YORK REGION-MARKHAM PORTAL BUSINESS PLAN

AND

DRAFT PORTAL SOLUTION REQUEST FOR PROPOSALS

February 7, 2007

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Notice to Reader

This document was prepared by Connected Insight Inc. for The Corporation of the Town of Markham and The Regional Municipality of York. The conclusions have been drawn from evidence and reasoning provided before February 7, 2007.

Statement of Confidentiality

The descriptive materials and related information in this document contain information that is confidential and proprietary to The Corporation of the Town of Markham and The Regional Municipality of York.

Acceptance

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Table of Contents

1 EXECUTIVE SUMMARY 1

2 BACKGROUND AND PURPOSE 5

3 PORTALS IN THE MUNICIPAL CONTEXT 7

PHASES OF EGOVERNMENT MATURITY 7

4 PORTAL TECHNOLOGY OVERVIEW 10

5 CURRENT STATE ANALYSIS 12

5.1 PARTNER READINESS TO IMPLEMENT AND OPERATE A PORTAL 12
5.2 MUNICIPAL AND REGIONAL SERVICES SUPPORTED 13
5.3 CURRENT APPLICATION SERVICES 14
5.4 CONCLUSIONS 14

6 REQUIREMENTS ANALYSIS 16

6.1 MANDATORY REQUIREMENTS 16
6.2 OBSERVATIONS 17

7 BUSINESS CASE FOR PORTAL 19

7.1 DEFINITIONS 19
7.2 METHODOLOGY AND CONSTRAINTS 20
7.3 ALTERNATIVES ANALYSIS 22
7.4 CURRENT COSTS 24
7.5 COST/BENEFIT ANALYSIS 24
7.6 RISK ANALYSIS AND MITIGATION 30
7.7 CONCLUSIONS 31
7.8 RECOMMENDATIONS 32

8 PORTAL OPERATIONS AND ADMINISTRATION 34

8.1 CONTENT ADMINISTRATION POLICY/GUIDELINES 34
8.2 CONTENT MANAGEMENT PROCESS 34
8.3 CONCLUSION 40
8.4 RECOMMENDATIONS 40

9 GOVERNANCE 42

9.1 PORTAL GOVERNANCE AS SUBSET OF IT GOVERNANCE 42
9.2 PORTAL GOVERNANCE BEST PRACTICES 43
9.3 ANALYSIS OF EXISTING PARTNER GOVERNANCE MODELS 44
9.4 ANALYSIS OF OTHER GOVERNANCE MODELS 45
9.5 CONCLUSIONS 46
9.6 RECOMMENDATIONS 48

10 SUSTAINABILITY MODEL 56

10.1 CONCLUSIONS 56
10.2 RECOMMENDATIONS 56

APPENDIX A - PORTAL TECHNOLOGY OVERVIEW 59

PORTAL DEFINITIONS 59
PORTAL ARCHITECTURE 60
PORTAL APPLICATION INTEGRATION 68

APPENDIX B - CURRENT APPLICATION SERVICES 69

MAIN APPLICATION SERVICES (YORK REGION) 69
MAIN APPLICATION SERVICES (MARKHAM) 70
MAIN INTERNET WEBSITE INFORMATION/SERVICES/FEATURES (YORK REGION) 71
MAIN INTRANET (INTERNAL) WEBSITE INFORMATION/SERVICES/FEATURES (YORK REGION) 71
MAIN INTERNET WEBSITE INFORMATION/SERVICES/FEATURES (MARKHAM) 73
MAIN INTRANET (INTERNAL) WEBSITE INFORMATION/SERVICES/FEATURES (MARKHAM) 74

APPENDIX C - REQUIREMENTS 75

HOW REQUIREMENTS ARE PRESENTED 75
REQUIREMENTS GATHERING METHODOLOGY 76

APPENDIX D - BUSINESS CASE FOR PORTAL (FINANCIAL ANALYSIS) 78

APPENDIX E - RISK MANAGEMENT SUPPORTING MATERIAL 79

APPENDIX F - GOVERNANCE CASE STUDIES 86

APPENDIX G - PORTAL SOLUTION PROCUREMENT PLAN 101

ORGANIZATION ISSUING RFP 101
CAPITAL FUNDING COMMITMENT 101
PORTAL PROCUREMENT PROJECT PLAN 101
DRAFT REQUEST FOR PROPOSALS (RFP) 103
DRAFT PROPOSAL EVALUATION MATRIX 103
DOMINANT PORTAL SOLUTION VENDORS 103
SOFTWARE AS A SERVICE / APPLICATION SERVICE PROVIDER 104
CONCLUSIONS 105
RECOMMENDATIONS 105

APPENDIX H - DRAFT PROPOSAL EVALUATION MATRIX 107

APPENDIX I - DRAFT REQUEST FOR PROPOSALS (RFP) 108

1 Executive Summary

All levels of government in Canada are moving aggressively towards solutions that provide seamless service to people using programs and services across several agencies. Canada has embraced the Internet. Increasingly Canadian citizens and businesses are coming to expect the substitution of paper forms, facsimiles and telephone calls in favour of interacting with government online. The transformation to "government online" is being driven by consumer demand, rapidly evolving technological capabilities and increased government confidence in matters related to privacy and security.

The opportunity for York Region and Markham to join forces and share the costs, risks and benefits of shared portal infrastructure is unique. The level of cooperation proposed by the partners, indeed between levels of government, is exceptional. York Region and Markham propose to build a common framework to enable present and future development in their respective online services.

At present Markham and York Region may not able to provide the level of online services that internal and external customers expect. Limited integration of current systems/services creates the impression that Markham and York Region are lagging. Opportunities to substantially improve productivity and increase efficiencies in online service delivery cannot be fully realized with existing web technology.

Markham and York Region have completed significant analysis to determine whether sufficient business value would likely be delivered by a joint web portal. The end users would include both those who work within the partner organizations and other organizations. However, the most significant group to benefit from a portal are citizens and businesses who wish to interact with Markham and York Region on their own terms and regardless of which level of municipal government provides a particular service. Once implemented, the portal is expected to make available a dynamic, personalized gateway to access municipal information and conduct regional government services and transactions.

A shared portal stems from the recognition that government operations need to modernize and traditional information silos be eliminated, within and between levels of government. Also, interagency, interdepartmental and intergovernmental information flow must improve so that taxpayers have a single point of entry for government services.

Presently York Region and Markham online capability gaps render existing business processes less than optimal. Furthermore, constituents are paying a premium to maintain two online technological infrastructures.

If Markham and York Region wish to compete online with other municipalities, they must invest in upgrading their online offering. Many municipalities have upgraded or are upgrading to portal technology. By making a portal investment, the partners will be better able to keep pace with other technologically advanced municipalities and communities.

The qualitative benefits to constituents, businesses and employees in providing online services are compelling. Connected Insight therefore recommends proceeding with the procurement of a joint portal solution. Furthermore, Connected Insignt recommends to the partners to:

- Prepare to commit dedicated labour resources to implement the joint portal;
- Solicit constituent input before issuing the portal RFP to validate the mandatory requirements identified in this plan;
- Commit to issuing a portal RFP in 2007; and
- Develop and implement a Markham and York Region shared services agreement.

There is substantial alignment between the partners' strategic plans and the implementation of a portal. The implementation of portal technology would significantly contribute to helping realize the York Region and Markham Council-endorsed strategic plans.

York Region's goals and actions stated in the "Vision 2026 (Towards a Sustainable Region)" include:

- Provide leading-edge municipal services;
- Provide advanced technology adoption and implementation;
- Demonstrate diversity and innovation in service delivery;
- Address the challenge of demands for urban service levels in rural communities;
- Increase businesses' awareness of the Region's services;
- Make services/information available regardless of personal mobility; and
- Enable residents and businesses to access services regardless of location.

All of these goals can be furthered though the effective application of portal technology.

In the "Engage Markham 21st Century Markham Report", the community vision and corporate goals are to be realized through the following elements:

- [Markham] will be recognized as an international leader in the management and delivery of high quality municipal services;
- We are the high tech/knowledge-based capital of Canada;
- Our communities … feel connected;
- [T]he Town will be a leader in e-government services; and
- To establish, promote and support Markham as the best location for diverse high-tech and related businesses.

Again, the effective deployment of portal technology would substantially help attain the above ambitions. Clearly, portals can play a key role in engaging the next generation's interaction with local and regional government.

Pragmatically, there are three e-government alternatives for Markham and York Region to consider:

Do nothing (maintain existing websites). This alternative is less resource-intensive in the short-term and will allow the partners to divert capital investment to other opportunities. However, this alternative is misaligned with the partners' strategic plans for technology leadership and may create the perception that the partners are technology followers. As well, existing websites have a limited capacity to meet future growth.

Implement separate portals. This would entail less cross-jurisdictional coordination with fewer stakeholders to satisfy. However, this alternative would prove more expensive and is estimated to be a 30-60% premium for each partner versus shared portal. Furthermore, it fails to demonstrate a cross-jurisdictional partnership.

Implement a joint portal. A joint portal cost is estimated to be 30-60% lower for each partner versus separate portals. As well, portal services support the partners' strategic goals and objectives and demonstrate willingness to partner to the benefit of the taxpayer. On the other hand, a joint portal would be realized through a large, complex and challenging multi-year project with numerous stakeholders to satisfy.

For a more comprehensive description of the analysis of the above three alternatives, please refer to Section 7.4.

A shared portal will **likely** require an investment of approximately $5 million over 5 years. However, depending on various assumptions, it may require as **high** as approximately $8 million to realize portal benefits. Over a five year period, estimated cost savings are $300,000-400,000. It is estimated that the initial capital costs will be $4-6 million and the portal will cost approximately $1-2 million to operate over 5 years.[1]

While it is possible to develop and offer a shared portal for Markham and York Region only, it is vastly preferable that the shared portal encompass all the local municipalities within the geographic area of York Region. Branding issues may arise, but they are not difficult to overcome once the joint portal is viewed from the perspective of the constituents as a "no wrong door" to municipal services in the region.

Once in place, the portal will demonstrate compelling business value and draw the interest of eight other prospective area municipality partners. If new partners join, the cost to operate the portal per partner would be reduced. Building a portal framework translates into an investment in future online capabilities. This foundation will enable future development to deliver functionality and features at a reduced cost versus maintaining the current non-integrated web architecture. Although difficult to accurately measure, initial investment in portal technology framework will yield its most significant cost savings over time as cost avoidance.

[1] For complete financial projections, please refer to Appendix D (Business Case For Portal (Financial Analysis)).

In Connected Insight's experience, quantifying the benefits of portal implementation is not reliably measured. Connected Insight understands that the Councils of the Town of Markham and York Region will make the final decision whether or not to charge fees and has assumed that Councils will choose to encourage portal adoption by providing all services free of charge. Therefore, no new revenue will likely be realized.

In its 2005 "Portal Business Value Assessment" for Markham, IBM estimated cumulative benefits over 5 years to be approximately $8.6 million. These benefits are almost entirely labour cost savings within Markham alone. If one assumes that the same holds true for a joint York Region-Markham portal solution, one may infer that the qualitative benefits may increase significantly.

The diagram below illustrates the proposed shared portal in the partners' environments, each of which might otherwise have separate infrastructure. By leveraging shared portal technology the partners will realize savings through a lower total cost of ownership (capital and operating).

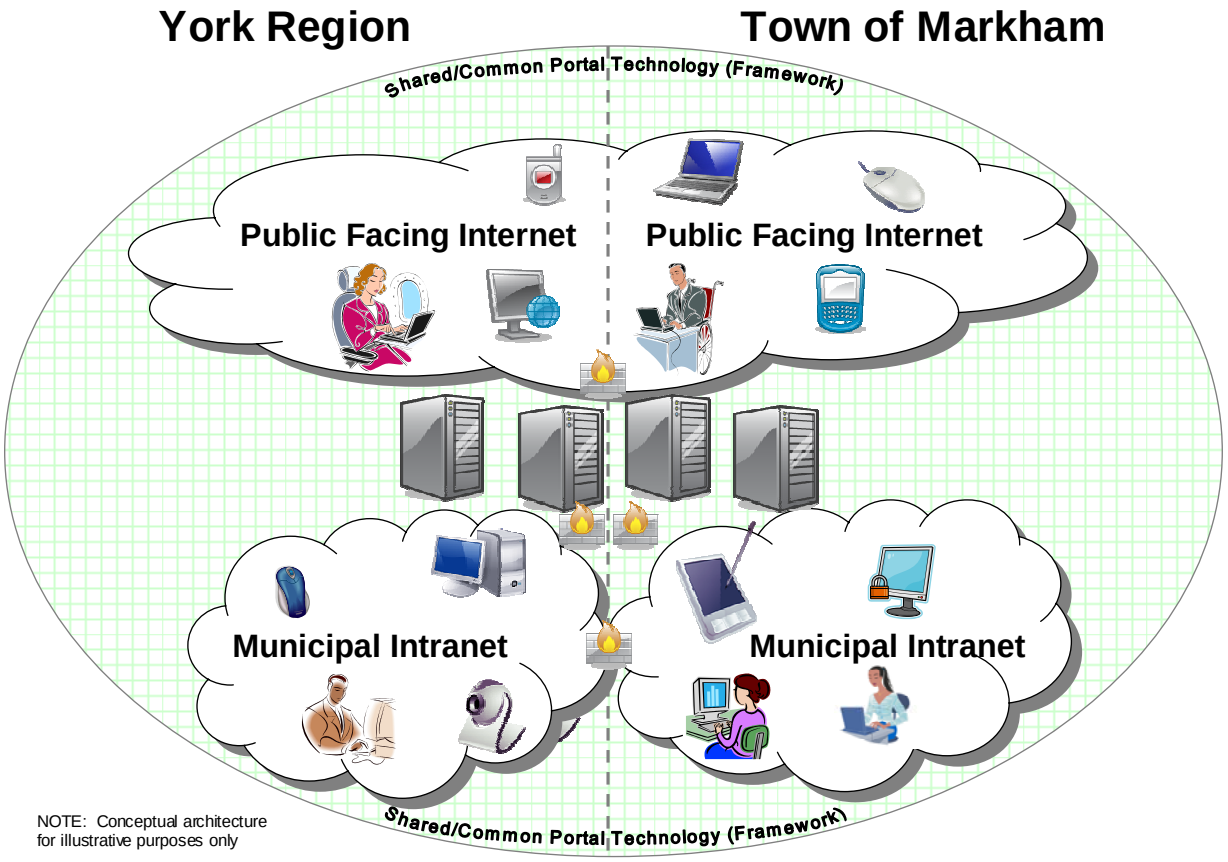


Figure 1 - Conceptual Joint Portal Future-State

Building the shared capacity to enable future growth and online services internally and externally will realize both short-term and long-term cost savings and advance York Region and Markham's shared vision for collaborative future.

2 Background and Purpose

This document is intended for Joint Portal Steering Committee (JPSC) members, The Regional Municipality of York (York Region) executives and The Corporation of the Town of Markham (Markham) executives.

Governments have experienced significant public demand for services and information delivered over the Internet. Also, there are cases to illustrate the value of sharing IT services to provide more efficient, integrated services that reduce the number of steps and amount of paperwork for constituents and governments. The tool that facilitates the development of a gateway to integrated information and services is portal technology.

The 2005 IBM-authored "Town of Markham Portal Business Value Assessment Report" did not include York Region but concluded that there was significant business justification for Markham to deploy a portal. It is reasonable to expect that this IBM report's findings and/or recommendations would apply to York Region as well. After Markham's "Information Technology Strategic Plan" recommended a portal, York Region was pleased to collaborate with Markham to explore a shared solution.

York Region and Markham formed the JPSC for the purposes of investigating the potential implementation of portal technology as another milestone in electronic service delivery and another step towards the transformation towards eGovernment.

Markham's JPSC membership was comprised of:

- Janet Carnegie (Director, Corporate Communications)
- Rick Dominico (Manager, Corporate Quality, CAO's Office)
- Bob Henderson (Markham Public Library)
- Nasir Kenea (Manager, Applications and GIS, Corporate Services)
- Peter Loukes (Director, Operations, Community and Fire Services)
- John Wright (Director, Building Standards, Development Services)

York Region's JPSC membership was comprised of:

- Bonnie Anderson (Manager of Business Services, Corporate Services)
- Joanne Armstrong (Manager, Administrative Services, Health Department)
- Jayne Blackburn (Manager, ERP Financial Systems Development and Support, Finance Department)
- Joanne Bovair (Acting Director of Business Services, Community Services & Housing Department)
- Mark Christiansen (Enterprise Architect, Finance Department)
- Michelle Herder (Program Manager, Corporate Customer Service Strategy)
- Ron Huber (Manager, Information Technology, York Regional Police)

- Bob McClelland (Director, Business Support Services, Transportation and Works Department)
- Duncan Rowe (GIS Project Manager, Geomatics)
- Andrew Satterthwaite (GIS Business Analyst, Geomatics)
- Louis Shallal (Chief Information Technology Officer, Finance Department)

The purpose of this Business Plan and Draft RFP is to complete analysis, draw conclusions and make recommendations about the York Region-Markham joint portal opportunity.

3 Portals in the Municipal Context

Most governmental organizations have come to understand the impact that the Internet continues to have on the world. How people inform themselves, shop, bank, and correspond has forever changed with the Internet. Not surprisingly, expectations of citizens, businesses, employees and visitors to government websites are also rapidly changing. Users are making ever-greater demands on the IT capabilities of governments and seek more flexible, responsive and cost-effective service delivery. Citizens and businesses are increasingly expecting the same level of online service that they have come to expect from the private sector. Municipal councils increasingly recognize the benefits of using the Internet to support municipal strategies and priorities.

Portal technology has emerged as the preferred channel for the provision of automated services. Internet, security and privacy standards have matured and have convinced many that the Internet is a viable, cost-effective channel to deliver information and services.

In Canada, municipal portals have helped modernize civic operations by breaking down silos and enabling collaboration. The opportunities for municipal government service improvement are extensive. One emerging goal has been to increase operational efficiencies by municipal employees and managers through the use of networks, information sharing and collaboration. Intranets — private internal networks which use standard Internet protocols — have grown in popularity in Canadian municipalities to improve communication and workflow among multiple locations.

In the last 10 to 15 years, Ontario has seen rapid growth in municipal government websites evolving from static information delivery to an increasing number of transactional services. This evolution may be viewed as part of a broader move toward eGovernment.

The Government of Canada defines eGovernment as "[applying] concepts of electronic commerce … to government operations. Some initiatives have included posting Government of Canada information and communication on Web sites, providing on-line services to clients, and collaborating with partners on-line."

Phases of eGovernment Maturity

Gartner's Baum and Di Maio (2000) describe a model with four phases of eGovernment maturity:

Phase 1 - Presence Phase: In the first phase, governments have a homepage on the web. This enables them to post a wide variety of information for their constituents. Governments attract constituents and others to visit their homepages for accessing information. This first phase allows for one-way information flow.

Phase 2 - Interaction Phase: After establishing its web presence, the government moves to the next level by providing the ability to download forms, perform simple searches, and e-

mailing government officials. This phase opens the door for constituents to interact with the government. The information flow now becomes bi-directional.

Phase 3 - Transaction Phase: Interaction with its constituents opens the door for a government to implement self-service applications for completing transactions online. These applications typically include the online ability for constituents to pay parking fines, file taxes, renew driver's license, and apply for permits. In these applications, there is an exchange of currency between constituents and government on the web. At this stage, governments start integrating Internet applications with the back-end applications (Miranda 2000), and empowering constituents to conduct business with the government on a 24x7 basis (Kreizman 2000).

Phase 4 - Transformation Phase: In the final phase, governments start creating web portals to serve as one-stop shops for constituents. Constituents can customize these websites based on their needs in an environment where services offered are tightly integrated. For example, constituents can participate in e-referendums, or vote online. Strong customer relationship management (CRM) tools are evident and enhance the constituents' experience in conducting business with the government. This is an ongoing phase for the governments, enabling them to re-engineer business processes to improve services for their constituents.

Some of the most common benefits recognized by municipalities include:

- Improved efficiencies through automated content management;
- Improved management and delivery of information and services to citizens and businesses;
- Improved efficiencies through citizen self-service and online payments;
- New and improved citizen and business services;
- Increased transparency between government and citizens/businesses;
- Furthering e-democracy and government transparency through online polling, online voting, and virtual town halls, anytime-anywhere access to municipal information; and
- Improved collaboration and information sharing.

Municipal portals differentiate themselves from one another by displaying distinctive regional value (e.g., attracting residents, industry, tourists, promoting local business, etc.).

In Connected Insight's experience, there has been a significant drop in municipal portal costs in recent years. Moreover, the vendor market has matured and the technologies have become very robust, scalable and easier for line of business managers and staff to own and manage their own content and sometimes maintain their own applications.

In recent years many smaller Ontario municipalities have invested in portal infrastructure to pave the way for future services to be delivered online. For instance, the Municipality of Greenstone recently made a $1 million investment to enable online services and encourage residents and businesses to make the portal their primary channel or way of transacting with

municipal government. It is interesting to note that the population of Greenstone is approximately 5,600.

In Kenora, a similar portal investment was made to serve as a municipal one-stop shop. The estimated population in Kenora is 15,000. Kenora residents can now customize the portal based on their individual needs and interests. Also, constituents can pay their property taxes directly online, have it automatically reconciled with the existing municipal financial system and receive a tax certificate.

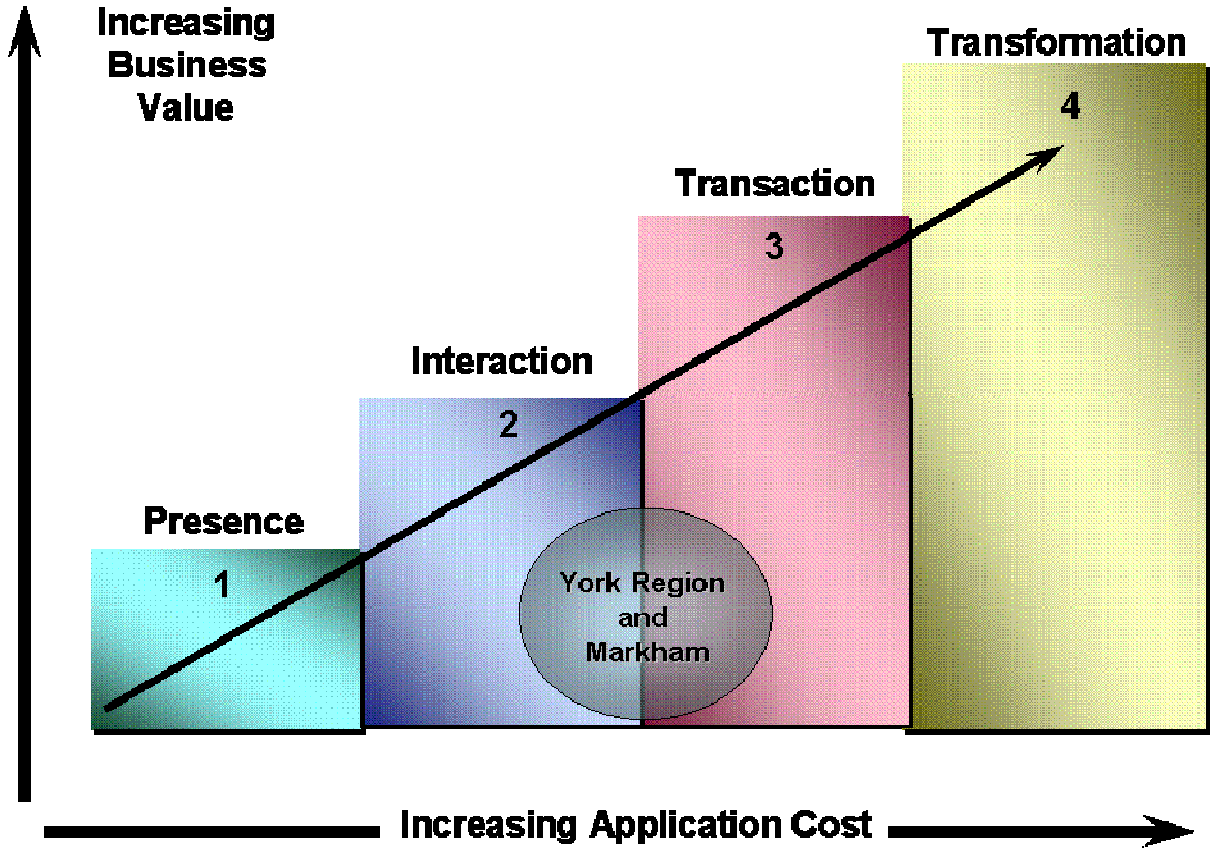


Figure 2 - "Web-Enabled E-Business: Four Phases" (Gartner, Abridged)[2]

In Connected Insight's opinion York Region and Markham are between Phases 2 and 3 of the evolution described by Gartner. As previously mentioned, existing technology presently limits both York Region and Markham's ability to seamlessly integrate backend systems and realize the full potential of automated service delivery. Migrating to a common portal framework would enable the partners to more easily advance to Phase 4.

[2] Phifer, G. "The Future of E-Business". Gartner.

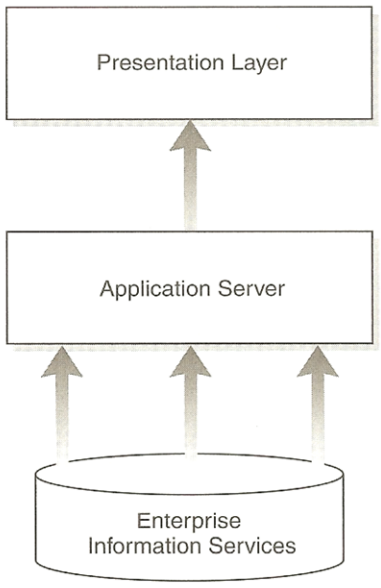
4 Portal Technology Overview

This section provides an overview of portal technology. For a more detailed discussion, please refer to Appendix A.

From an end-user point of view, a web portal is a dynamic, personalized gateway and starting point for access to information, services and transactions for a specific subject area or domain. Gartner defines a portal as "access to and interaction with relevant information assets (information/content, applications and business processes), knowledge assets and human assets by select targeted audiences, delivered in a highly personalized manner"[3]. This definition is non-technical and describes what functions portals support and how it delivers information, services and transactions to users.

There are technical characteristics that distinguish a portal from a normal static website. While there is no single common architecture to all portals, most designers and vendors apply a three-tier architecture. This tiered approach is common in many areas of information and communications technologies, since it supports defining the functional area of each tier and improves interoperability among different products from different vendors.

The most common three-tier architecture is illustrated in the figure below:



Main Function	Example Use Case
Display	Constituent/employee submits search on search web page
Processing	Search engine gathers data from numerous sources
Data sources	Databases Document management systems E-mail systems

Figure 3 - Three-Tier Portal Architecture (Sullivan)

[3] Phifer, G. "A Portal May Be Your First Step to Leverage SOA". Gartner, September 22, 2005.

Vendors employ several frameworks for integrating applications. The dominant frameworks used for implementing the application server (Tier 2) and enterprise information services (Tier 3) layers described in the previous section include:

- Java 2 Enterprise Edition (J2EE); and
- Microsoft .NET.

These frameworks define the overall structure for constructing and integrating portal components. Often, special brokering software (middleware) is needed to facilitate the application-to-application integration. This is also sometimes referred to as enterprise application integration (EAI) software.

In summary, portals are somewhat elusive to define in highly specific terms. However, having a general understanding of the technology can help in making decisions about the scope of the portal solution itself. Clearly, there is a great deal of technical complexity behind-the-scenes to deliver advance portal services to users. However, as portal applications and related standards mature, users and administrators are increasingly shielded from the background complexity and can focus on realizing benefits.

5 Current State Analysis

Connected Insight completed document review and personal interviews to develop an understanding of the partners' current online service delivery. This section highlights the main systems and services currently supported. Also, readiness to implement, operate and adopt a portal is addressed.

5.1 *Partner Readiness to Implement and Operate a Portal*

As noted earlier, the 2005 Portal Business Value Assessment served as a catalyst to inspire the partners to collaborate on this Business Plan and Draft RFP. It was viewed that since the Portal Business Value Assessment forecasted compelling benefits for Markham alone, it made strong business sense to explore a partnership.

Based on the needs analysis and requirements interviews conducted, Connected Insight has formed an opinion on the partners' readiness to engage a vendor, plan, develop and implement a portal, and operate it to realize the expected benefits. With sufficient dedicated resources and leadership, Connected Insight believes that both partners would be capable of implementing a portal solution independently.

In Connected Insight's opinion, York Region and Markham stakeholders have demonstrated willingness to partner on a portal implementation. During the process of developing this Business Plan and Draft RFP, however, it became apparent that the partners' ITS and other staff were challenged to devote significant time to the project. While this challenge was overcome, it is possible that future labour resource constraints may pose an obstacle to allocating dedicated personnel to the planning and implementation. The sheer scale of such a prospective project requires substantial dedicated labour to ensure that the expected benefits are realized. Therefore, if the partners can fulfill the required labour resources, the challenges of implementing and operating a portal can be met.

One other factor to consider is that of leadership. Markham has demonstrated leadership through its innovation of online voting. Similarly, York has shown leadership in areas including collection of court fines. A critical success factor of a portal implantation will be senior leadership support, including making difficult decisions to centralize certain IT service delivery to deploy a joint portal. This means that not only must senior partners' managers fully support this initiative, but that there must also be support within the respective Councils. In Connected Insight's experience, senior-level championing of the project greatly improve the outcomes.

Yet another factor is the partners' mutual dissatisfaction with some current IT systems that could be resolved with portal technology. Concerns have been expressed about some current systems being unsustainable and causing employee and user dissatisfaction.

5.2 *Municipal and Regional Services Supported*

Currently, York Region and its area municipalities provide services that generally fall into the following categories[4] for which performance is measured, including but not limited to:

- Protection Services
  - Fire
  - Police
  - Conservation authority
  - Protective inspection and control
  - Emergency measures
  - Provincial Offences Act (POA)

- Transportation Services
  - Roadways
  - Winter control
  - Transit
  - Parking
  - Street lighting
  - Air transportation

- Environmental Services
  - Sanitary sewer system
  - Storm sewer system
  - Waterworks system
  - Waste collection
  - Waste disposal
  - Recycling

- Health Services
  - Public health services
  - Hospitals
  - Ambulance services
  - Ambulance dispatch
  - Cemeteries

- Social and Family Services
  - General assistance
  - Assistance to aged persons
  - Child care

- Social Housing

[4] Province of Ontario - Ministry of Municipal Affairs. "Current Revenue for Specific Functions, FIR2005, Schedule 12". http://csconramp.mah.gov.on.ca/fir/ViewFIR2005.htm#2000

- Recreation and Cultural Services
  - Parks
  - Recreation programs
  - Recreation Facilities
  - Libraries
  - Cultural services

- Planning and Development
  - Planning and zoning
  - Commercial and industrial
  - Residential development
  - Agriculture and reforestation
  - Tile drainage/shoreline assistance

- General Government Services

Numerous existing systems, some of which are web-based, support service delivery in these areas. In the following sections, the linkage is made between these services, current support systems and how a future portal solution will be of benefit.

5.3 *Current Application Services*

For a list of current application services supported by the partners, please refer to Appendix B. The list helps the reader identify the wide array of applications, web-based or otherwise, that are currently in service. The list is not intended to be exhaustive, but to provide examples of the main services supported. Depending on the chosen solution, some of these applications would be accessible through a portal.

5.4 *Conclusions*

Complex IT Environments

Both partners maintain complex IT environments supporting a wide range of services using their current websites. Given the current growth of services, employees and constituents, both ITS departments are challenged to maintain current service levels and also adopt and implement a portal.

Limited Search Capabilities

Both internal and external users rely heavily on simple and easy-to-use search engines to find information. While both partners manage numerous information repositories intended for different user groups, neither possesses advanced search capabilities.

Considerable Overlap

There is significant overlap between the services supported by both partners (e.g., website content management). Some of this overlap could be could be reduced with portal technology in a shared services model, particularly if the portal partnership broadens.

Inconsistent Structure and Navigation

There is considerable variation to the structure and navigation within each partner website. This fragmentation and inconsistency is likely hindering users from finding what they need, or becoming confused about what path to follow. Coupled with that lack of sophisticated search services, this may be limiting the usability of the websites.

In some cases, there is also a very different "look and feel" among departments'/units'/commissions' web pages, further hindering easy navigation and requiring ITS maintenance of numerous templates that might be reduced through effective content governance using portal technology.

Multiple Website Domains

It appears that current decentralized website governance has resulted in the proliferation of many website domains (i.e., separate Internet addresses) that have been put in service for specific functions (see Appendix B). By consolidating these websites within a portal solution, the overall administration effort would be reduced, as well as some cost savings to maintain registration of so many domains. This could also help to optimize public search engine results (e.g., Google) when users search these to find information and services.

6 Requirements Analysis

The partners envision that the portal will provide constituents with, one-stop, easy access to all information and services. As well, the portal will become the new "desktop" for employees with most things needed to perform their jobs at their fingertips.

Naturally, different users have different needs. The following figure illustrates how portals link people with processes, resources and information that they need to do their jobs or get the services they require. The intent is to show how an inventory of services can be selectively made available to different users based on their needs.

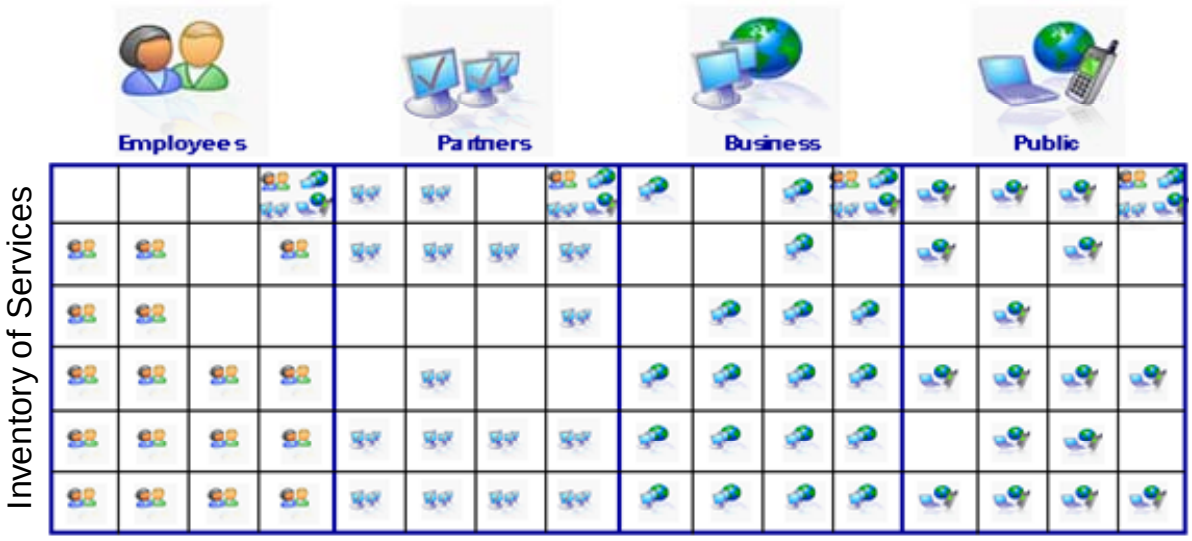


Figure 4 - Services Requirements Differ by Group (York Region, 2006)

What does the portal need to do in order to meet these goals? Connected Insight consulted with the partners and captured a list of required functions/services. Requirements identified were categorized in a spreadsheet for sorting and analysis. The methodology used and the final list of requirements identified is listed in Appendix C.

Constituents' input was not included in this requirements-gathering exercise. The partners should validate requirements through consultation with constituents prior to issuing the RFP.

6.1 *Mandatory Requirements*

Following is a summary of the most prominent mandatory required functions or services:

- Portal Personalization
- Content Management System
- Search
- Event Calendar

- Registered User Authentication (Single Sign-On)
- Payment Engine
- Directories
- E-Mail Newsletters/Notifications
- Surveys
- Information/Service Requests, Feedback and Complaint Processing
- Systems Management and Reporting (Utilization Statistics)
- Alerts
- License Services (Business)
- License Services (Animal)
- Parking Ticket Payment
- Provincial Offences Act Ticket Payment
- Resource/Facility Booking and Payment
- Program Registration and Payment
- Event Ticket Ordering and Payment
- Property Tax Calculator
- Document Management
- Access to Other Systems
- Third Party Application Integration
- Procurement
- Emergency Management Application
- Project Status Dashboards
- Department/Unit Performance Dashboards

6.2 *Observations*

During consultation with the partners, Connected Insight received input, concerns and observations as expressed below:

Significant Unsatisfied Requirements

Some of the mandatory portal requirements listed above are currently satisfied by non-portal solutions. However, both partners have a significant number of unsatisfied requirements that may be viewed as opportunities for improvement using portal technology. For example, many transaction services are not currently available online and also neither partner has a solution for Department/Unit Performance Dashboards which study participants believed to be valuable. As well, Single Sign-On is not currently supported but is expected to provide significant benefits in a portal environment.

Portal Solution Expected to be Challenge to Vendor Community

It can be expected that a solution to satisfy the mandatory requirements will be perceived as a significant challenge by the vendor community. The requirements are very broad, spanning many different existing systems. However, several vendors will likely view this as

a tremendous business opportunity, one that may later be cited as a showcase of technical leadership of a cross-jurisdictional public sector solution.

Complex IT Environments

As noted in the previous section, both Markham and York Region possess rapidly changing and complex IT environments.

Decentralized IT Project Planning and Execution

Planning and implementation of IT solutions is done at multiple organizational levels and is not highly centralized.

Stakeholder Concerns about IT Investments

Some stakeholders observed that existing technology is underutilized and expressed concern about being able to realize the benefits of a portal.

Stakeholder Concerns about Impact on Other Projects/Opportunities

In addition, some stakeholders expressed concern about how implementing a portal would impact other projects, either existing or future and whether the investment may be more valuable in other areas versus a portal.

Mandatory Requirements Sufficient for RFP

The mandatory requirements identified are sufficient upon which to issue an RFP. Vendors will be able to translate these requirements into a proposed solution. A solution that fulfills mandatory requirements may serve as foundation for future enhancements as portal services are adopted.

Significant Support for Portal Solution

As noted above, there are those who are concerned about the benefits of a portal solution. However, among the stakeholders interviewed there is significant support for embarking on a portal solution implementation to fulfill outstanding requirements.

7 Business Case for Portal

Key Messages

- **Invest in portal technology as necessary infrastructure (i.e., cost of doing business)**
- **Given partners' growth and demand for services, maintaining existing websites is not sustainable**
- **A portal offers compelling benefits to constituents and employees**
- **Estimated 30-60% cost savings for joint portal versus partners implementing separate portals**
- **Issue RFP and evaluate proposals**
- **Prepare to commit dedicated labour resources**
- **Plan to maximize portal adoption**

7.1 *Definitions*

According to the International Institute of Business Analysis, the business case is the document that "describes the justification for the project in terms of the value to be added to the business as a result of the project outcomes vs. the cost to develop the new solution"[5].

For the purposes of this Business Plan, the investment justification is based on both quantitative and qualitative benefits defined as follows:

- Quantitative Benefit: This includes "tangible", "hard" or "direct" cost savings and revenue increases that may reasonably be quantified. It excludes "soft" or "indirect" cost savings (e.g., time saved by an employee to complete a task).
- Qualitative Benefit: This includes all other benefits that are not, in Connected Insight's opinion, reasonably estimated with confidence. Also referred to as "intangible" benefits, these are important benefits to expect, but ones to which Connected Insight does not feel confident assigning a monetary value. Connected Insight has also elected to categorize "soft" or "indirect" cost savings as qualitative benefits.

[5] International Institute of Business Analysis. *A Guide to the Business Analysis Body of Knowledge, Release 1.6.* 2006.

7.2 *Methodology and Constraints*

Before delving into the details of quantitative and qualitative benefit analysis, it is prudent to consider one common public sector approach to justifying IT investments. The Treasury Board of Canada Secretariat's mandate is to "provide advice and support to Treasury Board Ministers in their role of ensuring value for money."[6] This organization proposes assessing both "comparative" and "level-of-service" advantages expected to result from an IT investment.

Comparative advantages include:

- More time spent on highly-valued activities;
- Improved inputs to decision-making;
- Resource savings achieved by avoiding errors and needless work; and
- Reducing the number of steps in a business process, resulting in improved workflow.

Level-of-service advantages include:

- Reductions in paperwork;
- Improved client access to services;
- More timely services; and
- Improved quality or quantity of service.

Connected Insight observes that the private sector often employs a different model than the one proposed by the Treasury Board of Canada Secretariat to justify IT investments. These may include return on investment (ROI) calculations where the effectiveness of the investment is calculated to determine whether the costs will generate enough return (benefits minus costs) to recover the original investment.

Estimated costs can be identified as a range, as the portal RFP can be expected to attract proposals that will provide more detailed market-specific pricing for comparative purposes.

Clear and defensible net benefits are difficult to quantify for all business requirements identified in the needs analysis for the portal. Therefore, more weight has been given to the qualitative benefits as modelled by the Treasury Board of Canada Secretariat.

Quantitative benefits include incremental revenue, reduced printing costs, and decommissioning legacy intranet software. Such "direct" or "hard" benefits may fall into one or more of the following categories:

- Revenue/margin enhancement;
- Direct cost reduction; and
- Working capital improvement (i.e., freeing capital for alternate investments).

[6] Treasury Board Secretariat of Canada (www.tbs-sct.gc.ca/common/us-nous_e.asp).

As stated earlier, "soft", "intangible" or "indirect" benefits have not been quantified for the portal. This is because Connected Insight's experience with other clients shows that realization of such benefits is not reliably measured. Such benefits generally fall into one or more of the following categories:

- Quality improvement
- Cost avoidance (e.g., reducing rate of future staff growth);
- Fractional labour (FTE) reduction; and
- Capacity creation (expanded capability).

These are not possible to accurately quantify to the satisfaction of multiple stakeholders. In Connected Insight's experience, such qualitative benefits are often the main drivers of public sector capital projects.

It is worth noting that public sector organizations frequently make capital infrastructure investment decisions on the basis of expected qualitative improvements. Much like the Treasury Board of Canada Secretariat uses comparative improvements and level-of-service advantages to justify federal spending, the Province of Ontario has implemented a portal technology strategy for a number of compelling qualitative reasons. "The Portal Guide" Ontario vision includes:

- Clients will have seamless, speedy and simple access to government information, expertise, products and services.
- Ontario is recognized as a world leader in providing electronic services. Client view portals as the preferred channel for receiving Government of Ontario services and client's satisfaction with them is extremely high.[7]

The Ontario Government recognizes "… that this transformation is being driven by consumer demand, quickly evolving technological capabilities and the need for robust security framework" (2005).

Ontario's justification for a common portal framework stems from the recognition that government operations need to modernize; that information silos must be eliminated through access integration; that interagency, interdepartmental and intergovernmental information flow must be improved so that taxpayers realize the elusive goal of "build it once - use many".

Presently York Region and Markham online capability gaps render existing business processes less than optimal. Today residents and businesses in Markham and, therefore, York Region are paying to maintain two different online technological infrastructures. For example, both support online payment systems. This typifies the inefficient use of IT

[7] Province of Ontario. "The Portal Guide – Building an Effective Portal Solution Quickly and Cost Effectively". e-Government Branch, Ministry of Government Services, Province of Ontario 2005.

resources that portal technology seeks to reduce or eliminate. Fractional and segmented approach to online services has become unmanageable and expensive and must be reduced or eliminated.

All levels of government in Canada are moving aggressively towards building solutions that will provide a seamless service to people progressing through different stages of programs and services that cross several agencies. As connected government expands and a holistic approach to government systems is adopted, more opportunities to increase efficiency will emerge.

The combination of quantitative and qualitative benefits analysis combines both private sector and public sector practices to assist the reader in determining whether there is justification for the project.

7.3 *Alternatives Analysis*

Connected Insight was engaged to deliver this Business Plan and Draft RFP for a joint portal solution. However, it is expected to be helpful to the reader to show the portal solution in the context of other alternatives presently available to the partners.

Table 1 on the following page summarizes key strengths and weaknesses of each alternative:

Alternative	Key Strengths	Key Weaknesses
Do nothing (**maintain existing websites**)	✓ Less resource-intensive in short-term ✓ Can divert capital investment to other opportunities	× Misaligned with strategic plans for technology leadership (creates perception as a technology follower) × Limited capacity to meet future growth × Risk of not retaining skilled staff who seek a more challenging technology direction × Missed opportunity to realize portal benefits × Missed opportunity to partner and demonstrate a successful IT shared services model × Continued investment in limited technology platform that does not provide a strong foundation for future development
Implement **separate portals**	✓ Less cross-jurisdictional coordination ✓ Fewer stakeholders to satisfy	× More expensive (estimated to be 30-60% premium for each partner versus shared portal) × Fails to demonstrate cross-jurisdictional partnership × Likely preempts opportunity for future joint portal (if different solutions implemented) × Business case founded on qualitative benefits
Implement a **joint portal**	✓ Less expensive (estimated to be 30-60% lower cost for shared portal) ✓ Furthers established strategic goals and objectives ✓ Demonstrates a willingness to partner to the benefit of the taxpayer ✓ Builds a strong foundation for future development and cooperation ✓ Realize numerous qualitative benefits ✓ Realize cost-savings benefits ✓ Lower cost versus separate portal implementations, especially for any new area municipal partners	× Large, complex and challenging multi-year project with numerous stakeholders to satisfy × Business case founded on qualitative benefits

Table 1 - Alternatives Analysis

As will be explained later in more detail, it is recommended that the partners proceed to the procurement stage for a joint portal solution.

While it is possible to develop and offer a shared portal for Markham and York Region only, it is vastly preferable that the shared portal encompass all the local municipalities within the geographic area of York Region. Branding issues may arise, but they are not difficult to

overcome once the joint portal is viewed from the perspective of the constituents as a "no wrong door" to municipal services in the region.

7.4 *Current Costs*

For details of costs, benefits and assumptions please refer to Appendix D - Business Case for Portal (Financial Analysis).

Markham

Markham's ITS department estimates its annual Internet and Intranet operating expenses at $160,000. This includes internal labour, hardware maintenance and support, and software maintenance and support.

Because of uncertainty forecasting related cost savings after portal implementation, assumptions have been made to exclude internal labour and therefore only minor savings are likely. These are estimated at $5,000 per year.

York Region

York Region's ITS department estimates its annual Internet and Intranet operating expenses at $350,000. This includes internal labour, hardware maintenance and support, and software maintenance and support.

As in Markham's case, because of uncertainty forecasting related cost savings after portal implementation, assumptions have been made to exclude internal labour and therefore only minor savings are likely. These are estimated at $80,000 per year.

7.5 *Cost/Benefit Analysis*

The cost/benefit analysis is based on estimated cost ranges to fulfill the **mandatory** requirements identified. For a list of optional requirements and assumptions, please refer to Appendix C. Also provided is a five-year total cost/benefit estimate.

Cost/Benefit Analysis Summary

Table 2 on the following page is the cost/benefit analysis summary. Please refer to Appendix D for the complete spreadsheet and accompanying assumptions.

	Year 1 ($)	Year 2 ($)	Year 3 ($)	Year 4 ($)	Year 5 ($)	Cumulative (Years 1-5) ($)	
	Likely	Likely	Likely	Likely	Likely	Likely	High
Initial Costs (Capital)							
Software Licenses	955,000	90,000				1,045,000	1,785,000
Hardware	192,000					192,000	313,000
Services (External)	1,070,000	1,120,000				2,190,000	3,300,000
Training (External)	125,000	125,000				250,000	380,000
Total Initial Costs (Capital)	**2,342,000**	**1,335,000**	**0**	**0**	**0**	**3,677,000**	**5,778,000**
Recurring Costs (Operating)							
Software Maintenance & Support		191,000	191,000	191,000	191,000	764,000	1,324,000
Hardware Maintenance & Support		38,400	38,400	38,400	38,400	153,600	250,400
Services (External)			25,000	25,000	25,000	75,000	120,000
Training (External)		50,000	50,000	50,000	50,000	200,000	300,000
Total Recurring Costs (Operating)		**279,400**	**304,400**	**304,400**	**304,400**	**1,192,600**	**1,994,400**
TOTAL COSTS (Initial + Operating)	**2,342,000**	**1,614,400**	**304,400**	**304,400**	**304,400**	**4,869,600**	**7,772,400**
Benefits (Quantitative Savings)							
Markham		5,000	5,000	5,000	5,000	20,000	28,000
York Region		80,000	80,000	80,000	80,000	320,000	400,000
Total Savings		**85,000**	**85,000**	**85,000**	**85,000**	**340,000**	**428,000**
Benefits (Quantitative Revenue Increases)							
Markham (Fee Payment / Convenience Fees)							
York							
Total Revenue Increases							
TOTAL BENEFITS (Savings + Revenue Increases)		**85,000**	**85,000**	**85,000**	**85,000**	**340,000**	**428,000**

Table 2 - Cost/Benefit Analysis Summary (to Fulfill Mandatory Requirements Only) (Estimates) [8]

Internal Labour Costs

The following personnel are deemed required to be dedicated to the project during the two-year implementation period, with only the Portal Administrator being required for ongoing operations:

- Portal Administrator
- Project Manager
- Project Coordinator (Markham)
- Project Coordinator (York Region)
- Business Analyst (Markham)
- Business Analyst (York Region)

The estimated value of all internal labour over a five-year period, including positions listed above, is $4.6 million. It is important to note that **no** internal labour costs are included in Table 2.

[8] The line "Benefits (Quantitative Revenue Increases" is a placeholder to represent net-new revenue. Currently, no values are shown to indicate that no reliably estimated net-new revenue is forecast without the levying of convenience or other fees.

Cost to Fulfill Optional Requirements

As noted earlier, initial cost ranges are to fulfill **mandatory** requirements only which will deliver a strong portal foundation that delivers some transactional services. This means that any optional requirement identified *may* not be covered by the identified initial costs. However, it is important to note that there is some uncertainty whether or not the partners can expect to incur additional costs to cover optional requirements. Some vendors' solutions may fulfill optional requirements, while others may require additional costs.

Connected Insight has not estimated the cost to fulfill all optional requirements. It is expected that after the proposed two-year implementation project is complete, a new capital project can be initiated to develop enhancements to address selected optional requirements. By this point, it is likely that the partners will have a highly refined sense of which options are expected to deliver the greatest business value.

Initial Costs (Estimate)

Initial cost estimates are based on a solution to satisfy mandatory requirements over a two-year implementation project after a portal solution vendor is contracted. That is, optional requirements have not been evaluated, including some transaction services. This approach was taken to present initial capital cost estimates for a foundational portal infrastructure that delivers some transactional services. Estimated costs are based on Connected Insight's experience with both portal implementations and proposal evaluations.

Initial costs are not apportioned by partner, since it is not yet defined how the capital costs will be shared.

Finally, cost estimates are biased toward a self-managed solution (i.e., versus an outsourced software as a service or ASP solution) which would bear lower initial costs and higher recurring operating costs.

Recurring Costs (Estimate)

Here again, recurring cost estimates are biased toward a self-managed solution and are based on a solution to satisfy mandatory requirements.

Cost Comparison with Portal Business Value Assessment

It is recognized that readers will be interested in comparing these costs for the joint portal with those estimated in Markham's Portal Business Value Assessment. However, because these are dissimilar they cannot be readily compared. The following summarizes the key comparisons (both excluding internal labour):

- Total Initial Costs (Capital): $3,677,000 (versus $2,432,850 estimated in Portal Business Value Assessment)
- Total Costs (Initial + Operating, Five Year Period): $4,869,600 (versus $2,874,789 estimated in Portal Business Value Assessment)

The main reason for the variance is that the joint portal costs are to develop a portal solution for multiple organizations and, therefore, a greater number of internal and external users. Secondly, the list of requirements identified by IBM differs significantly than those identified by Connected Insight. Also, the Business Value Assessment costs are understood to be based on an IBM portal solution. However, other vendors' solutions can be expected to come in a wide range of costs. In addition, portal solution costs can reasonably be expected to decline somewhat since the Business Value Assessment costs were estimated.

For the above reasons, the estimated portal implementation costs identified in this business plan cannot be reasonably compared to those identified in the IBM authored Portal Business Value Assessment.

Benefits Comparison with Portal Business Value Assessment

Connected Insight recognizes that the method of benefits valuation[9] differs between Markham's Portal Business Value Assessment and this plan. The reason is as follows. Connected Insight is more conservative in its benefits valuation approach. Connected Insight forecasts quantitative benefits that are likely to be both realized and measured and excludes labour-savings.

In the Portal Business Value Assessment and based on their experience and knowledge, IBM has allocated to a dollar value to qualitative benefits, in most cases forecasting a labour-saving benefit. For example, it may have been assumed that the labour saved by implementing a portal would be reallocated to a higher-value activity or that FTEs could be reduced. IBM estimates cumulative benefits over 5 years to be approximately $8.6 million almost entirely consisting of labour cost savings within Markham alone. **If one assumes that the same holds true for a joint York Region-Markham portal solution, one may infer that the qualitative benefits may increase significantly.**

7.5.1 Quantitative Benefits (Estimate)

Cost Savings

The partners have agreed that fractional FTE reduction estimates will not be presented as quantifiable "soft" cost-savings benefits. In addition, no full FTE reductions are forecast as a result of the portal implementation.

Both Markham and York Region have partial FTEs allocated to content administration for their respective Internet and Intranet websites. Once a portal is in service, some of this labour may be reallocated to other activities, since content administration may become more decentralized. However, the value of the reallocated labour is not being forecast as a savings, since it is unlikely to be realized as a net savings to either partner.

[9] Both Connected Insight's and IBM's benefits valuation considered a portal solution used by both employees and constituents.

Connected Insight views such a conservative approach to projecting cost savings is prudent based on observations of other municipal government portal experiences.

Revenue Increases

It is likely that improved cash flow will be realized by the Markham Public Library due to collecting a greater portion of fines by library patrons that prefer to pay online.

For online service transactions, it is common among other municipal portals that convenience fees are charged. It is reasonable to expect that providing portal services without user fees will realize better portal adoption. Therefore, Connected Insight did not include a forecast for new revenue. The decision to charge user fees is a political decision and the Councils of the Town of Markham and York Region will need to consider whether convenience fees would be charged.

Qualitative Benefits

While this list is in no way meant to be exhaustive, Connected Insight's opinion is that most of the following benefits have a high probability of being realized to some degree should portal technology be implemented.

Qualitative Benefit	Quality Improvement	Cost Avoidance / Savings	Labour Reduction[10]	Capacity Creation
Customer Service				
Improved quality of service, including: • Personalized access to information and services • Improved constituent choice of service delivery channel • Improved client access to services	√			√
• Enable self-service for constituents	√	√		√
• Faster response to citizen inquiries	√			√
• Improved communication of available services	√			√
• Better customer service agent performance	√	√		√
• Increased employee satisfaction	√	√		
• Improved employee consultation	√	√		
Improved Communication and Management Decision Making[11]				
• Improved coordination of services between departments	√	√		√
• Improved coordination of services between municipalities	√	√		√
• Improved coordination of services between municipalities and other levels of government	√	√		√
• Improved coordination of services between municipalities and community agencies	√	√		√
• Improved coordination of between municipalities and businesses	√			

[10] "Labour Reduction" refers to reduced labour related to the stated benefit. It is not intended to refer to full FTE reductions.
[11] Most benefits listed here are of particular note since they are aligned with York's "Vision 2026" strategic plan.

Qualitative Benefit	Quality Improvement	Cost Avoidance / Savings	Labour Reduction[10]	Capacity Creation
• Reduced undetected workplace issues	√	√	√	
Increased Citizen Engagement				
• Enhanced public awareness of local government	√			√
• Improved community reporting	√			√
• Enhanced community-building	√			√
• Enable citizens and businesses to access information anywhere, anytime	√		√	√
• Faster deployment of municipal information online	√	√	√	√
Operational Efficiency				
• Reduce knowledge requirements for employees to access common applications or information	√	√	√	√
• Improved flexibility to expand services	√		√	√
• Improved targeting of training	√	√		√
• Reduced paperwork for portal-enabled processes			√	
• Improve workflow for portal-enabled processes	√	√		√
• Reduced errors through reduced duplication/re-keying	√	√	√	√
• Higher degree of automation across the enterprise value chain		√		√
• Improved accountability	√			√
• Employee time savings • Enable employees to work from home • Reduced travel • Reduced call times in call centres • Reduced time searching for information	√	√		√
IT-Specific Efficiencies • Reduced printing costs (e.g., paper, toner, printers, etc.) • Reduced internal IT delivery service costs • Improved compatibility and reusability of components (i.e., SOA compatibility) • Achieve economies of scale in capital and ongoing costs and through reusable processes	√	√	√	√
Communications Improvements • Better targeted and more timely communications • Increased internal collaboration • Enables content authors to update information more quickly	√	√		√
Demonstrates Municipal Leadership				
• Demonstrated commitment to partnerships and cost sharing	√	√	√	
• Demonstrated ability to cooperate and/or partner with other levels of government	√	√	√	
• Demonstrated municipal leadership though shared service partnership	√	√	√	

Table 3 - Qualitative Benefits

It is important to note that although existing costs to maintain disparate online technologies and 30 or more domains is significant, the costs to improve these over time is likely to be exorbitant. The reader is encouraged to consider the cumulative costs of future upgrades and maintenance while safeguarding existing departmental silos. It is likely that if these

continue to be independently supported/maintained no economies of scale or sharing of benefits are likely to be realized.

Although difficult to accurately measure, initial investment in portal technology framework will yield its most significant cost savings over time as *cost avoidance*.

But perhaps the most compelling argument for investing based on qualitative benefits is that of *capacity creation*. Building a portal framework, while initially costly, translates into an investment in future online capabilities. This foundation will enable future development to deliver functionality and features at a reduced cost versus maintaining the current non-integrated web architecture. It is reasonable to expect that development upon a shared services portal will yield significant cost savings in future upgrades, application releases and new services.

Finally, both Markham and York Region have made commitments to demonstrate leadership in the effective use of technology. Many municipalities have upgraded or are upgrading to portal technology. These include:

- Kenora;
- Mississauga;
- Toronto;
- Hamilton;
- Greenstone;
- Ottawa; and
- Sudbury.

These municipalities have demonstrated leadership and leave first-time visitors with a very favourable impression. Visitors are left with the impression that these municipalities are innovative, modern and consider the Internet an important channel in the provision of government services.

Creating a positive impression to first-time online visitors is important if Markham and York Region wish to compete effectively with other municipalities to attract residents, professionals and businesses.

7.6 *Risk Analysis and Mitigation*

This section analyzes identified negative risks presented by proceeding to implement a shared portal.

The following risks are rated as both high probability and high impact and should, therefore, receive most focus[12]:

[12] Other risks are detailed in the Risk Log in Appendix E (Risk Management Supporting Material).

- Portal utilization/adoption objectives may not be met; and
- Unnecessary overlap with other projects.

Detailed descriptions of these risks and recommended mitigation strategies is outlined in Appendix E (Risk Management Supporting Material). It is intended that the included Risk Log may be used as a starting point by the JPSC and the assigned project manager should it be decided to proceed with portal implementation. The mitigation strategies outlined can be expected to reduce these risks' impact to project success.

7.7 *Conclusions*

The decision of whether or not to invest in a portal solution is challenging for any organization. Connected Insight's experience is that public sector clients often look beyond hard return-on-investment values when making this decision. It is reasonable to conclude that if the decision-makers focus on the qualitative benefits, there is indeed a business case for a phased implementation of portal technology.

Dedicated labour resources from both partners, as well as vendors, will likely be a critical success factor for portal implementation.

In Connected Insight's opinion there is substantial alignment between the partners' strategic plans and the implementation of portal technology. It could be argued that the implementation of portal technology would significantly contribute to helping realize the York Region and Markham Council-endorsed strategic plans.

York Region's goals and actions stated in the "Vision 2026 (Towards a Sustainable Region)" include:

- Provide leading-edge municipal services;
- Provide advanced technology adoption and implementation;
- Demonstrate diversity and innovation in service delivery;
- Address the challenge of demands for urban service levels in rural communities;
- Increase businesses' awareness of the Region's services;
- Make services/information available regardless of personal mobility; and
- Enable resident to access services regardless of location.

All of these goals can be furthered though the effective application of portal technology.

In the "Engage Markham 21st Century Markham Report", the community vision and corporate goals are to be realized through the following elements:

- [Markham] will be recognized as an international leader in the management and delivery of high quality municipal services;
- We are the high tech/knowledge-based capital of Canada;
- Our communities … feel connected;

- [T]he Town will be a leader in e-government services; and
- To establish, promote and support Markham as the best location for diverse high-tech and related businesses.

Again, the effective deployment of portal technology would substantially help attain some of the above ambitions.

If Markham and York Region wish to compete online with other municipalities, they must invest in upgrading their online offering. Many municipalities have or are upgrading to portal technology. Without further investment in portal technology, the partners' present advantages may be lost.

There is a significant cost advantage to deploy a joint portal versus separate portals. Based on Connected Insight's experience and review of other shared services arrangements, it is estimated that for the partners to separately implement portal technology, there would likely be an initial cost premium in the range of 30-60% versus a shared services approach. This premium is due to duplicated separate computer infrastructure, software licensing and services to implement the portal. In addition, a joint portal will be less costly for the partners to operate versus separate portals (e.g., single portal administrator, single computing platform, etc.)

Like any venture, portal implementation presents risks to the project objectives. The major risks faced by York Region and Markham are that user adoption will not meet objectives and that wasteful overlap and duplication of resources will occur.

However, by focusing on mitigating these risks, overall risk to project objectives can be reduced. As well, the portal implementation project manager will need senior level support to mitigate project risks. This can improve the chances that expected portal benefits are realized by the partners.

7.8 *Recommendations*

Focus on Compelling Qualitative Benefits to Constituents and Employees

It would require many additional person-months of labour to perform thorough analysis of qualitative benefits in order to arrive at savings estimates that would be acceptable. For example, detailed time and motion studies would need to be completed for Markham's Contact Centre to quantify the value of the total time savings that single sign-on may realize (i.e., instead of each customer service representative separately logging-into nine applications before they are ready to assist customers).

Connected Insight recommends that the partners focus on reasonable qualitative benefits that portal technology can be expected to deliver.

Issue RFP and Evaluate Proposals

If the partners agree that qualitative benefits are sufficient to justify the Business Plan, the partners should proceed to the procurement stage for a joint portal solution.

Connected Insight is confident that its cost/benefit analysis estimates are reasonable for the purposes of this Business Plan. However, only through "going to market" can the partners develop a more detailed picture of the wide array of costs and solution variants available. Using the Draft RFP provided is expected to maximize the degree to which an "apples-to-apples" comparison may be made between solution offerings. If it is more agreeable to the partners, the procurement project may be decoupled from the implementation project and handled separately.

If resulting vendor proposals fall within the initial and operating cost ranges provided in the cost/benefit analysis, it is recommended to proceed to the implementation stage if a contract with the successful proponent can be executed and necessary internal labour resources can be committed.

Prepare to Commit Dedicated Labour Resources

As identified in the cost/benefit analysis, several dedicated labour resources will be required for an estimated two-year period for the portal implementation project. Senior management in both partners will need to commit dedicated personnel, either seconded from existing positions or through new hires. It is possible that new positions may need to be created to address this need.

Manage Risk

To manage risk, the JPSC should:

- Use the Risk Log as a starting point for the assigned project manager should it be decided to proceed with portal procurement and implementation;
- Support the assigned project manager in assigning an owner for each risk; and
- Ensure mitigative actions are taken.

8 Portal Operations and Administration

This section previews how the implemented portal will be operated and administered.

8.1 *Content Administration Policy/Guidelines*

Some organizations elect to approve a communication policy specifically for website or portal content governance. Others simply provide guidelines to support users in content decision-making. It is likely that the partners' respective records management policies, in tandem with existing communication policies, are sufficient to govern portal content administration. These, together with provincial legislation addressing matters including accessibility, may lead the partners to conclude that a portal-specific policy is unnecessary.

Partners will realize the most value from the vendor's implementation if there is a clear shared vision of how the the content management system will support and align with existing policy. Part of the vendor's engagement will be to configure and operationalize the content management system in alignment with existing policies. While this can be expected to require significant planning effort from both partners, it will ensure that most disruptive problems or conflicts are prevented. For York Region, it is possible that the current configuration of Hummingbird eDOCS may serve as a model for content management system implementation. Since eDOCS already has configuration settings for record types (e.g., transitory versus official) and other attributes, it may provide a valuable reference model to expedite decision-making.

8.2 *Content Management Process*

The partners currently have processes in place for website content management. Adopting a common process for portal content management will be a challenge. However, doing so can be expected to provide improved consistency and rigour for content authors, editors and approvers.

Portal solution vendors can be expected to make the claim that using their proposed content management system provides a competitive advantage through simplifying content administration. While this may be partially true in some cases, in general the partners can expect that much planning is required to fully exploit content management system functionality to automate some aspects of content administration that are currently performed manually.

The figure below depicts a simplified, linear content lifecycle for content management system-managed content item[13]. This is the way most vendors will present the features and benefits of their proposed content management system.

[13] Woods, R. "Decisions to Make before You Implement a Web Content Management Solution". Non-Linear Creations Inc. 2005.

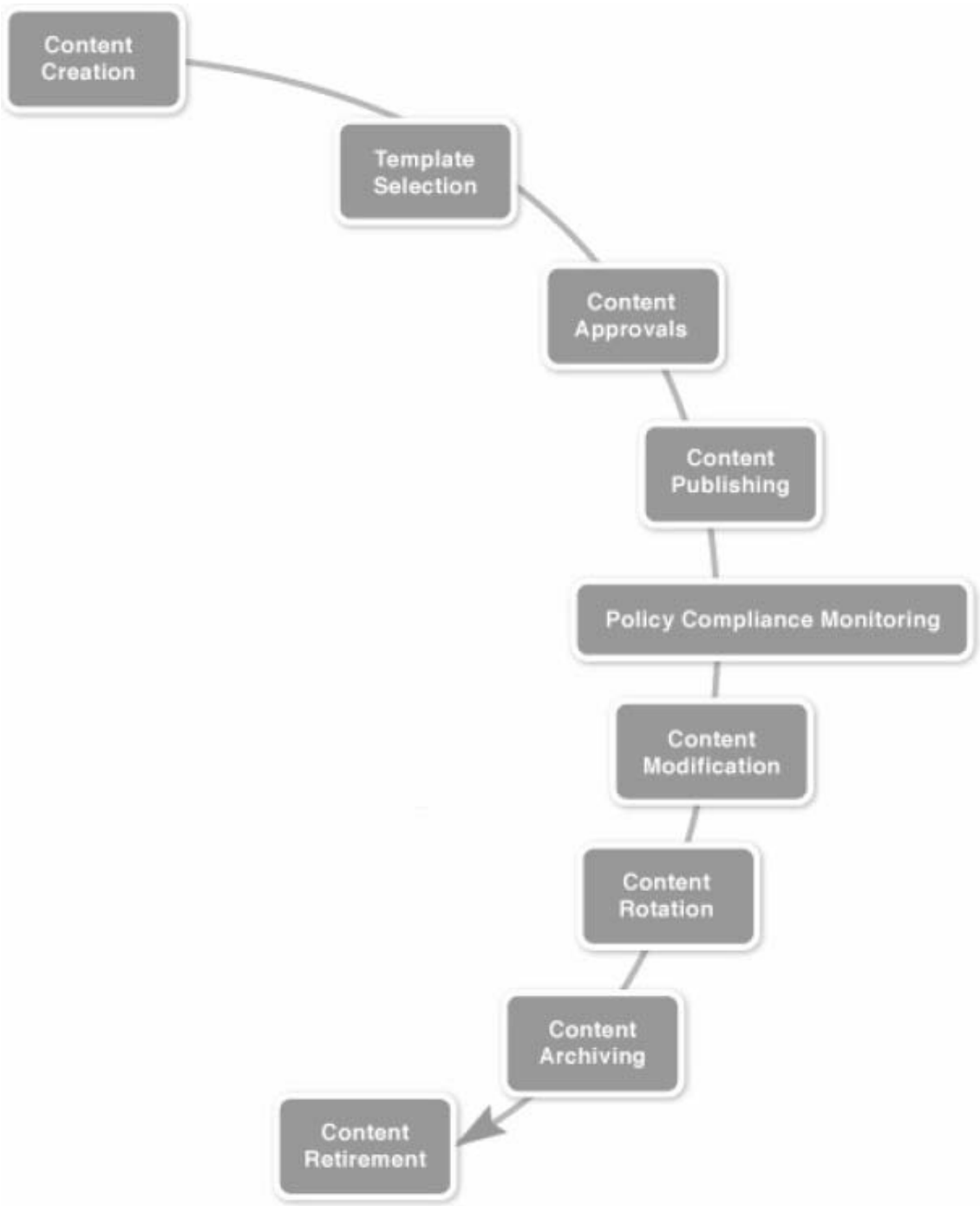


Figure 5 - Ideal Content Lifecycle (Woods)

Most content management system users will point out that such linear process is not often a real-world experience. The more likely lifecycle for a content item is often more iterative and complex as illustrated below:

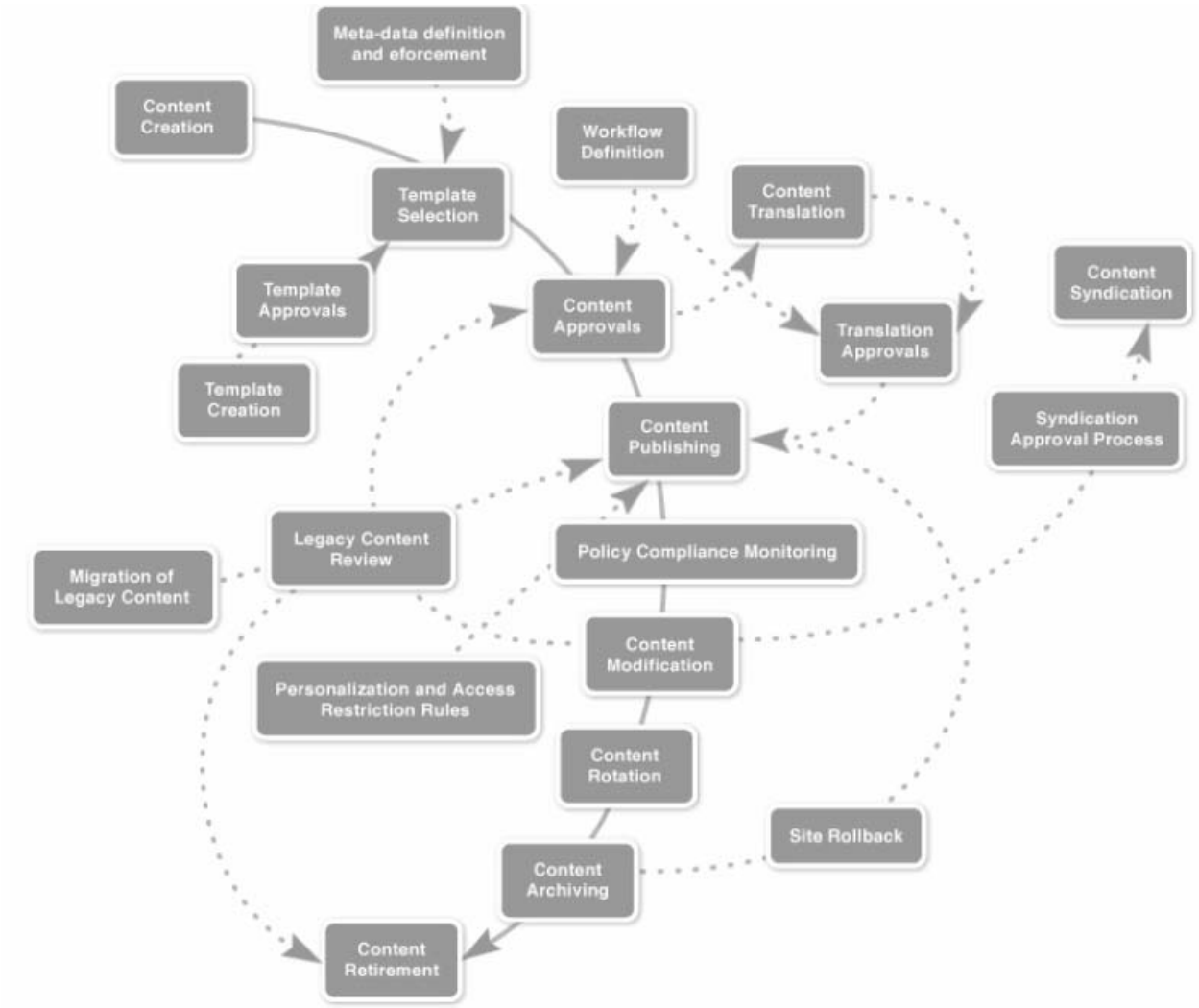


Figure 6 - Likely Content Lifecycle (Woods)

While it is beyond the scope of this document to define all the details of a future content management process common for both partners, we will briefly describe each of these steps in the followings sections. To help the reader understand the distinctions between low and high frequency processes, they have been grouped under the headings below.

Initial Content Management System Configuration Process

The following processes are ones that in most cases will be performed by vendors with guidance and input from the partners' project team members. However, they are expected to be repeated at least several times annually.

Define Mandatory and Optional Metadata

Metadata is typically text descriptions of content presented in the content management system but is normally not presented to users browsing the web page. It is used to help search engines identify relevant content in addition to in-page content factors (i.e., the text

displayed to users). Many content management systems enable identifying mandatory and optional metadata that must be entered by a user – or automatically populated by the content management system (e.g., date created) – before content can be submitted for approval. Decisions around this can be made with vendor support during design and implementation.

Create Templates

For the partners use, there will be an initial set of templates that are developed as part of the portal implementation project. This includes creating the templates for the various portal sections, including the partners' main portal home page, sub-section home pages, etc. It also includes creating any templates for multilingual portions of the portal. For example, it may be decided that York Region's Social Services section will support toggling from English to Mandarin. For most vendors, each supported language will consume another template for that section of the portal.

After portal implementation, however, specified super-users may also be granted permissions to create new templates for consideration to supplement those created by the chosen vendor.

To maintain consistent style and navigation for users, the number of templates should be limited. This can be expected to pose a challenge, since some partner departments are accustomed to significant autonomy. However, the trade-off for improved style consistency, taxonomy and navigation should outweigh department uniqueness of templates.

Approve Templates

After the initial templates are approved within the implementation project, new templates will need to be approved before being made available for production use.

Define Workflow

This defines how content submissions automatically route from author to editor to approver before being published. The number of intermediary routing points and process varies among content management systems, but generally there is a hierarchical structure similar to that in enterprise resource planning (ERP) systems for purchase requisitions and purchase orders. Decisions need to be made for what content management system accounts/roles will be part of the workflow for different portal sections. For example, publishing to the top of the public portal home page will likely have a different workflow than that for a specific department's intranet home page.

Define Personalization and Access Restriction Rules

This involves deciding what anonymous users will access versus authenticated (logged-in) users assigned to different groups. The simplest example will be for internal versus external users whereby external users would not be presented with links to internal-only content.

Select and Copy Legacy Content

Many organizations encounter significant challenges identifying what legacy content is to be migrated to a new portal. Connected Insight's experience suggests that significant internal labour should be allocated to this task. This will provide clear direction to the vendor on what to copy and what to ignore.

Specify Multilingual Content Sections

If it is decided that the partners want to maintain multilingual content for specified portal sections, these will need to be identified well in advance. This is not only important from a template planning perspective, but for planning translations and supplementary workflows for multilingual content for the same portal section.

Specify Content Rollback Configuration

This entails deciding how many prior revisions of a content item must be able to be restored on demand.

Define Content Syndication Support and Approvals

In most cases, content syndication to other portals or websites is done using what are commonly referred to as "RSS feeds", RSS meaning "Rich Site Summary" or "Real Simple Syndication". During design and implementation, it can be decided whether or not such feeds will be provided and, if so, under what conditions.

Routine Content Management System Operations

The following processes are ones that in most cases will be performed routinely by content management system users.

Create Content: Registered content management system users may create content for submission and routing based on the defined workflow. In some cases, the content may be copied from another source (e.g., word processor document, image library, etc.). During content creation, users may also specify the time period for which the content should be published, eventually expire and be archived.

Select Template: Based on the intended location of the content within the portal, the author may select from approved templates.

Submit Content: Once the content item is complete, the author may submit it for workflow routing.

Approve Content: If it is approved by the designated editor, it will in most cases be further routed to a content management system user with publishing authority (i.e., unless the editor is also granted publishing permission for the designated portal section). York Region and Markham should reserve the right to approve all portal content.

Publish Content: The individual with publishing permission, often referred to as "moderator", "approver" or "publisher", will then be prompted to approve the posting and post it based on the scheduled period. For urgent postings, of course, publishing may be done immediately.

At any point in the workflow, the content item may be rejected and editing requested prior to posting.

Monitor Content for Policy Compliance

Periodic checks for compliance with the agreed-upon policy may be performed by designated content management system users or another designated person (e.g., Office of the Regional Clerk, Corporate and Legal Services Department). This may include verifying the accuracy and completeness of postings, ensuring that no out-of-date information is posted or other compliance elements.

Modify Content

Periodically, content management system users may modify content items for various reasons. Depending on the workflow rules, modifications will likely be subject to the same sequence of approvals as the original posting.

Many portal solutions provide automated tools to maintain link integrity to avoid the annoyance to end-users that a link is no longer valid. The checking and updating of links may or may not require approvals, depending on the content management system configuration.

Rotate Content

After content is published, content management system users may choose to rotate content in and out of a feature or highlighted portal section. For example, it may be posted in the "what's new" section for a specified period after which it is removed from this section and published in an alternate location.

Archive Content

After a predefined period, postings may be automatically moved to an archive section.

Retire Content

After being archived for a predefined period, postings may be automatically retired and no longer posted on the portal (i.e., hidden from non-content management system users).

Applications and Systems Administration

It is expected that a full-time portal administrator will be assigned by York Region's ITS department to oversee portal hardware, software and networking. A backup portal administrator will also be trained as an alternate. These individuals will be the primary interface to the portal solution vendor for maintenance and support.

The portal solution is expected to be developed, implemented and adopted as a valid ITS-supported system before being declared as in-service to the user population. It is expected that it will be operated and supported in accordance with other systems operated by ITS.

Search and Traffic Reports

The portal administrator is expected to provide online search and traffic reports to specified users on an ongoing basis. This will ensure key users are informed of the utilization of portal sections under their administration. It will also support decision-making about where to invest in future enhancements.

Maintenance Notices

Periodically, portal services may be unavailable during off-peak hours for maintenance. The portal administrator is expected to communicate this to users in advance and manage such maintenance in accordance with standard ITS procedures.

8.3 *Conclusion*

An experienced portal administrator, along with appropriate content governance, with help ensure that the benefits of a portal solution are realized.

8.4 *Recommendations*

Create Content Administration Guidelines

A formal content administration policy is not likely required to effectively administer portal content. However, guidelines that align with the process outlined earlier will help ensure consistent usability of the portal.

Pressure Proponents to Explain Security and Architecture Compliance

During the procurement process, vendors can be expected to make claims about compliance with sound security and architecture standards. However, vendors should be expected to explain how the proposed solution will comply with York Region's Enterprise Architecture and information security standards outlined in the "Information and Technology Security" policy. This is highlighted because in Connected Insight's experience, vendors often wait until the implementation phase to specify that certain mandatory configurations are required for the solution to operate in a way that they will support. The potential problem is that such configuration requirements may require exceptions to security policy. Attempting to discover such constraints during the procurement stage will enable proposal reviewers to consider this factor as part of the evaluation.

Recruit an Experienced Portal Administrator

It is recommended that an individual with three-to-five years of experience with the chosen vendor solution be recruited as Portal Administrator. This person will be expected to provide bold technical leadership to the vendor and other project team members. It will, therefore,

be vital that he/she understand the technology being implemented and the optimal approach to design and implementation.

It is reasonable to expect that a backup portal administrator could be an experienced system administrator that lacks experience with portal solutions and could learn during the two-year development and implementation project.

9 Governance

This section presents analysis of portal governance and arrives at conclusions and recommendations. Extensive research and analysis was conducted, including review of existing partner documentation, research studies, reference books, etc. Also, telephone interviews were conducted with representatives of other organizations.

In some cases, research questions are presented in the preamble to illustrate the approach. Conclusions and recommendations presented are the result of Connected Insight's thorough consideration of research inputs and are expected to be very helpful in the partners' efforts to establish portal governance.

9.1 *Portal Governance as Subset of IT Governance*

For the purposes of this section, portal governance is a subset of IT governance and is defined as "a structure of relationships and processes to direct and control … in order to achieve the enterprise's goals by adding value while balancing risk versus return".[14] For portal governance, reference is being made to high-level strategic oversight, but excludes routine operations. It is reasonable to view *portal* governance within the broader subject of IT governance. The IT Governance Institute "IT Governance Framework"[15] is illustrated in the following diagram:

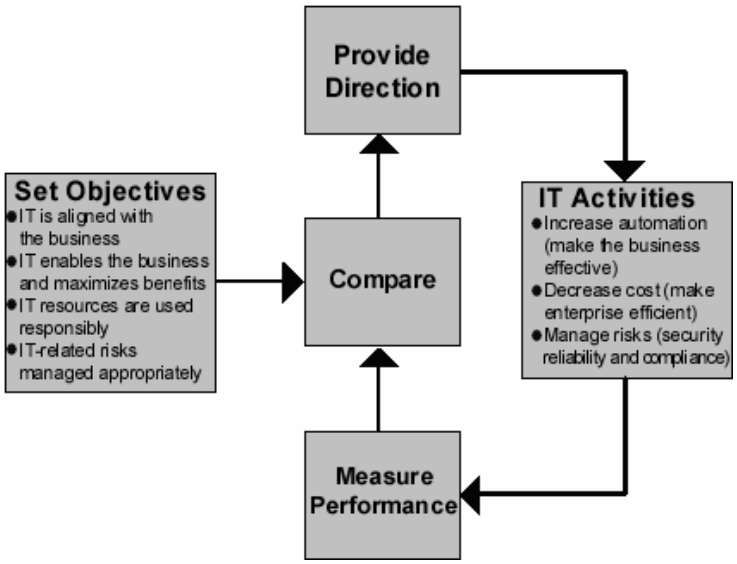


Figure 7 - IT Governance Framework

[14] Bitpipe Inc. www.bitpipe.com/tlist/IT-Governance.html

[15] IT Governance Institute. www.itgi.org/template_ITGI.cfm?Section=Process&Template=/ContentManagement/HTMLDisplay.cfm&ContentID=19660

This framework is similar to the Project Management Institute framework of "plan, do, check, act". However, instead of applying performance management to *project* objectives, in this case performance of IT activities or processes is compared against high-level performance objectives aligned with the business.

9.2 *Portal Governance Best Practices*

The following are some identified best practices for portal governance[16]:

Share Decision-Making: The chosen governance model should not require fully centralized decision-making. There should be some flexibility for lower-level organization units to share decision-making. For example, decisions like software choice, single sign-on authentication and basic information architecture are best made by a centralized decision-making group. Other such decisions include "minimal set of requirements" including standards and services that, if consistently applied across the portal, improve ease of use and maintenance, including:

- Security;
- Metadata;
- Search functions;
- Directory and taxonomy (information architecture);
- Navigation patterns; and
- Usability.

However, more detailed decisions, like information architecture "lower than three levels deep", may be delegated to business units. The "federated model balances the need for governing frameworks while allowing business units and departments to make choices appropriate for their areas."

Also, governance bodies should not centrally dictate what content is published, but should delegate authority to content authors and approvers. Similarly, details on how services are provided should not be the domain of portal governance, but delegated to technical specialists. The cited example is that "governing bodies should define the features required of a search engine but leave it to technical evaluation teams to choose the tool…."

Finally, the governance model should be "multitiered, and the scope of each tier should be limited both in the breadth and depth of its decision making." He summarizes that the federated decision-making model's goal is "to create a minimal framework that ensure interoperability, security, a consistent user experience, and high-quality search and navigation services."

Provide Leadership in Response to Changing Needs: Governance is required to ensure the portal service utilization may be measured. Through having systems in place to measure use of portal application services, those in a governance role can use this

[16] Sullivan, D. *Proven Portals: Best Practices for Planning, Designing, and Developing Enterprise Portals*. Addison-Wesley Professional. First Edition, 2003.

information to guide decision-making, including evaluating proposals for further enhancements.

Lead Delivery of Compelling Portal Services: It is stressed that "anchor applications … [are delivered that] meet multiple needs, cross project and department boundaries, and are tied to core business operations."

9.3 *Analysis of Existing Partner Governance Models*

As an input to identifying governance models alternatives, it was decided to determine if any current shared services were governed and administered in a structured manner.

York Region

Enterprise Architecture (EA) Strategy and Principles

In 2005, York Region adopted recommendations of EA strategy and principles. This is part of the foundation upon which ITS governs investment and service delivery decision-making.

York Region Websites

York Region's primary public website (www.york.ca) content administration is governed by Corporate Communications. The Microsoft content management system workflow is used to enforce content approvals.

ITS administers the computing platforms and application software. The ITS Enterprise Architect chairs the e-Solutions Sub-Committee which governs all York Region websites.

In addition to this centralized control, most departments have their own staff partly allocated to maintaining content.

Viva Public Transit[17]

There exists a cross-jurisdictional public-private governance model in place for York Region's Viva rapid transit network. An agreement between York Region and the private York Consortium 2002 governs the relationship, with York Region controlling all assets (e.g., vehicles, terminals). The consortium participated in the first phase by implementing base-line bus rapid transit service for four major transportation corridors in the region and was involved in new bus purchases, station stops, intersection improvements and ITS components.

There is joint funding from federal, provincial and municipal government. The Government of Canada's funding is committed under the Canada Strategic Infrastructure Fund.

[17] York. "Viva Rapid Transit". www.region.york.on.ca/Publications/News/2005/September+6,+2005+Viva+Fact+Sheet.htm

Ontario Child Care Management System

The Ontario Child Care Management System (OCCMS) is shared online application used by municipalities to administer child care service system management responsibilities. York Region hosts the web-based application and provides services to other municipalities.

The Government of Ontario funds development, testing and enhancements to the system within the constraints of a budget allocation. Statutory requirements for changes are made without user group involvement. However, discretionary changes requested by OCCMS user group members are voted on to determine which changes are implemented within funding constraints.

Each user organization is responsible for its own data maintenance and version control with changes to the application.

Markham

Markham Websites

Governance for the various websites managed by Town of Markham staff has not been formalized. Corporate Communications is responsible for managing content on the official Town of Markham website, www.markham.ca. ITS department is responsible for technical support and maintenance.

Other Markham websites have decentralized departmental governance. That is, content is not centrally approved by Corporate Communications.

Other Markham Shared Services

There are no reported shared service governance models in place.

9.4 *Analysis of Other Governance Models*

Are there any existing examples of two-tier government IT services and/or web portals? If so, do they consider themselves successfully governed? If so, using what model? What other public sector models might be suitable future governance alternatives for the portal?

It was decided that identified alternatives need not be confined to portals, but that IT shared services governance models would be equally valid for consideration.

The case studies outlined in Appendix F describe several current public sector portal governance alternatives that were analyzed. For each, several aspects of governance are described. However, because of limitations on information obtained for each case, the aspects covered vary to some extent.

Defining governance for project implementation would be covered in the project charter.

It is prudent to align closely with any York Region-Markham cross-jurisdictional governance existing today. York Region and Markham must ensure that the adopted portal governance model is sufficiently aligned with other relevant existing policies and/or standards.

Bearing this in mind, the following governance modes are believed to be reasonable based on external case analysis, third party research and analysis and information provided by the partners and includes the following options:

- Markham in charge and accountable for operations;
- York Region in charge and accountable for operations;
- Partnership (Markham and York Region);
- New corporation (Markham and York Region as shareholders); or
- New corporation/partnership (risk-sharing agreement among Markham, York Region and vendor partner).

9.5 *Conclusions*

Based on the preceding analysis, following are the main conclusions drawn about governance.

Shared Governance Requires Compromise and Trust

In cases of governance of a shared service, it is consistently noted that the parties compromised to share benefits greater than those that could be realized alone. There is a trust bond between stakeholders who share governance that encourages them to overcome concerns about compromises (e.g., design independence and flexibility).

Increasing Cross-Jurisdictional Collaboration

In an attempt to improve efficiency, reduce costs and enhance service delivery, many public sector organizations are initiating online service delivery, including cross-jurisdictional initiatives.

Few Two-Tier Municipal Examples

While there are quite a number of examples of cross-jurisdictional public sector IT shared service arrangements, there are few current examples of two-tier municipal portals from which York Region and Markham can learn.

Successful Collaboration Not Always Formalized

Some organizations who claim successful cross-jurisdiction collaboration choose informal honour-based agreements instead of pursuing formal cross-jurisdictional governance definition. However, little information was found to show how such agreements are maintained when individuals change positions. Nevertheless, some cases suggest that partners are willing to accept risks of undocumented agreements for more immediate rewards of collaboration.

Formal Agreements are Resource-Intensive

Formal cross-jurisdictional governance is very challenging and protracted to negotiate. Defining a formal governance model can be expected to consume substantial legal resources within both York Region and Markham.

Governance is Foundational

Whether formalized or not, governance decisions can impact technical requirements later if not anticipated (e.g., privacy measures for user data protection). Therefore, it is reasonable to agree on governance as a foundation upon which to define portal requirements.

Minimize Disruptions while Transitioning from Portal Implementation to Production

Case study outcomes suggest that some success in portal implementations can be attributed to a smooth transition from implementation to operation. It has been noted that where this was successful, most made few governance changes when transitioning from implementation to production, resulting in fewer disruptions and continuity reporting, decision making, etc.

Portal May be Governed as a Shared IT Service with Some Centralized Control

It may be appropriate to govern a shared portal as a shared IT service. Gartner research in the general area of government shared services concludes that "[m]ost government agencies are considering or already implementing some form of shared-service arrangement … driven by the need to relieve acute cost pressures … or to deliver the interagency integration required for e-government initiatives."

Gartner finds that many municipal governments have shared services in place for both internal and external services (e.g., waste collection, library services). However, Gartner clearly distinguishes between "centralized services" over which customers have little control and "shared services" in which "customers must have a high level of governance influence over the service provider … [i]n some shared-service arrangements, customers are even the legal owners of the service-providing entity". Connected Insight views York Region and Markham's joint venture as one that would deliver a shared portal service.

Multiple Organizational Governance Levels[18]

Committees have the problem of meeting only periodically and dispersing responsibility and accountability. In large multi-business unit enterprises like Markham and York Region, it is necessary to consider IT governance at several levels. The starting point is enterprise-wide IT governance driven by enterprise-wide strategies and goals. Enterprises with separate IT functions in divisions, business units, or geographies require a separate but connected layer of IT governance. Usually the demand for

[18] Harvard Business School. "Ten Principles of IT Governance". *HBS Working Knowledge,* 2004.

synergies increases at the lower levels, whereas the need for autonomy between units is greatest at the top of the organization.

EA Strategies are Compatible

Since York Region and Markham share a similar EA strategy, it may be appropriate to govern the portal based on EA principles that have been adopted by York Region.

Upper Tier Partners Often Financially Accountable

Even in cases where governance is informal, there is one partner who is ultimately financially accountable. That is, one entity contracts for vendor goods and services (e.g., software licenses). Case analysis reveals that this is often the upper tier government partner. York Region may need to act as a lead partner with some central authority for a shared portal service in which area municipalities can optionally participate.

9.6 *Recommendations*

Adopt Organizational Change Management Guiding Principles

In this section, the concept "organizational change" is intended to cover many factors including:

- York Region and Markham management's willingness and capacity to change;
- Attitudes to changing long-standing processes (e.g., optimism versus pessimism);
- Emotional responses to change;
- Behaviour in response to change (e.g., adoption or rejection of new portal);
- Aligning employee performance objectives to incent behavioural change;
- Acceptance of new organizational structure (i.e., reporting relationships, budget transfers, shifting decision-making authority);
- Accountability/responsibility transfers among departments/people; and
- Demands of learning how to use and administer new technology.

Following are several guiding principles to support lasting positive organizational change:

Promote the value: JPSC members should act as "evangelists" for the powerful effects of portal technology.

Commit to the long haul: Impacted users must be reassured that after the project is complete, adequate support for new systems will be in place.

Think small: Managing efforts in "bite-sized" pieces. Smaller incremental steps are easier to understand, plan and execute than major leaps. Further, they allow stakeholders to identify needs and concerns before they become unmanageable.

Build alliances: Identify critical stakeholders and engage them early in the change planning. Share costs and resources (e.g., labour) required by the project as well as the benefits (e.g., productivity improvements).

Put an organizational infrastructure in place: Define roles and responsibilities of the project manager, project sponsor, team leaders, subject matter experts and a steering team to provide oversight.

Adhere to the implementation plan: A detailed written implementation plan and project management methodology are needed to align expectations, coordinate training activities, keep communications current, etc.

Assess progress regularly and follow up relentlessly: Both formal and informal reporting are necessary to track progress against expected outcomes and identify emerging problems early. Both formal and informal personal contacts need to be kept current and information shared with the whole team.

Integrate the change into management systems: Department staff, end users, vendors, etc., need to recognize shared responsibility as agents of change and make commitments evident in their management systems (e.g., human resources performance reviews).

Accountability: People must be held accountable for commitments. Ensure that responsibilities in often overlooked areas like training, support, etc., have been allocated to the right parties and their roles and responsibilities are clear to everyone.

Develop and Implement Organizational Change Management Plan

Any governance model, to be successful, will have to integrate change management planning into portal implementation with the goal of aligning the people, processes and the technology.

Much research has been done to understand the impact of IT on organizations. IT enabled change is significantly different than other types of change. Extensive study of organizational change has been undertaken and produced a significant body of knowledge. Research suggests that reasons are numerous for IT enabled change failure.

Harvard Business Press' "Ten Principles of IT Governance" noted that some of the most ineffective governance observed was the result of conflicting goals. This problem was often observed in the government sector, where directives come from many agencies, departments and organizational levels. The result was confusion, complexity, and mixed messages, resulting in governance being ignored. The unmanageable number of goals typically arose from not making strategic business choices and had nothing to do with IT.

Following are considerations for an organizational change management plan.

Change is almost always disruptive and at times traumatic. Because of this, many people often avoid change when possible. Nevertheless, change is part of organizational life and essential for progress. JPSC has made an important decision to propose use of a portal by employees and residents. To maximize the benefits to be realized from this investment,

much effort must be expended on non-technical change-related matters. In general, organizations are said to be ready for organizational change when effective and respected leaders are in charge and that people are motivated to change[19].

Demonstrate Alignment with Strategy: Both partners have made commitments to furthering the effective use of technology including online services. Clearly demonstrating that implementing shared portal services is aligned and will help achieve common strategic goals will help validate the implementation of the portal to stakeholders.

Champion the Change: In order to improve the chances of lasting beneficial changes taking root, York Region and Markham must champion the change. The importance of communicating the drivers and expected benefits of the portal changes to stakeholders can not be overstated.

The following leadership tools for change are helpful in planning the proposed organizational changes.

- **Leadership:** Implementing the enabling portal infrastructure should be accompanied by strong leadership by the JPSC, super-users and other impacted management. Initiating positive change requires effective communication; leading change can be described as a "contact sport". By interacting with all staff in a direct way to address questions, comments and concerns, management can demonstrate commitment to change.
- **Information Sharing:** York Region and Markham will not secure buy-in of prospective portal users without first educating them about the expected benefits of changing. Allowing current users to ask questions and challenge assumptions is important to ensure that everyone shares a clear understanding of the reasoning behind the decision to implement portal technology and process changes.
- **Support:** Leadership must demonstrate empathy and support to management and staff for the change that will be expected of them. Management can help diminish fear of failure or implementation problems and provide a needed support. Managers and other leaders must recognize that users and other staff require significant time to understand and accept planned procedural and organizational change. Much time will be taken away from regular duties to support implementation. Therefore, management must plan and prioritize accordingly.
- **Resources:** Those managing and introducing portal related changes must negotiate for provision of appropriate resources to contribute to the project, including funds, staff time, equipment, material and information. For example, it may be determined that a specific user group requires a controlled test environment on and substantial time to develop test plans. Management withholding necessary resources will send a powerful message: the portal is not important. On the other hand, negotiating for appropriate resources will enable the portal project management to maintain a realistic baseline plan to manage expectations.

[19] Harvard Business School Press. Managing Change and Transition. Harvard Business School Publishing Corporation, 2003.

Temporarily Maintain "Build" Governance while Transitioning to "Operate"

It is important to note that during the lifespan of any new structure it is more likely that there will be deficiencies earlier rather than later. It is reasonable to assume that this would apply to a new governance model shared by two autonomous partners who have never shared IT services. This represents significant risks to the goal of sharing common portal infrastructure.

To limit these risks, consider maintaining exiting governance structures, where possible, while transitioning from portal implementation to portal operations for a short period or until operations are deemed stable. Maintaining existing implementation project governance into the early stages of operation will reduce risks usually associated with lack of continuity or inadequate "hand-off". It will provide some stability to the transition from *build* to *operate.* Maintaining continuity will reduce the need for additional resources at a time when few are likely to be available. Finally, benefiting from practical experience gained from the portal implementation process and some early operations-related "lessons learned" will improve the likelihood that new operational governance will benefit from practical experience.

At present, the partners have their own respective committees whose responsibilities, it could be argued, should incorporate some of the portal planning, implementation and operation activities. The Harvard research cited earlier suggests that organizations with the fewest number of effective governance mechanisms are more effective.

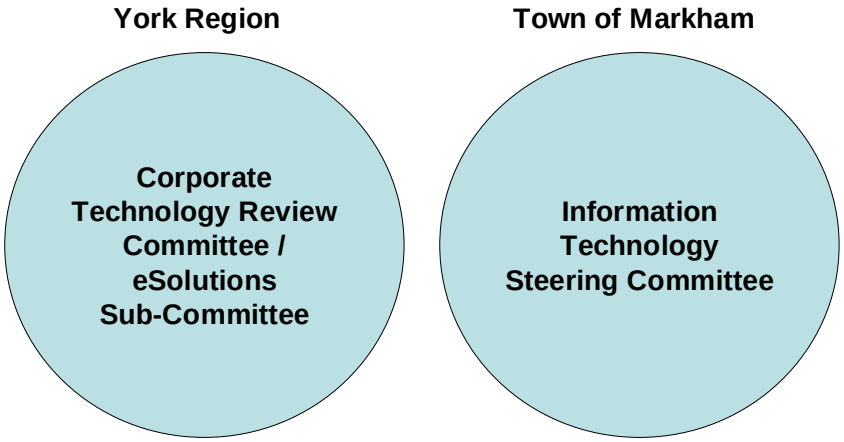


Figure 8 - Current IT Governance

The Joint Portal Steering Committee (JPSC) was created to oversee development of this Portal Business Plan. The JPSC has representation from both partners, including most of York Region's Corporate Technology Review Committee (CTRC) members and those who constitute senior management. According to the Harvard study cited earlier, more effective IT governance had more senior management involvement. Further, the same study states "[f]irst, IT governance cannot be designed in isolation from the other key assets of the firm (financial, human, and so on) … the person or group owning IT governance must have an enterprise-wide view that goes beyond IT, as well as credibility with all business leaders."

Members from existing York Region's eSolutions Sub-Committee and Markham's Information Technology Steering Committee (ITSC) could be added to the JPSC should it transition to an implementation project steering committee. This same committee could also govern year one of portal operations.

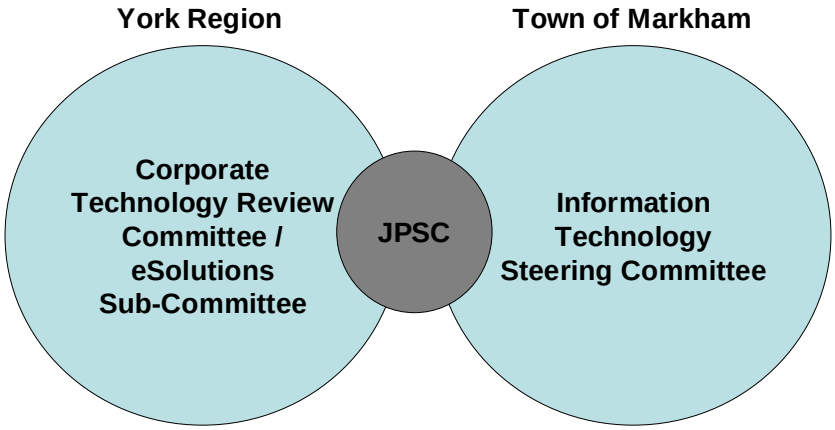


Figure 9 - Portal Governance Model (Joint Portal Steering Committee)

The JPSC could be maintained to provide governance for the first year of portal operations. Again, this transition is intended to be temporary.

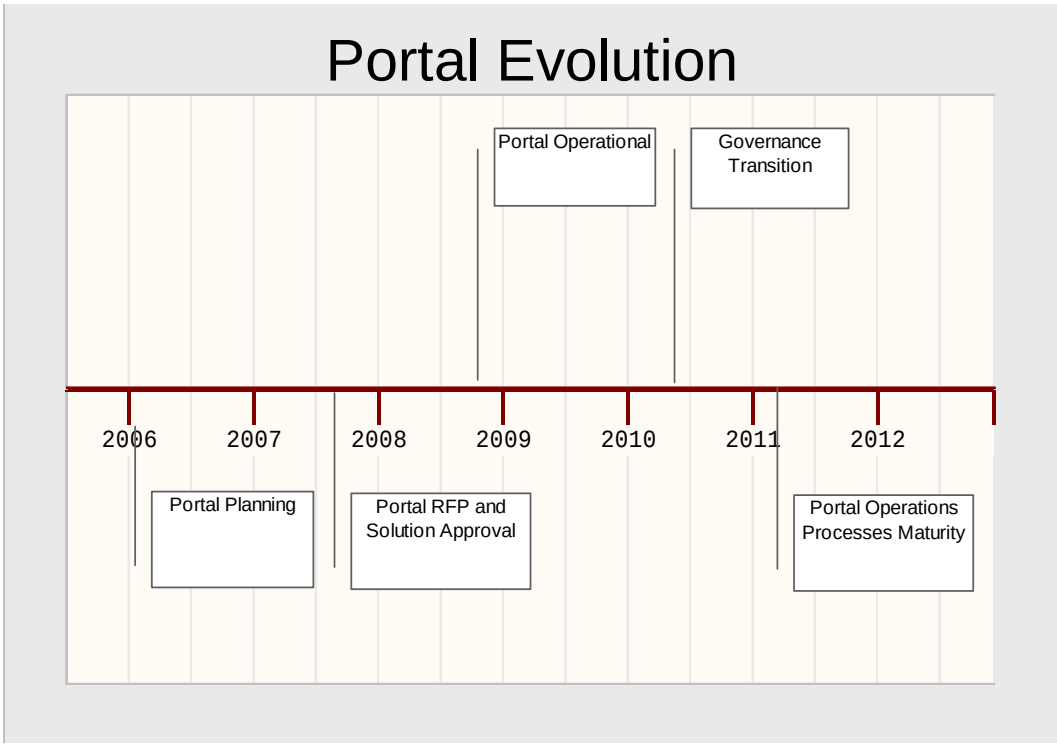
Clearly Define and Document Responsibilities of JPSC

Following is a preliminary outline of JPSC's shared responsibilities should it transition to an implementation project steering committee:

- Federated or shared decision making (provide direction);
- Capital and operating budget control;
- Delegate authority;
- Basic information architecture;
- Define and follow guiding principles;
- Set objectives; and
- Compare measured outcomes to stated objectives and take corrective action where required.

Clearly Define and Document Implementation Timeline

The partners should define and document the portal procurement and implementation timeline. The following timeline is proposed for illustrative purposes:



Clearly Define and Document Recommended Accountability

It is assumed that both partners wish to have equal power and authority over the portal or, at the very least, control and authority over resources that are required to meet their individual organizational and business needs.

Should it be determined that the portal will be owned and operated by the partners, i.e., an application service provider (ASP) solution is not selected, then the decision must be made of who will have purchasing authority and operational control. This is based on the assumption that the partners expect that one partner will administer the solution.

Based on our research and experience, the following represents main criteria for choosing the governance model:

- Which model is the simplest to manage?
- Which model is most likely to realize the expected cost savings and service delivery improvements?
- Which model is most likely to attract other partners, thereby further enhancing expected cost savings and service delivery improvements?

While both parties will contribute expertise and other resources including funding, research indicates that a single point of control and accountability yields the higher return on investment and reduces confusion and potential conflict. In light of this, and based on the preceding criteria, it is expected that York Region should own and operate the portal solution.

Develop and Implement a Shared Services Agreement[20]

It is recommended that York Region and Markham execute a shared services agreement under the governance of JPSC to govern administration of portal services. (An alternative approach would be to rely only on a simpler Memorandum of Understanding that might be suitable because only two parties are involved at this time. However, this approach may not scale well should other area municipalities choose to become parties to the agreement.)

Because this governance agreement is the first such formal agreement that will show how the portal service will be delivered across jurisdictions, legal advice should be sought to define an agreement to protect both partners' interests.

Following are the terms and conditions that should be addressed in the agreement:

- Parties
- New Party Addition Procedure
- Period
- Definition of Terms
- Scope of Services
- Service Level Agreement
- Liability
- Sub-Contracting
- Financial Responsibilities (cost sharing of human resources, capital, operating; payment period; bank account)
- Other Responsibilities (network services, maintenance, overhead)
- Audit Procedures
- Amendment Procedures
- Asset Ownership
- Data Ownership: Each partner's data ownership and access privileges should be clearly specified.
- Staff Ownership
- Data Protection
- Content Administration
- Information Collection Policy
- Privacy Policy
- Privacy Impact Assessment
- Compliance with MFIPPA
- Compliance with PHIPPA
- Terms of Use Policy
- Security Policy
- Refund Policy

[20] Improvement Network. "Shared Services - Set-Up and Arrangements". (www.improvementnetwork.gov.uk)

In addition to the preceding items, any other items deemed relevant by the partners should be covered in the agreement.

Clearly Define and Document Decision-Making Processes

Consensus is a collective opinion arrived at by a group of individuals working together under conditions that permit open and supportive communication, such that everyone feels he or she has had a fair chance to influence the decision. It is recommended that the JPSC strive to make decisions by consensus.

Clearly Define and Document Content Management Policy

To take advantage of the decentralized content administration functions that portals offer, the partners should create a content management policy or guidelines document for users. This should be aligned with existing communication policies and/or accepted practices. More on this is detailed in Section 8, “Portal Operations and Administration”.

10 Sustainability Model

Typically the term “portal sustainability” focuses on the provision of adequate financial resources to ensure the necessary elements intended to maintain the portal can be funded.

Sustainability of the portal will require many elements to work in concert to ensure its long term viability. Without adequate resources the portal will begin to languish. These provisions typically include adequate labour resources, sufficient physical space, proper training, committed content authoring, technical maintenance including software upgrades, etc. All of these, of course, require a financial or in-kind commitment.

Connected Insight knows of no municipal or community portal that has found a way to charge convenience or other fees to offset a significant proportion of the operating costs.

Both existing partners stand to benefit from the portal. However, it is anticipated that there will be significant differences in how the portal will be used by each partner’s employees and constituents. It is difficult to determine which partner will benefit more and by how much.

Developing and agreeing to a charge-back model so that each partner pays an amount that reflects actual value would be ideal but difficult until the portal has matured and meaningful data can be gathered and analysed.

10.1 *Conclusions*

Initial Equitable Charge-Back for the Portal

Assigning costs to each partner through a charge-back model is not an option in the short term. Without knowing the value of each transaction, usage statistics, etc. attempting to assign costs is not feasible.

It is likely that a detailed formula for charging back costs may be completely elusive to the partners as it would likely be quite complex, require significant internal process changes and likely be quite difficult to manage over time. Moreover, negotiating a model that is agreeable to both partners may be divisive and may lead to more problems than it intends to solve.

Sustainability Requires Additional Financial Commitment

The partners will need to find alternative sources of operational funding.

10.2 *Recommendations*

Agree to Assign Costs Equally Between Partners

Because of there is significant uncertainty about portal usage, it is reasonable to apportion the costs evenly until there is enough information available to develop an equitable cost sharing model where the benefits accrued are charged back to the benefiting partner.

By implementing a simple 50/50 cost sharing model in the short term, the partners can focus on refining and improving the portal in its formative years. Both Markham and York Region will likely be motivated to leverage the most out of the portal to ensure value for money.

Request Operating Budget from York Region and Markham Councils

York Region and Markham should request from their respective councils a commitment of ongoing operating budget to support the portal operations as a cost of doing business.

Refine the Cost Sharing Model

The partners should agree to revisit the cost sharing model after having gathered at least three years of operating statistics with the intent of making adjustments so that costs can be more accurately assigned to the partners.

Appendix A - Portal Technology Overview

This section provides an overview of portal technology, dominant portal technologies currently offered, as well as a vendor overview.

Portal Definitions

From an end-user point of view, it is reasonable to define it as a dynamic, personalized gateway and starting point for access to information, services and transactions for a specific subject area or domain.

Portal as a Concept

Gartner defines a portal as "access to and interaction with relevant information assets (information/content, applications and business processes), knowledge assets and human assets by select targeted audiences, delivered in a highly personalized manner"[21]. The reader will note that this definition is quite non-technical and defines the portal more in terms of what functions it supports and how it delivers information, services and transactions to users.

Following are other definitions that are expected to help define this somewhat vague term:

[A] Web site designed to be a first port of call for a user logging on to the Internet … designed to carry links to pages the user is likely to want to access; it may even be customizable….[22]

[A] special Internet (or intranet) site designed to act as a gateway to give access to other sites. A portal aggregates information from multiple sources and makes that information available to various users. In other words a portal is an all-in-one Web site used to find and to gain access to other sites, but also one that provides the services of a guide that can help to protect the user from the chaos of the Internet and direct them towards an eventual goal. More generally, however, a portal should be seen as providing a gateway not just to sites on the Web, but to all network-accessible resources, whether involving intranets, extranets, or the Internet. In other words a portal offers centralised access to all relevant content and applications.

There is no definitive categorisation of the types of portals, but PortalsCommunity (www.portalscommunity.com/) offers the following list: corporate or enterprise (intranet) portals, e-business (extranet) portals, personal (WAP) portals, and public or mega (Internet) portals. Another categorisation (Davison, Burgess, & Tatnall, 2003) offers: general portals, community portals, vertical industry portals, horizontal industry portals, enterprise

[21] Phifer, G. "A Portal May Be Your First Step to Leverage SOA". Gartner, September 22, 2005.

[22] British Computer Society Schools Expert Panel Glossary Working Group. *The British Computer Society Glossary of ICT and Computing Terms*. Eleventh Edition. Pearson - Prentice Hall 2005.

information portals, e-marketplace portals, personal/mobile portals, information portals, and niche portals. Unfortunately as the categories are not mutually exclusive, some portals fit into more than one while others do not fit well into any. To further complicate any attempt at categorisation, some implementations can span several different portal types, blended into a form of hybrid solution.[23]

For the purposes of the joint portal venture being considered, Connected Insight advises the reader to view this Business Plan as considering the prospect of engaging a vendor to deliver a portal *solution* that fulfills one or more of the general definitions cited above and fulfills mutually agreed-upon requirements specified by the partners.

Portal as a Technology

These general definitions are helpful to orient the reader to what a portal is and how it can benefit York Region and Markham users. However, vendors naturally tend to define portals in more technical terms. For example, a website that supports certain communication protocols and software development frameworks can be deemed a portal if implemented in a particular way.

The following section attempts to isolate some of these technical characteristics that distinguish a portal from a normal static website.

Portal Architecture[24]

While there is no single absolute common architecture to all portals, most designers and vendors apply a three-tier architecture. This tiered approach is common in many areas of information and communications technologies, since it supports defining the functional area of each tier and improves interoperability among different products from different vendors.

The most common three-tier architecture includes the following layers (illustrated in the figure below):

- Presentation (display);
- Application server (processing); and
- Enterprise information services (data sources/repositories).

[23] Tatnall, A. *Web Portals: The New Gateways to Internet Information and Services.* Idea Group Publishing 2005.

[24] Sullivan, D. *Proven Portals: Best Practices for Planning, Designing, and Developing Enterprise Portals*. Addison-Wesley Professional. First Edition, 2003.

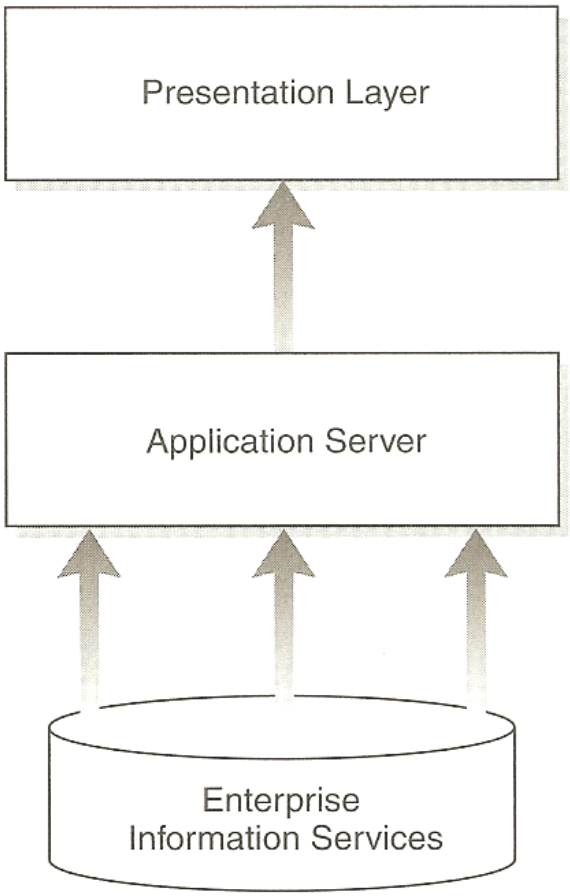


Figure 10 - Three-Tier Portal Architecture (Sullivan)

User Interface / Presentation Layer (Tier 1)

The presentation layer constitutes the user interface and is responsible for formatting and presenting information to the portal user. It includes the functions of unifying access to different applications through a single view, including enabling access to a single sign-on capability in the application server tier below. Many portals display different information in designated screen sections and act as the users map to information and services as shown in the figure below (sometimes described as a wireframe):

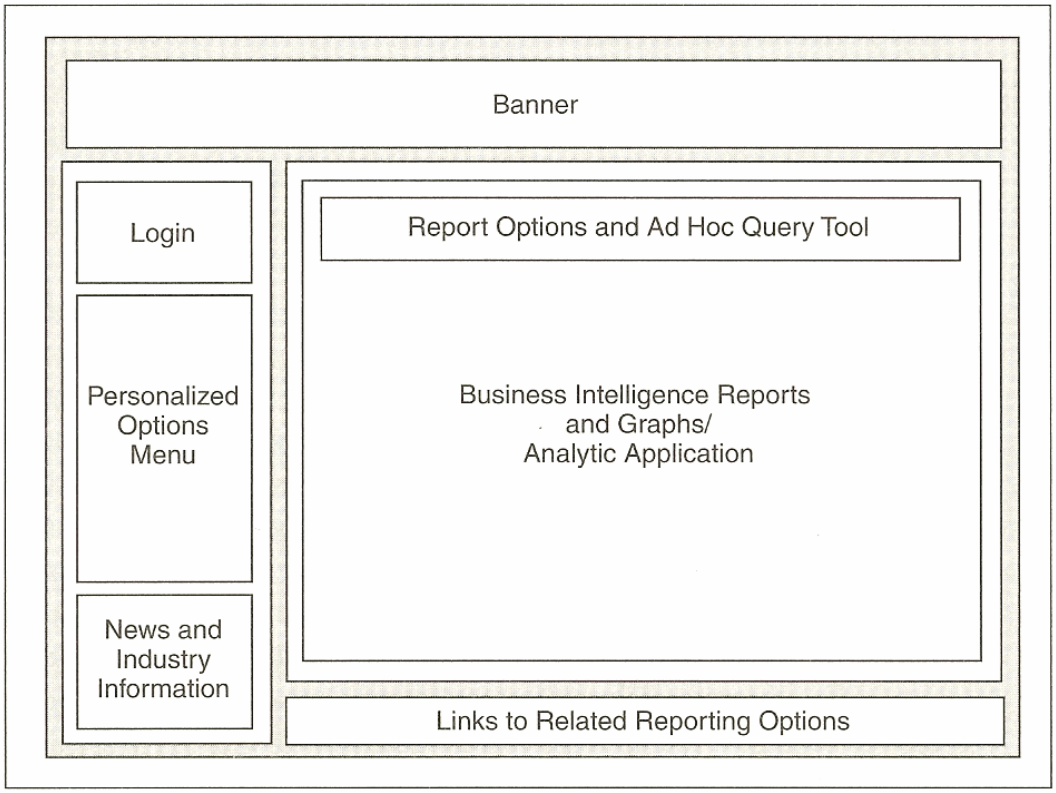


Figure 11 - Typical Enterprise Information Portal User Interface Structure (Sullivan)

This layer also provides links to personalization functions for different portal users or groups.

Designers have a number of choices how to render and present information in these various regions of the browser screen:

- Hypertext markup language (HTML);
- Browser plug-ins; and
- Brower applications (applets).

The portal servers in the application server layer (Tier 2) support generating content for each display component. The component applications are often referred to as “portlets” or “gadgets”. Portlets can be viewed as a bridge to the application server layer (Tier 2) as shown in the following figure:

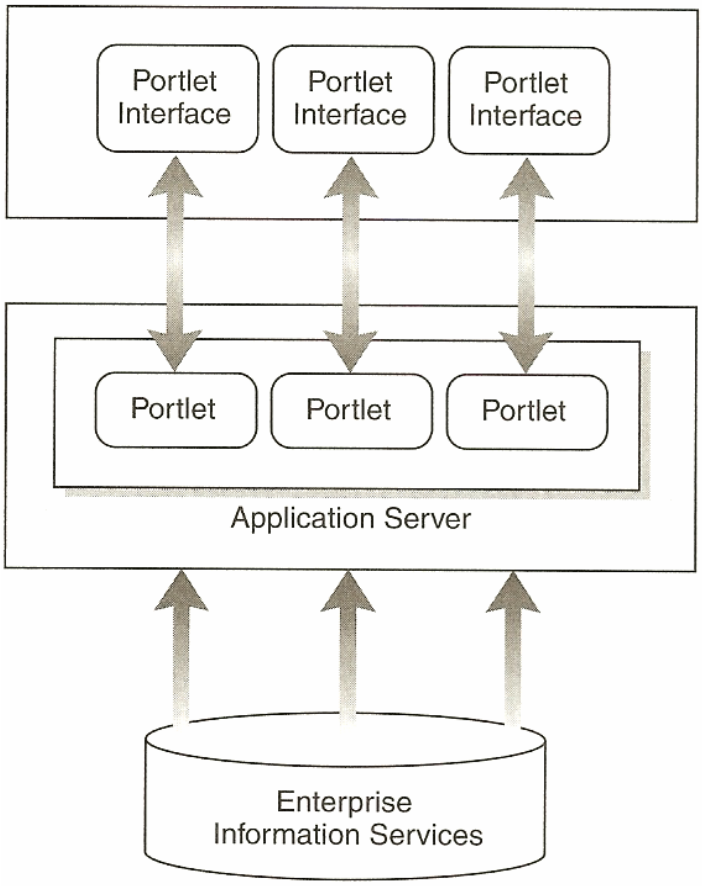


Figure 12 - Portlets as Bridget to Application Server (Sullivan)

Dominant portal solution vendors support basic portlets for access to various common or standard applications. However, custom portlets may also be developed for unique requirements.

While portlets are often written in the Java programming language, other languages are also often supported by major vendors. Recently, the "web services" group of related standards is becoming increasingly dominant. This approach uses a special message format and communications protocol - extensible markup language (XML) in conjunction with Simple Object Access Protocol (SOAP) - to ease the implementation of portlets developed in any language where components comply with these standards.

According to Gartner, "any software that uses the standards Web Services Description Language (WSDL), SOAP or Universal Description, Discovery and Integration (UDDI) is a Web service."[25] This is also aligned with the general concept of Services-Oriented Architecture (SOA), which Gartner states is "a software architecture that starts with an interface definition and builds the entire application topology as a topology of interfaces,

[25] Natis, Y. V. "Service-Oriented Architecture Scenario". Gartner, April 16, 2003.

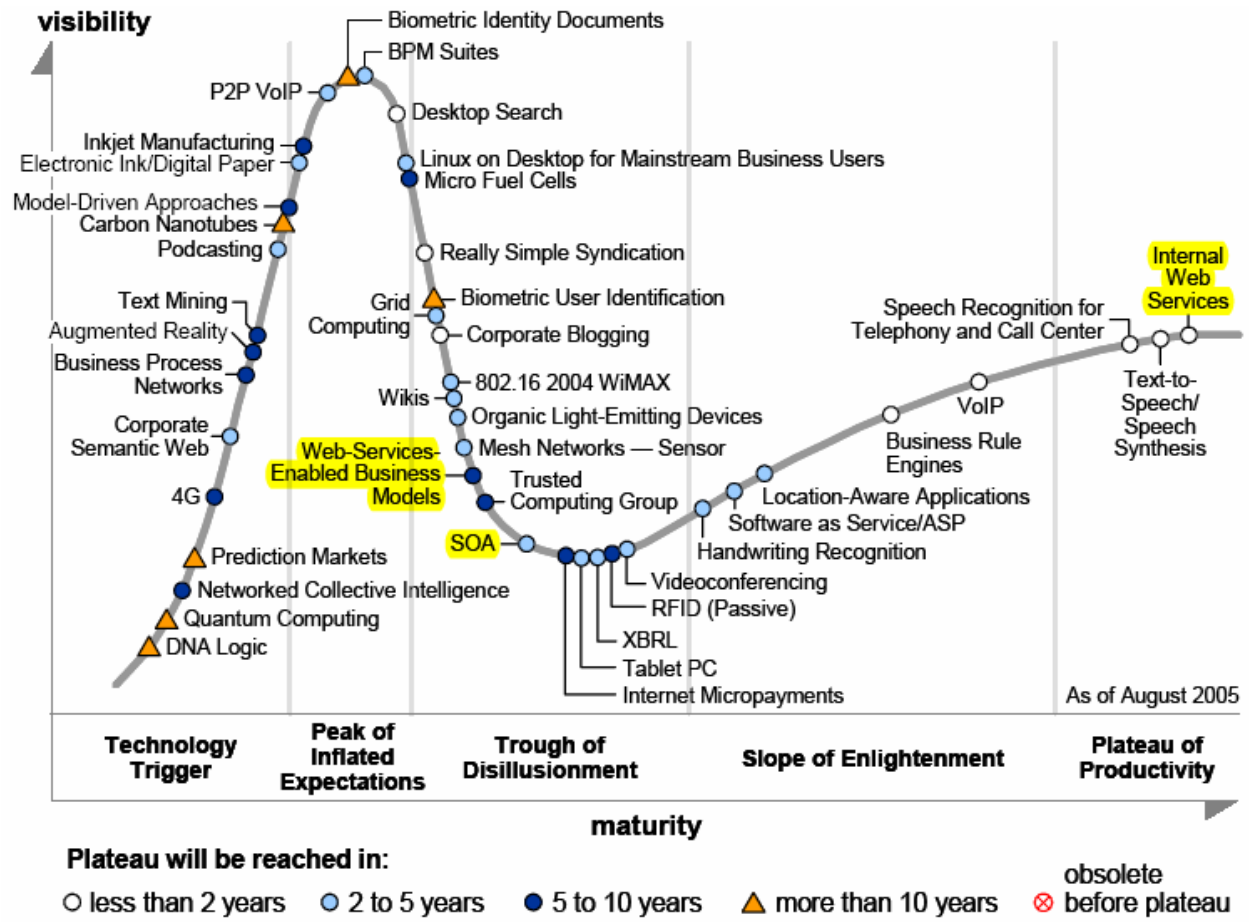
interface implementations and interface calls … SOA would be better-named "interface-oriented architecture".

Gartner goes on to attempt to clarify some of the business issues around the much-lauded growth of SOA and makes some predictions about its adoption:

> The main benefit of SOA is the opportunity for incremental development, deployment, maintenance and extension of business applications. Many myths have developed … around SOA. The reality is more modest, but also more immediately beneficial than the hype. SOA brings these benefits to enterprise IT:
>
> - Incremental development and deployment of business software
> - Reuse of business components in multiple business experiences
> - Low-cost assembly of some new business processes
> - Clarity of application topology
>
> SOA does not bring these mistakenly attributed benefits:
>
> - Simple software engineering
> - Free integration or interoperability
> - Technology independence
> - Vendor independence
>
> … Through 2007, growing enterprise experience with SOA process and SOA-based applications will eliminate the myths and instill appreciation for the real benefits of SOA in most enterprises. Evolving tools, skills and best practices will make development of SOA-style applications easier than development of monolithic applications. This change will shift the massive software industry mainstream into the new software-engineering reality: By 2008, SOA will be a prevailing software engineering practice, ending the 40-year domination of monolithic software architecture (0.7 probability). "Prevailing," however, does not translate to "exclusive." Through 2008, most enterprises will combine elements of SOA, EDA and monolithic architecture in their enterprise software development projects (0.8 probability).

In its periodic assessment called the "Hype Cycle for Emerging Technologies"[26], Gartner illustrates its perspective on how web services and SOA are evolving and the outlook for reaching an adoption plateau. It also shows the relative maturity of a technology to guide organizations in adoption decisions based on weighing the impact of being an early adopter with the related risks. The 2005 view seems to indicate that for internal use especially, web services are deemed a technology that is likely to be productive.

[26] Fenn, J. and Linden, A. "Gartner's Hype Cycle Special Report for 2005".



Application Server Layer (Tier 2)

The application server layer consists of one or more servers that provide the main processing for portal applications.

Some of the basic or foundational services provided include:

- Security and user administration;
- Application/portlet management;
- Content management;
- Collaboration tools;
- Search; and
- Data integration from numerous sources.

The figure below illustrates how an existing legacy application with a proprietary or custom data format can communicate with the application server layer. A conversion process there can format the data to an XML data stream and present it to the user.

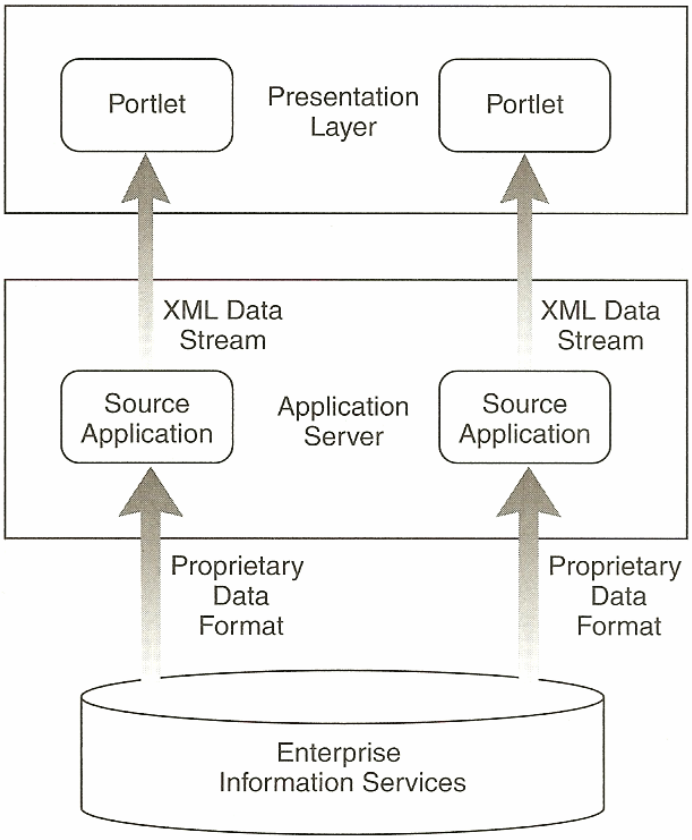


Figure 13 - Application Server Access to Proprietary Application (Sullivan)

The application server layer can also provide more advanced services. For example, it can obtain data from multiple sources or applications, process them in an integrated manner for presentation to the user as illustrated in the following figure:

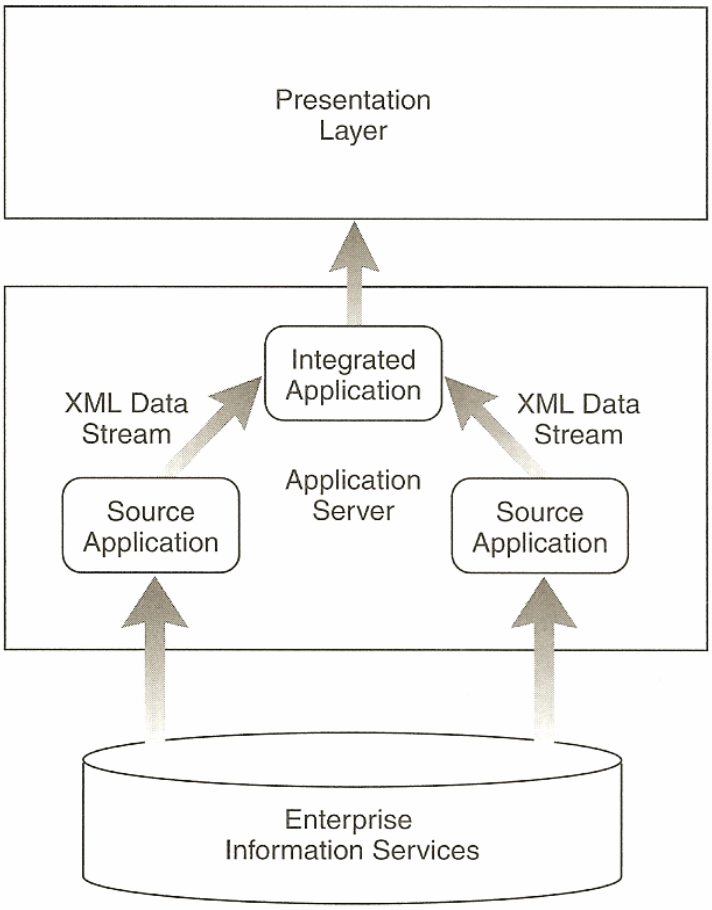


Figure 14 - Deep Application Integration (Sullivan)

This deeper integration is, of course, more resource intensive to design and develop, but is necessary to provide more advanced functions (e.g., workflow between applications).

Enterprise Information Services Layer (Tier 3)

Also referred to as the data services layer, this tier is the most varied and is where the portal interfaces to other systems for data and transactions. Example systems include:

- Enterprise resource planning systems (e.g., PeopleSoft Financials);
- Document management systems (e.g., Hummingbird eDOCS);
- E-mail systems (e.g., Microsoft Exchange Server);
- Customer relationship management systems (e.g., CARE); and
- Databases (e.g., Microsoft SQL Server).

The application server layer (Tier 2) is responsible for how these sources are accessed.

In summary, this three-tier approach enables portal designers and developers to deliver portal solutions that more closely align to the way users work and think rather than would otherwise be possible.

Portal Application Integration

Vendors employ several frameworks for integrating applications. The dominant frameworks used for implementing the application server (Tier 2) and enterprise information services (Tier 3) layers described in the previous section include:

- Java 2 Enterprise Edition (J2EE); and
- Microsoft .NET.

These frameworks define the overall structure for constructing and integrating portal components. Often, special brokering software (middleware) is needed to facilitate the application-to-application integration. This is also sometimes referred to as enterprise application integration (EAI) software.

Appendix B - Current Application Services

Main Application Services (York Region)[27]

System	Service Description
Asset/Workflow (Maximo)	• Asset/workflow management system
CISS	• Health services
CINOT	• Health services
CLRS (Corporate Learning Registration System)	• Training registration
Content Management System (Microsoft)	• Website content management
CRM (CARES)	• Customer relationship management
Datamining / Analysis (Cognos)	• Data mining/analysis
Divorcemate	• Provincial application (case management)
Document Management (Hummingbird DM)	• Document management
Domiciliary Hostel Database	• Domiciliary Hostel Program and Case Management database
EI – Web-AO-Link (Employment Insurance)	• Provincial application (case management)
EIS Database	• Wait list management
EM2000	• Incident management
Enterprise Database (Oracle and SQL)	• Databases
ePERMITS	• Permit management
Equifax	• Provincial application (case management)
ERP Financial (PeopleSoft)	• General ledger • Procurement • Accounts payable and receivable • Asset management • Billing • Budget development (separate module from that for budget management) • Budget management • Project management
ERP Human Resources (PeopleSoft)	• Human resource management • Time management and reporting • Training registration • Payroll processing
ETN/Bid Navigator	• Tendering
FIT (Seniors Falls Intervention)	• Health services
FoodSmart	• Health services
GIS (ESRI)	• GIS
Heart Alive	• Training registration
Health Connection	• Health services
Help Desk/Change/Incident (Computer Associates)	• Incident management • Asset management
HR Management (Performance Impact and	• Human resource management

[27] IBM. "ARC 302 - Application Functional Model". Version 0.92 (Draft). September 9, 2006.

System	Service Description
Halogen)	
Infosource	• Database
iPHIS	• Health services
IRIS	• Health services
ISCIS	• Health services
ISOsoft	• Training registration
Issues Management System (IMS)	• Issue tracking and reporting
MTO	• Ministry of Transportation case management
Ontario Child Care Management System (OCCMS)	• Child care management and reporting
parkingtickets.ca	• POA ticket payment processing
Patient Safety Survey Software	• Health services
PBS (Fleet)	• Fleet management
Point-Click Care	• Case management
Position Management Database	• Historical and staff information
Proton	• Health services
PRT	• Financial forecasting
RMMS	• Time management and reporting
RRMS (Revenue Recovery Management System)	• Revenue recovery for CS&H Department programs
ScheduleSoft	• Health services scheduling
SDMT	• Mandatory, provincially-run application accessed by staff to case manage and deliver services under the *Ontario Works Act*
SMS (Salary Management System)	• Budgeted salary and benefit calculation
TEAMS/LCD	• Time management and reporting
Time Matters 4.0	• Time management and reporting
Time Reporting (Eclipse)	• Time reporting
TRAVAX	• Health services
WNV Registry	• Health services
YARDI (Multiple Versions/Modules)	• Case management • Social housing waitlist management • Property/tenant management
YCSS (York Client Services System)	• Client information for CS&H Department programs
YorkLink	• Database of community agencies

Main Application Services (Markham)

System	Service Description
ACR (Active Networks)	• Customer relationship management (CRM) system, including complaint flow and tracking
ADP (ADP)	• Payroll web solution
AMANDA	• Building permits • Building inspections • By-law permits
CCBS	• Council and committee agenda and minutes circulation system
CLASS (Active Netwoks)	• Recreation program registration and management system
Horizon	• Library catalogue
ArcGIS (ESRI)	• Geographic information system (GIS)

System	Service Description
GEAC (Enroute)	• Fire dispatch system with mapping interface
Hansen (Hansen)	• Asset management system
MIMSY (Willoughby)	• Collection management system (museum, library and art gallery)
Onpoint Enterprise (Orion)	• GIS web mapping
Oracle and SQL	• Enterprise databases
ParkSmart (Parksmart)	• Parking by-law enforcement
SFG (Cayenta)	• Finance
TXM2000 (City of Mississauga)	• Taxation

Main Internet Website Information/Services/Features (York Region)

Following are highlights of the main public Internet services:

- Health information and services
- Council highlights
- Transit
- Job opportunities
- Community Snapshots: Recent Immigrants Living in York Region
- Removing Barriers - York Regions Accessibility Plan
- Have Questions? Child Care Fee Assistance (links)
- YorkLink Online Community Service Directory
- CARES customer relationship management (coming soon, public trouble reports for Transportation and Works for transit complaints, pot holes, street lights out, no water, etc.), www.vivayork.com , www.yrt.ca , All information on current public web site (york.ca), http://maps.york.ca/yorkexplorer/default.jsp ,
- York Durham Interceptor Sewer (http://ydss.cenet.ca)
- Mapping (YorkExplorer)
- Regional Official Plan and Planning
- Tourism
- Master plans for Transportation and Works
- Pedestrian and Cycling
- Infrastructure
- Public media releases
- Human Services Coalition

Main Intranet (Internal) Website Information/Services/Features (York Region)

Following are the main Intranet (http://mynetwork.region.york.on.ca) services:

- Departmental online tools and reports
- York Client Services System (YCSS)
- Time reporting

- Issues Management System (IMS, tracks contentious issues)
- Central report repository (annual reports, operating and capital budgets, development charge rates and information)
- Print Shop (online printing forms for business cards, etc.)
- Insurance Certificate Form, Property Loss Damage Report Form, Risk Management Committee Terms of Reference, Vehicle Equipment Accident Report Form, Regional Property Taxes Web Pages
- Health information (Healthy Measures E-Bulletin, Come Grow With Us, Healthy babies healthy Children, Tobacco substation programs, etc), Public Beach Postings, Food Premises and Restaurant disclosure charges, West Nile Virus information, Flu/ Vaccination clinic information
- Employee communication (“York Beat”, “CAO's Corner”, etc.)
- Online Training
- Content Management System guide
- Accessibility guide
- Business cards guide

York Region currently administers numerous web domains for various functions outlined below:

- www.york.ca
- www.region.york.on.ca
- www.region.york.on.ca/tmp (Transportation Master Plan)
- www.region.york.on.ca/standards (Water, Wastewater standards)
- http://ydss.cenet.ca (York Durham Interceptor Sewer project)
- www.region.york.on.ca/forceten (Training Application)
- www.region.york.on.ca/fit2005 (FIT project)
- www.region.york.on.ca/FIT/login.asp
- https://www.region.york.on.ca/occms (Ontario Child Care Management System)
- www.region.york.on.ca/yrtp/index.htm (under review)
- www.region.york.on.ca/ombi (Ontario Municipal Benchmarking Initiative)
- www.region.york.on.ca/cc (Character Community)
- www.region.york.on.ca/SignPermits/ (Transportation and Works sign permit application)
- www.region.york.on.ca/csh (temporary area for CSH department, under review)
- www.region.york.on.ca/extranet (to be retired in 2006)
- www.region.york.on.ca/info_kiosk (kiosk machines)
- www.region.york.on.ca/opha2002
- www.yrt.ca
- www.yorkregiontransit.com
- http://maps.york.ca
- www.yorklink.org
- www.yorktourism.com

- www.tourismyork.com
- www.rpco.on.ca
- www.charactercommunity.com
- www.rideforawish.com

Main Internet Website Information/Services/Features (Markham)

Following are highlights of the main public Internet (www.markham.ca) services:

- Council Information
- Geographical Information System (Explore Markham)
- Parking Ticket Payment
- Resource/Facility Booking and Payment
- Recreation Program Registration and Payment
- Event Ticket Ordering and Payment
- Property Tax Calculator
- Event Calendar
- Audio Webcasting Services
- Employment Opportunities
- Waste Collection Schedule Query
- Information for residents
- Markham Public Library (www.markham.ca/mpl, information, hot topics, customer survey (in four languages), links to other websites and programs)
- Markham Small Business Enterprise Centre (http://msbec.markham.ca)
- Milliken Children's Festival (www.markhamfestivals.ca/millikenchildren)
- Engage Markham (http://www.engagemarkham.com)
- Markham District Energy Inc. (www.markhamdistrictenergy.com)
- Markham Space Race (www.markhamspacerace.ca)
- EZReg (http://econnect.markham.ca)
- Markham Enterprises Corporation (http://mec.markham.ca)

Markham currently administers several other web domains to access specific areas of the Town's website for various functions outlined below:

- www.markhamtheatre.ca
- www.Varleygallery.ca
- www.markhammuseum.ca
- www.business.markham.ca
- www.markhamcentre.com

Main Intranet (Internal) Website Information/Services/Features (Markham)

Following are the main Intranet services:

- Markham Public Library (separate Intranet)
- News/announcements
- Special promotions/offers
- Common file sharing (e.g. logos, forms, policies, guidelines and publications)
- Employee directory with search function
- Corporate directions and activities
- First aid response contacts
- Guide to services
- Organization charts
- Interpreter listing
- Online comments/feedbacks to webmaster
- Audio webcast of general meetings
- Online poll/surveys
- Ping pong table online reservation
- Social club
- Links to corporate applications
- ITS help desk (updates and quick tips)
- Corporation links
- IDEAs logs submission
- Committee meeting calendar (Markham and York Region)
- Recreation services (policies, procedures, search, etc.)
- HR (accessibilities W3C Level 1, e.g., printer friendly feature, etc.)
  - Compensation & Benefits
  - Employee/Labour Relations
  - Learning & Development
  - Staffing
  - Health & Safety
  - Wellness
  - Online Comments and Suggestions

Appendix C - Requirements

How Requirements are Presented

What does the portal need to do in order to meet the partners' goals? Following is the type of information gathered in an attempt to answer this question to drive toward an approved list of mandatory and optional requirements:

Attribute	Description
Requirement Identifier	• Unique identifier
Business, Functional or Technical Requirement	• Requirement statement, in most cases phrased in the form of supporting the user's ability to perform a task/function
Related Source (Markham)	• Markham individual(s) consulted
Related Source Document (Markham)	• Markham document(s) consulted
Related Source (York Region)	• York Region individual(s) consulted
Related Source Document (York Region)	• York Region document(s) consulted
Portal Service Category	Aligned with terminology of Business Plan RFP (Section 3), including: • A. Transaction and e-Commerce Services • B. E-Democracy Services • C. Information Services • D. Collaboration Services • E. All • F. Implementation
Primary Requirement Category	• Primary aspect of portal solution expected to fulfill the requirement (hardware, software, services, content)
Classification	• Mandatory or optional
Required by Markham Constituents?	• To capture whether or not the requirement is relevant to Markham constituents
Required by York Region Constituents?	• To capture whether or not the requirement is relevant to York Region constituents
Required by Markham Employees?	• To capture whether or not the requirement is relevant to Markham employees
Required by York Region Employees?	• To capture whether or not the requirement is relevant to York Region employees
Importance / Business Value Impact	• Rating of importance or business value (high, medium or low)
Strategic Alignment	• Rating of alignment with partners' strategic vision (high, medium or low)
Fulfilled Today?	• Statement of whether or not the requirement is fulfilled today by a non-portal solution
Fulfilled by…	• Identification of how the requirement is fulfilled today by a non-portal solution
Comments	• Clarifying comments

Requirements Gathering Methodology

Portal requirements were identified through both document review and stakeholder interviews. Constituents' input was not included in this requirements-gathering exercise. Connected Insight conducted 25 interviews involving input from 33 individuals listed on the following page In addition, JPSC members reached out to their colleagues to gather other valuable input provided by e-mail to Connected Insight.

Document Review (Markham)

- Request for Proposal # 078-R-06, Consulting Services, Business Plan for a Municipal Portal for York Region and Town of Markham (Joint Venture)
- 2006 Budget (2005)
- Information Technology Strategic Plan (2006)
- Portal Business Value Assessment (2005)
- Contact Centre Statistics Summary (December, 2003)
- Contact Centre Statistics Summary (2004)
- Contact Centre Statistics Summary (December, 2005)
- Contact Centre Statistics Summary (October, 2006)
- "Federation of Ontario Public Libraries Research" (Market Probe Canada, 2006)
- www.markham.ca and associated websites

Document Review (York Region)

- "Vision 2026, Towards a Sustainable Region, Fourth Annual Report on Indicators of Progress" (2005)
- 2006 Operating Business Plans & Budget (2005)
- 2006 Capital Business Plans & 10 Year Forecast (2005)
- "ITS Strategy & 5 Year Plan, 2006 Update" (2006)
- "York Region Enterprise Architecture 1.0, Models, Frameworks & Recommendations" (IBM, 2005)
- Transportation and Works Intranet (Screen Capture Summary)
- Corporate Services 2007 Business Plan (Draft Excerpt)
- Court Services 2007 Business Plan (Draft Excerpt)
- Property Services 2007 Capital Business Plan (Draft Excerpt)
- Strategic Accommodation Plan (2005)
- "Citizens First 4" (Institute for Citizen-Centred Service, 2005)
- www.york.ca and associated websites

Stakeholder Interviews (Markham)

- Building Standards (John Wright, Director; Anthony Boyko, Manager, Building Code Inspections; Jamie Bosomworth, Manager, Strategy and Innovation; Chris Bird, Manager, Plans Review)
- By-Law Enforcement & Licensing (Bill Wiles, Manager)
- Community & Fire Services (Peter Loukes, Director, Operations)
- Contact Centre (Janice Cox, Manager; Rose Cozis, Team Supervisor; Meegan Garnto, Training/ACR Coordinator)
- Corporate Communications (Janet Carnegie, Director)
- Financial and Client Services (Joel Lustig, Director)
- Financial Services (Paul Wealleans, Director, Taxation)
- Information Technology Services (Nasir Kenea, Acting CIO)
- Markham Public Libraries (Bob Henderson, Director, Strategic Planning and Service Development)
- Recreation and Culture (Barb Roth, Director; Lisa Sillito; Dave Merriman, Angus Glen Community Centre Facilities Manager)

Stakeholder Interviews (York Region)

- Community Services and Housing Department (Joanne Bovair, Director (Acting), Business Operations and Support Services)
- Corporate Services, Legal Services Branch (Joy Hulton, Regional Solicitor)
- Corporate Services, Office of the Regional Clerk (Denis Kelly, Regional Clerk)
- Corporate Services, Property Services Branch (Barry Crowe, Director)
- Corporate Services, Human Resource Services Branch (Karen Close, Director)
- Corporate Services, Court Services Branch (Norman Scarratt, Director)
- Finance Department (Jayne Blackburn, Manager Financial Systems Support)
- Geomatics (Duncan Rowe; Andrew Satterthwaite)
- Health Department (EMS, Sandra Norris, CQI Manager)
- Information Technology Services (Louis Shallal, Chief Information Technology Officer; Mark Christiansen, Enterprise Architect)
- Office of the CAO (Emergency Management) (Morris Faccin, Emergency Management Coordinator)
- Office of the CAO (Marc Gallant, Senior Multimedia Specialist)
- Office of the CAO (Michelle Herder, Program Manager, Corporate Customer Service Strategy)
- Transportation and Works Department (Bob McClelland, Director Business Support Services; Dave Szeptycki, Technology Assets, Program Manager, Water and Wastewater; Rajeev Roy, Manager TMS, Transit)

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1	Personalization • Ability for registered users to specify preferences stored in a profile • Ability to define personalized portal homepage • Ability for administrator to constrain personalization by designating some content on personal portal homepage as mandatory	A. Transaction and e-Commerce Services	Software	Mandatory	Y	Y	Y	Y	H	H	N		
2	Payment Engine • Ability to support credit card payments • Ability to support debit card payments (Interac Online payments (optional) • Ability to support PayPal payments (optional) • Ability to support batch interface to PeopleSoft Financials for general ledger reconciliation (York) • Ability to support batch interface to SFG for general ledger reconciliation (Markham) • Ability to support multiple e-commerce gateway providers for up to 10 partners • Ability to support online donations (e.g., Markham Public Libraries "Gifting Program") • Ability to support online MPL fine payments • Ability to support online MPL fee payments • Ability to support online MPL program registrations	A. Transaction and e-Commerce Services	Software	Mandatory	Y	Y	Y	Y	H	H	N		• No requirement to process payments between York and area municipalities • No requirement to process payments between York departments • No requirement to process payments between Markham departments
3	Security • Portal applications will provide appropriate security safeguards for personal information against such risks as loss or unauthorized access, destruction, use, modification or disclosure of data • Security design will apply Security Zones and Layers to achieve consistent and appropriate level of security and risk acceptance • Specified personal content shall be sent using SSL • No credit and/or debit card information shall be stored • All Vendor software components must be certified as compliant with proposed operating system security patches within 30 calendar days of public release of such security patches	A. Transaction and e-Commerce Services	Software	Mandatory	Y	Y	Y	Y	H	H	N		• Although there are TCP/IP requirements, it should be clarified in more detail at the solution design stage

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4	Waste Collection Scheduling and Payment (Appliances) • Ability for end-users to schedule and pre-pay for an appliance pick-up • Ability for automatic creation of new ACR service request assigned to contractor (Miller) for pick-up • Ability for end-users to receive e-mail confirmation of transaction completion • Ability for end-users to enquire on status of confirmed appliance pick-up	A. Transaction and e-Commerce Services	Software	Optional	Y	N	Y	N	M	M	N		• ~5000/year • Miller already has ACR access
5	License Services (Business) • Ability to apply and pay for licenses • Ability to query status of license applications • Ability to be notified by e-mail of license renewal option • Ability to renew and pay for license renewals	A. Transaction and e-Commerce Services - License Services	Software	Mandatory	Y	N	Y	Y	M	M	N		• ~2500-5000 per year
6	License Services (Animal) • Ability to apply and pay for licenses • Ability to query status of license applications • Ability to be notified by e-mail of license renewal option • Ability to renew and pay for license renewals	A. Transaction and e-Commerce Services - License Services	Software	Mandatory	Y	N	N	N	M	M	N		• ~5000 per year
7	Parking Ticket Payment • Ability to continue using PaySmart for Town of Markham parking tickets	A. Transaction and e-Commerce Services - Online Parking Tickets Payment	Software	Mandatory	Y	N	Y	Y	H	H	Y	www.markham.ca/markham/channels/bylaws/parking_paymentonline.htm	• ~7200 per year processed

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8	Provincial Offences Act Ticket Payment • Ability to process *POA* Part 1 tickets • Ability to process *POA* Part 2 tickets • Ability to support real-time interface to Ministry of Attorney General ICON system for validation of user input • Ability to maintain current Paytickets.ca solution	A. Transaction and e-Commerce Services - Online Ticket Payment	Software	Mandatory	Y	Y	Y	Y	H	H	Y	www.york.ca	• Unsure if single solution could process all tickets
9	Registered User Authentication (Single Sign-On) • Ability to access all permitted resources in user profile after one authentication step (including, where feasible, York, Markham, and partner applications (e.g., Government of Ontario)) • Ability to support Ministry of Attorney General ICON system (currently accessed by York Court Services staff) • Ability for Administrator to be able to select and deselect permitted applications invoked • Shall support both internal and external users spanning multiple domains (e.g., Markham's Active Directory users, York Active Directory users, public users in portal registered user directory); all rights and privileges for remote and local users defined in profile • Ability to support multiple instances of PeopleSoft (on condition that user IDs and passwords are synchronized for each instance)	A. Transaction and e-Commerce Services - Permit Services	Software	Mandatory	Y	Y	Y	Y	L	H	N		• Should be the default requirement, with the possible exclusion of some systems like CPIC

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10	Building Permit Services • Ability to query status of building permit applications • Ability to be notified by e-mail of building permit application status • Ability to submit non-residential schedule inspection request • Ability to submit residential schedule inspection request • Ability to query status of schedule inspection request • Ability to be notified by e-mail of inspection result • Ability to support facility and property mapping	A. Transaction and e-Commerce Services - Permit Services	Software	Optional	Y	N	Y	Y	H	H	N		• BVA states "may not be appropriate for complex permits such as a building permit"
11	Permit Services (Parking) • Ability to apply and pay for and pay for permits • Ability to query status of permit application • Ability to be notified by e-mail of permit application status	A. Transaction and e-Commerce Services - Permit Services	Software	Optional	Y	N	Y	N	L	M	N		• ~300/year (versus ~10,000 per year cited by By-Law Enforcement & Licensing)
12	Permit Services (Parking Exemption) • Ability to apply and pay for and pay for parking exemption permits • Ability to query status of parking exemption permit application • Ability to be notified by e-mail of parking exemption permit application status	A. Transaction and e-Commerce Services - Permit Services	Software	Optional	Y	N	Y	N	M	M	N		• ~3000/year
13	Resource/Facility Booking and Payment • Ability for MPL customers to reserve a room in advance at any MPL branch • Ability for MPL customers to reserve a PC in advance (no cost)	A. Transaction and e-Commerce Services - Program Registration Services	Software	Mandatory	Y	N	Y	N	H	H	Y	econnect.markham.ca	
14	Program Registration and Payment • Shall support both web and telephony (IVR) interfaces • Ability to search MPL programs • Ability to interface to Active Networks CLASS and support >500 simultaneous users	A. Transaction and e-Commerce Services - Program Registration Services	Software	Mandatory	Y	Y	Y	N	H	H	Y	econnect.markham.ca	• Could be extended to registration for York internal events/programs

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15	Event Ticket Ordering and Payment • Ability to support Theatre events • Ability to support Museum events • Ability to support Art Gallery events • Ability to search all events	A. Transaction and e-Commerce Services - Program Registration Services	Software	Mandatory	Y	Y	Y	Y	M	M	Y	https://secure.tixhub.com/markham/procurement/	
16	Public Transit • Ability to sell transit tickets • Ability to create service order and workflow to trigger transit ticket order fulfillment • Ability to publish near real-time schedule for transit vehicles (e.g., estimated time to arrival for vehicle at specified stop)	A. Transaction and e-Commerce Services - Program Registration Services	Software	Optional	Y	Y	Y	Y	M	H	N		
17	Health Services • Ability to authenticate registered user • Ability to query child immunization record (if permitted)	A. Transaction and e-Commerce Services - Program Registration Services	Software	Optional	Y	Y	N	Y	M	M	N		
18	Property Tax Calculator • Ability to support currently offered functionality	A. Transaction and e-Commerce Services - Property Services	Software	Mandatory	Y	N	Y	N	M	M	Y	www.markham.ca/markham/channels/finserv/taxes/calculator.htm	
19	Tax Certificate Ordering and Payment • Property owners, realtors, bankers, and lawyers will be able to order and pay for tax certificates	A. Transaction and e-Commerce Services - Property Services	Software	Optional	Y	N	Y	N	M	M	N		• Currently $50 each via in-person channel • ~4000/year
20	Tax Receipt Ordering and Payment • Property owners, realtors, bankers, and lawyers will be able to order and pay for tax receipts	A. Transaction and e-Commerce Services - Property Services	Software	Optional	Y	N	Y	N	L	M	N		• Currently $15 each via in-person channel • ~300/year
21	Property Inquiries / Assessment Information • Property owners, realtors, bankers, and lawyers will be able to order and pay for property inquiries • Ability for registered user to display outstanding balance for his/her owned property • Ability to display tax account status and account activity to authenticated registered user • Ability for registered user to display current value assessment (CVA) for his/her owned property and other selected data • Ability to search by roll number or address • Ability to query single property at a time • Ability to apply fee for each inquiry	A. Transaction and e-Commerce Services - Property Services	Software	Optional	Y	N	Y	N	M	M	N		• Would want to consider impact of exposing on Internet, since tax consultants may download and exploit to increase appeals to the Assessment Review Board • May also be FOI issue

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22	Event Calendar • Support for multiple event calendars, including optional ability to have parent-child relationships established between calendars • Ability to publish Council meetings and agendas • Ability to search events • Support for non-registered users submission of new event • Ability to support event registration • Ability to display workforce management calendar (optional, to support display of workers assigned to shifts, etc.)	B. E-Democracy Services	Software	Mandatory	Y	Y	Y	Y	H	H	Y	www.york.ca www.markham.ca	
23	Webcasting Services • Ability to delivery real-time streamed multimedia content (i.e., audio, video, application screen capture); includes real-time camera feeds (e.g., transit stops) • Ability to store/archive webcasts for later use	B. E-Democracy Services	Software	Optional	Y	Y	Y	Y	L	M	Y	www.markham.ca (audio only)	• Limited interest

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24	Content Management System (CMS): • "Look and feel" standards enforced using templates • Graphical WYSIWYG environment (no HTML knowledge required by users) • At least 30 templates for Markham • At least 30 templates for York • Customizable templates • Customizable style sheets (if applicable) • Version control with check-in/check-out (previous versions of web pages are automatically saved for optional restoral) • Ability to archive web pages and specify retention period for each • Step-by-step approval workflow, including e-mail notifications • Ability for user to control font size with persistent on-screen control • Link integrity management (moving pages will automatically update links) • Site map • 200 user licenses • Supports multimedia content objects • Supports breadcrumbs navigation aid • Content scheduling • Supports printer-friendly views of web pages • Support for both English and French content • Supports Real Simple Syndication (RSS) feeds for automatic populating specified content (e.g., news, weather, etc.) • Ability to support metadata	C. Information Services	Software	Mandatory	N	N	Y	Y	H	H	Y		
25	Employment Opportunities • Ability to post employment opportunities • Ability to submit applications	C. Information Services	Software	Mandatory	Y	Y	Y	Y	H	H	Y	www.markham.ca/markham/channels/hr/employopps.htm	

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26	Procurement • Ability to post tenders for specified time period • Ability to sell individual tender documents • Ability to sell tender subscriptions for a designated time period • Ability to download tender documents (e.g., RFPs, RFP addenda) • Ability to notify registered subscribed users by e-mail • Ability for vendor subscribers to perform status inquiries (e.g., bids, invoices, payments) • Ability for vendor subscribers to remit invoices	C. Information Services	Software	Mandatory	Y	Y	Y	Y	H	H	Y		
27	Form Downloads • Ability to download electronic forms (e.g., PDF)	C. Information Services	Software	Mandatory	Y	Y	Y	Y	H	-	Y	Current websites	• CMS function
28	Document Management • Ability to store documents • Ability to search for documents • Ability to interface portal applications to existing OpenText (legacy Hummingbird) Enterprise (including eDOCS) electronic document management system (e.g., presentation of eDOCS document within portal) • Ability to interface portal applications to (or integrate) existing proprietary (in-house) Quality Review System (QRS) electronic document management system (York EMS), including workflow functions • Ability to embed links to eDOCS documents • Ability to designate documents as transitory or official • Ability to specify document retention period • Ability to interface portal applications to (or integrate) Roboinfo (to manage, track, and instantly publish policies and procedures online)	C. Information Services	Software	Mandatory	Y	Y	Y	Y	M	H	Y	• eDOCS • QRS	• "There needs to be a Region wide adoption of e-DOCS and endorsement by SMG to move the initiative forward" • "[N]ew records management system"
29	Waste Collection Schedule Query • Ability to obtain waste collection schedule based on user's specified location	C. Information Services	Software	Mandatory	N	N	Y	Y	H	H	Y	www.markham.ca/markham/channels/wastemgmt/schedules.htm	

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30	Program Information • Ability to publish selected content	C. Information Services	Content	Mandatory	Y	Y	Y	Y	H	H	Y		
31	Facility Information • Ability to publish selected content	C. Information Services	Content	Mandatory	Y	Y	Y	Y	H	H	Y		
32	Bus Schedules • Ability to publish selected content	C. Information Services	Content	Mandatory	Y	Y	Y	Y	H	H	Y		
33	Engineering Project Information • Ability to publish selected content	C. Information Services	Content	Mandatory	Y	Y	Y	Y	H	H	Y		
34	Zoning By-Law • Ability to publish selected content	C. Information Services	Content	Mandatory	Y	Y	Y	Y	H	H	Y		
35	Information/Service Requests, Feedback and Complaint Processing • Ability to submit service request for selected subject area or department • Ability to provide feedback • Ability to provide e-mail status update to originator	C. Information Services	Content	Mandatory	Y	Y	Y	Y	H	H	N		• ~5000 per year (By-Law Enforcement & Licensing)
36	Directories • Ability to query employee directory (a.k.a. "employee locator" or "people finder") by name, role/title, location, telephone number, etc. • Ability to query business directory • Ability to submit directory records (e.g., business) • Ability to query community directory (e.g., housing providers, including optional mapping and photographs) • Ability to query by selecting one or more filter criteria from drop-down lists	C. Information Services	Content	Mandatory	Y	Y	Y	Y	M	H	Y	www.region.york.on.ca/NR/yorklink/search.asp	

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37	Search • Shall support both basic and advanced search operations • Shall support indexing of all CMS content • Shall support indexing of binary files (e.g., Adobe Acrobat, Microsoft Word, Microsoft Excel, etc.) • Shall support querying data bases by selecting filter criteria from drop-down lists • Shall index content in all Document Management System(s), including Hummingbird eDOCS (e.g., archived e-mail) • Ability to parse data in unstructured documents to find geographic references (more intelligent searching) (optional) • Ability to employ metadata in search operations	C. Information Services	Content	Mandatory	Y	Y	Y	Y	H	-	Y	Example: York 10 Year Construction Program Project Search	
38	Online Forms • Ability to quickly produce simple forms	C. Information Services	Content	Optional	N	Y	Y	Y	M	-	N		
39	Council Reporting Tools • Ability to collect and organize documents provided to Council	C. Information Services	Software	Mandatory	N	N	Y	Y	M	M	Y		
40	Access to Other Systems • Ability to access Amanda through portal based on user's portal profile (including online forms and workflow)	C. Information Services	Software	Mandatory	Y	N	Y	Y	M	H	N		
41	Access to Other Systems (GIS) • Ability to provide interactive web mapping with real-time bidirectional interface to existing Markham GIS • Ability to provide interactive web mapping with real-time bidirectional interface to existing York GIS • Portal solution mapping module shall support multiple reference/projection systems • Portal solution mapping module shall support broadly accepted geospatial technology standards (e.g., like those promoted by www.opengis.org)	C. Information Services	Software	Mandatory	Y	N	Y	Y	H	H	Y	www.exploremarkham.ca/onpoint gis/onpoint	• Excludes "integration of Amanda with GIS system for property address and web based mapping interface" (Markham) • Excludes Hansen-Amanda integration

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42	Access to Other Systems (Property) • Ability to access Hansen through portal based on user's portal profile	C. Information Services	Software	Mandatory	Y	N	Y	Y	M	H	N		
43	Access to Other Systems (Taxation) • Ability to access TMS2000 (a.k.a. "TXM2000") through portal based on user's portal profile	C. Information Services	Software	Mandatory	Y	N	Y	N	H	Y	N		
44	Access to Other Systems (Recreation) • Ability to access CLASS through portal based on user's portal profile	C. Information Services	Software	Mandatory	Y	Y	Y	Y	M	H	Y	econnect.markham.ca	• Currently does not have batch interface to SFG financial system (manual reconciliation)
45	Access to Other Systems (Work Order / Customer Relationship Management) • Ability to access Active Network ACR through portal based on user's portal profile (e.g., ability to create service request, inquiry on service request status, close service request, etc.) • Ability to access Angus work order management software	C. Information Services	Software	Mandatory	Y	N	Y	N	M	H	N		
46	Access to HR Information • Ability to support employee self-serve model • Ability to interface to web-enabled York's PeopleSoft Time and Labour module	C. Information Services	Software	Mandatory	N	N	Y	Y	M	H	N		
47	Access to Finance Information (SFG) • Ability to present current financial information by department • Ability to provide enhanced access to client departments	C. Information Services	Software	Mandatory	N	N	Y	N	M	H	N		

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48	E-Mail Newsletters/Notifications • Ability for end-users to subscribe and unsubscribe to categories (e.g., alerts, road maintenance notification, disaster recovery status updates) • Ability send e-mail newsletters (e.g., alerts to Council, employees, etc.) • Ability send e-mail newsletters in multiple formats (e.g., plain text, HTML, etc.) • Ability to include graphic elements	C. Information Services		Mandatory	Y	Y	Y	Y	H	H	N		
49	Surveys • Ability to create and publish surveys • Ability to process and present survey results • Ability to produce survey reports • Ability to export results	C. Information Services	Content	Mandatory	Y	Y	Y	Y	L	L	Y	York (HRS)	• Some reported use of external research providers for surveys • Likely to be used in cases where statistical significance of outcomes not required
50	Emergency Management Application • The portal solution shall include - or provide an interface to - a web-based application for emergency management • Ability to support emergency response planning • Ability to support emergency operations and communications (e.g., evacuation zone identification, message boards, etc.)	C. Information Services	Software	Mandatory	Y	Y	Y	Y	H	H	N		• Some aspects likely to be fulfilled by CMS • Other aspects may require other software to fulfill
51	Alerts • Ability for administrator to publish alerts on portal home page • Ability for administrator to send e-mail alerts to subscribed users	C. Information Services	Software	Mandatory	Y	Y	Y	Y	M	-	Y	www.york.ca	
52	e-Learning • Ability to deliver computer-based self-paced training modules	C. Information Services	Software	Optional	Y	Y	Y	Y	L	-	Y	York (Finance)	• Excludes training modules themselves

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53	User Communication Channel Choice • Ability to support customer's communication channel choice e-mail or telephone (where both channels designated supported by portal administrator) (e.g., for notification to user of a library resource being available for pick-up) • Ability for portal administrator to enable or disable choice of communication medium (i.e., default to only option supported if chosen by portal administrator due to privacy/security constraints)	C. Information Services	Software	Optional	Y	Y	Y	N	M	M	N		
54	User Communication Channel Choice • Digital Library Reserve Overdrive (www.dlrlinc.com) subscription • Library catalogue content (e.g., audio books, eBooks, digital music, etc.)	C. Information Services	Content	Optional	Y	N	Y	N	M	M	N		
55	Infrastructure Monitoring • Ability to integrate SCADA (i.e., remote monitoring, including via wireless links, facility information sensors)	C. Information Services	Software	Optional	N	N	Y	Y	M	H	N		
56	Health Connection Database • Ability to query	C. Information Services	Software	Optional	Y	Y	Y	Y	M	H			
57	Third Party Application Integration • Ability to interface to or integrate third party applications to portal based on published API or Web Services and SOA • Ability to support interface to - or substitute for - Citrix where necessary in order to support employee remote access (teleworking) • Ability to support interface to MIMSYXG is used for collections management	D. Collaboration Services	Software	Mandatory	N	Y	Y	Y	H	H	Y	• Various methods	
58	Project Status Dashboards • Ability to publish a simple view of the status of a project (e.g., green, yellow, red)	D. Collaboration Services	Software	Mandatory	N	Y	Y	Y	H	-	Y	York (Transportation & Works Intranet)	

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59	Department/Unit Performance Dashboards • Ability to present summarized information on a single screen • Ability to support real-time interface to PeopleSoft Financials (including notifications of user action required, e.g., pending approval) • Ability to support real-time interface to PeopleSoft Payroll • Ability to support real-time interface to PeopleSoft HR and Position Management • Ability to present graphical summary reports of key performance indicators based on PeopleSoft data • Ability to customize dashboard elements for multiple user groups • Ability to support messaging/notifications and reporting functions • Ability to support real-time interfaces based on standards (e.g., Web Services) or APIs • Ability to display selected calendars • Ability to support dynamic scrolling messages/tickers	D. Collaboration Services	Software	Mandatory	N	N	Y	Y	H	-	N		
60	Team Workspaces • Ability to store discussions and documents • Enables avoidance of reliance on e-mail as primary project collaboration medium	D. Collaboration Services	Software	Optional	N	Y	Y	Y	L	M	N		• May be fulfilled by CMS
61	Web Conferencing • Ability to conduct online meetings • Ability to support audio, video, screen sharing, etc.	D. Collaboration Services	Software	Optional	N	Y	Y	Y	L	L	N		• Low-to-moderate probability of adoption • Low interest in use for training
62	Discussion Forums / Web Logs (Blogs) • Ability to support moderated and unmoderated discussion threads • Ability for users to create a new discussion thread/topic where permitted by moderator	D. Collaboration Services	Software	Optional	Y	Y	Y	Y	L	M	Y	http://ydss.cenet.ca (York Durham Interceptor Sewer project)	

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63	Polls • Ability to create and process online polls • Ability to automatically tabulate and process results after each result submitted • Ability to produce variety of reports • Ability to export results in standard format for importing into other applications	D. Collaboration Services	Software	Optional	Y	Y	Y	Y	L	M	Y	• York HRS has tool	
64	Volunteer Registration • Ability to define organization requiring volunteer recruiting • Ability to define volunteer opportunities • Ability to apply for volunteer opportunities • Ability to display report of applications for volunteer opportunities • Ability to trigger optional e-mail notification of application for volunteer opportunity	D. Collaboration Services	Software	Optional	Y	Y	N	N	L	L	N		• Limited interest
65	Instant Messaging / Text Chat • Ability to conduct real-time text chat (e.g., library AskMPL Electronic Reference Service inquiries) • Ability to publish presence indicator (e.g., away, on the telephone)	D. Collaboration Services	Software	Optional	Y	Y	Y	Y	L	L	N		
66	Podcasting • Ability to support Podcasting	D. Collaboration Services	Software	Optional	Y	Y	Y	Y	L	L	N		• MPL interested
67	Knowledge Management • Ability to store collective knowledge of organization • May be less formalized than Document Management	D. Collaboration Services	Software	Optional	N	N	Y	Y	M	-	N		• May be to vague to specify; may consider striking

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68	Registered User Authentication • "Auto Log-In" and "Log-In" • Ability for user to self-recover forgotten password	E. All	Software	Mandatory	Y	Y	Y	Y	M	H	Y	www.yorktourism.com/Special+Events/default.htm	
69	End-User Self-Registration • Ability for end-users to self-register for a portal user account • Ability for end-users to optionally associate portal account with other accounts (e.g., MPL account, CLASS account, etc.) to enable integration with other services	E. All	Software	Mandatory	Y	Y	Y	Y	H	H	N		
70	User Administration • Ability for defining multiple user groups • Ability for defining multiple levels of portal administration authority • Ability to add, modify and delete users • Ability to temporarily suspend user	E. All	Software	Mandatory	-	-	Y	Y	H	H	Y		
71	Portal Availability • Portal software and hardware design and architecture shall deliver 99.0% portal availability (i.e., downtime of approximately 1 hour per week)	E. All	Software	Mandatory	Y	Y	Y	Y	H	-	-		
72	Training • Vendor responsible for working with partners to complete a training plan that will describe in detail how both end users as well as technical and application support staff will be trained (should address content authors, content approvers, Portal Administrator, business users, end users) • Training plan must specify training strategy, methods, location and preliminary schedule • Vendor responsible for delivering training services (may require multiple days at multiple sites) • Some training shall be delivered on-site and shall use the same version of the software that end-users will be using in the production environment	E. All	Services	Mandatory	N	N	Y	Y	H	H	-		

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73	Software Support • Vendor shall support and maintain software and shall maintain compatibility of solution with newer releases of any incorporated third-party software • Includes telephone and Internet support services, maintenance and upgrades • Supplier warrants software and documentation for one (1) year from date of final payment • Software assurance (i.e., entitlement to all major upgrades) shall be provided for all third party software	E. All	Services	Mandatory	Y	Y	Y	Y	H	H	N		
74	Maintenance and Upgrade Support: • Long-term maintenance and upgrade support services for solution shall be offered • First year to be part of the solution's basic warranty and shall be included • Optionally renewable for 1 year terms • Shall be priced separately and not be included in the Vendor's final price • Vendor shall guarantee compatibility under future releases of software and shall extend to any interfaces written by the Vendor	E. All	Software	Mandatory	-	-	-	-	H	H	N		
75	Modularity of Portal Applications • Ability for administrator to selectively enable and disable portal modules • Ability to introduce portal functions at different times • Ability to differentiate identities, management and ownership structures for each service/application (even though applications may share common platform, network and databases) • Ability to support administrative and end-user groups defined across multiple autonomous organizations (e.g., Markham, York, etc.)	E. All	Software	Mandatory	-	-	-	-	H	-	N		

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76	Server Hardware • Vendor shall propose suitable computer platform • Vendor shall propose optional high-availability configuration with automated fail-over to secondary servers located at disaster recovery site	E. All	Hardware	Mandatory	-	-	-	-	-	-	-		• Applicable if partner-hosted
77	Server Software (Operating System & Middleware) • Vendor shall propose suitable computer operating system software • Vendor shall propose optional high-availability configuration with semi-automated fail-over to secondary servers located at disaster recovery site	E. All	Software	Mandatory	-	-	-	-	H	H	N	-	• Applicable if partner-hosted
78	Server Software (Application) • All portal software components must be Web Services-enabled • Vendor shall propose suitable application software • Vendor shall propose optional high-availability configuration with semi-automated fail-over to secondary servers located at disaster recovery site • Vendor shall provide source code for any newly developed components and provide Customer with escrow rights at Customer's option	E. All	Software	Mandatory	-		-	-	-	-	-	-	
79	Software Licensing • Site license (unlimited users) • Business Partner Authorized Use: Vendor confirms that Customer's business partners are authorized to use all deliverables including any Commercially Available off-the-Shelf Software Components	E. All	Software	Mandatory	Y	Y	Y	Y	H	H			
80	W3C (WWWC) Standard Compliant	E. All	Software	Mandatory	Y	Y	Y	Y	H	M			

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81	Systems Management and Reporting • Portal shall support ability to measure and track performance, security, utilization, throughput and capacity • Portal shall provide utilization/traffic analysis and reporting • Compatibility with dominant system management vendors (e.g., Tivoli)	E. All	Software	Mandatory	Y	Y	Y	Y	H	H	Y	• Various methods	
82	Scalability • Solution shall be fully scalable to handle future increases in customer usage (e.g., up to 500,000 registered end-users, up to 15,000 simultaneous authenticated users) • Solution shall be fully scalable to handle up to 10 semi-autonomous partners (i.e., York plus its area municipalities)	E. All	Software	Mandatory	Y	Y	Y	Y	H	H	N		
83	Accessibility • Accessible to users with disabilities • Compliance with *Ontario Disabilities Act* • Level A Conformance to W3C Web Content Accessibility Guidelines 1.0 • Ability to support accessibility features and functions (e.g., for visual and auditory disabilities), including ability to interface to dominant screen reading software (e.g., Freedom Scientic Jaws) • Ability to render pages without graphics • Ability to configure all printer-friendly pages with no background colour • Ability to support English, French and numerous other languages	E. All	Software	Mandatory	Y	Y	Y	Y	H	H	Y	• Some sections of current websites compliant	• York (Office of the CAO): "Customer Service Standards pertaining to AODA are currently out for public comment, once they become regulations, York and Markham (if they have more than 500 employees) will need to be compliant within three years. The standard applies to all forms of service delivery including electronic.

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84	Portal Architecture • Portal solution shall be substantially compliant with York's EA Principles, Standards, Models, Guidelines, Processes and Plans • Portal solution components must be properly integrated to enable sharing • Portal solution components must have ability to integrate • Portal solution shall reuse existing Markham and/or York components where suitable (e.g., database instances) • Each portal component must have a clearly defined boundary for the functionality it provides and the data (if any) that it manage • The portal user interface will allow for a multilingual interface (e.g., "toggling" from one language to another)	E. All	Software	Mandatory	-	-	-	-	-	-	-		
85	Server Operating System Software • Shall include all current patches	E. All	Software	Mandatory	-	-	-	-	-	-	-		
86	Disaster Recovery Plan • Vendor shall create a Disaster Recovery Plan for recover of portal services	E. All	Services	Optional	Y	Y	Y	Y	H	H	Y		
87	Responsiveness • Portal will function with acceptable response times for both dial-up and broadband users	E. All	Software	Optional	Y	Y	N	N	L	M	Y		• Drives graphical and multimedia richness • Separate "low bandwidth" section very labour-intensive to maintain

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88	Portal Architecture (Standards and Interfaces) • Portal solution components shall be substantially compliant with commercially accepted international and industry standards (either *de jure* or *de facto*) • Each portal component must have clearly defined, consistent/standardized, stable, accessible, and published interfaces	E. All	Software	Mandatory	Y	Y	Y	Y	H	H	-		
89	Privacy • Portal solution shall protect privacy and provide reliable information according to principles of *MFIPPA, PHIPA* and *PIPEDA* • Portal solution shall meet both protection of privacy and access to information requirements established in government legislation • Applications shall specify purpose for which personal information is collected, used or disclosed • Personal information may be obtained with user consent or by authority of law • Portal applications will limit collection of personal information to that necessary for business objectives • Portal applications will not disclose, make available or otherwise use personal information for purposes other than those stated to the user, except with the user consent or by authority of law • Portal applications will provide means to keep personal information accurate, complete and up-to-date for intended purposes; means for recording consent status and changes to it will be provided when appropriate • Portal applications will establish existence and nature of personal information about a subject and its principal purposes	E. All	Software	Mandatory	Y	Y	Y	Y	H	H	Y	• Various methods	• Privacy Impact Assessment should be completed
90	Market Adoption & Solution Maturity • The portal solution shall have demonstrated broad industry acceptance • The portal solution shall be tried and proven	E. All	Software	Mandatory	Y	Y	Y	Y	M	M	-		

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91	Device Access • Portal applications shall be accessible from wireless devices (e.g., Blackberries, mobile telephones, etc.) to support dominant market standards	E. All	Software	Mandatory	Y	Y	Y	Y	M	M	N		
92	Portal Implementation Methodology • The portal solution shall be developed and implemented using generally accepted best practices	F. Implementation	Services	Mandatory	-		-	-	H	H	-		
93	Content Migration/Copying Services • Vendor shall copy existing specified content from www.york.ca (or related websites) to specified CMS templates • Vendor shall copy existing specified content from www.markham.ca (or related websites) to specified CMS templates • Vendor shall recommend where multiple data stores may be consolidated (and partitioned where applicable, e.g., business directories)	F. Implementation	Services	Optional	Y	Y	Y	Y	M	-	-		
94	Test Content • All test content created by Vendor shall be deleted prior to production in-service date	F. Implementation	Services	Mandatory	-	-	-	-	-	-	-		
95	Functional Requirements Document • Vendor shall collaborate on refining/elaborating portal requirements to deliver a detailed functional requirements document specific to Vendor's portal solution	F. Implementation	Services	Mandatory	-	-	-	-	-	-	-		
96	Design Document • Vendor shall deliver a portal design, including overall portal design and architecture, information architecture, graphical design and CMS template design	F. Implementation	Services	Mandatory	-	-	-	-	-	-	-		

Appendix D - Business Case for Portal (Financial Analysis)

York Region-Markham Portal Business Plan - Cost/Benefit Analysis (to Fulfill Mandatory Requirements Only) (Estimates)

	Year 1 ($)			Year 2 ($)			Year 3 ($)			Year 4 ($)			Year 5 ($)			Cumulative (Years 1-5) ($)		
	Low	Likely	High	Low	Likely	High	Low	Likely	High	Low	Likely	High	Low	Likely	High	Low	Likely	High
Initial Costs (Capital)																		
Software Licenses	475,000	955,000	1,655,000	50,000	90,000	130,000										525,000	1,045,000	1,785,000
Operating System	10,000	20,000	40,000													10,000	20,000	40,000
Middleware / Adapters / Agents	50,000	100,000	150,000													50,000	100,000	150,000
Database Server	10,000	20,000	40,000													10,000	20,000	40,000
Content Management System	15,000	40,000	70,000													15,000	40,000	70,000
Portal Framework	250,000	500,000	800,000													250,000	500,000	800,000
Payment Engine	25,000	50,000	100,000													25,000	50,000	100,000
Search Engine	10,000	25,000	50,000													10,000	25,000	50,000
Web Analytics Application	10,000	20,000	40,000													10,000	20,000	40,000
SSL Certificates	5,000	10,000	15,000													5,000	10,000	15,000
Business Intelligence / Dashboard Application	50,000	100,000	250,000													50,000	100,000	250,000
Systems Management Application Agents				10,000	20,000	30,000										10,000	20,000	30,000
Portal Administrator Tools				10,000	20,000	30,000										10,000	20,000	30,000
Backup & Recovery Agents	10,000	20,000	30,000													10,000	20,000	30,000
Other	30,000	50,000	70,000	30,000	50,000	70,000										60,000	100,000	140,000
Hardware	127,000	192,000	313,000													127,000	192,000	313,000
Servers	100,000	150,000	250,000													100,000	150,000	250,000
Racks	3,000	5,000	10,000													3,000	5,000	10,000
Management NICs	3,000	5,000	10,000													3,000	5,000	10,000
Cables	1,000	2,000	3,000													1,000	2,000	3,000
Other	20,000	30,000	40,000													20,000	30,000	40,000
Services (External)	615,000	1,070,000	1,700,000	735,000	1,120,000	1,600,000										1,350,000	2,190,000	3,300,000
Technical Project Management	80,000	120,000	160,000	80,000	120,000	160,000										160,000	240,000	320,000
Business Analysis	80,000	120,000	160,000	80,000	120,000	160,000										160,000	240,000	320,000
Architecture & Design	150,000	250,000	450,000													150,000	250,000	450,000
Software Development & Integration	20,000	50,000	100,000	180,000	250,000	400,000										200,000	300,000	500,000
Content Migration	20,000	50,000	100,000	180,000	250,000	300,000										200,000	300,000	400,000
Software Installation & Configuration	100,000	150,000	200,000	100,000	150,000	200,000										200,000	300,000	400,000
Hardware Installation & Configuration	50,000	100,000	150,000													50,000	100,000	150,000
Testing	50,000	100,000	150,000	50,000	100,000	150,000										100,000	200,000	300,000
Documentation	15,000	30,000	80,000	15,000	30,000	80,000										30,000	60,000	160,000
Other	50,000	100,000	150,000	50,000	100,000	150,000										100,000	200,000	300,000
Training (External)	65,000	125,000	190,000	65,000	125,000	190,000										130,000	250,000	380,000
Content Management System	15,000	25,000	40,000	15,000	25,000	40,000										30,000	50,000	80,000
Other	50,000	100,000	150,000	50,000	100,000	150,000										100,000	200,000	300,000
Total Initial Costs (Capital)	**1,282,000**	**2,342,000**	**3,858,000**	**850,000**	**1,335,000**	**1,920,000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2,132,000**	**3,677,000**	**5,778,000**
Recurring Costs (Operating)																		
Software Maintenance & Support				95,000	191,000	331,000	95,000	191,000	331,000	95,000	191,000	331,000	95,000	191,000	331,000	380,000	764,000	1,324,000
Hardware Maintenance & Support				25,400	38,400	62,600	25,400	38,400	62,600	25,400	38,400	62,600	25,400	38,400	62,600	101,600	153,600	250,400
Services (External)							15,000	25,000	40,000	15,000	25,000	40,000	15,000	25,000	40,000	45,000	75,000	120,000
Training (External)				20,000	50,000	75,000	20,000	50,000	75,000	20,000	50,000	75,000	20,000	50,000	75,000	80,000	200,000	300,000
Total Recurring Costs (Operating)				**140,400**	**279,400**	**468,600**	**155,400**	**304,400**	**508,600**	**155,400**	**304,400**	**508,600**	**155,400**	**304,400**	**508,600**	**606,600**	**1,192,600**	**1,994,400**
TOTAL COSTS (Initial + Operating)	**1,282,000**	**2,342,000**	**3,858,000**	**990,400**	**1,614,400**	**2,388,600**	**155,400**	**304,400**	**508,600**	**155,400**	**304,400**	**508,600**	**155,400**	**304,400**	**508,600**	**2,738,600**	**4,869,600**	**7,772,400**
Benefits (Quantitative Savings)																		
Markham				3,000	5,000	7,000	3,000	5,000	7,000	3,000	5,000	7,000	3,000	5,000	7,000	12,000	20,000	28,000
York Region				70,000	80,000	100,000	70,000	80,000	100,000	70,000	80,000	100,000	70,000	80,000	100,000	280,000	320,000	400,000
Total Savings				**73,000**	**85,000**	**107,000**	**73,000**	**85,000**	**107,000**	**73,000**	**85,000**	**107,000**	**73,000**	**85,000**	**107,000**	**292,000**	**340,000**	**428,000**
Benefits (Quantitative Revenue Increases)																		
Markham (Fee Payment / Convenience Fees)																		
MPL Fine Payments																		
MPL Fee Payments																		
MPL Program Registrations																		
License Services (Business)																		
License Services (Animal)																		
York																		
Total Revenue Increases																		
TOTAL BENEFITS (Savings + Revenue Increases)				**73,000**	**85,000**	**107,000**	**73,000**	**85,000**	**107,000**	**73,000**	**85,000**	**107,000**	**73,000**	**85,000**	**107,000**	**292,000**	**340,000**	**428,000**

ASSUMPTIONS

General	• Portal implementation will be a 2-year project • Vendors will not categorize or group items in the same way in proposals, thereby limiting the extent to which multiple vendor proposals' costs may be easily compared
Initial Costs (Capital)	
Software	• Initial software costs will be incurred in Year 1
Hardware	• Initial hardware costs will be incurred in Year 1 • Existing electrical infrastructure (e.g., power distribution units) has capacity for new portal servers • Existing LAN/WAN infrastructure has capacity for new portal servers • Existing backup/recovery infrastructure has capacity for new portal servers • Existing HVAC infrastructure has capacity for new portal servers
Services (External)	• Incurred in Years 1 and 2 only
Recurring Costs (Operating)	• Excludes new portal development which would be covered by a new capital project • Costs projected to be constant over Years 2-5
Software Maintenance & Support	• Maintenance and support = 20% of initial cost
Hardware	• Maintenance and support = 20% of initial cost
Benefits (Savings)	• Markham: Portion of $150,000-160,000 current costs will be directly reduced by introduction of portal • York Region: Portion of $350,000 of current costs will be directly reduced by introduction of portal • Excludes "soft" savings not deemed defensible • Markham parking ticket and York Region POA ticket processing savings not claimed (uncertain if savings will result from going to common solution or if common solution feasible)
Benefits (Revenue Increases)	• Partners' Councils will decide if convenience fees to be applied

	• Following services excluded on basis that revenue from service charges is already being realized and that no material net increase will be realized through the portal solution:
	  • Parking Ticket Payment excluded (already being realized)
	  • Resource/Facility Booking and Payment
	  • Event Ticket Ordering and Payment
	  • Tendering Document Sale

Appendix E - Risk Management Supporting Material

How Identified Risks are Presented

The following table describes the attributes for identified risks:

Attribute	Description
Identifier (ID)	• Unique identifier used to reference each risk
Date Recorded	• Date the risk was identified to or by the project manager
Identified By	• Individual or organization that identified each risk
Risk Description	• Describes the conditions or causal factors and how they pose a potential risk to the project
Risk Owner(s)	• Owner of primary responsibility to manage and monitor risk
Category	• Risks are categorized as Technical, Quality, Project Management, Organizational or External • The Project Management Institute (PMI) illustrates this "Risk Breakdown Structure" in the figure below, showing the main areas covered under each category
Probability	• Rates as high, moderate or low the probability that the risk will occur
Impact	• Rates as high, moderate or low the expected negative impact to one or more project objectives
Rank (Response Priority)	• Qualitative analysis of probability and impact are summarized in this column • Rates as high, moderate or low the priority of response planning and action
Remarks	• Information about planned mitigative action or contingency plans

Table 4 - Risk Attributes

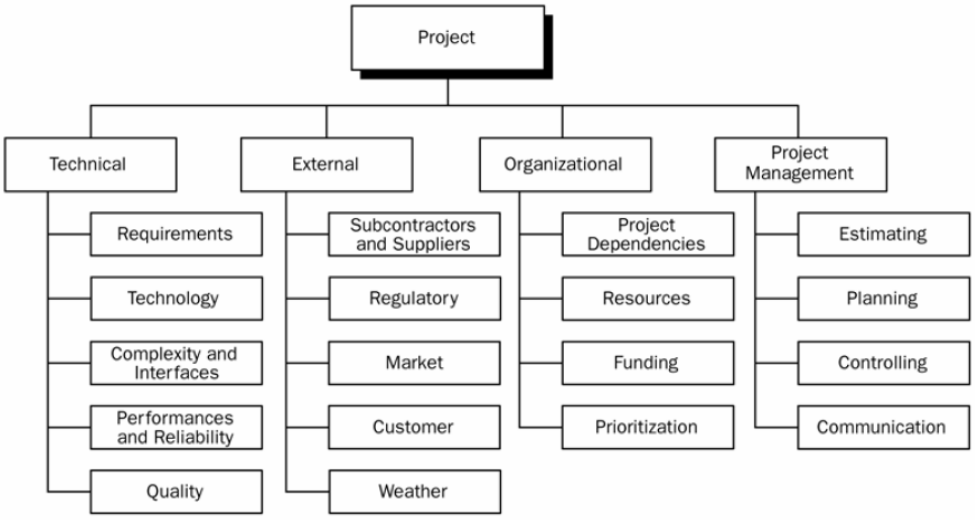

Figure 15 - Risk Breakdown Structure (PMI 2004)

Major Risk: Portal Utilization/Adoption Objectives May Not be Met

A major risk faced by most enterprise, municipal and community portals is that portal services will not be adopted by users. By extension, this would mean that the expected benefits will either not be realized or will be less than expected. However, this risk can be mitigated by taking steps to ensure that the portal satisfies user requirements in a compelling way.

To prepare a response to this major risk, we can start with the following questions:

- What has been learned about portal adoption that can be applied to mitigate the risk of poor utilization/adoption?
- For government online services, what user preferences and tendencies should be considered?
- What is known about which information and services are adopted by constituents?

While there is not a great deal of academic research to answer these questions, there are some resources available to guide requirements decision-making, i.e., to determine if a given requirement, if satisfied, would yield a low, moderate or high business value.

The following sections propose mitigation strategies to reduce the risk that the portal will not be adopted by constituents and employees.

Mitigation: Design with User Requirements/Preferences in Mind

There are research findings that suggest that overall adoption of eGovernment services is still modest, particularly for transactional services. According to Forrester[28], Canadian and U.S. government portals are still mainly used for information, not interaction (transactions). Forrester found that "Canada continues to outpace the [U.S.] in almost all online activities, but both governments continue to fail to capitalize on the potential of the Web to increase interaction levels while reducing the cost of individual interactions." It went on to state that "[r]esearching government information and downloading forms are the most popular activities on government Web sites in both the [U.S.] and Canada" and that the "Boomer" generation has the highest adoption.

Also according to Forrester[29], a "mere 44% of employee portal users report that it's easy to find what they're looking for". This is likely also true for external users. Forrester points out the following best practices to mitigate the risk of poor adoption:

- Focus portal design on driving adoption;
- Make the portal's services more attractive than current alternatives;
- Actively manage content;

[28] Weber, A..et al. "Data Highlight: eGovernment Adoption Levels: 2006" (Excerpt from "The State Of Consumers And Technology: Benchmark 2006"). September 6, 2006. Forrester Research, Inc.

[29] Brown, M. et al. "Best Practices: How to Drive Portal Adoption". February 10, 2006. Forrester Research, Inc.

- Segment users along dimensions other than organization structure (e.g., extent of mobility, extent of working from home, geographic location, access method, etc.) and answer several questions for each segment to "design portals that deliver high-value content and functional capabilities to specific user groups within the organization":
  - What advantage will users realize by using the portal?
  - Does the portal make a process more or less complex?
  - Will users find the portal compatible with their existing ways of working?
  - How observable are the benefits that users will realize?
  - What risks are users taking by adopting the portal?
  - How can risks be divided over time?

The following illustration shows how the user segmentation approach may be considered by the portal designer to target specific user segments:

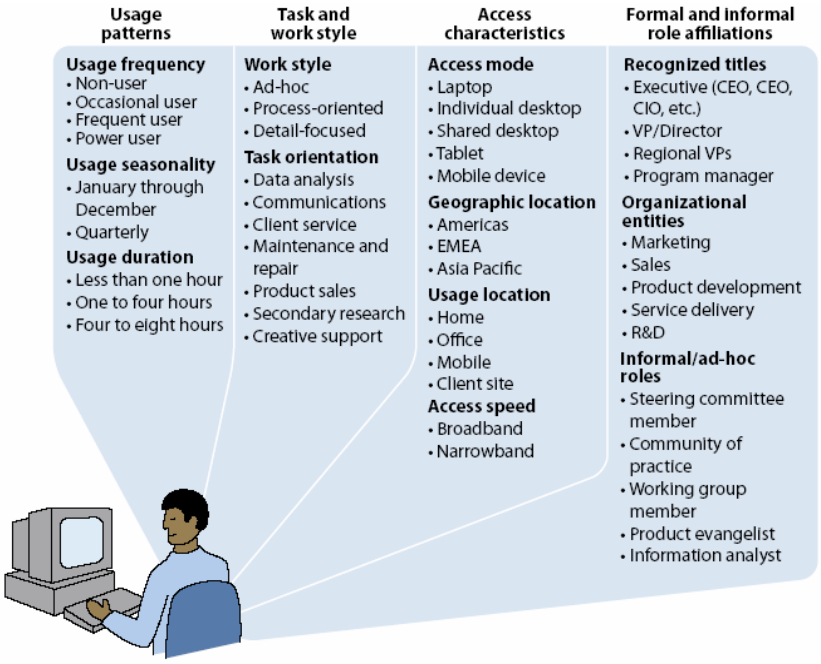

Figure 16 - Portal User Segmentation (Forrester Research 2006)

Favouring a portal solution vendor with demonstrated experience in cross-jurisdictional public sector portal implementation will likely prove beneficial in taking mitigative actions outlined here, particularly in the design area.

Mitigation: Build Trust and Drive Satisfaction

Even though Forrester identifies opportunities to improve offerings of transactional services, it is reasonable to proceed with caution and identify compelling transactional services. The Institute for Citizen-Centred Service & The Institute of Public Administration of Canada published its "Citizens First 4" research report in 2005. Among its key findings were that:

- The five drivers of satisfaction first identified in 1998 are still valid (i.e., timely service, a positive outcome, knowledgeable staff who go the extra mile to help citizens, and fair treatment);
- Compared with the telephone channel, the Internet is seldom the only channel used and is mostly used to support other channels;
- Most Internet services are still focused on information delivery versus transactions;
- Citizens are most satisfied with the Internet channel for information gathering, but as is the case with the telephone, satisfaction declines for complex services;
- Drivers of satisfaction with the Internet are outcome, ease of finding information, sufficient information, site navigation and visual appeal;
- Citizens are concerned about eGovernment security and privacy (e.g., unrestricted information sharing, hacking, identity theft) that represent barriers to adoption, even those who are heavy users (transacting online and using e-mail cause greater concern than that noted for in-person, telephone or mail channels);
- Without addressing security and privacy concerns, citizens will remain in more traditional service channels;
- Searching for information online is comfortable for most citizens but transacting is not;
- Strong citizen interest is indicated in having access to a government official while doing transactions online;
- Efforts to improve satisfaction should focus initially on timeliness, then outcome, then going the extra mile;
- Citizens are more critical of paid services and must believe the services are worth the associated fee;
- In order to justify a switch from another channel (e.g., telephone) citizens must believe the Internet channel is reliable and personalized; and
- The following variables most greatly impact satisfaction (in order of importance):
  - "In the end, I got what I needed from the Web site"
  - "It was easy to find what I was looking for"
  - "The site had all the information I needed"
  - "I always knew where I was on the site"
  - "The site was visually appealing".

The report "Trust and Risk in E-government Adoption" by U.S. researchers Bélanger and Carter builds on the necessity to nurture trust to promote adoption, particularly for transactional services[30]. They note that "[c]itizens seek … assurance that their interaction with e-government services is safe … while egovernment has the potential to improve government transparency, responsiveness, and accountability to citizens, e-services will only be adopted if citizens deem them trustworthy." As noted earlier, this domain, while very important to realizing portal benefits, is not well-understood; "researchers are just beginning to empirically explore the role of trust in e-government adoption". There is, therefore, some

[30] Bélanger, F. and Carter, L. "Trust and Risk in E-government Adoption". (Proceedings of the Eleventh Americas Conference on Information Systems, Omaha, NE, USA August 11-14, 2005).

uncertainty about how to best mitigate the risk of poor adoption due to citizen mistrust. However, the research indicates that some aspects of this problem are clear and provide some guidance on how communication can help build trust:

- Citizens must be helped to believe "in the benevolence, integrity, and competence of the agencies providing theses services";
- "Citizens must believe that government agencies provide e-government services for the purpose of benefiting, not monitoring, society"; and
- "[C]itizens must believe government agencies possess the astuteness and technical resources necessary to implement and secure these systems".

This study also refers to prior research in which a user's statement of intention-to-use does indeed strongly predict actual usage of an online service. The figure below illustrates that intention-to-use is, to a significant extent, a product of trust in the Internet itself as well as York Region and Markham governments.

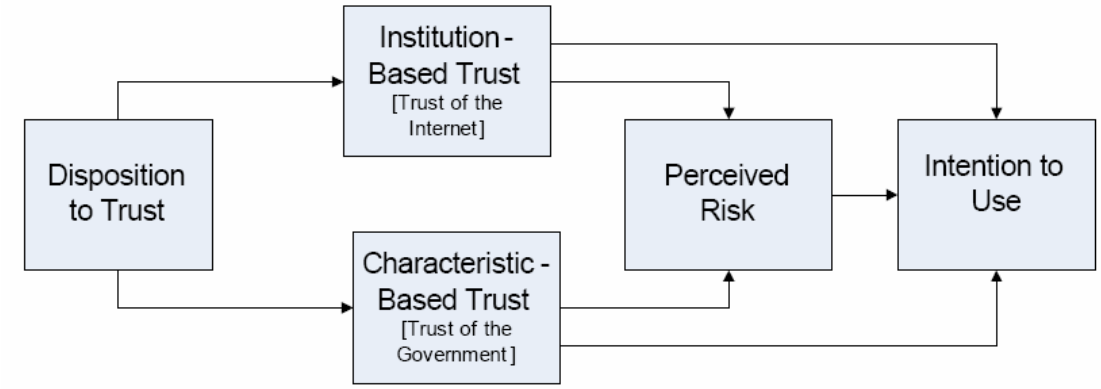

Figure 17 - Trust and Risk in eGovernment Adoption (Bélanger and Carter 2005)

For users who follow-through on the intention-to-use and have a positive eGovernment experience, one encouraging finding is that they show an "unusually high likelihood to recommend the site to others".

If York Region and Markham expect strong adoption of transactional services, major communication efforts will be necessary to cement constituents' trust of both the Internet and the partners themselves.

Mitigation: Monitor Traffic and Search Activity

One consideration in the domain of usability and adoption is that of search queries: For what information or services are users searching? One example is the portal

mycommunityinfo.ca[31] which performs performance analysis of search queries. It found that the most searched for categories were, in descending order of frequency, as follows:

- Employment;
- Municipal information;
- Community information; and
- Recreation.

According to the Government of Canada's *Government On-Line 2006* report (2005), Canadians indicate a preference for a website or portal information architecture centred on subjects or topics. After subject, users expressed a preference for information organized by life event, department/agency, function, location and audience. Also, this report claims that the government invested development effort based on frequency of use; the most commonly used informational and transactional services were prioritized for "better and more responsive service". A scan of the 130 most commonly used services reveals broad categories including the following highlights:

- Taxation;
- Regulations and permits;
- Licensing;
- Employment and recruitment;
- Business and trade; and
- Online procurement.

After portal implementation, monitoring traffic and search activity can help guide the focus of both development and operational efforts.

Major Risk: Unnecessary Overlap with Other Projects

Another major risk for which mitigation is an appropriate response is that of resource waste resulting from unnecessary overlap - or poor coordination - between the prospective portal project and other active or prospective projects.

Both York Region and Markham have large and complex IT project portfolios. Not all of these projects are driven by the partners' respective ITS departments; some are driven by the commissions, business units or departments without direct involvement of ITS. Because a portal will touch numerous existing systems, it is highly likely that the portal implementation project will have an impact on other IT projects and vice versa.

Mitigation: Document Overlapping Projects in the Portfolio

During the initiation phase of the implementation project, a scan of active and prospective projects should be completed to identify and document overlapping projects in both York

[31] www.mycommunityinfo.ca/about/performance1.asp

Region and Markham's portfolios. Of particular importance are projects for which expected outcomes overlap with core portal framework components (e.g., content management systems, collaboration applications, etc.) to avoid redundant investments that may be incompatible.

For each overlapping project identified, a decision will need to be made among several alternatives, including:

- Redefine the overlapping project's requirements within the portal project (i.e., if not already defined as mandatory portal requirements);
- Authorize both projects to proceed with monitoring at the portfolio level to identify and resolve issues as they arise; or
- Authorize both projects to proceed on condition that their respective outcomes are deemed compatible from an enterprise architecture point of view.

There may be other alternatives not listed here to effectively mitigate this risk.

ID	DATE RECORDED	IDENTIFIED BY	RISK OWNER(S)	RISK DESCRIPTION	CATEGORY	PROBABILITY	IMPACT	RANK (RESPONSE PRIORITY)	RESPONSE	REMARKS
R1	November 13, 2006	CII	JPSC	Portal utilization/adoption objectives may not be met (i.e., assuming utilization/adoption objectives are defined as measures of project success)	Project Management	M	H	H	Mitigation	• Set realistic adoption objectives • Favour portal solution vendor with demonstrated experience in cross-jurisdictional public sector portal implementation • Design with user requirements/preferences in mind • Build trust and focus on known drivers of satisfaction • Ensure capability in place to measure utilization and adoption • Apply IT change management principles • Consider implementing a "Portal Marketing Plan" to increase user awareness and adoption
R2	November 14, 2006	CII	JPSC	There may be unnecessary waste (e.g., duplication of effort) between a new portal project and other active/prospective projects; projects may be working at cross-purposes	Project Management	M	H	H	Mitigation	• Identify overlapping projects and decide response to minimize waste
R3	November 13, 2006	CII	JPSC	Some departments' / commissions' with significant IT independence / autonomy may decline to actively participate in the project	Organizational	M	M	M	Mitigation	• Promote benefits of effective governance to commissioners and set expectations for trade-offs
R4	November 13, 2006	CII	JPSC	Complexity of a "big bang" project approach may overwhelm stakeholders and hinder decision-making	Project Management	L	H	M	Avoid	• Deliver multiple phased releases that build upon successes of previous phase(s)
R5	November 13, 2006	CII	JPSC	Portal solution vendors may propose solutions within understated or hidden costs (e.g., hardware, software)	Project Management	M	M	M	Mitigation	• Inform vendors in RFP that they will be expected to cover specified costs exceeding those outlined in proposal

ID	DATE RECORDED	IDENTIFIED BY	RISK OWNER(S)	RISK DESCRIPTION	CATEGORY	PROBABILITY	IMPACT	RANK (RESPONSE PRIORITY)	RESPONSE	REMARKS
R6	November 13, 2006	CII	JPSC	Some managers may view the portal as a potential threat to their current staff, processes or budget and may not assign necessary resources (e.g., staff being trained to support the new portal service delivery channel)	Organizational	M	M	M	Mitigation	• Promote key portal benefits that are aligned with their department's plans • Apply IT change management principles
R7	November 13, 2006	CII	JPSC	Interfacing/integration of legacy systems may be deemed not technically feasible during solution design phase	Technical	L	H	M	Mitigation	• Provide necessary detailed information to vendors in RFP to support proposal of technically feasible solution • Rate openness/flexibility of vendor solution as a heavily-weighted evaluation criterion
R8	November 13, 2006	CII	JPSC	The portal solution may not be compatible with other department-centric IT solutions being implemented through separate projects	Technical	M	M	M	Mitigation	• Ensure that sound Enterprise Architecture principles are applied to all IT projects to improve openness of solutions

Appendix F - Governance Case Studies

Governance Case Study 1: Wellington-Guelph Community Portal[32]

The County of Wellington services seven municipalities across the county, excluding the City of Guelph. The Wellington-Guelph Community Portal was developed and deployed by the following partners:

- Centre Wellington Chamber of Commerce
- City of Guelph
- County of Wellington
- Guelph Chamber of Commerce
- Township of Centre Wellington
- Township of Wellington North
- Upper Grand District School Board
- Volunteer Centre of Guelph/Wellington

Information within this portal is contributed by members and partners. The main objective is to connect people to the businesses, organizations, services and events happening within Wellington County. Members pay a yearly fee. The Wellington-Guelph Community Portal was approved for funding by the Ontario Ministry of Economic Development and Trade under the Connect Ontario program – a government sponsored initiative to connect citizens to government and business organizations through technologies such as the internet. Additional support and funding has been provided by the portal partners.

Agreement: Partners must complete an application form and consent to comply with the privacy policy and terms of use of the portal.

Financial Accountability: The Wellington-Guelph Community Portal is a not-for-profit joint venture partnership owned by its partners. At this stage, partners do not share financial accountability.

Since the implementation project closed and the portal became operational, only two out of partners are fulfilling financial commitments. However, partners argue that they have no documentation of committed operational funding. Further, they argue, most have developed their own websites and challenge the benefits of sharing infrastructure and resources. It appears that there were few clear written agreements in place. Consequently, there are ongoing disputes about partners' financial obligations.

A partner is an entity who is actively involved in integrating its information and communications within the portal. The partners have contributed both "in-kind" efforts and

[32] Lawrence, K. (New Media Analyst, City of Guelph), Personal communication, August 29, 2006. www.wellingtonguelph.ca

funding. Wellington-Guelph Portal Partners benefit from added services and exposure. A partner is a business or organization that uses the portal to promote its website content that is valuable to citizens, businesses and visitors of Wellington-Guelph. Applications for partners are reviewed by the Wellington-Guelph Steering Committee.

Financial Performance Management (Outcome Measurement): Based on tracking Guelph employee utilization for portal support, Guelph management has concluded that portal is incurring labour costs greater than what is deemed reasonable. Therefore, Guelph has made the management decision to provide minimal support. Future initiatives including advertising and other membership fees are being considered in order to help with the costs of maintaining the portal. It was reported that there are no committed labour resources, budget or plan in place.

Operational Performance Management (Outcome Measurement): Statistics indicate low portal usage which is estimated for some periods at only 90 visits per day. This is interpreted as little interest in the portal at this time. While apparently not measured in a structured manner, it was observed that partners are not meeting verbal commitments to refresh and update content. This is partly the cause of significant content duplication between partners and their own respective websites.

Decision-Making Authority: Decision-making is controlled by the partners and governed by a steering committee that meets quarterly and is made up of the same partner representatives who oversaw the portal project implementation. For example, the portal's "Terms of Use" are reviewed annually by the Steering Committee and reposted.

System Administration: Employees of the City of Guelph administers the portal itself.

Planning: Future initiatives including advertising and other membership fees are being considered in order to help with the costs of maintaining the portal.

Content: Once content changes are submitted and approved by partners, they are promoted to the portal. The portal employs one Community Coordinator – who also acts as webmaster – who is responsible for maintaining the standards of the postings that have been put forward by the Wellington-Guelph Community Portal Steering Committee. The material posted on the portal has been supplied by the Wellington-Guelph Community Portal Partners. There is also a large collection of local businesses and organizations that have posted their own company information. Content submissions are centrally approved by the City of Guelph portal administrator.

Lessons Learned: It was observed that the project funding model was attractive to get partners to collaborate to build the portal. However, in the absence of committed budget to maintain the portal, the interest has severely waned. Further it was believed that the implementation project was too rushed and that more planning would have been better. It was noted that the project partners might have created a strong case for collaboration and documented this. Finally, all agreements should be documented, since many original participants have moved on and there are few original team members who initiated the portal project.

Governance Case Study 2: Dufferin Orangeville Technical Services[33]

Dufferin Orangeville Technical Services (DOTS) is the IT shared services organization created in 2002 by the County of Dufferin and the Town of Orangeville. When it began, DOTS was approved by both councils as a one-year trial that eventually expanded to 18 months. The organization was later approved for continued operations. Supported services include telecommunications, project management, computer and network support.

DOTS' Information Services Manager claims that to his knowledge, there is only one other group in Quebec that truly shares integrated IT services between municipalities to a similar degree.

Agreement: While both Dufferin and Orangeville councils approved DOTS, no formal shared services agreement has been struck. DOTS' Information Services Manager explains it is better to be without the formal structure to this point and noted that even at the end of the trial, both councils agreed to maintain DOTS informally. However, it is recognized that there may come a time when a formal agreement is necessary. The absence of an agreement, and its administrative overhead, is believed to enable staff to focus on meaningful support service delivery and capital projects.

Financial Accountability: Three of the five DOTS' staff members are funded by the County of Dufferin, while two are funded by the Town of Orangeville. Budget contributions for capital projects are individually negotiated. End user departments are accountable for support services which are charged-back by DOTS. Therefore, DOTS is expected to account for all project and operations support service delivered.

Financial Performance Management (Outcome Measurement): The DOTS Information Services Manager measures and reports cost savings realized from capital projects (e.g., voice over Internet protocol (VOIP), fibre build, etc.).

Operational Performance Management (Outcome Measurement): The DOTS Information Services Manager oversees service delivery to both governments and reports outcomes to both treasurers. He points out that this dual reporting has not yet posed a problem.

Decision-Making Authority: For project initiation decisions, DOTS' Information Services Manager points to an informal agreement with business managers approaching him to conceptualize projects to identify where cost savings may be realized. They collaborate to determine if there is a reasonable business case to proceed. Trouble/incident prioritization is done on a case-by-case basis, with the rank of the originator being among the primary decision factors.

System Administration: Shared systems are administered by DOTS staff.

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[33] Moule, L. "Town and County Work Together To Build IT Services and Network". *Municipal Interface*, May, 2006, pp. 35-37.

Hall, J. (Information Services Manager, Town of Orangeville), Personal communication, August 29, 2006.

Planning: Both partners are described as reasonable and there is, so far, no major problem serving two masters. DOTS' Information Services Manager describes a *quid pro quo* approach and that partners have a good relationship. Long-term strategic planning is now underway. Not surprisingly, planning is reported to take a great deal of time - a lot longer than expected. Consideration is being given to creating a new corporate entity to move DOTS staff into due to union pay scale limitations. In this model, a single shared services corporation would exist with its shares divided among partners. So far, such a tentative proposal is viewed favourably from each government's treasurers.

One major issue identified is that one partner more advanced than the other. This creates some tension in that one government is apprehensive while the other is aggressively moving forward. Another planning issue was that of collocated staff; because of office constraints DOTS operate as a centralized entity for service but in two locations (i.e., administration at one site, technical staff at the other).

Governance Case Study 3: eSask Coalition[34]

The eSask Coalition includes the City of Saskatoon, City of Regina, SaskTel, SaskPower, SaskEnergy and Saskatchewan Government Insurance. In 2003, the joint venture delivered a common web-based solution for common customers called ExpressAddress. SaskEnergy describes the services as "[t]he first application of its kind in Canada … a 'one-stop' service giving Saskatchewan residents a convenient and secure way to connect, transfer or disconnect residential services for natural gas, telephone, water and electricity … can also use ExpressAddress to update their address for driver's licences, vehicle registrations and various municipal services." Since 2003, the list of participating organizations has grown to eleven. The initiative earned the eSask Coalition a GTEC Distinction Award in the 2004 National Innovative Cross-Jurisdictional e-Government Awards.

The eSask Coalition mission statement in its governance document states "[i]t is the intent of the parties to work together in the identification, development and deployment of Web-based, customer self-serve opportunities, where synergies exist across organizations, to meet our end customers' needs and gain in cost efficiencies."

Agreement: The eSask Steering Committee established a Governance Sub-Committee that developed a formal agreement which details the coalition's governance. The agreement also defines how partners may voluntarily participate in future service expansion and share costs based on participation.

Each partner may have 3 Steering Committee members. However, each partner has only one vote. The role of Chair rotates periodically among partners.

Financial Accountability: There is a fee structure in place for subscribers of address change data. SaskEnergy has been appointed by the partners to be responsible for billing and collections of both subscriber and partner fees. ExpressAddress operations (e.g., web hosting, systems, etc.) are funded by each partner. Each partner receives an annual invoice from SaskEnergy for its share of services.

Financial Performance Management (Outcome Measurement): Cost per transaction is not measured. Also, partners' cost savings are not been formally measured. Finally, customer satisfaction is not measured formally, but it is reported that anecdotal feedback from subscribers and the public is very positive.

Operational Performance Management (Outcome Measurement): ExpressAddress performance is measured on number of address change transactions completed by partner and subscriber. Also, the number of participating organizations is an important outcome

[34] Fisher, C. and Peacock, K. "Saskatchewan Cities Help Create Innovative Online Partnership". Municipal Interface, September, 2003, Vol. 10, No. 4, pp. 1-40.

Wells, D. Saskatchewan Government Insurance (Vice President, SGISYST - Systems). Personal communication, September 26, 2006.

SaskEnergy. "SaskEnergy 2004 Annual Report".

measurement, since the more participants, the more efficient the address change transactions become.

Decision-Making Authority: The eSask Steering Committee makes decisions during its monthly meetings.

System Administration: SaskTel hosts the service and is funded by the other partners.

Planning: The eSask Steering Committee evaluates proposed plans brought forward by the partners. At this writing, there have been only preliminary planning discussions about extending the eSask model to other services.

Governance Case Study 4: Central Saanich, North Saanich and Town of Sidney[35]

In 2002, British Columbia's District of Central Saanich, District of North Saanich and Town of Sidney embarked on a project to sponsor development of a shared web site infrastructure. It was decided that the limitations on uniqueness of each partner's website - due to use of common content management system templates - were reasonable in order to realize the benefits. Driven by IT management and endorsed by each respective council, the project has realized an estimated 60% cost savings and significantly reduced operational complexity.

Agreement: The partners choose to not have a formal written shared service governance agreement. One partner explained that their agreement, while informal, is founded on the commitment of the partner councils which authorized the current arrangement. It was explained that the key issue of design and functionality compromise was uppermost in discussions with council. Some councillors were naturally very passionate about uniqueness for each website, but elected to compromise in consideration of the forecast cost savings. Furthermore, cross-jurisdictional collaboration was cited as being part of the District of North Saanich strategic plan. Therefore, this shared service is aligned with this strategy and seems to be regarded as something that binds the partners.

Financial Accountability: While the partners do not have a formal agreement, they do have contracts in place with vendors. One partner has contracted WeDoHosting.com Inc. for server hosting services. The same partner contracted Novus Consulting Inc. for server and some application administration. For example, Novus Consulting Inc. will engage IronPoint if there is a content management system incident. The one partner maintains these contracts, pays the invoices and then in turn invoices the other partners for one-third.

In cases where not all partners want to procure a new service or application, the costs are borne only by the beneficiary partner. However, they do optionally allow opting in later and paying accordingly.

Financial Performance Management (Outcome Measurement): The joint project was sponsored by the councils partly on the basis of forecast estimated cost savings of 60%. One partner claims that this was realized.

Operational Performance Management (Outcome Measurement): The configuration of the IronPoint content management system enabled each partner to configure Google Analytics for their respective websites. This enables each to analyze metrics including unique users, page views, etc.

Decision-Making Authority: Each partner has its own committee to govern website decision-making and set priorities. The three IT manager partners meet monthly to agree on priorities (e.g., operational issues, further development projects).

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[35] Moule, L. "Three Municipalities Unite IT Vision After Success of Joint Web Project". *Municipal Interface*, March, 2006, Vol. 13, No. 2, pp. 20-21.

Carnell, J. (IT/GIS Manager, District of North Saanich). Personal communication, September 6, 2006.

System Administration: Only Novus Consulting Inc. has administrative access to the shared server. The partners mutually depend upon and trust Novus alone to maintain the server and communicate with all partners on incidents and problem management.

Planning: The partners meet periodically to plan any actions that jointly affect them and prioritize changes, including upgrades. The strategic direction to drive cost savings through cross-jurisdiction collaboration is driving IT strategic planning in which further shared services are being considered (e.g., asset management).

Content: Because the content is separately administered, similar content sections, including the privacy notice, vary for each.

Governance Case Study 5: New Zealand State Services Commission[36]

New Zealand's Public Service agencies have adopted an approach to managing cross-agency e-government initiatives.

As IT services move into production by agencies, governance responsibility is transferred from the project steering committee to the All-of-Government Advisory Board that oversees service maintenance responsibility. Not only does the All-of-Government Advisory Board provide general oversight and guidance on business issues, it also acts to champion shared and coordinated services.

Agreement: Service delivery is governed by legal agreements binding SSC and the agencies.

Decision-Making Authority: The country's central authority, the State Services Commission (SSC), has chosen a decentralized model for service delivery where associated agencies retain considerable autonomy over decision-making.

Planning: The SSC is responsible for "the E-government Strategy, the E-government Interoperability Framework standards and the development of 'foundation' services" upon which shared IT services are based. It contrasts its own approach with the Government of Canada and Government of Australia which have both adopted a federal "service integrator" approach.

It sets the strategic direction but authorizes government agencies to devise aligned solutions. It cites examples where this framework has resulted in services being delivered is the "tax collection agency, Inland Revenue Department and the Company Registration Group within the Ministry of Economic Development; and between the Customs Department and the Ministry of Agriculture and Forestry".

Looking forward, the SSC expects that "models adopted will support agencies operating in a devolved, decentralised public management environment to deliver integrated services that provide real value to New Zealand's citizens and other recipients of government services".

[36] Aagaard, P. "Governance Arrangements for New Zealand Public Service E-government Transformational Initiatives". *eGov Monitor*, April 24, 2006 (www.egovmonitor.com/node/5697).

Governance Case Study 6: Nova Scotia Shared Services and Operations[37]

Nova Scotia has implemented a shared enterprise resource planning (ERP) system, including portal software, and promoted a shared-service model across provincial, municipal, academic, and healthcare institutions. The claimed benefits to date include achieving economies of scale through more efficient use of resources.

Agreement: The Nova Scotia Office of Economic Development works with other public sector groups to evaluate the fit for adopting the SAP ERP and related business process changes. For participating groups, the Office of Economic Development has an SAP licensing agreement in place that governs the terms and conditions, including license maintenance and use of the centralized SAP Customer Competency Center.

Financial Accountability: The Office of Economic Development is the SAP primary licensee. Its sub-licensees under the agreement are responsible for license maintenance.

Financial Performance Management (Outcome Measurement): The province estimates overall savings derived by the shared services model. It estimates that $43 million has been saved so far. This is largely due to the innovative ERP procurement approach used.

Operational Performance Management (Outcome Measurement): According to Gartner which analyzed the case, an estimated 60 percent of municipal transactions have been migrated to the shared platform. This share has been reached through adoption of the shared service by eight of the 55 municipalities in the province.

Decision-Making Authority: While the provincial government has absolute decision-making authority over the arrangement with SAP, smaller public-sector partners appear to have substantial decision-making authority around the degree of participation.

System Administration: SAP itself is administered by the provincial government.

Planning: It appears that ongoing planning is driven by the Nova Scotia Office of Economic Development.

It is clear from this success story that such cross-jurisdiction collaborations can succeed if carefully planned, governed and executed. A creative procurement approach that supports economies of scale for goods and services procurement is a foundation element that drives broad participation.

[37] Kost, J. "Nova Scotia Uses Shared Services to Align Operations Across the Province". Gartner, Inc., 6 March 6, 2006.

Governance Case Study 7: Industry Canada BizPal[38]

BizPal was launched in late 2005 to "help municipalities provide better services to businesses, while streamlining their administration and improving productivity for both municipalities and their corporate citizens … among the first online public services designed from the ground up as a collaborative initiative of all four levels of government and launched on a national basis, with the purpose of aligning those services and making them seamless to the public."

The primary service is to inform businesses of required permits and/or licences from municipal, provincial/territorial and federal governments.

Agreement: The interim governance structure created in 2005 is still in place. At that time, the following seven partners signed a letter of intent to Industry Canada:

- Industry Canada;
- Province of British Columbia;
- City of Kamloops;
- Province of Ontario;
- Halton Region;
- Yukon Territory; and
- City of Whitehorse.

Industry Canada is the lead partner and is named the "BizPal Secretariat". However, there is a Service Transformation Committee to be developed that will assume governance from the BizPal Secretariat.

New partners also must execute a letter of intent. However, a more detailed memorandum of understanding is in development. The letter of intent commits partners to the following key items detailed in the "BizPal Partner Implementation Kit":

- Business process mapping (plus committing access to permit and license expert staff);
- Adoption of compatible data standards;
- Regular updating of local information (i.e., each partner controls and is responsible for its own information);
- Contribution to maintenance (cost-sharing);
- Coordinated marketing and communication (i.e., promotion to attract new partners);

[38] Blauel, R. "BizPal Service Advances the Case For e-Government Collaboration". *Municipal Interface* (November, 2005, Vol. 12, No. 5) pp. 12-15.

Jane Kralik (Senior Project Officer, Service Delivery & Partnerships, Canada Business, Industry Canada). Personal communication, September 13, 2006.

www.bizpal.ca

- Meeting participation (two face-to-face meetings per year, monthly partner steering committee meetings, bi-weekly project steering committee meetings within each partner's organization); and
- Integrating BizPal into partner's municipal website.

Also, there is a general agreement to share best practices and express ideas for opportunities for improvement.

Financial Accountability: Industry Canada contracts the BizPal hosting to EDS and is the sole party to the contract. A cost-sharing formula is in place to govern partner payments.

Financial Performance Management (Outcome Measurement): No information was available describing financial performance measurement.

Operational Performance Management (Outcome Measurement): The partners' collaboration is said to create "valuable dialogue for long-term service transformation … regulatory redundancies, conflicts or inadequacies among departments and governments are clearly highlighted and captured." Also, "the comprehensive inventory of permits and licences … is entered into a central BizPaL database … [and] is itself a valuable asset and can be reused within each jurisdiction for a variety of other purposes." The BizPal Secretariat is also developing recommended specifications for partners' use of Google Analytics to evaluate performance.

Decision-Making Authority: While certain decisions are centralized, new partners share in decision-making. Once a partner is accepted and has initiated its own BizPal development project, the partner's project team drives technical decision-making. This includes determining the best technical approach to interfacing with the central BizPal systems. Similarly, a generic project plan provided by the BizPal Secretariat can be customized by the partner.

System Administration: This is centralized and managed by EDS on behalf of Industry Canada. However, each partner still retains administrative authority over its interfacing systems.

Planning: At this point, the BizPal Secretariat drives overall planning for the BizPal service. In the future, the intent is to hand-off responsibility to the Service Transformation Committee. However, individual partner planning is delegated to each partner's project steering committee.

Governance Case Study 8: City of Greater Sudbury[39]

Launched in March 2005, the mysudbury.ca community portal provides a link for the community to have improved access to information and services. The need to improve access to information by all is the main stated objective.

To enhance the city's sense of community, the content of the portal is generated by the community. One of the key features of the portal is the mycommunity workspaces offered to each of the city's human services organizations. The mycommunity section supports the Social Planning Council of Sudbury's mission to maintain a comprehensive database of human services information. The workspaces are managed by each individual human services agency and may be used as the sole web presence or an augmentation of an existing website.

Each stakeholder group, Tourism, Greater Sudbury Economic Development Corp. and Social Planning Council, has a seat on a project management team that carries out governance that was defined during the project (i.e., there is no hand-off to a separate body for operational governance).

Agreement: A partnership agreement was originally created to satisfy the primary funding agency (MEDT). It was comprised of mostly implementation related matters but had a few provisions related asset ownership and financial responsibility for the following five years. No new agreement has been defined since then. Also, it was pointed out that this governing agreement is not deemed vital to maintaining good governance over portal services. Because of harmonious relations between partner representatives that were involved in the development project, there is shared interest in keeping the partner relationship unstructured and informal to ease decision-making. There is a view that it is preferable to keep legal departments and council out if we can keep the details to a minimum and make decisions quickly"

Financial Accountability: The City of Greater Sudbury has ultimate financial accountability for operating costs for the portal, including staff. The Social Planning Council has no financial resources or accountability. Enhancements are funded by the by the partners who benefits from the enhancements.

Financial Performance Management (Outcome Measurement): There are some basic financial performance indicators reported to Council.

Operational Performance Management (Outcome Measurement): Periodic portal performance reporting is not currently in place. However, a new reporting framework is being created.

[39] Cameron, J. "mysudbury.ca – Helping to Build A Smart Community in Greater Sudbury". Municipal Interface (November, 2005, Vol. 12, No. 5) pp. 19-20.

Cameron, V. (ICT Director / CRNet Project Manager). Personal communication, September 13, 2006.

Decision-Making Authority: Strategic portal decisions are driven by the Greater Sudbury Economic Development Corp. and the Social Planning Council. Organizations are still making decisions like a project management team because the implementation project has not yet been fully closed. The original project management team in still in place to oversee operations. There are escalation procedures in place should disputes arise.

System Administration: The City of Greater Sudbury manages and owns the portal infrastructure.

Planning: The partners collectively look for new innovations, projects, and funding to leverage existing infrastructure to provide new value. Examples include the Immigration Portal, e-Learning, corporate online training, etc. Generally the partners are non committal to long term sustainable funding for the portal. Demonstrated value is always required.

City of Hamilton[40]

The City of Hamilton portal (www.myhamilton.ca) has been in production since late 2005. A project governance model was in place during the portal's development project. However, the partners have identified significant changes necessary to the governance model that are currently being debated. Because governance of this portal is undergoing a major transformation, detailed analysis of its current state was not undertaken.

Regional Municipality of Peel[41]

The Regional Municipality of Peel is the upper tier of a two-tier system of local government. Peel contains three area municipalities: The City of Mississauga, the City of Brampton and the Town of Caledon. Incorporated in 1974, Peel offers community and infrastructure services such as community health, water, wastewater and waste collection, based on the principle that these are most cost-effectively managed over a larger geographic area.

Peel's Information Technology Services department provides all Peel departments with a range of support services, including system design, implementation, maintenance, resource planning, and security. There is reportedly some sharing of telecommunications services among Peel and its area municipalities. However, there does not appear to be a substantial joint governance of application services.

Northumberland County

Northumberland County has a website that links to its seven municipalities, but there does not appear to be any shared services or integration.

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[40] McKay, S. (Senior Project Manager, myhamilton.ca Portal Project, Coordinator, eGovernment, City of Hamilton, Information Technology Services, Corporate Services), Personal communication, August 28, 2006.

[41] Regional Municipality of Peel, "Information Technology 2004 Service Strategy Business Plan".

Regional Municipality of Peel, "2005 Business Plan".

www.region.peel.on.ca

County of Oxford

We could not find definitive information describing governance of County of Oxford's community portal (www.cooloxford.ca). Therefore, it is not elaborated upon here.

Elgin ~ St. Thomas Connects[42]

Elgin County, its seven municipalities and the City of St. Thomas jointly govern Elgin ~ St. Thomas Connects (www.elginconnects.ca). It is marketed as a "source for information, contacts and services in the Elgin and St Thomas area".

A permanent governance structure to oversee ongoing operations has been proposed but has not yet been voted upon by the nine councils.

[42] Moule, L. "Community-Wide Effort Brings E-Services to Rural Ontario County". *Municipal Interface* (May, 2004) pp. 14-19

www.elginconnects.ca

Appendix G - Portal Solution Procurement Plan

This section outlines a plan for procurement of the portal solution, including the Draft RFP.

Organization Issuing RFP

One partner will be designated to issue the RFP. The selected partner's procurement by-laws and requirements will form the basis for planning and issuing the RFP and evaluating the proposals.

Capital Funding Commitment

It is assumed that should both partners' Councils' grant necessary approvals, the necessary committed budget will be reserved to proceed to the procurement stage.

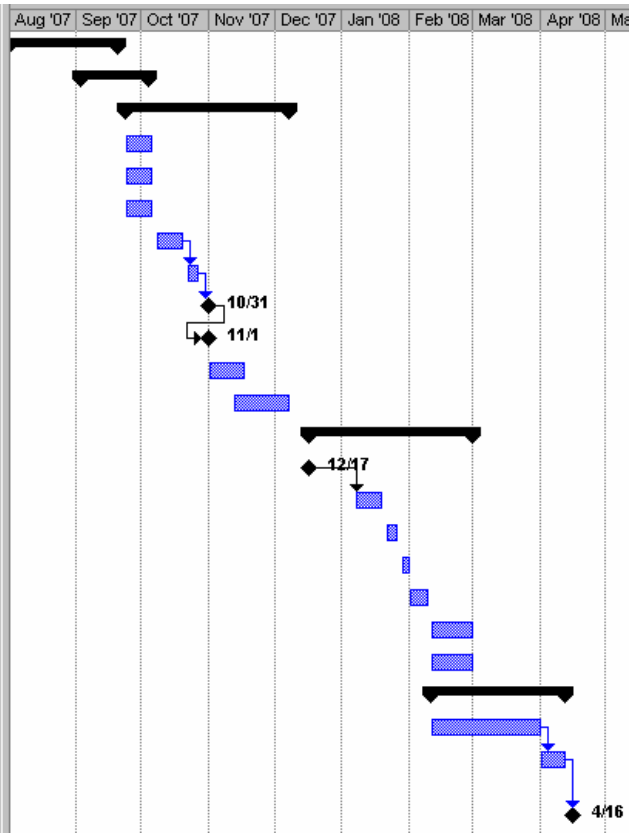
It is suggested that the partners treat the Portal Procurement Project as separate from the Portal Implementation Project for the sake of manageability and simplicity. Also, since the Portal Procurement Project is estimated to take approximately eight months, it makes sense to decouple it from the estimated two-year implementation project. However, if the partners prefer to combine these as a single project and deem this feasible, this is not anticipated to be a problem.

It is assumed that the Markham's share will be 50% and York Region's share 50%

Portal Procurement Project Plan

Following is an initial summary portal procurement plan that by which the best value portal solution vendor is chosen. The complete timeline is attached as part of this Appendix F. The timeline shown assumes that the Portal Procurement Project would commence in August, 2007.

WBS	Task Name
1	**Phase 0 - Initiation**
2	**Phase 1 - Planning**
3	**Phase 2 - Create Portal Solution RFP**
3.1	Refine & Finalize Portal Solution Requirements
3.2	Define & document evaluation criteria & weighting
3.3	Define & document form of agreement/contract
3.4	Create RFP (Draft)
3.5	Review RFP (Draft)
3.6	RFP approved
3.7	Issue RFP
3.8	Plan & conduct bidders meeting
3.9	Respond to proponents' questions & issue addenda
4	**Phase 3 - Evaluate Proposals**
4.1	Receive proposals
4.2	Rate proposals
4.3	Conduct proponent presentations & demonstrations
4.4	Check short-listed vendor references
4.5	Select & recommend proponent
4.6	Execute LOI with selected proponent
4.7	Conduct vendor/proponent debriefing (as requested)
5	**Phase 4 - Negotiate & Execute Contract**
5.1	Negotiate & execute contract with selected proponent
5.2	Create vendor contract by-law(s) & obtain Council(s') approval
6	**Project Complete**



The portal procurement project will conclude if and when the successful proponent is selected and contracted.

Part of the contract will specify that the vendor implement several successive portal releases versus taking a “big bang” approach. The following high-level phased implementation approach can be provided as an example for illustrative purposes. It will help to reinforce that vendors must present what they consider to be the most appropriate phased roll-out of portal functionality.

Portal Function / Service Summary (Not Exhaustive)	Beta Rel. 0.1	Beta Rel. 0.2	Prod. Rel. 1	Prod. Rel. 2
User Registration	x			
End-User Self-Registration	x			
User Administration	x			
Portal Personalization	x			
Content Management System (CMS)	x			
Search	x			
Event Calendar	x			
Registered User Authentication (Single Sign-On)		x		
Payment Engine		x		
Directories		x		
E-Mail Newsletters/Notifications		x		
Surveys		x		
Information/Service Requests, Feedback and Complaint Processing		x		
Systems Management and Reporting (Utilization Statistics)			x	
Alerts			x	
License Services (Business)			x	
License Services (Animal)			x	
Parking Ticket Payment			x	
Provincial Offences Act Ticket Payment			x	
Resource/Facility Booking and Payment			x	
Program Registration and Payment			x	
Event Ticket Ordering and Payment			x	
Property Tax Calculator			x	
Document Management			x	
Access to Other Systems			x	
Third Party Application Integration			x	
Procurement				x
Emergency Management Application				x
Project Status Dashboards				x
Department/Unit Performance Dashboards				x

Draft Request for Proposals (RFP)

Appendix G presents the Draft RFP that is proposed to be issued by one of the partners. Connected Insight has proven that this format produces positive results while minimizing the number of follow-up questions to which the partners will need to respond in addenda.

Draft Proposal Evaluation Matrix

Additionally, Appendix H presents a draft Proposal Evaluation Matrix.

Dominant Portal Solution Vendors

This section will briefly highlight some of the dominant vendors in today's marketplace.

Gartner provides helpful thought leadership in understanding the dominant players in the portal market. Some of its key findings and conclusions are[43]:

[43] Phifer, G. et al. "Magic Quadrant for Horizontal Portal Products, 2005". Gartner 2005.

- The portal market is growing, but the number of vendors is shrinking (increasing concentration);
- The large vendors are continuing to take market share away from smaller players; and
- Enterprise portals still rank in the top ten CIO technology focus areas.

The following figure shows Gartner's ranking of dominant vendors on the basis of "ability to execute" and "completeness of vision".

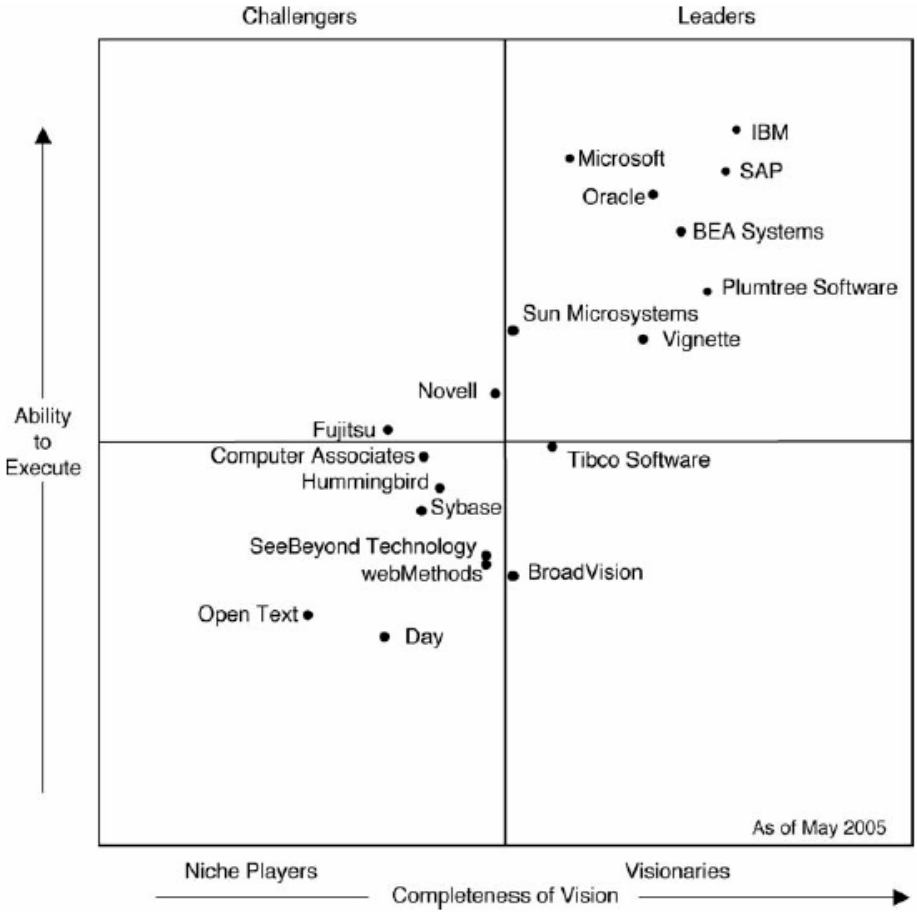


Figure 18 - Magic Quadrant for Horizontal Portal (Gartner, 2005)

Software as a Service / Application Service Provider

The software as a service (SaaS) model, also referred to as the application service provider (ASP) model, refers to a portal solution hosted and managed by an outside vendor.

The partners intend to request proposals for both partner-hosted (i.e., hosted in-house) and SaaS/ASP solutions. However, Connected Insight observes that most public sector portals are hosted in-house and that the SaaS/ASP model is much less popular. This is primarily due to the desire by municipal governments to limit access to secure and/or private information. Secondly, municipalities typically wish to maintain control over mission-critical systems and data that support core business processes. Finally, the declining cost and

improved ease-of-maintenance of portal solutions have made SaaS/ASP solutions less attractive.

Conclusions

Using the Draft RFP and Portal Procurement Project Plan as guides, the partners have a sound basis to "go to market" and allow the vendor community the opportunity to present alternative portal solutions for consideration. Since there are fewer rivals and the dominant experienced vendors are increasing their share of the market, the 2007-2008 period will be a good period to invite vendor proposals for the partners' consideration. Using the prescribed approach can be expected to solicit multiple proposals for consideration.

Recommendations

Decide on Issuing RFP by Mid-2007

The partners should decide whether or not to issue an RFP by mid-2007 or earlier. This will ensure that the requirements gathered are still reasonably current for vendor analysis.

Tailor Draft RFP as Needed

The partners should engage the right internal or external resources to tailor the Draft RFP as needed to ensure it is satisfactory to the Portal Procurement Project team members before it is issued.

Because of the likely solution complexity, it is suggested that a proposal response period of six to eight weeks be provided.

Clarify Proposal Uncertainties in Writing

Portal solution vendors can be expected to be unclear in describing how the solution proposed is compliant with requirements. Connected Insight has experienced cases where vendors stated full compliance with a requirement, yet on further investigation this was determined to be far from the truth.

There are always uncertainties about how to evaluate vendor claims. One early way to assess – and build trust with – a portal vendor is to see how forthcoming they are in answering questions in writing about the proposal. Such written response to questions can prove very valuable for reference during contract negotiations and implementation planning.

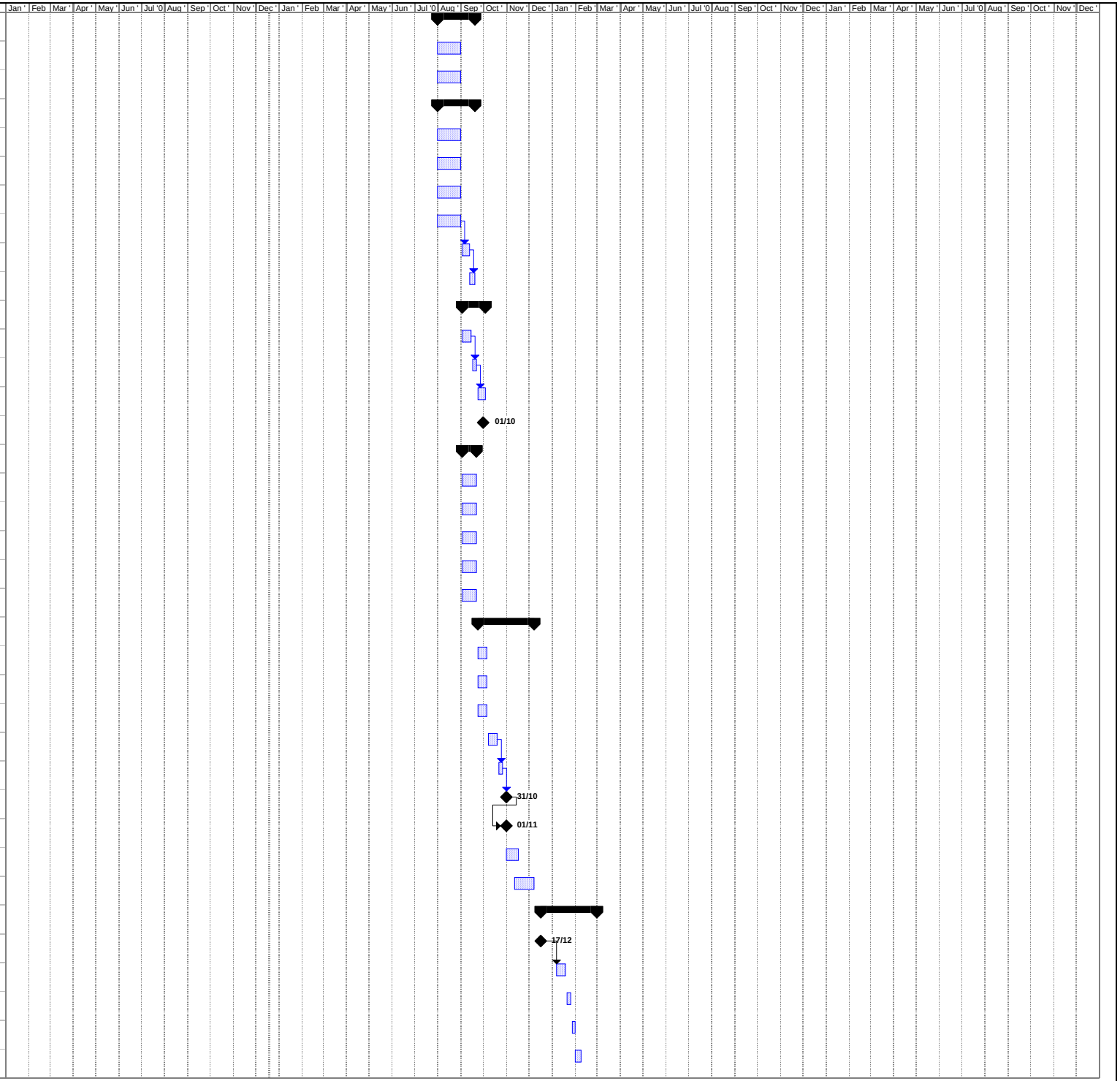
Cautiously Assess Proposed Risk-Sharing Arrangements

While it is not likely, some vendors may propose risk-sharing arrangements. In such arrangements, the vendor may propose defining agreed-upon success criteria portal operations in exchange for a much lower initial price versus competitors. Connected Insight does not recommend actively pursuing such arrangements.

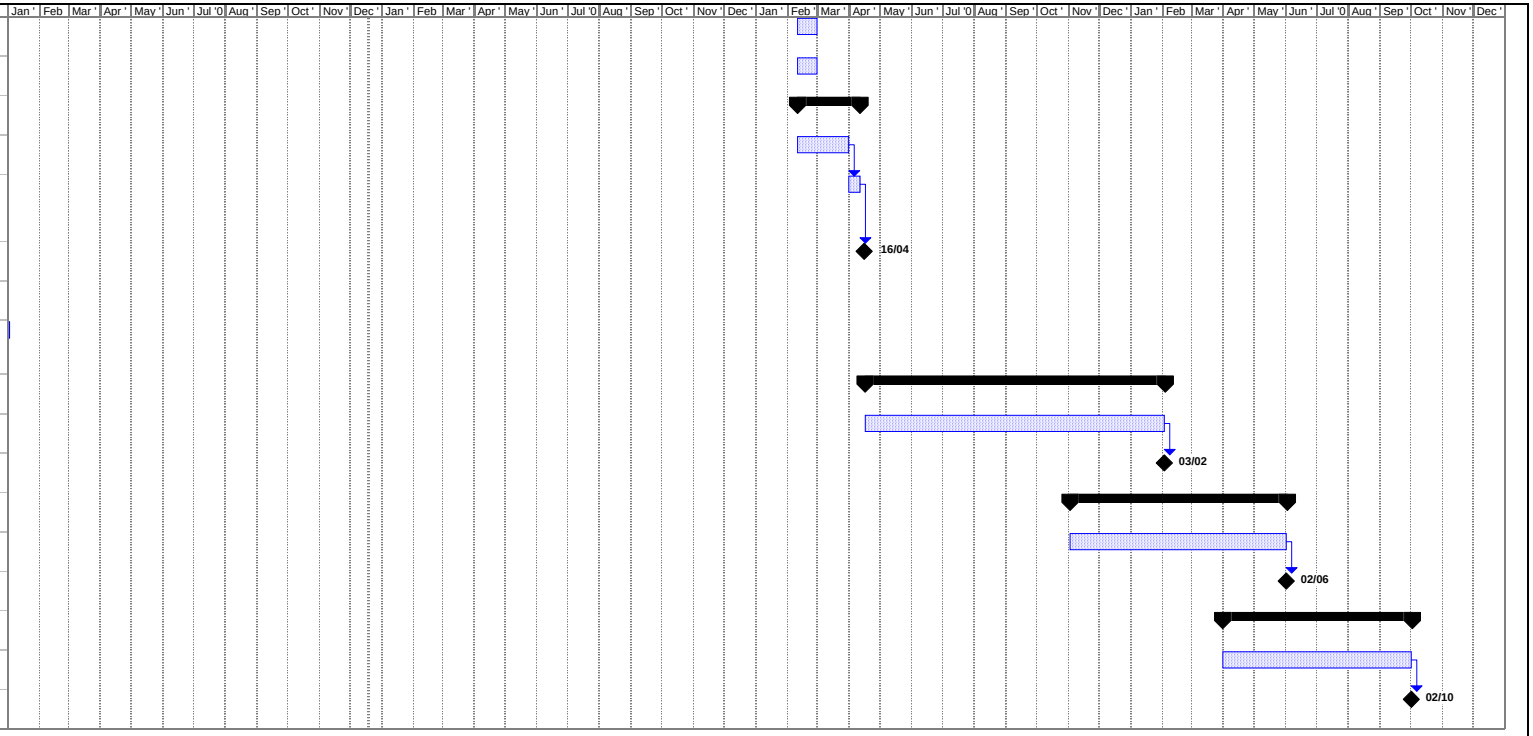
Engage Experienced Legal Counsel

The partners should ensure experienced legal counsel is provided. A lawyer with deep and broad IT experience, preferably in the Internet domain, is essential to ensure the partners receive the best value solution and are adequately protected from unforeseen costs.

ID	WBS	Task Name
1	**1**	**Phase 0 - Initiation**
2	1.1	Identify partner issuing RFP
3	1.2	Identify governing procurement laws/requirements
4	**1.3**	**Authorization**
5	1.3.1	Obtain required authorizations
6	1.3.2	Assign project manager
7	1.3.3	Create Project Charter (Draft)
8	1.3.4	Review Project Charter (Draft)
9	1.3.5	Create Project Charter (Final)
10	1.3.6	Project Charter (Final) Approved
11	**2**	**Phase 1 - Planning**
12	2.1	Create Project Plan (Draft)
13	2.2	Review Project Plan (Draft)
14	2.3	Create Project Plan (Final)
15	2.4	Project Plan (Final) Approved
16	**2.5**	**Form Project Team**
17	2.5.1	Assign procurement specialist
18	2.5.2	Assign lawyer
19	2.5.3	Assign business analyst
20	2.5.4	Assign enterprise architect
21	2.5.5	Assign Portal Proposal Evaluation Committee
22	**3**	**Phase 2 - Create Portal Solution RFP**
23	3.1	Refine & Finalize Portal Solution Requirements
24	3.2	Define & document evaluation criteria & weighting
25	3.3	Define & document form of agreement/contract
26	3.4	Create RFP (Draft)
27	3.5	Review RFP (Draft)
28	3.6	RFP approved
29	3.7	Issue RFP
30	3.8	Plan & conduct bidders meeting
31	3.9	Respond to proponents' questions & issue addenda
32	**4**	**Phase 3 - Evaluate Proposals**
33	4.1	Receive proposals
34	4.2	Rate proposals
35	4.3	Conduct proponent presentations & demonstrations
36	4.4	Check short-listed vendor references
37	4.5	Select & recommend proponent



ID	WBS	Task Name
38	4.6	Execute LOI with selected proponent
39	4.7	Conduct vendor/proponent debriefing (as requested)
40	**5**	**Phase 4 - Negotiate & Execute Contract**
41	5.1	Negotiate & execute contract with selected proponent
42	5.2	Create vendor contract by-law(s) & obtain Council(s') approval
43	**6**	**Project Complete**
44		
45	7	**ACTIVITIES BELOW PART OF PORTAL IMPLEMENTATION PROJECT (TIMING TO BE DETERMINED)**
46	**8**	**Plan & Deliver Beta Release 0.1**
47	*8.1*	*Develop Portal Release 1*
48	*8.2*	*Implement York-Markham Portal Release 1*
49	**9**	**Plan & Deliver Beta Release 0.2**
50	*9.1*	*Develop Portal Release 2*
51	*9.2*	*Implement York-Markham Portal Release 2*
52	**10**	**Plan & Deliver Production Release n**
53	*10.1*	*Develop Portal Release n*
54	*10.2*	*Implement York-Markham Portal Release n*



Appendix H - Draft Proposal Evaluation Matrix

York-Markham Portal Project
Portal Solution Proposal Cost and Evaluation Summary
(Short-Listed Proponents)

Portal Solution Component	Budget Allocated	Company A	Company B
Hardware			
Software			
Services			
Sub-Total (Pre-discount)			
Discount			
Sub-Total (Discounted)			
Taxes			
Total			
Evaluation Score (Average)			

York-Markham Portal Project
Portal Solution Proposal Evaluation Summary

Vendor: **Company A**
Evaluators: **M, Y and Z**
Total Score (Average): **xx.x/100**

1. Solution (30 Points)	M Score	Y Score	Z Score	Average Score
Compliance with RFP requirements				
Completeness and quality of proposal				
Perceived value of in-kind contributions and/or value-added items				
Sub-Total				

2. Vendor Experience & References (25 Points)	M Score	Y Score	Z Score	Average Score
Experience				
Staff qualifications				
Training capability				
References				
Financial stability				
Sub-Total				

3. Solution Ease-of-Use & Maintenance (20 Points)	M Score	Y Score	Z Score	Average Score
Ease-of-use and user-friendliness (end-user)				
Ease-of-use and user-friendliness (business user)				
Ease-of-use and user-friendliness (administrator)				
Technical support				
Sub-Total				

4. Initial and Recurring Costs (25 Points)	M Score	Y Score	Z Score	Average Score
Initial costs				
Recurring costs				
Sub-Total				

York-Markham Portal Project
Portal Solution Proposal Evaluation Summary

Vendor: **Company B**
Evaluators: **M, Y and Z**
Total Score (Average): **xx.x/100**

1. Solution (30 Points)	M Score	Y Score	Z Score	Average Score
Compliance with RFP requirements				
Completeness and quality of proposal				
Perceived value of in-kind contributions and/or value-added items				
Sub-Total				

2. Vendor Experience & References (25 Points)	M Score	Y Score	Z Score	Average Score
Experience				
Staff qualifications				
Training capability				
References				
Financial stability				
Sub-Total				

3. Solution Ease-of-Use & Maintenance (20 Points)	M Score	Y Score	Z Score	Average Score
Ease-of-use and user-friendliness (end-user)				
Ease-of-use and user-friendliness (business user)				
Ease-of-use and user-friendliness (administrator)				
Technical support				
Sub-Total				

4. Initial and Recurring Costs (25 Points)	M Score	Y Score	Z Score	Average Score
Initial costs				
Recurring costs				
Sub-Total				

York-Markham Portal Project
Portal Solution Proposal Evaluation Detail (Company A)

The following pages are the individual Company A proposal evaluation forms upon which the preceding summary was based.

York-Markham Portal Project - Portal Solution Proposal Evaluation

Vendor: **Company A**
Evaluator: **M**
Total Score: **xx.x/100**

1. Solution (30 Points)	Score	Comments
Compliance with RFP requirements		
Completeness and quality of proposal		
Perceived value of in-kind contributions and/or value-added items		
Sub-Total		

2. Vendor Experience & References (25 Points)	Score	Comments
Experience		
Staff qualifications		
Training capability		
References		
Financial stability		
Sub-Total		

3. Solution Ease-of-Use & Maintenance (20 Points)	Score	Comments
Ease-of-use and user-friendliness (end-user)		
Ease-of-use and user-friendliness (business user)		
Ease-of-use and user-friendliness (administrator)		
Technical support		
Sub-Total		

4. Initial and Recurring Costs (25 Points)	Score	Comments
Initial costs		
Recurring costs		
Sub-Total		

York-Markham Portal Project - Portal Solution Proposal Evaluation

Vendor: **Company A**
Evaluator: **Y**
Total Score: **xx.x/100**

1. Solution (30 Points)	Score	Comments
Compliance with RFP requirements		
Completeness and quality of proposal		
Perceived value of in-kind contributions and/or value-added items		
Sub-Total		

Notes:

2. Vendor Experience & References (25 Points)	Score	Comments
Experience		
Staff qualifications		
Training capability		
References		
Financial stability		
Sub-Total		

Notes:

3. Solution Ease-of-Use & Maintenance (20 Points)	Score	Comments
Ease-of-use and user-friendliness (end-user)		
Ease-of-use and user-friendliness (business user)		
Ease-of-use and user-friendliness (administrator)		
Technical support		
Sub-Total		

Notes:

4. Initial and Recurring Costs (25 Points)	Score	Comments
Initial costs		
Recurring costs		
Sub-Total		

Notes:

York-Markham Portal Project - Portal Solution Proposal Evaluation

Vendor: **Company A**
Evaluator: **Y**
Total Score: **xx.x/100**

1. Solution (30 Points)	Score	Comments
Compliance with RFP requirements		
Completeness and quality of proposal		
Perceived value of in-kind contributions and/or value-added items		
Sub-Total		

Notes:

2. Vendor Experience & References (25 Points)	Score	Comments
Experience		
Staff qualifications		
Training capability		
References		
Financial stability		
Sub-Total		

3. Solution Ease-of-Use & Maintenance (20 Points)	Score	Comments
Ease-of-use and user-friendliness (end-user)		
Ease-of-use and user-friendliness (business user)		
Ease-of-use and user-friendliness (administrator)		
Technical support		
Sub-Total		

4. Initial and Recurring Costs (25 Points)	Score	Comments
Initial costs		
Recurring costs		
Sub-Total		

Notes:

York-Markham Portal Project
Portal Solution Proposal Evaluation Detail (Company B)

The following pages are the individual Company B proposal evaluation forms upon which the preceding summary was based.

York-Markham Portal Project - Portal Solution Proposal Evaluation

Vendor: **Company B**
Evaluator: **M**
Total Score: **xx.x/100**

1. Solution (30 Points)	Score	Comments
Compliance with RFP requirements		
Completeness and quality of proposal		
Perceived value of in-kind contributions and/or value-added items		
Sub-Total		

2. Vendor Experience & References (25 Points)	Score	Comments
Experience		
Staff qualifications		
Training capability		
References		
Financial stability		
Sub-Total		

3. Solution Ease-of-Use & Maintenance (20 Points)	Score	Comments
Ease-of-use and user-friendliness (end-user)		
Ease-of-use and user-friendliness (business user)		
Ease-of-use and user-friendliness (administrator)		
Technical support		
Sub-Total		

4. Initial and Recurring Costs (25 Points)	Score	Comments
Initial costs		
Recurring costs		
Sub-Total		

Notes:

York-Markham Portal Project - Portal Solution Proposal Evaluation

Vendor: **Company B**
Evaluator: **Y**
Total Score: **xx.x/100**

1. Solution (30 Points)	Score	Comments
Compliance with RFP requirements		
Completeness and quality of proposal		
Perceived value of in-kind contributions and/or value-added items		
Sub-Total		

Notes: Many extras thrown in. More specifics would be nice.

2. Vendor Experience & References (25 Points)	Score	Comments
Experience		
Staff qualifications		
Training capability		
References		
Financial stability		
Sub-Total		

Notes:

3. Solution Ease-of-Use & Maintenance (20 Points)	Score	Comments
Ease-of-use and user-friendliness (end-user)		
Ease-of-use and user-friendliness (business user)		
Ease-of-use and user-friendliness (administrator)		
Technical support		
Sub-Total		

Notes:

4. Initial and Recurring Costs (25 Points)	Score	Comments
Initial costs		
Recurring costs		
Sub-Total		

Notes: Large server discrepancy (4 versus 9)

York-Markham Portal Project - Portal Solution Proposal Evaluation

Vendor: **Company B**
Evaluator: **Z**
Total Score: **xx.x/100**

1. Solution (30 Points)	Score	Comments
Compliance with RFP requirements		
Completeness and quality of proposal		
Perceived value of in-kind contributions and/or value-added items		
Sub-Total		

Notes:

2. Vendor Experience & References (25 Points)	Score	Comments
Experience		
Staff qualifications		
Training capability		
References		
Financial stability		
Sub-Total		

3. Solution Ease-of-Use & Maintenance (20 Points)	Score	Comments
Ease-of-use and user-friendliness (end-user)		
Ease-of-use and user-friendliness (business user)		
Ease-of-use and user-friendliness (administrator)		
Technical support		
Sub-Total		

4. Initial and Recurring Costs (25 Points)	Score	Comments
Initial costs		
Recurring costs		
Sub-Total		

York-Markham Portal Project - Portal Solution Proposal Evaluation

Vendor: **Company B**
Evaluator: **Y**
Total Score: **xx.x/100**

1. Solution (30 Points)	Score	Comments
Compliance with RFP requirements		
Completeness and quality of proposal		
Perceived value of in-kind contributions and/or value-added items		
Sub-Total		

Notes:

2. Vendor Experience & References (25 Points)	Score	Comments
Experience		
Staff qualifications		
Training capability		
References		
Financial stability		
Sub-Total		

Notes:

3. Solution Ease-of-Use & Maintenance (20 Points)	Score	Comments
Ease-of-use and user-friendliness (end-user)		
Ease-of-use and user-friendliness (business user)		
Ease-of-use and user-friendliness (administrator)		
Technical support		
Sub-Total		

Notes:

4. Initial and Recurring Costs (25 Points)	Score	Comments
Initial costs		
Recurring costs		
Sub-Total		

Notes:

Appendix I - Draft Request for Proposals (RFP)

York Region-Markham Portal Project
Request for Proposals

For Portal Hardware, Software and Services

For Submission by [INSERT]

Issued by

[INSERT]

Vendors are asked not to communicate directly with anyone working for the Regional Municipality of York or The Corporation of the Town of Markham concerning this project.

Issued [INSERT]

CLOSING DATE AND TIME: [INSERT]

PROCUREMENT RESPONSE FORM

To receive consideration, proposals must be submitted no later than the above-noted closing date and time. Please submit an electronic copy in MS Word or Adobe PDF to (an e-mail acknowledgement of receipt will be sent in response):

YORK REGION-MARKHAM PORTAL PROJECT

(For Portal Hardware, Software and Services)

TOTAL SOLUTION COST: $_____
("GRAND TOTAL") (Taxes Included)

SUBMITTED BY:

Name of Firm: _____

Address: _____

Contact Name: _____

Title: _____ E-Mail: _____

Telephone: _____ Fax: _____

By my signature hereunder, it shall be understood that I have read, understood and agreed to abide by the instructions, terms and conditions contained in this Request for Proposals and am authorized to bind the firm. (Failure to sign here may result in automatic rejection of this proposal submission.)

Authorized Signature: _____ Date: _____

"I have the authority to bind the Corporation/Company"

Name (Please Print): _____ Title: _____

Table of Contents

1. INSTRUCTIONS TO VENDORS 1

1.1. Invitation to Bid 1

2. PROPOSAL REQUIREMENTS 2

2.1. Proposal Response Format 3

2.1.1.Part 1 – Procurement Response Form 3

2.1.2.Part 2 – Proposal Checklist 3

2.1.3.Part 3 – Section-by-Section Response 3

2.1.4.Part 4 – Detailed Bid Form 3

2.1.5.Part 5 – Supporting Documentation ✔ 4

3. PROJECT DESCRIPTION 5

3.1. Purpose of this Request for Proposals 5

3.2. Project Background 5

3.2.1.Preliminary Requirements Identified 5

4. SCOPE OF WORK (IMPLEMENTATION) 6

4.1. Implementation Schedule 6

4.2. Budget 7

4.3. Scope 7

5. PROPOSAL PREPARATION INSTRUCTIONS 9

5.1. Executive Summary ✔ 9

5.2. Company Profile ✔ 9

5.3. Vendor Experience 9

5.3.1.Experience and Qualifications ✔ 9

5.3.2.References ✔ 10

5.3.3.Resumes of Proposed Individuals ✔ 10

5.4. Methodology 11

5.4.1.Recommended Methodology ✔ 11

5.4.2.Prior Portal Implementation Lessons Learned ✔ 11

5.4.3.Quality Control Process ✔ 11

5.5. Project Deliverables 11

5.5.1.Proposed Solution Deliverables' Compliance with Requirements ✔ 11

6. PROJECTED USER LICENSES AND LOCATIONS 12

6.1. Preferred Licensing Arrangement ✔ 12

7. PROJECT PLAN 13

7.1. Schedule ✔ 13

7.2. Technical Project Management Plan 13

7.3. Proposal Assumptions ✔ 14

7.4. Other Information ✔ 14
8. SOLUTION ACCEPTANCE AND PAYMENT 15
8.1. Final Acceptance of Solution ✔ 15
8.2. Payment Schedule ✔ 15
9. DETAILED BID FORM 16
9.1. Proposed Hardware, Software and Services ✔ 17
9.2. Rates: Support Services, Consulting and Additional Licences ✔ 21
9.3. Additional Software, Hardware and Services ✔ 21
9.4. Optional In-Kind Contributions ✔ 22
10. EVALUATION CRITERIA 23
10.1. Last and Final Offer 24
10.1.1.Negotiations with Responsible Bidders 24
10.1.2.Review of Offers and Vendor Selection 24
10.2. Vendor Demonstrations 24
10.3. Project Commencement and Estimated Duration 24
10.4. Incurred Expenses 25
10.5. Contract Award 25
10.6. Disposal of Submissions 25
11. RFP TIMELINE 26
11.1. Vendor Contact ✔ 27
12. SPECIAL TERMS and CONDITIONS 28
12.1. Authority 28
12.2. Changes to Contract 28
12.3. Use of Sub-Contractors ✔ 28
12.4. Conflicts of Interest ✔ 28
12.5. Confidentiality ✔ 29
12.6. Price Protection 29
12.7. Invoice Detail 29
12.8. Extras 29
12.9. York Region and Markham Contract Management Cost Reimbursement 29
12.10. Quality Assurance 29
12.11. Performance Unsatisfactory 30
12.12. Termination 30
12.13. Software Ownership ✔ 30
12.14. Source Code ✔ 30
12.15. Warranty ✔ 31
13. ANNEX A – PROPOSAL CHECKLIST ✔ 32
14. ANNEX B – ORGANIZATION 35

14.1. Project Organization 35
14.1.1. York Region and Markham Steering Committee 35
14.1.2. The York Region-Markham Project Manager 35
14.1.3. Vendor Project Team 35
15. ANNEX C – REQUIREMENTS 37

1. INSTRUCTIONS TO VENDORS

Interested proponents are advised to send an RFP receipt acknowledgement e-mail message to ensure they receive any further information regarding this RFP, including addenda. Failure to do so may result in the vendor receiving incomplete information.

1.1. Invitation to Bid

The Regional Municipality of York (York Region) and The Corporation of the Town of Markham (Markham) invite proposals from qualified Vendors for the York Region-Markham Portal Project. The solution will include hardware, software and services to deliver a portal solution.

2. PROPOSAL REQUIREMENTS

- Vendors shall submit an electronic copy in MS Word or Adobe PDF to:

  An e-mail acknowledgement of receipt will be sent in response to your proposal submission. The Vendor's proposal must be received no later than [INSERT]

  Vendors are asked to not communicate directly with York Region and/or Markham concerning this project.

- All submissions become the property of York Region and Markham and will not be returned. York Region and Markham reserve the right to alter the closing date or cancel the process without any cost or penalty to York Region and Markham.

- Vendors are advised to submit proposals well before the deadline to allow for delivery.

- York Region and Markham are not responsible for bids that arrive late or that are not properly marked. Proposals not received by the deadline will be rejected.

- Proposals must be submitted in electronic format only (MS Word or Adobe PDF).

- Each proposal will be irrevocable at closing time and will be considered a unilateral contract capable only of acceptance or rejection by York Region and Markham in accordance with the terms contained in this RFP.

- York Region and Markham are under no obligation to select the lowest or any proposal. Funding constraints may result in project cancellation or deferral. York Region and Markham reserve the right to accept or reject any or all proposals. York Region and Markham also reserve the right to award by item, or part thereof, groups of items, or parts thereof, or all items of a proposal and to waive minor technicalities, irregularities and omissions if, in so doing, the best interests of York Region and Markham will be served.

- Any and all costs incurred in responding to this RFP, including conducting demonstrations, benchmarks, interviews or any other related activities up to and including the signing of a contract shall be borne entirely by the Vendor. The rejection of any or all proposals shall not render York Region and Markham liable for any costs or damages.

- The selection process and subsequent contract shall be governed by, subject to and interpreted in accordance with the laws of the Province of Ontario.

- Proposals must clearly define the roles and responsibilities of York Region and Markham representatives for implementation and maintenance.

- Vendor assumptions regarding the proposed solution must be clearly stated.

2.1. Proposal Response Format

2.1.1. Part 1 – Procurement Response Form

Part 1 (i.e., the cover page) of the Vendor's response shall consist of a completed Procurement Response Form with an authorizing signature. The Procurement Response Form identifies the Vendor, confirms the total bid amount and certifies that the solution proposed by the Vendor conforms fully to the requirements of this RFP except where explicitly noted in the proposal.

2.1.2. Part 2 – Proposal Checklist

To assist Vendors in preparation of proposals, a checklist of all those items requiring a direct response by the Vendor has been included in Annex A of this RFP. The Vendor shall use this checklist to structure their RFP response. The completed Proposal Checklist shall form the second part of the Vendor's proposal and shall be inserted immediately behind the Procurement Response Form.

2.1.3. Part 3 – Section-by-Section Response

Part 3 of the Vendor's proposal is to be inserted immediately following the completed Proposal Checklist and shall consist of a section-by-section response to any parts of this RFP marked by "✔" beside the section name (i.e., the Proposal Checklist lists all such items). Sections not marked by "✔" are provided for information only and require no direct response by the Vendor.

The section numbering in the Vendor's proposal shall correspond exactly to the numbering used in this RFP.

Important Note: By submitting a proposal, the Vendor warrants that the proposed solution complies with the requirements described in all sections of the RFP and its appendices (even those not marked by "✔") except where specifically noted in the Vendor's proposal.

2.1.4. Part 4 – Detailed Bid Form

Part 4 of the Vendor's proposal shall consist of a completed copy of the Detailed Bid Form. All prices shall be net and firm including shipping, duties, tariffs, imports, customs, and any other charges. Federal Goods and Services Tax (GST) and Provincial Sales Tax (PST), where applicable, must be shown separately. All prices shall be denoted in Canadian dollars.

2.1.5. Part 5 – Supporting Documentation ✔

The fifth and final part of the Vendor's proposal (to be inserted immediately following the completed Detailed Bid Form) shall consist of any relevant product literature and technical information concerning the software, hardware, training, and support as well as sample user and system administrator's manuals. Demonstration CD-ROMs, DVDs, and/or videotapes may also be included.

3. PROJECT DESCRIPTION

3.1. Purpose of this Request for Proposals

The purpose of this York Region-Markham RFP is to contract a vendor to deliver a portal solution. The chosen Vendor will work with the York Region-Markham team members to deliver a portal on-time and on-budget. York Region and Markham aspire to develop its own internal capacity (i.e., people, process and technology) to manage the solution after implementation with Vendor support.

3.2. Project Background

3.2.1. Preliminary Requirements Identified

Preliminary requirements have been identified and are included as Annex #. Each requirement has been deemed mandatory or optional and been assigned an importance rating. Proposals should explain the degree to which the proposed solution will satisfy identified requirements.

There are many ways to satisfy the requirements identified. York Region and Markham expect that Vendors may believe that satisfying some requirements will provide more value to portal users than others. Also, some meaningful requirements and/or applications may not have been identified to date. York Region and Markham suggest that Vendors cite experience in portal implementations to identify the highest valued applications whether described in this document or not.

4. SCOPE OF WORK (IMPLEMENTATION)

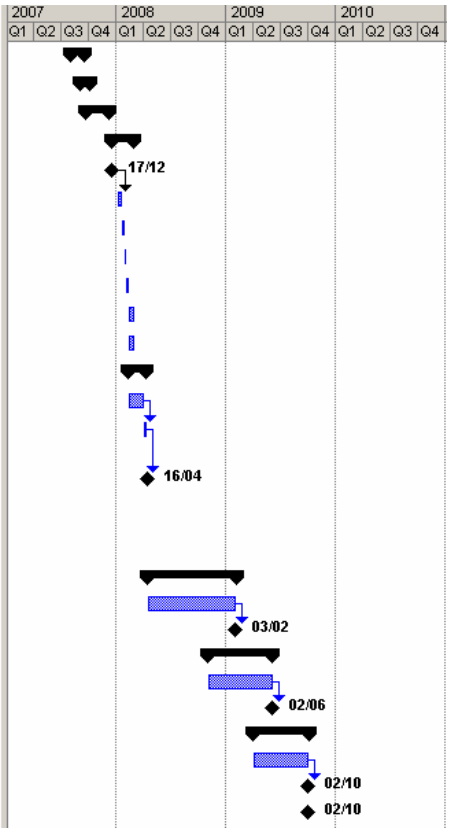
Your proposal should indicate your understanding of the scope and complexity of the project and include any problems or issues that are likely to be encountered.

4.1. Implementation Schedule

The duration of the portal solution design and implementation is estimated at two years after the contract is executed.

Following is a schedule overview:

WBS	Task Name	Start	Finish
1	**Phase 0 - Initiation**	**Wed 01/08/07**	**Wed 19/09/07**
2	**Phase 1 - Planning**	**Mon 03/09/07**	**Wed 03/10/07**
3	**Phase 2 - Create Portal Solution RFP**	**Mon 24/09/07**	**Fri 07/12/07**
4	**Phase 3 - Evaluate Proposals**	**Mon 17/12/07**	**Fri 29/02/08**
4.1	Receive proposals	Mon 17/12/07	Mon 17/12/07
4.2	Rate proposals	Mon 07/01/08	Fri 18/01/08
4.3	Conduct proponent presentations & demonstrations	Mon 21/01/08	Fri 25/01/08
4.4	Check short-listed vendor references	Mon 28/01/08	Thu 31/01/08
4.5	Select & recommend proponent	Fri 01/02/08	Fri 08/02/08
4.6	Execute LOI with selected proponent	Mon 11/02/08	Fri 29/02/08
4.7	Conduct vendor/proponent debriefing (as requested)	Mon 11/02/08	Fri 29/02/08
5	**Phase 4 - Negotiate & Execute Contract**	**Mon 11/02/08**	**Fri 11/04/08**
5.1	Negotiate & execute contract with selected proponent	Mon 11/02/08	Mon 31/03/08
5.2	Create vendor contract by-law(s) & obtain Council(s') approval	Tue 01/04/08	Fri 11/04/08
6	**Procurement Project Complete**	**Wed 16/04/08**	**Wed 16/04/08**
7	**ACTIVITIES BELOW PART OF PORTAL IMPLEMENTATION PROJECT (TIMING TO BE DETERMINED)**	Mon 02/01/06	Mon 02/01/06
8	**Plan & Deliver Beta Release 0.1**	**Thu 17/04/08**	**Tue 03/02/09**
8.1	*Develop Portal Release 1*	*Thu 17/04/08*	*Mon 02/02/09*
8.2	*Implement York-Markham Portal Release 1*	*Tue 03/02/09*	*Tue 03/02/09*
9	**Plan & Deliver Beta Release 0.2**	**Mon 03/11/08**	**Tue 02/06/09**
9.1	*Develop Portal Release 2*	*Mon 03/11/08*	*Mon 01/06/09*
9.2	*Implement York-Markham Portal Release 2*	*Tue 02/06/09*	*Tue 02/06/09*
10	**Plan & Deliver Production Release n**	**Wed 01/04/09**	**Fri 02/10/09**
10.1	*Develop Portal Release n*	*Wed 01/04/09*	*Thu 01/10/09*
10.2	*Implement York-Markham Portal Release n*	*Fri 02/10/09*	*Fri 02/10/09*
11	**Implementation Project Complete**	**Fri 02/10/09**	**Fri 02/10/09**



4.2. Budget

The budget allocated for the portal solution hardware, software and services is as follows:

Portal Solution Component	Budget Allocated
Hardware	
Software	
Services	
Total Portal Solution Cost (Taxes Included)	

The allocation between categories is subject to change. However, Vendors are asked to consider the current allocations in their proposals.

4.3. Scope

The minimum scope of Vendor deliverables includes but is not limited to:

- Technical project management
- Requirements
- Portal solution design and architecture
- Portal graphical design
- Portal template design
- Test plan(s)
- Portal system testing
- Portal security testing
- Disaster recovery testing
- User acceptance testing (UAT)
- Supply and installation of commercial off-the-shelf software
- Software customization, configuration and integration to satisfy requirements
- Development environment

- Project document repository
- Data centre design
- Supply and installation of computer equipment and peripherals
- Supply and installation of data backup/recovery equipment
- Network design
- Administrator documentation
- User documentation
- Hardware documentation
- Network documentation
- Content migration
- Technical training
- Software support
- Software maintenance
- Other deliverables to fulfill requirements of this RFP

5. PROPOSAL PREPARATION INSTRUCTIONS

Your proposal should consist mainly of a section-by-section response to any parts of this RFP document that are marked with "✔" beside the section name, as well as any supplemental material you wish to include. Please do not deviate from this format since we will be comparing proposals on a section-by-section basis. The best way to ensure that your proposal is complete is to follow the Proposal Checklist included in Annex A. However, Vendors are encouraged to make suggestions or offer alternatives that they believe would enhance the portal solution.

5.1. Executive Summary ✔

This section should provide a summary of the proposal.

5.2. Company Profile ✔

At a minimum, the following must be provided:

1. Name, address and brief description of the company
2. Type of company ownership and structure. If the company is a subsidiary, indicate the ownership.
3. Complete name and address of the person who will receive correspondence and who is authorized to make decisions or represent the Vendor.
4. Number of years in business under the present business name and number of years in business under previous business names, if applicable (include previous business names).
5. A statement that the company is financially stable.
6. Identify and describe any relevant relationships (e.g., partnerships, reseller agreements, affiliations, etc.) with other vendors.

5.3. Vendor Experience

This section must provide information in sufficient detail to allow York Region and Markham to evaluate the Vendor's past experience in performing the scope of work requested in this RFP.

5.3.1. Experience and Qualifications ✔

This section must provide descriptions of the Vendor's previous experience and qualifications relating to the scope of work requested in this RFP. Information provided should include, but not be limited to:

- Name of client
- Project beginning and end dates
- Project description, including scope and contract value
- Team members who worked on projects being described, the amount of time spent on the project and their respective roles

5.3.2. References ✔

This section must include a minimum of two (2) references for similar projects performed that are of comparable complexity to the work requested in this RFP. References involving other portal projects are preferred. At least one reference must be for a project within the past year. The references cited must be willing to discuss the services that were (or are being) provided. Each cited reference must include a short description of the project, and the following information:

- Name, address, telephone number and e-mail address for client
- Project beginning and end dates
- Project description, including scope and contract value
- Team members who worked on projects being described, the amount of time spent on the project and their respective roles

5.3.3. Resumes of Proposed Individuals ✔

This section must include a description of each team member's appropriate qualifications and the proposed role(s) he/she will have. Since York Region and Markham will assume that these are the same individuals who will perform the work, Vendors are advised to propose individuals who have the necessary qualifications and experience and who will be available for the duration of the project.

5.4. Methodology

This section must describe the Vendor's methodology for fulfilling the scope of work requested in this RFP and allow York Region and Markham to assess whether or not the Vendor has a proven methodology. The following information at a minimum should be included:

5.4.1. Recommended Methodology ✔

Identify the methodology (e.g., agile development, rapid application development, etc.) Describe how the proposed methodology will fulfill the scope of work requested in this RFP. Cite examples of how this methodology has been successful in the past.

5.4.2. Prior Portal Implementation Lessons Learned ✔

Cite lessons learned from your experience in completing similar projects.

5.4.3. Quality Control Process ✔

How will quality of deliverables be assured and controlled?

5.5. Project Deliverables

The Vendor is expected to specify and describe project deliverables, minimally including those listed in Section 4.

5.5.1. Proposed Solution Deliverables' Compliance with Requirements ✔

For each requirement in, the Vendor must specify its interpretation of the degree of compliance with or satisfaction of the stated requirement. Each requirement shall have a compliance statement of "full", "partial" or "none". Vendors should explain how the requirement will be satisfied (i.e., which major solution component(s)) and explain any assumptions that have been made in judging compliance.

6. PROJECTED USER LICENSES AND LOCATIONS

The following sections provide a preliminary list of potential users of each module of the system and indicate the preferred licensing scheme of York Region and Markham.

6.1. Preferred Licensing Arrangement ✔

York Region and Markham prefer a site licence for unlimited users administered centrally for both organizations. All other factors being equal — and assuming it is the most economical choice — York Region and Markham will give preference to Vendors proposing this type of licensing scheme. If a site licence is not available, the second choice of York Region and Markham is for a concurrent user licensing arrangement.

The Vendor's proposal shall describe the licensing scheme proposed. This shall include calculations used to arrive at any final licence fees. The Vendor shall also describe alternative licensing options if more than one licensing option is available.

7. PROJECT PLAN

7.1. Schedule ✔

Provide an activity schedule for the production of deliverables which is aligned with the schedule overview provided in Section 4. Include a schedule for performing the work, indicating dependencies and "trigger points" for making project decisions. What are the critical milestones? What are the obstacles that might prevent completing the tasks within this timeframe?

Vendors must also outline a preliminary phased approach to delivering several portal releases. The example shown below is based on preliminary requirements identified to date and is presented for illustrative purposes only. Vendor release schedules are expected to provide more detail than that shown.

Portal Function / Service Summary (Not Exhaustive)	Beta Rel. 0.1	Beta Rel. 0.2	Prod. Rel. 1	Prod. Rel. 2
User Registration	x			
End-User Self-Registration	x			
User Administration	x			
Portal Personalization	x			
Content Management System (CMS)	x			
Search	x			
Event Calendar	x			
Registered User Authentication (Single Sign-On)		x		
Payment Engine		x		
Directories		x		
E-Mail Newsletters/Notifications		x		
Surveys		x		
Information/Service Requests, Feedback and Complaint Processing		x		
Systems Management and Reporting (Utilization Statistics)			x	
Alerts			x	
License Services (Business)			x	
License Services (Animal)			x	
Parking Ticket Payment			x	
Provincial Offences Act Ticket Payment			x	
Resource/Facility Booking and Payment			x	
Program Registration and Payment			x	
Event Ticket Ordering and Payment			x	
Property Tax Calculator			x	
Document Management			x	
Access to Other Systems			x	
Third Party Application Integration			x	
Procurement				x
Emergency Management Application				x
Project Status Dashboards				x
Department/Unit Performance Dashboards				x

7.2. Technical Project Management Plan

The Vendor will be expected to nominate a Technical Project Manager to report to the York Region-Markham Project Manager. These two individuals will collectively develop the project plan.

The Technical Project Manager will deliver monthly status reports used to summarize progress. The Vendor will also participate in weekly technical project team meetings.

7.3. Proposal Assumptions ✔

Include a list of assumptions made in developing the proposal.

7.4. Other Information ✔

Provide any other information that your firm believes would help convince the evaluators that your firm should be selected for this project.

8. SOLUTION ACCEPTANCE AND PAYMENT

8.1. Final Acceptance of Solution ✔

Final acceptance of the solution will be granted by York Region and Markham upon full delivery of all project deliverables.

Acceptance testing for the final production release will begin upon certification by the Vendor to York Region and Markham Project Manager that the solution has been installed and functions in accordance with approved requirements and contract terms and conditions and that the solution is ready for final acceptance testing. York Region and Markham shall have fifteen (15) days to perform such acceptance tests.

If the solution or any other item specified in the RFP and any subsequent contract is found to be materially deficient during this acceptance testing period, the Vendor shall have a maximum of fifteen (15) days to correct these material deficiencies and, upon notification of correction, York Region and Markham shall have a second fifteen (15) days to further test. In the event that the solution is found to be materially deficient in the second test period, York Region and Markham may reject the solution and terminate the Agreement.

York Region and Markham shall make its final payment indicating final acceptance of the solution, when all outstanding material deficiencies have been corrected to the satisfaction of York Region and Markham. Payment will not be unreasonably withheld.

The Vendor shall indicate agreement with this acceptance scheme.

8.2. Payment Schedule ✔

York Region and Markham will pay for the solution in accordance with the budget and payment schedule outlined in the agreement for which details will be provided to the successful Vendor. The Vendor shall acknowledge that this is acceptable.

9. DETAILED BID FORM

Vendors shall complete and submit the following Detailed Bid Form. Include descriptions of proposed hardware, software and services. Please enter "N/A" where an item is not applicable and explain why it is not applicable. Software prices shall include proposed third-party software.

Prices shall be firm and fixed and shall not increase but may be adjusted downward to reflect changing market conditions. All prices shall be in Canadian dollars. Provide complete pricing information to implement your portal solution. This will include:

- Hardware
- Base purchase cost of software licences and annual maintenance for the first 3 years
- Per-seat licenses for 200 content management system users (purchase price plus annual maintenance for the first 3 years; include pricing on additional seat licenses)
- Additional costs incurred by you to successfully implement the portal solution broken down by the following categories and an hourly rate for staff time:
    - Technical Project Management
    - Engineering and Architecture Design
    - Software Development and Customization
    - Software Installation and Configuration Services
    - Systems Integration
    - Training
    - Other Costs (specify)

9.1. Proposed Hardware, Software and Services ✔

Item	Price ($)
Hardware	
Software	
Portal Software ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	
Content Management System Software ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	

Other Portal Software (Specify) ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	
Other Portal Software (Specify) ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	
Other Portal Software (Specify) ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	
Other Portal Software (Specify) ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	
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Other Portal Software (Specify) ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	

Other Portal Software (Specify) ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	
Other Features: ___ Site Licence or, ___ Concurrent User Licences @ $___ each or, ___ Individual User Licences @ $___ each	
Total - Software	
Consulting Services	
Technical Project Management	
Engineering and Architecture Design	
Systems Integration	
Software Development and Customization	
Testing	
Software Installation and Configuration Services	
Training	
Documentation	
Backup and Restoration Planning	
Total - Consulting Services	

Support Services	
Software Support	Included (Year 1)
Telephone and Internet Support Services	Included (Year 1)
Maintenance and Upgrade Support Services	Included (Year 1)
Total - Support Services	**Included (Year 1)**
Other Costs	
Other Costs (Specify)	
Other Costs (Specify)	
Total - Other Costs	
Total Before Discounts	
Subtract: Discounts	
Total After Discounts	
PST	
GST	
GRAND TOTAL (Total Solution Cost) ** (** Include this amount on the Procurement Response Form)	

9.2. Rates: Support Services, Consulting and Additional Licences ✔

The Vendor shall clarify their rate structure for system support beyond the first year (the warranty period). The Vendor shall also provide their normal hourly rate for on-site consulting services as well as the cost of additional user licences (if not a site licence)

Item	Price ($)
Cost of Support Services Beyond Year 1	
Support Services - Year 2	
Support Services - Year 3	
Support Services - Other	
Consulting Rate(s)	
$ / Hour	
$ / Day	
Each Additional User Licence	
Other Software (Specify)	
Total	

9.3. Additional Software, Hardware and Services ✔

The Vendor shall list and describe any additional software, hardware and/or Vendor services that might be of interest to York Region and Markham (especially software modules that are integrated with the modules being proposed).

Item	Price ($)

9.4. Optional In-Kind Contributions ✔

Vendors are encouraged to supplement their proposal with in-kind contributions of hardware, software or services. For example, a Vendor may optionally choose to enhance the value proposition in its proposal to offer in-kind training services in addition to those identified as requirements. Vendors are invited to append descriptions of in-kind contributions.

10. EVALUATION CRITERIA

An evaluation committee consisting of York Region and Markham will evaluate the submitted proposals.

Proposals shall be evaluated as follows:

1. Solution		/30
2. Vendor Experience and References		/25
3. Solution Ease of Use and Maintenance		/20
4. Initial and Recurring Costs		/25
	TOTAL	/100

Specific criteria that may be used to evaluate Vendor proposals include, but may not be limited to:

- Compliance with RFP requirements
- Functionality, ease of use and user-friendliness
- Interface design and navigation
- Operational performance
- Reliability and stability
- Flexibility and scalability
- Perceived value of in-kind contributions and/or value-added items
- Vendor experience
- Vendor financial stability
- Vendor staff qualifications
- Vendor technical project management
- Vendor training
- Vendor references
- Completeness and quality of proposal
- Any other criteria deemed appropriate

10.1. Last and Final Offer

10.1.1. Negotiations with Responsible Bidders

Upon completion of the initial proposal evaluation, Vendors will be short-listed and negotiations may be undertaken to refine details of all or portions of the solution proposed. Short-listed bidders shall be accorded fair and equal treatment with respect to any opportunity for discussions and revision of proposals, and such revisions may be permitted after submissions and prior to contract award for the purpose of obtaining best last and final offers.

10.1.2. Review of Offers and Vendor Selection

After the evaluation committee has reviewed proposals, discussions may be held between the short-listed bidders and the evaluation committee to obtain a better understanding of the initial proposal by the bidder. Negotiations may also include adding, deleting or modifying certain requirements. Note, however, that the total project cost is subject to budget restrictions. No further payments beyond the contract amount will be made.

Although firm, irrevocable proposals are required, discussions may be undertaken to modify information and/or requirements to ensure a best overall solution. Changes must be documented and incorporated into the final Detailed Bid Form and will form the Last and Final Offer.

Upon written acceptance of the Vendor's proposal, or any part thereof, York Region and Markham shall issue a Letter of Intent and other provisions deemed to be required to protect York Region and Markham and the successful Vendor. Contract requirements will be determined subsequent to funding approval.

10.2. Vendor Demonstrations

Short-listed Vendors may be invited to demonstrate their proposed solutions to the evaluation committee. Any and all costs incurred by the Vendor in order to attend this demonstration shall be borne entirely by the Vendor.

10.3. Project Commencement and Estimated Duration

As time is of prime importance, the successful bidder(s) will be expected to start the project as soon as possible after being awarded the contract.

10.4. Incurred Expenses

Neither York Region and Markham nor any of its associated entities shall be obligated in any way by the bidder's response to the document. Bidder's costs related to the preparation of a response to the document shall be entirely the responsibility of the bidder.

10.5. Contract Award

The award of a contract from this RFP is conditional upon the successful bidder completing negotiations. York Region and Markham are under no obligation to award a contract, nor are York Region and Markham obligated to accept the lowest or any of the bids.

Vendors should be aware that a contract form and structure similar to that used by the Government of Ontario for its Vendors of Record will be used as the basis for contract negotiations.

10.6. Disposal of Submissions

All proposals and supporting materials shall become the property of York Region and Markham.

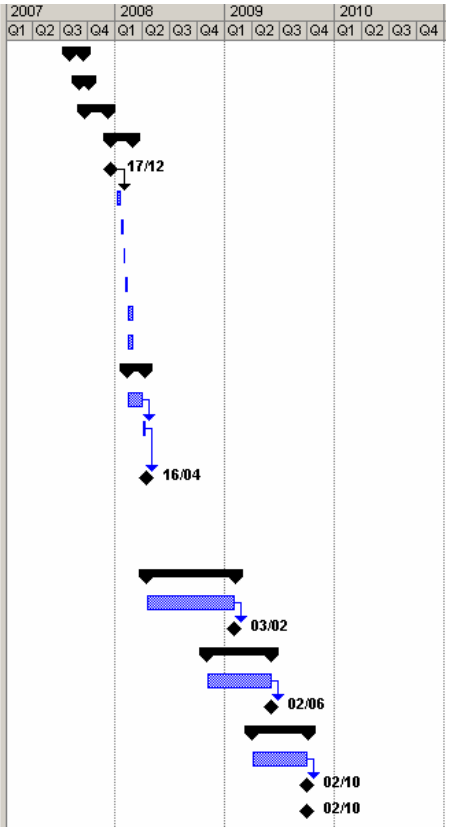
Prices will not be read out. York Region and Markham shall make every effort to safeguard the confidentiality of each proposal submission; however, all proposal submissions are subject to the provisions of the *Municipal Freedom of Information and Protection of Privacy Act*.

11. RFP TIMELINE

The following timeline applies to this RFP:

RFP Issued	[INSERT]
Deadline for Questions	[INSERT]
Proposal Submission Deadline	[INSERT]
Proponent Presentations (if required)	[INSERT]
Award of Contract	[INSERT]

WBS	Task Name	Start	Finish
1	**Phase 0 - Initiation**	**Wed 01/08/07**	**Wed 19/09/07**
2	**Phase 1 - Planning**	**Mon 03/09/07**	**Wed 03/10/07**
3	**Phase 2 - Create Portal Solution RFP**	**Mon 24/09/07**	**Fri 07/12/07**
4	**Phase 3 - Evaluate Proposals**	**Mon 17/12/07**	**Fri 29/02/08**
4.1	Receive proposals	Mon 17/12/07	Mon 17/12/07
4.2	Rate proposals	Mon 07/01/08	Fri 18/01/08
4.3	Conduct proponent presentations & demonstrations	Mon 21/01/08	Fri 25/01/08
4.4	Check short-listed vendor references	Mon 28/01/08	Thu 31/01/08
4.5	Select & recommend proponent	Fri 01/02/08	Fri 08/02/08
4.6	Execute LOI with selected proponent	Mon 11/02/08	Fri 29/02/08
4.7	Conduct vendor/proponent debriefing (as requested)	Mon 11/02/08	Fri 29/02/08
5	**Phase 4 - Negotiate & Execute Contract**	**Mon 11/02/08**	**Fri 11/04/08**
5.1	Negotiate & execute contract with selected proponent	Mon 11/02/08	Mon 31/03/08
5.2	Create vendor contract by-law(s) & obtain Council(s') approval	Tue 01/04/08	Fri 11/04/08
6	**Procurement Project Complete**	**Wed 16/04/08**	**Wed 16/04/08**
7	**ACTIVITIES BELOW PART OF PORTAL IMPLEMENTATION PROJECT (TIMING TO BE DETERMINED)**	Mon 02/01/06	Mon 02/01/06
8	**Plan & Deliver Beta Release 0.1**	**Thu 17/04/08**	**Tue 03/02/09**
8.1	*Develop Portal Release 1*	*Thu 17/04/08*	*Mon 02/02/09*
8.2	*Implement York-Markham Portal Release 1*	*Tue 03/02/09*	*Tue 03/02/09*
9	**Plan & Deliver Beta Release 0.2**	**Mon 03/11/08**	**Tue 02/06/09**
9.1	*Develop Portal Release 2*	*Mon 03/11/08*	*Mon 01/06/09*
9.2	*Implement York-Markham Portal Release 2*	*Tue 02/06/09*	*Tue 02/06/09*
10	**Plan & Deliver Production Release n**	**Wed 01/04/09**	**Fri 02/10/09**
10.1	*Develop Portal Release n*	*Wed 01/04/09*	*Thu 01/10/09*
10.2	*Implement York-Markham Portal Release n*	*Fri 02/10/09*	*Fri 02/10/09*
11	**Implementation Project Complete**	**Fri 02/10/09**	**Fri 02/10/09**



All communication with Vendors **MUST BE** in written format via e-mail. **Vendors are encouraged to e-mail questions to**. Questions and answers will be provided to all Vendors via e-mail addenda. No verbal instructions or verbal information to Vendors will be binding on York Region and Markham.

Vendors are asked to not communicate directly with anyone working for York Region and Markham concerning this project.

All written instructions and specifications will be considered clear and complete unless written attention is called to any apparent discrepancies or incompleteness before the official closing of the RFP. Should any alterations to the RFP be deemed necessary by York Region and Markham, these alterations will be made in the form of written addenda which will be provided to all Vendors. These addenda shall be considered as part of the RFP.

11.1. Vendor Contact ✔

The Vendor shall provide the name, title, address, telephone number, fax number and e-mail address of one Vendor representative to whom all communication shall be directed during the RFP process.

12. SPECIAL TERMS AND CONDITIONS

12.1. Authority

York Region and Markham's Project Manager shall be named upon commencement. The Vendor must communicate on all matters of importance and submit all documentation including invoices to the Project Manager. This person shall have authority to release payment provided the goods and services are delivered or performed as required under the contract.

12.2. Changes to Contract

Once the Vendor executes a contract with York Region and Markham, York Region and Markham or the Vendor may request changes to the contract. All changes to the contract must be documented in an amendment.

Pricing for agreed to changes shall be based on per diem rates indicated in the Vendor proposal. In the event a change is agreed to but no price defined, the Vendor shall invoice based on additional hours consumed for the change.

12.3. Use of Sub-Contractors ✔

The Vendor shall identify all sub-contractors that may be used to complete any part of the proposed solution. If the Vendor does sub-contract any part of this solution, the Vendor will retain full responsibility to York Region and Markham for the acts and omissions of the sub-contractor(s) and their employees.

Should sub-contractors be used for any part of the proposed solution, York Region and Markham would prefer using local businesses. No part of the contract may be sub-contracted without prior written approval of York Region and Markham.

12.4. Conflicts of Interest ✔

The Vendor shall specifically identify any and all potential conflicts of interest between the Vendor, and York Region and Markham employees, members of Council, contractors, sub-contractors, etc. This includes relationships with the Vendor and their employees, agents, subsidiaries, and parent organizations.

12.5. Confidentiality ✔

During the course of work with York Region and Markham, the Vendor may have access to confidential information. The Vendor shall agree to hold all such information in confidence and agrees not to disclose or cause to be disclosed any such information.

12.6. Price Protection

In the event that pricing decreases in the marketplace as a result of competitive forces, the Vendor shall offer appropriately reduced pricing to York Region and Markham, which York Region and Markham shall have the option of incorporating in the contract.

12.7. Invoice Detail

In order to be paid, all invoices must indicate clear, detailed information, and show the GST and PST amounts separately with the applicable GST registration number. All charges must be itemized in detail based on the agreed to milestones and details for each team member and time worked must be indicated. The Vendor is responsible for ensuring their invoice information conforms exactly to the specifications provided by York Region and Markham. Payment for invoices which do not conform will be delayed or denied.

12.8. Extras

There shall be no provision for extras or disbursements in the contract. All charges must be incorporated into the per diem rates as bid.

12.9. York Region and Markham Contract Management Cost Reimbursement

The Vendor shall be entirely responsible for providing high quality work in a professional manner. If it is determined that York Region and Markham must spend additional unplanned time to review work that has been received late or which lacks appropriate content and/or quality and/or detail, then York Region and Markham shall calculate its additional contract management costs and deduct them from the next Vendor invoice.

12.10. Quality Assurance

The Vendor shall make every effort and take all appropriate steps to assure delivery of hardware, software and services in a timely, high-quality manner. Deliverables must conform to

the higher of the standard proposed by the Vendor and accepted by York Region and Markham or industry standards and norms.

12.11. Performance Unsatisfactory

York Region and Markham, in their sole and absolute discretion, will determine if the work performed is acceptable. The contract will be deemed to be in default when the Vendor fails to:

- Adhere to the agreed to project schedule
- Provide comprehensive, accurate detailed information and reports in accordance with agreed to expectations and professional standards
- Meet the requirements in the quality and quantities expressed or implied as set out on this RFP

12.12. Termination

The Vendor agrees that in the event of unsatisfactory performance (default) or, the Vendor becomes insolvent, bankrupt, or makes an authorized assignment or compromise with its creditors and is unable to perform its duties under the contract, York Region and Markham may, in addition to and without prejudice to its other lawful rights and remedies, forthwith terminate the agreement by written notice. In this event, York Region and Markham shall pay only for services received and accepted up to the date that the notice of termination has been issued and will not be liable for any penalties. In the event of default, York Region and Markham shall not by termination, waive any rights or remedies it may be entitled to as at the date of termination. Such termination shall not relieve the Vendor from their warranties and other responsibilities relating to services performed.

12.13. Software Ownership ✔

York Region and Markham require ownership of all newly-developed software which is part of the solution but separate from commercially available off-the-shelf software. Ownership of the Intellectual Property in newly developed or customized software must be clearly stated in the proposal.

12.14. Source Code ✔

The Vendor shall provide source code for any newly developed components and shall provide York Region and Markham with escrow rights should the partners wish to pursue this. The Vendor shall keep a copy of the program source code on the servers of York Region and Markham.

12.15. Warranty ✔

The warranty shall be for a minimum of twelve (12) months. If the warranty is longer, please indicate what the warranty time frame is.

The Vendor warrants that:

- The Vendor is the true and lawful owner of the software and the Vendor has the full power and authority to licence the software for use by York Region and Markham.
- The solution supports all functionality set out in the Vendor's proposal.
- The solution conforms to all standards set out in this RFP including all hardware, software, and performance standards.
- The solution shall be capable of consistently achieving and maintaining a high level of operating reliability and response time performance.
- The solution shall be in good operating condition, free of defects, errors, and malfunctions and will operate reliably and in accordance with York Region and Markham functional and technical specifications as specified in this RFP for a period of one year from the date of final acceptance. If during this warranty period, any component is discovered to be defective, the Vendor shall promptly repair or replace the defective component at no cost to York Region and Markham. This warranty shall include parts and labour service and shall apply to all components.
- The Vendor shall disclose to York Region and Markham's Project Manager, the terms and conditions of all third-party software and hardware warranties for approval and acceptance by York Region and Markham and shall transfer, assign, and convey to York Region and Markham the use, benefit, and entitlement to all these warranties. The Vendor shall execute all documents, agreements, conveyances, and other writings necessary to give effect to the foregoing and shall provide all necessary notices to third-party Vendors in order to fully and completely vest the benefits of all such warranties with York Region and Markham.
- **The solution shall be developed in conformance with recognized good development practices and shall be independently maintainable.** Complete documentation will be provided by the Vendor for all applications software. This documentation must be of a calibre that will permit analysts and programmers unfamiliar with the applications to assume responsibility for maintenance, if necessary.

The Vendor shall provide warranty as described above.

13. ANNEX A – PROPOSAL CHECKLIST ✔

Vendors shall use this Proposal Checklist to ensure completeness. This checklist will also be used by evaluation team as a cross-reference between the RFP and the Vendor's proposal.

Note: A copy of this checklist, with the third column completed, shall be included as part of the Vendor's proposal. The completed Proposal Checklist shall form the second part of the Vendor's proposal and shall be inserted immediately behind the Procurement Response Form.

Item	Description	Page # in Vendor's Proposal
Procurement Response Form	Remove the Procurement Response Form, complete it and use it as the cover page of your proposal	Cover Page
Procurement Response Form	Ensure that the Procurement Response Form includes "TOTAL SOLUTION COST". This amount shall equal the "GRAND TOTAL" in Section 9	Cover Page
Procurement Response Form	Ensure that the Procurement Response Form includes the Vendor name and address	Cover Page
Procurement Response Form	Ensure that Procurement Response Form includes the name, title, e-mail address, telephone number and fax number of the contact person	Cover Page
Procurement Response Form	Ensure that the Procurement Response Form includes name, title and signature of person authorized to submit bid on firm's behalf	Cover Page
Procurement Response Form	Ensure that Procurement Response Form is dated	Cover Page
2.1.5	Append any supporting documentation you wish (e.g., product literature, demonstration diskettes/CD-ROMs, newspaper/magazine articles, sample manuals, etc.) to your submission package	
5.1	Executive Summary	

5.2	Company Profile	
5.3.1	Experience and Qualifications	
5.3.2	References	
5.3.3	Resumes of Proposed Individuals	
5.4.1	Recommended Methodology	
5.4.2	Prior Portal Implementation Lessons Learned	
5.4.3	Quality Control Process	
5.5.1.	Proposed Solution Deliverables' Compliance with Requirements	
6.1.	Preferred Licensing Arrangement	
7.1.	Schedule	
7.3	Proposal Assumptions	
7.4	Other Information	
8.1.	Final Acceptance of Solution	
8.2.	Payment Schedule	
9.1.	Proposed Hardware, Software and Services	
9.2.	Rates: Support Services, Consulting and Additional Licenses	
9.3.	Additional Software, Hardware and Services	
9.4	Optional In-Kind Contributions	
11.1.	Vendor Contact	
12.3.	Use of Sub-Contractors	
12.4.	Conflicts of Interest	
12.5.	Confidentiality	

12.13.	Software Ownership	
12.14.	Source Code	
12.15.	Warranty	
13. Annex A	Remove this Proposal Checklist from the back of the RFP, complete the entries in the third column and use it as the first pages of your proposal (i.e., immediately behind the Procurement Response Form). Important Note: Be sure to fill out the third column of the Proposal Checklist with the page number in your proposal in which that particular item appears. This will become the Table of Contents for your proposal and will be used by the evaluation team to quickly locate the applicable response item in your submission package.	Annex A

14. ANNEX B – ORGANIZATION

14.1. Project Organization

14.1.1. York Region and Markham Steering Committee

The Steering Committee includes York Region and Markham management. The Steering Committee will be responsible for project governance.

14.1.2. The York Region-Markham Project Manager

York Region and Markham have appointed a Project Manager. The York Region-Markham Project Manager will:

- Work with the Vendor's Technical Project Manager to prepare, maintain, and execute the Project Plan to ensure delivery on-time and on-budget
- Manage project communication
- Manage the project budget
- Be responsible for successful completion of the project
- Provide direction and leadership
- Approve deliverables and authorize project expenditures
- Make recommendations to the Steering Committee of York Region and Markham for response to proposed contract amendments

14.1.3. Vendor Project Team

The Vendor's proposal shall clearly specify all human resources required to deliver the solution. This shall include identifying the specific type of York Region, Markham and Vendor resources required, their designated roles and duties, the anticipated stage of the project during which each resource will be required, and the amount of time each resource will need to dedicate to the project at each point in the project timeline.

The Vendor's proposal shall clearly identify the amount of time Vendor staff will dedicate to the project and at what stages the Vendor's staff will be on-site. Vendors shall note that York Region and Markham preference is for Vendor staff to be on-site for part of the project pending agreement between the Vendor's Technical Project Manager and the GCPP Project Manager. The Vendor's proposal shall clearly differentiate between consulting services that are included

in the Vendor's quoted price and those that are not. Any extra consulting services that are anticipated but not included in the final quoted price shall be clearly identified.

The project team will include the Vendor Technical Project Manager, subject matter experts, analysts and other required labour resources. The Vendor Technical Project Manager will report to the Project Manager of York Region and Markham and will have the following main responsibilities:

- Manage the Vendor Project Team members
- Support the York Region-Markham Project Manager in Vendor deliverable planning
- Prepare presentations to those deemed necessary
- Provide monthly written status reports outlining accomplishments, plans, and issues requiring management action
- Ensure all deliverables are approved by the York Region-Markham Project Manager or designated Steering Committee member of York Region and Markham
- Monitor resources to ensure they are performing their tasks with the expertise that is required
- Coordinate all tasks assigned to Vendor labour resources
- Provide needed resources when and where required
- Ensure the Vendor deliverables are completed and accepted according to identified timelines

15. ANNEX C – REQUIREMENTS

This section lists portal solution requirements to which Vendors are expected to respond (see Section 5.5.1.) York Region and Markham recognize that there are varying degrees of detail among the requirements. However, Vendors are encouraged to explain their interpretations and reasonable assumptions made in explaining how the proposed solution may or not satisfy the stated requirement. Please note that Vendors must reference the unique requirement identifier in proposals. Requirement identifiers may not be sequential due to filtering of certain requirement categories in the view provided.