a UCD methodology can greatly improve the return on investment of a website development project by preventing costly mistakes and improving the usability and accessibility of online services, ensuring a positive and successful experience for website visitors. This in turn means that citizens and businesses will not have to resort to additional service channels to complete their task. (In fact, the U.S. Government is signaling their commitment to this approach by creating the *Usability.gov* resource for its departments and agencies.)

As part of the web redevelopment project, the City will also be reviewing all of the City's online services, including those that are part of larger software investments. Where online services are determined to be performing inadequately, staff will determine the underlying reasons for the inadequate performance and recommend improvement options. Where necessary, these services will be redesigned and enhancements made applying a UCD methodology.

4. Enabling the City to manage or avoid costs in the future

Perhaps the most frequently studied and cited benefit of the evolution of online service delivery to government is the opportunity to manage or avoid costs against increasing demand for services from a growing and aging population. The City's website redevelopment project will enable opportunities for longer term cost savings in a number of significant ways.

(a) Streamline and consolidate content

The City's current website properties include over 6,000 pages of content and over 25,000 PDF documents. Based on comparisons with other government websites that are considered leading or best practice, this is an excessive amount of information. This amount of online information actually has a negative value, because it often makes it very difficult to find relevant information using the website's navigational tools and search engine. The key failure of the City's current website search function is actually not the technology itself, but in fact the quality and organization of the City's online information. The situation is a bit like searching for a needle in a haystack.

Based on website metrics, only 20% of the City's online information accounts for over 95% of the traffic. This means that 80% of the online information is having little or no benefit for citizens. Worse still, there is a cost to producing and maintaining such a large volume of online information. If each page on the City's website only required a few hours of staff time for review annually, this still adds up to a significant amount of staff time (3 hours x 6,000 pages = 18,000 hours). Many pages on the City's website require significantly more time to review annually – and in fact, many pages on the City's website are not currently being reviewed at all by staff, which poses a costly risk of a different variety.

Through a careful and thorough examination of all online content, the City will significantly streamline the amount of information on its website. This process was recently performed in the Garbage and Recycling area with success. A review of the online information in that section showed that there was a significant over-production of information, making it confusing

and difficult for website visitors to find the information they were seeking. This can have numerous negative and costly consequences, including mistakes made by citizens in disposing of their waste properly, illegal dumping in neighbourhoods and costs associated with the use of other service channels, if citizens need to call or visit to find the information they were seeking. By significantly streamlining content in this area, staff were able to reduce the number of pages in the section by over 75%, while not losing any important information for citizens. In fact, information was actually added to the reorganized section.

An important secondary benefit to the streamlining of information on the City's website is that the costs associated with making the online information AODA compliant will be significantly reduced, because there will be less overall content to redesign and rewrite.

In addition to the City's main website, the City currently owns, operates and/or manages dozens of separate website properties related to individual City programs or services. Each one of these separate websites has a cost associated with the original design, development and ongoing maintenance, above and beyond the costs associated with operating the City's main website.

In addition to streamlining the content on the City's website, another activity that will be undertaken is the consolidation of several separately hosted and developed websites, based on a review of the performance and analytics. Wherever warranted, these separate websites will be consolidated to reduce overall costs related to the City's online service delivery, as well as to make it easier for citizens and businesses to find all of the City's services in one place.

By more effectively managing the online service channel, the City will make it easier, and therefore less costly to maintain the City's online information, make it easier for citizens to find relevant information, and will ensure a shorter path to compliance with the AODA.

(b) Leverage a single, common technology platform

As mentioned above, the City manages several separate websites in addition to the City's main website. These websites are using a number of different technology platforms, content management systems and hosting arrangements, using a number of third-party providers.

Based on a review, a number of these websites will be consolidated into the City's main website during the web redevelopment project. However, where a separate website is deemed to continue to be required for a certain program area or service, there is an opportunity to leverage the City's new web technology platform to host and manage these separate websites.

By eventually migrating all City web properties to a single, common technology platform, the City will reduce its total overall costs of ownership. Additionally, it will be easier, and therefore, less costly, to maintain a single technology platform, rather than various distinct platforms, as is currently the case today. Where the services of third parties are required, it will be easier to manage a single supplier of those services, rather than several separate suppliers.

As an example of the potential impact of sharing common technology platforms, the Government of Canada recently created an entire department dedicated to making similar improvements at the federal level. In 2011, Shared Services Canada was created with the mandate of fundamentally transforming how the Government of Canada manages its information technology infrastructure. Part of their work includes a move toward greater use of managed services, particularly for online service delivery. Staff are paying close attention to the approaches being used by the federal government, where there is promise of significant cost savings and cost avoidance opportunities.

Beyond the cost savings benefits, important secondary benefits of leveraging a single technology platform include improved performance, improved security and risk management practices, improved compliance with the City's brand standards, better support through our internal IT Division, easier to maintain compliance with the AODA, and increased opportunity to ensure high quality user experiences for citizens and businesses.

(c) Reduce advertising, mail and printing costs

Each year, the City spends a significant amount of money in order to communicate with citizens and businesses. This can take the form of advertisements in local media, on outdoor billboards, on buses and on-street advertising; direct and insert mail to citizens; and printing of numerous brochures, guides, pamphlets and other materials.

More and more, citizens are becoming accustomed to, and even learning to rely upon digital forms of communication over traditional print and mail forms. As part of the web redevelopment project, the City will enable more effective communication to citizens and businesses. These improved forms of communication will include well-organized information on the City's website, an opt-in e-newsletter delivered to citizens and better integration of social media channels.

By improving these digital forms of communication, and enabling better online experiences for citizens, over time there will be an opportunity to review advertising, print and mail budget costs to determine if alternative digital communications would satisfy the business requirements, at a lower cost.

(d) Shift service to self-serve channels

The Government of Canada, all of the provinces and many municipalities, have focused considerable resources and attention on moving in-person and telephone services online, because of the potential to drive down costs and mitigate cost increases, while responding to the increasing demands of citizens and businesses.

Known as 'channel-shifting', all levels of government are reporting savings by measuring and managing channel costs. The Government of Canada created Service Canada specifically with the objective of realizing multi-billion dollar savings over a number of years, through the streamlining and automation of processes associated with service delivery. Similarly, Service Ontario was created with much the same goal and purpose.

The Service Delivery Strategy Team is currently identifying opportunities to better manage service channels and improve service to citizens and businesses, including creating better alignment and integration of the City's telephone and online service channels. One of the greatest opportunities for long-term savings related to the web redevelopment project will come from the eventual shifting of full-service telephone calls and walk-in visits (full-service, meaning that the citizen or business interacts with a staff person) to self-service online transactions, which research shows are generally less-costly transactions compared to traditional service channels.

Currently, the City's Customer Contact Centre (CCC) handles approximately 50% of total calls to all contact centres at the City. Over time, through the Call Handling Review project, a greater number of telephone calls could be managed through the single CCC, which would enable better data collection regarding the type and frequency of calls to the CCC. Based on a review of this data, it would be possible to identify high-volume calls that are routine in nature and that are suitable for automation as a self-service option for the City's website.

Through improved alignment and integration of the City's online and telephone service channels, combined with improved data collection through the Customer Contact Centre, and improvements to the City's website, there exists an opportunity to develop strategies that would result in significant cost savings over the long-term, through greater promotion and adoption of self-service options wherever possible.