



**CITY OF HAMILTON
CITY MANAGER'S OFFICE
Audit Services Division**

TO:	Mayor and Members General Issues Committee
COMMITTEE DATE:	September 29, 2016
SUBJECT/REPORT NO:	Value-for-Money Consulting Report: Performance Measures Research and Next Steps (AUD16022) (City Wide) (Outstanding Business List Item)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Brigitte Minard CPA, CA, CIA, CGAP 905-546-2424 x2088 Charles Brown CPA, CA, CPA (Illinois) 905-546-2424 x4469
SUBMITTED BY:	Charles Brown CPA, CA, CPA (Illinois) Director, Audit Services City Manager's Office
SIGNATURE:	

RECOMMENDATION

- (a) That Report AUD16022, respecting Performance Measures Research and Next Steps, be received.
- (b) That any items relating to resource requirements needed by the City Manager to execute recommendations made to him be forwarded to the applicable 2017 budget process (operating or capital, as appropriate) or be submitted to Committee and Council via a separate report.
- (c) That Item "QQ" respecting the 2016 - 2025 Strategic Plan - Components (Performance Measurement) be considered complete and removed from the General Issues Committee's Outstanding Business List.

EXECUTIVE SUMMARY

Scope: In February 2016 a motion regarding Performance Measurement was approved at the Audit, Finance and Administration Committee. Subsequent to this motion being approved by Council, the Audit Services Division began working to fulfil the requirements of this motion.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

The project scope included conducting internal research at the City of Hamilton and external research to learn about performance measurement best practices (including citizen dashboards) in other cities. Research was also conducted for other relevant topics including open data, wellbeing indexes, CitiStat and performance measurement-related software solutions.

Methodology:

For the internal research, a standard set of performance measurement criteria were assembled and a questionnaire was created. Interviews were conducted by the Audit Services Division across the organization and performance measurement maturity was assessed for each service area (using the Service Delivery Review as the basis for determining service areas).

For the external research, screening was conducting using US and Canadian census data for cities larger than 250,000 people. Detailed research was conducted for over 40 cities and site visits and/or conference calls were conducted for a select number of cities. Best practices were compiled and assessed.

Findings:

The internal and external research findings were synthesized and utilized to create next steps and recommendations for performance measurement at the City of Hamilton. Key findings included:

- While the City has pockets of strength in some areas, there is no corporate-wide system of performance measurement. Such a system should be developed and deployed to enhance performance measurement utility and consistency and thereby strengthen innovation and continuous improvement
- A performance dashboard would be a very important tool to help drive accountability, transparency, innovation and improvement opportunities
- Implementing a full regime of performance management is a multiyear effort that will require a dedicated capacity to realize the opportunities that other cities have leveraged
- The successful transformation to a performance excellence culture is greatly improved with the adoption of a common approach to the understanding and application of performance accountability and through the leveraging of performance excellence and quality management tools
- Corporate wide training and education on performance measurement and innovation could vastly improve the use and utility of performance measures in the City, and enhance their integration with strategic and business planning
- Establishing a robust performance culture requires a strong accountability regime for understanding, reporting and acting on performance information
- Community partners can play a key role in ensuring the City capitalizes on opportunities to strengthen its performance culture and measurement regime

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- Regular, consistent, and reliable information from residents, local businesses and other stakeholders is necessary to effective performance management
- A consistent and invariable element in best practice cities with strong performance cultures is committed and action oriented leadership at all levels in the organization

In our view, action taken to address the above findings will be entirely consistent with, and supportive of Council's previous endorsement of transforming the City's Budget and Business Planning Process and the development of an updated process for communicating the cost and performance of City services.

Next Steps:

The following recommendations have been made to the City Manager, and he has enthusiastically agreed to accept and implement them per his authority under By-law 08-307.

- (i) That the City, based on the research of this report, develop, design and implement a public facing City Dashboard as part of a broader strategy to improve the efficacy and use of performance measures in City management.
- (ii) That an office of Performance Excellence be established by the City Manager to provide dedicated resources to oversee and coordinate the development of a mature performance measurement regime.
- (iii) That the Performance Excellence team be charged with the responsibility of working with departments in the development of robust performance measures and analytics, establishment and tracking of strategic plans, business plans and key initiatives, process improvement opportunities, customer/resident research, aligning organizational practices with recognized criteria and acknowledged better practices in municipal management.
- (iv) That the City of Hamilton adopt the formal methodologies of a results-based corporate-wide performance accountability framework (e.g. "Results-Based Accountability") to enable consistency in performance measurement maturity and inculcate a vigorous culture of performance excellence through commonality of language and understanding.
- (v) That the City adopt practices that model other cities integration of performance measurement, with other activities such as strategic planning, open data, business planning and business intelligence.
- (vi) That the City establish a strong accountability regime modelled on the CitiStat approach.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- (vii) That the City, with its Community partners, explore the development of community indicators that could be used to bring greater dimension to the City's strengths and challenges across key elements of well being, sustainability, and citizen experience.
- (viii) That the City adopt a broadly targeted training regime in innovation, measurement, analytics, and process improvement to inculcate a strong culture of performance accountability and ensure the capacity and skills for successful implementation of a robust performance measurement system.
- (ix) That the City put into place an annual performance report of all City programs and services that explain to residents the quality, impact and satisfaction with services that has been achieved, in light of previous historical trends and targets established.
- (x) That the City put in place a system of regular measurement of resident satisfaction and business satisfaction with services and programs delivered by the City and incorporate that information into ongoing measurement, strategic planning, business planning and the annual performance report.
- (xi) That the City establish the relevant policies and procedures for this work including: Performance Measurement Policy, Open Data Policy, Citizen Survey Policy.
- (xii) That the City identify and procure the appropriate software tool(s) for the City's dashboard and open data portal.

Alternatives for Consideration – Not Applicable

FINANCIAL – STAFFING – LEGAL IMPLICATIONS (for recommendation(s) only)

Financial: There are no financial impacts related to the recommendations of Report AUD16022. Future costs may include: software application and related implementation, consulting costs relating to software and a related performance measurement methodology and will be dependent on future Council and management decisions. Staff will report back to Council as part of the 2017 budget process with projected year one costs.

Staffing: There are no staffing impacts related to the recommendations of Report AUD16022. Although it is a best practice for there to be a team dedicated to performance measurement, at this time it is not yet known if staff can be reallocated internally rather than request new FTE's.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Wherever possible, it is recommended that existing resources be utilized. Staffing impacts will be forwarded to the to the applicable budget process or be submitted to Committee and Council via a separate report.

Legal: Consultation with Legal Services and the Office of the City Clerk will be required as the Open Data Initiative progresses to ensure that privacy legislation is complied with.

HISTORICAL BACKGROUND (Chronology of events)

In February 2016 a motion regarding “Performance Measurement – Best Practices and Next Steps was approved at the Audit, Finance and Administration Committee providing the following direction to staff (the Audit Services Division in particular):

That staff be directed to investigate and report back to the Audit, Finance & Administration Committee in September 2016 with respect to:

- (a) General best practices and/or models in empirical, data-based performance measurement protocol systems across city organizations (i.e. Canadian municipal governments similar to the City of Hamilton); and*
- (b) Next steps in implementing a refined broad, empirical, data-based performance measurement protocol system for the City of Hamilton with options and recommendations.*

Subsequent to this motion being approved by Council on February 10, 2016, the Audit Services Division began working on the project to fulfil the requirements of the motion. This report fulfils the requirements of the requests contained in the motion.

Additional Background:

Despite being identified as a priority in the SMT 2011 Work Plan, a performance measurement system does not exist at the organization-wide level at the City of Hamilton. While progress has been made as a result of the Service Delivery Review and projects executed by the Service Delivery Strategy Team (which has been disbanded), there still is not a performance measurement system and without such a system, it is challenging for value to be demonstrated to taxpayers.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

- Municipal Freedom of Information and Protection of Privacy Act (MFIPPA)
- City of Hamilton By-law 08-307 (To Appoint and Prescribe the Duties and Responsibilities of the Chief Administrative Officer)

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

RELEVANT CONSULTATION

- City of Hamilton, ON – All departments and divisions
- City of Boston, MA (Boston About Results – Citywide Analytics Team)
- City of Burlington, ON (City Auditor’s Office)
- City of Calgary, AB (Corporate Initiatives - Performance Measurement, Benchmarking and Risk and Customer Service & Communications)
- City of Edmonton, AB (Strategic Services Division)
- City of Houston, TX (Performance Improvement Division)
- City of Irving, TX (Chief Innovation and Performance Officer)
- City of Portland, OR (City Budget Office and City Auditor’s Office)
- City of Santa Monica, CA (Well Being Project Office)
- City of St. Albert, AB (Strategic Services Department)
- Hamilton Community Foundation
- Municipal Benchmarking Network (MBN) Canada (Program Manager)
- Region of Niagara, ON (Performance Improvement Division)
- Region of Peel, ON (Community Partnerships Group)
- Socrata (Open Data and Open Performance)

ANALYSIS AND RATIONALE FOR RECOMMENDATION

(Include Performance Measurement/Benchmarking Data if applicable)

Introduction

For a long time cities have been routinely using performance measures to set goals and track performance, guide decisions and policy development, inform on what citizens need, and to make tactical decisions to improve operations. But in recent years a kind of renaissance has been taking place, with many cities focused on leveraging newer technology towards becoming more citizen responsive and data driven. Accompanying this drive toward a “smarter” city has been a determination to make better use of performance measures and performance analytics in improving operations and in portraying to citizens the value of the programs and services they receive.

A manifestation of this lies in how some cities have chosen to share performance information through interactive “data visualization” or citizen dashboards.

The Audit Services Division’s review of the current landscape through the research of over 40 cities reveals dramatic changes to the breadth of performance measures, their presentation, their application, use, and utility. The extension of performance measures toward broader sets of indicators, the capture and display of real time information and the open sharing of source data with the public are just a few of the attributes we discovered in “best practices” cities. Other common elements demonstrated in the most successful cities were:

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- Relentless focus on innovation
- Deep understanding and commitment to analytics
- Strong performance accountability mechanisms
- Customer centric approach
- An organizational imperative for having timely, reliable data that are the basis for evidence-based decision making
- Performance measurement integrated with strategic planning, business planning, and process improvement
- Leadership that “knows the numbers”
- Leveraging of community partnerships

In this report, we provide a critical reflection on how innovative cities have been developing and using their performance regimes to provide better service and gain greater citizen trust and confidence. We detail various best practices that are enabling greater levels of accountability and transparency and more robust analysis of performance. We also present our research on the current state of performance measurements at the City of Hamilton, and the opportunities afforded by this research to adapt and improve practices. For a more detailed listing of best practices for performance measurement, please see Appendix “F” to Report AUD16022.

Performance Measures

The use of performance measures in local government is being driven by increased citizen demands for government accountability, greater interest on the part of local legislators in performance related information to assist in program evaluation and resource allocation decisions, and the efforts of various organizations and professional associations to make governments more results-oriented.¹

One of the primary goals of our research was to understand how performance measures in leading cities are deployed and used. We sought to answer the question “What makes a performance management system practical and useful?”

The traditional rationale for performance measurement is to facilitate accountability, show results being achieved, improve the efficiency and effectiveness of services, and ultimately inspire the trust and confidence of citizens.

Per the author Mark Friedman (in his book about performance accountability and measurement²), the purposes of performance measurement are as follows:

1. *To improve performance.*
2. *To show the program is working and tell the story to funders and other stakeholders.*

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

While virtually all cities have performance measures in place, our review would suggest the design and implementation of those systems is far from uniform.

In part, this is due to the complex challenges of measurement in the public sector. The goals themselves are often subjectively or aspirationally derived, measurement instruments are elusive, or data is not available. In part this is due to understanding what excellent performance measures means. All too often measures tell the story of activity levels being delivered by a service but less so the outcomes being achieved. It can also be attributed to the historical context in how cities have responded to, and/or been open about sharing measured results on a regular basis. The result has been a wide array of practice, which for the purpose of analyzing best practices we broke down into three perspectives or considerations.

The first consideration of any performance measurement regime is the measures themselves, essentially “the content” question. Are the measures sufficiently developed in terms of timeliness, relevance and completeness to be useful for decisions? Of course, this depends on the purposes for which they are constructed. In our research we determined there were multiple purposes for performance measures that included:

- Public reporting and accountability for meeting defined goals, targets or standards
- Management control and operations
- Strategic insights and policy or course correction decisions

The above creates endless possibilities in a performance system for any city.

The second consideration is the integration of performance measures into an overall performance management “system”. By this we mean the processes that support the establishment of measures, including technical and data requirements, the review of measures, analysis of results, and their feeding into future plans and modifications.

The typical tools used to align with this concept are manifested in strategic planning and business planning processes that have a strong orientation to performance measurement systems that are closely tied to process improvement.

The third consideration or level is in the use of performance measurement as a communications tool. We looked at how successfully cities used performance measurement to set organizational expectations on the one hand, and communicate organizational achievement on the other.

So in answering the question “What makes a performance measurement system practical and useful”, we looked to how cities were achieving in all three areas.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Our research showed that best practice cities have measurement regimes that successfully deliver on all three criteria.

Performance Measures Content

For the first consideration, performance measures “content”, best practice cities ensure measures are sufficiently robust to provide a full and complete picture of program or service level achievement from multiple perspectives. It was common to see measures constructed around answering three fundamental questions:

- What do you do?
- How well do you do it?
- What impact does it have?

One of the better cities for robust performance measures we found was Irving, Texas. They construct their measurements for each service using a “family” of measures consisting of input measures, output measures, efficiency measures, quality, effectiveness and outcomes. This approach is similar to the State of Iowa which developed a comprehensive performance governance system under its Accountable Government Act. Until they applied a robust framework, both Irving and Iowa were reliant on input and output measures and challenged to answer fundamental questions – how well are we doing – what impact are we having – is it working? For details on the various types of measures that are contained in a “family” of measures, please see Appendix “G” to Report AUD16022.

Another model of performance measurement and accountability that is elegant for its simplicity is the Results Based Accountability system developed by Mark Friedman. The emphasis with this approach is the adoption of a common “plain language” approach to measurement that can be used to improve the quality of life in communities and the performance of programs and services without the complex, jargon-laden approach of other methods. Calgary, AB, Burlington, ON and Baltimore, MD are three cities that have adopted RBA.

Other municipalities such as Niagara Region and Irving, whilst not using RBA specifically, have implemented similar regimes. Regardless of the approach used, all best practice cities place great emphasis on a comprehensive training regimen to indoctrinate all staff into a system of common understanding for their performance system.

Integrating Performance Measurement with Accountability and Other Processes

Performance Measurement is a critical component of municipal government accountability. Performance measures demonstrate results achieved to senior leadership, elected officials and the public.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Performance measures can be used to provide evidence to support budgets and decisions regarding new requirements and ultimately resource allocations. There is also a strong relationship between performance measurement, customer service and communications. Having a strong communications plan ensures that performance measurement results are communicated effectively to the public and that value-for-money is being demonstrated to the audiences of Council, residents, businesses and other community stakeholders. Demonstrating value-for-money can enhance the perception of the level of customer service that residents, businesses and stakeholders are receiving. By conducting surveys, perceptions of customer service can be empirically measured and monitored for any needed changes.

In terms of the second criteria we used to evaluate best practices, which has to do with the processes integral to performance measurement use and application, Coral Springs, FL provides a best practice example of integrating performance measurement into overall management, so that measurement works in concert with, and in support of sound results-based accountability. Aspects of the Coral Spring's overall management that supports successful performance management include an integrated strategic planning system, a yearly business plan that operationalizes that plan, a city budget that is driven by the business plan initiatives flowing from the strategic plan and a mature performance evaluation system.

Another example of an integrated Performance Measurement system is the City of Calgary. They have a "Performance Measurement and Accountability System"³ which utilizes Results-Based Accountability as their corporate standard for performance measurement. The components of the system include:

- Service Review and Improvement - "an ongoing activity in all areas and at all levels of the organization. The corporate program for Service Review and Improvement is currently centred on the Zero Based Review (ZBR) program. The end result of a ZBR is a set of detailed and implementable recommendations for efficiency and effectiveness improvements."

The Hamilton equivalent could be the Continuous Improvement Program that is currently under development, combined with value-for-money audits

- Service Plans and Budgets that "focus on community and customer results, future strategies for service delivery, risks and investments". The approach also provides information on the cost and effects of changing service levels to support Council decisions on where investments in services should be made.

The City of Hamilton is currently implementing Multi-Year Budgeting and Business Planning for the 2017 calendar year.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- Integrated Risk Management that “provides a framework for identifying, assessing, managing, communicating and monitoring risks related to the achievement of The City’s objectives and our ability to deliver services to citizens.

Hamilton’s Audit Services Division has been working to educate the organization about integrated (or enterprise) risk management and plans to help the organization develop a corporate risk profile in 2017 per the Council-approved 2016-2018 Audit Services Work Plan.

- Individual Performance Development-Calgary is currently developing a performance evaluation system that provides a consistent, corporate approach to performance and carer development.

The City of Hamilton has already developed the Performance Accountability and Development (PAD) system and significant progress has been made towards rolling it out across the organization.

- Dashboard-The City of Calgary launched their “Citizen Dashboard” in October 2015. The “Citizen Dashboard” is a visual depiction of performance measures. A summary is provided on the main page, the second click provides descriptions of the measures and results achieved, and the third click provides a link to the open data set that supports the performance measure.
- Accountability Report-There is a semi-annual “Accountability Report” at the City of Calgary. This report includes a population component and includes both community and City contributions and individual program performance.

In Portland, Oregon there is close alignment between measurement and their “Portland Plan” where they have developed a vision for the future and then converted that into strategic goals and priorities for action. As part of that plan they track metrics called “vital signs” which provide insights into overall health. They refer to them as the 12 measures of success and have identified long term targets for these measures. In addition, Portland has a budget process that includes rigorous performance metrics listed under the categories of Key Performance Measures, Effectiveness, Efficiency and Workload that provide a complete picture of each service and how well it is doing.

In Irving, TX performance measures are very tightly aligned with strategic plans, annual business plans and key processes. Strategic objectives are tracked with key performance indicators and departmental measures are used to monitor operations and process. Process measures are tracked by process owners and are used to evaluate operational performance (cycle times, cost, and customer satisfaction). They also drive innovations, and if a process is not meeting its requirement, a Lean Six Sigma team is formed.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Irving has implemented Lean throughout the organization and put great emphasis on achieving stability with their performance measures. They want measures that will sustain them through change. They use benchmark data to set targets which are displayed in reporting and scorecards. Their performance management process has a very strong orientation to the “voice of the customer” and obtaining actionable information from residents and businesses. They track over 600 measures, with Council receiving a high-level summary of key performance indicators.

Irving has a strong commitment to managerial excellence and is one of only two cities in the United States to win the prestigious Malcolm Baldrige National Quality Award. To win that award the city had to satisfy rigorous criteria with respect to managing and leading the organization as a whole, managing change and embedding data analytics/performance metrics. The Baldrige Criteria have a strong orientation to the “voice of the customer” and an intense focus on results and performance management. For further details about the components of the Baldrige Criteria and the related framework, please refer to Appendix “E” to Report AUD16022.

According to their Chief Innovation and Performance Officer, going through the Baldrige process was instrumental in providing structure and focus in their journey toward performance excellence and led them to becoming more systematic with innovation. They have also developed a robust analytics capability with the use of business intelligence expertise and tools. In our view, business intelligence is a natural extension of the performance analysis regime and is inherently part of a mature performance management framework. In fact, in Irving the business intelligence function resides within the Innovation and Performance Office which reports to the City Manager.

Communication of Performance Measures

The third consideration or criteria for productive “holistic” performance management is in building its efficacy as a communications tool and strategy. Our research indicates that best practice cities are adept at communication of performance, and using performance information to achieve clarity of understanding and building consensus with stakeholders.

A strong performance oriented city will typically publish an annual report of performance achieved as compared to targets, benchmarks and plans and strategies. In a mature system these reports will have a large component of measurement focused on quality of services and resident satisfaction. In between annual reporting will be routine public reporting of performance, usually quarterly. An important aspect of these communications is having clear understanding of what performance measures really mean, and avoiding technical jargon. Leading cities make use of visual and graphical representations to tell the story of each measure. Good examples of such an approach are represented by Seattle’s Performance Portal and Edmonton’s “Our Progress” report.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

In addition, best practice cities are not reticent about presenting and/or communicating measures that are beyond their control because they provide important contextual insights that help align organization resources and focus, and help communicate priorities for the city.

Some of the cities that we visited emphasized the importance of having a common language for performance measurement. It was common for these cities to utilize a framework for their performance measurement system. The most common framework was “Results-Based Accountability” or a custom-framework that was very similar to RBA.

Many cities that we visited commented on how even after being several years into the development of a corporate-wide performance measurement process, they were still unclear who the primary audience is for their dashboard. Ultimately, creating an effective public-facing dashboard is a complex, ongoing communications exercise. One of the decisions that needs to be made is to determine who the primary audience is for the dashboard (Council, residents, businesses). Deciding the audience will enable the development work to be more focused and may shorten the development timeline.

Emergence of Citizen Dashboards

One of the most common ways for an organization to publicly communicate to their elected officials and residents/other stakeholders about their performance measurement efforts is via a city/citizen dashboard. Over the past 3-4 years dashboards have become more common in municipal governments.

Given the significance of interactive dashboards as an emerging technology and their potential usefulness in supporting accountability and citizen engagement, we conducted extensive research on their use by other cities. To determine our sample, Canadian and U.S. cities with a populations greater than 250,000 people were selected for review and screening. Of those, 99 cities were determined to have a population of 250,000 or more people. The websites of the 99 cities were visited to determine whether they used city/citizen dashboards.

Of the 99 city websites reviewed, 31 used city/citizen dashboards and were screened in for further research. Of the 31 dashboards, seven were from large cities (including one Canadian city); the remaining 24 were from mid-sized cities (including four Canadian cities).

Criteria to evaluate the dashboards that were screened in were developed by the Audit Services Division. Each dashboard was evaluated against these criteria and assigned a score (the higher the score, the more sophisticated the dashboard was).

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

From this research, a select number of cities were identified for site visits and/or conference calls. These cities were chosen based on how they scored (several of the top dashboards were selected for site visits) and due to the fact that many of the dashboards looked similar, dashboards that contained unique characteristics were also selected for site visits.

During site visits, some additional cities were identified by our hosts. As a result, Audit Services added further cities to the detailed research component (nine additional cities).

Additionally, as the project progressed, it became more apparent that there was a strong linkage between dashboards and open data. Three additional cities were reviewed solely from an open data portal perspective, along with two sites from the US Federal government. Open data was also part of the review process for the other cities previously selected for detailed research.

Site visits/conference calls were conducted at/with the following cities:

- Calgary, AB*
- Edmonton, AB*
- Houston, TX*
- Irving, TX*
- Niagara Region, ON*
- Peel Region, ON **
- Portland, OR*
- Santa Monica, CA**
- St. Albert, AB*

*visit/conference call focused on dashboard and/or performance measurement

**visit/conference call focused on an index of well-being

The City of Hamilton is appreciative of the time the above cities took to share their experiences with performance measurement and dashboards.

Dashboard Best Practices

Some of the common features of these cities with advanced city/citizen dashboards and performance measurement systems included:

- A Dedicated Team

All of the cities visited (focus on dashboard and performance measurement) had a team dedicated to maintaining the dashboard and related performance measurements

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- A dedication to performance measurement and performance improvement/continuous improvement and a structured approach to one or both of these topics. Many had teams dedicated to performance improvement/continuous improvement. The City of Houston calls this type of work “PI Projects” (Performance Improvement Projects) and the City of Calgary regularly conducts Zero Based Reviews (ZBRs) to improve their service delivery.
- Culture: at all of the site visits, the importance of culture was discussed.

Many of the cities discussed how it was important not to underestimate the importance of culture and how significant effort must be made early on in any new performance measurement/dashboard process to ensure that the organization adapts to and accepts these changes. The City of Houston noted that not addressing the culture piece can hinder and slow the progress of performance measurement and performance excellence work.

- Education and Training-Most of the cities visited had formal corporate-wide training with topics similar to: Performance Measurement 101, Results Based Accountability 101 and Balanced Scorecard training
- Best Practices Sharing-some of the most advanced cities held regular “Communities of Practice” where performance measurement practitioners throughout came together two to three times a year to share learnings, best practices and generally work together to move performance measurement forward even further in their organization.

Audit Services attended one of the semi-annual Community of Practice sessions at the City of Calgary during a site visit. This model was found to be an effective way of bringing together staff from different departments that were all dedicated to performance measurement and provided the opportunity for them to share their current projects and key learnings in this area.

- Validated data-the City of Edmonton is a leader in this area. For the 2015 “Our Progress” report, the City Auditor’s Office validated a sample of the data and information contained in the report to verify that the information presented was accurate. The process that the City of Edmonton has in place is a leading practice that ensures that the information in the report is based on high integrity data.
- Had the support of their senior leadership and/or elected officials-the cities visited all had strong support from their senior leadership team and/or elected officials. They were supportive of training and allocating resources.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- Do not underestimate the effort and resources required. Creating a dashboard with a corresponding performance measurement system is a major undertaking. This was a message that was heard at all of the cities that were visited.

Portland, Oregon has a well-developed performance management portal. They have a Key Performance Measure Methodology that subscribes to the view that measures should answer fundamental questions which are similar to the RBA methodology. In terms of dashboards, they have a Mayor's Dashboard that tracks key priorities in the areas of Economic Opportunity, Liveable Neighbourhoods, Public Safety, and Good Government. Under public safety for example they provide crime rates, police and EMS response times, use of force statistics and resident survey information on how safe residents feel.

Another level of performance measurement is provided through "City Bureau Performance Dashboards" which citizens can access to get more detail about the performance of specific departments. In terms of extensiveness, organization and breadth of measures covered, Montgomery County, Maryland maintains a very effective dashboard called "County Stat". The first level of entry is by priority objective. Under each objective are broad indicators that are followed by indicators tracked by each department supporting that objective. This is useful in showing all the departments involved in supporting that objective or that impact each theme. The next level of performance information shows measurements related to cross departmental initiatives. The final listing of measures is accessible by department. Citizens can access particular departments and look at their mission statements and "headline" results.

The most elaborate dashboard in our research was the Dublin Dashboard of the City of Dublin, Ireland. It provides citizens, researchers, planners, and businesses with hundreds of data visualizations on every aspect of the City including metrics, time sensitive data and real time information.

The most innovative dashboard initiative we found was Boston's CityScore which puts together and tracks a set of metrics from across the city to provide an at-a-glance view of the City's performance. It is updated very close to real time and shown on monitors in the City's offices and on their website. A unique feature of the CityScore is that it tracks each measure using a relative scale where a "1" is target performance, below "1" is below target, etc. These scores are rolled up into an overall CityScore which allows citizens, the Mayor, Council, and administrators a day-to-day perspective on city performance. The dashboard is supported by an automated process where data is retrieved for each measure and compared to a target or historical average and normalized whereby a "1" is "meets target". They track a number of measures related to city activities such as emergency response and on-time performance of various services.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

One of the more valuable lessons learned in our research was that a city/citizen dashboard is most useful when it is supported by a robust performance measurement program and it has a high level of data integrity.

The dashboards reviewed covered a wide variety of time horizons. Some of the dashboards are updated annually; others are updated quarterly or monthly. There are a very limited number of dashboards that are updated “real-time” (i.e. five minute delay or less). One of the most well-known real-time dashboards in North America is in Boston, MA. Outside of North America, Dublin, Ireland and London, United Kingdom have impressive real-time dashboards.

Overall, based on our external and internal research, great things are possible at the City of Hamilton from a performance measurement and city/citizen dashboard perspective. It is realistic that within the next six months to 18 months, Hamilton should be able to roll out Version 1.0 of a City of Hamilton Citizen Dashboard.

Implementing a robust performance measurement program to support the dashboard is a significant initiative that should be rolled out in phases.

Based on the research conducted, these phases are cumulatively longer-term in nature and span between three to five years to fully develop and implement a robust performance measurement program. The City of Edmonton has been developing and implementing their program (and the related dashboard) since 2012 and work is still continuing to implement the last phase of their performance measurement system. Even though the system is still in the final phases of implementation, many successful components have already been fully rolled out, including the “Citizen Dashboard” and the “Our Progress” report on performance for the 2015 calendar year. The initial Citizen dashboard only included one of the six themes from their strategic plan “The Way Ahead” and was incrementally expanded to include all six theme areas from the strategic plan.

Platforms Used

The most common technology platforms used for dashboards include Socrata, InformationBuilders and Tableau Software. There are also a few cities that have designed in-house software solutions for their dashboards.

Socrata is a cloud-based data visualization and analysis toolset for open government.⁴

Socrata Open Performance is one of the premier performance management solutions for governments of all sizes to establish and communicate their goals and tangible achievements. It is the only solution that utilizes performance metrics based on real, up-to-date data. Socrata Open Performance helps promote a culture of data-driven decision-making, as well as articulate the efforts being taken and the progress achieved so far.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

We found many organizations using it to ensure they are being accountable for achieving their goals embracing Socrata Open Performance as a key component of their operational strategies.⁵

InformationBuilders is known for its business intelligence tools and other related applications.⁶

The WebFOCUS Performance Management Framework (PMF) from Information Builders is a set of business-level tools that improve the management of your department or division. It enables the management of three critical elements of the performance execution cycle:

Strategy – Select, organize, and align your goals and objectives

Metrics – Determine the percent achieved towards an objective

Actions – Define the initiatives and projects designed to fulfill goals and objectives”⁷

Tableau Software produces a family of interactive data visualization products focused on business intelligence.⁸

Tableau is business intelligence software that allows anyone to easily connect to data, then visualize and create interactive, sharable dashboards. It's easy enough that any Excel user can learn it, but powerful enough to satisfy even the most complex analytical problems.⁹

Having the appropriate software solution for performance measurement and a related dashboard is a critical success factor. Further research will need to be completed as part of a formal procurement process that is anticipated to take place in the future.

Accountability Under the CitiStat Model

One of the basic tenets of sound management is in the establishment of mechanisms for reporting of performance using metrics that have been agreed-on and tracked over time. All of the best practices cities we examined had mature systems for reporting on strategic outcomes, major initiatives, departmental business plans, services and programs.

The most rigorous mechanism of accountability for performance that we found in our research was a management tool called CitiStat. It was originally developed and established in Baltimore, MD “to make City government responsive, accountable, and cost effective.” The concept was to maximize accountability by having departmental management appear at routine intervals (2-4 weeks) for CitiStat sessions with the mayor, other appointed members of cabinet and administrative representatives. Departments submit their data to analysts in the CitiStat office prior to each session and the analysts prepare briefing notes and possible questions for members.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

At each meeting departmental leadership are questioned about their metrics and what is being done to improve performance.

Baltimore uses the data-driven CitiStat system to manage all programs and services and over time they have gathered an array of useful indicators. Since inception, Baltimore has realized dramatic improvements and efficiency savings, and the model was adopted by other cities in the United States.

By attending to “the numbers” in such a fashion Baltimore became much more adept at focusing on problem areas, spotting trends and allocating resources efficiently. To make sessions as effective as possible, Baltimore adheres to four (4) principles in conducting its CitiStat approach.

1. Accurate and timely intelligence shared by all
2. Rapid development of resources
3. Effective tactics and strategies
4. Relentless follow-up and assessment

This approach involves more continuous, closer to real time data collection and review so it does affect resource requirements. It requires capacity for data collection be built, data analysis training for staff be provided, and analysts to perform a “secretariat” function for the sessions.

The success of CitiStat led to similar approaches being followed at the state level – first Maryland and then Washington State. One approach that has evolved in the CitiStat system is to employ it as a thematic review of priority issues.

With a given issue such as economic vitality, health, safety, or transportation, multiple departments and agencies participate in sessions to collaborate in resolving problems. This approach enhances coordination and communication across departmental silos and ensures all necessary perspectives are brought to bear on challenging issues. The city of Portland, OR also employs such an approach; which is called a “GATR” session. The GATR acronym stands for “Government Accountability Transparency Results”.

Open Data

Most of the best practice cities we researched extend the usefulness of their public facing performance information by providing an open data portal on their websites. Open data is a practice that makes machine-readable source data publicly available that is easy to use and accessible under different formats so it can be repurposed and reused by citizens, researchers, analysts and application developers. It facilitates answers to questions that pre-existing measures portrayed on a dashboard cannot answer by providing the underlying data sources. By making data available for use by citizens it supports transparent government and promotes citizen engagement. Through open data, citizens become more informed and engaged and have the opportunity to help cities become more innovative.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Most often, a citizen dashboard will supply a current metric along with some analysis and trending. In addition they usually supply a link to the underlying data set. A number of cities have built up substantial open data catalogues with thousands of datasets, which then becomes a challenge to maintain.

A typical site will highlight popular datasets in the catalogue, provide search capabilities and filters to narrow the datasets under different categories, views, topics and owners and they also make their datasets available in different formats.

Los Angeles has a well-established and easily navigable portal. Users can access information through multiple channels depending on business category. They also provide a platform for downloading location based open data (LA GeoHub) and a platform called LA Control Panel that provides detailed expenditures related to every aspect of city operations.

In Hamilton, there are a small number of datasets that have been made available to the public. However, the program is really in its infancy, so it may be optimal to consider as part of a rollout of performance measures, the provision of each dashboard measure with “clickable” access to the underlying data set.

One interesting practice we found in Boston was in how they have gone about the revamp of their open data catalogue.

Given libraries and librarians long standing expertise in providing citizens free and open access to knowledge resources, providing assistance to researchers, and designing and maintaining knowledge management systems, the Citywide Analytics Team is partnering with Boston Public Library to reimagine the City’s data as a valuable resource for the public. They have librarians as part of the project team that is seeking to inventory and build out the City’s comprehensive data catalogue. They will re-develop their open data portal with an enhanced user interface to improve user experience, and to develop and deliver open data related curriculum to all librarians.

Another observation we have with respect to open data is that most cities with a significant open data presence have a formal policy that clarifies and defines open data, privacy, security and interoperability requirements and includes guidance for departments on the clarification of datasets as public or protected, and expectations to be met for publishing open data.

Resident Surveys

In a number of best practice cities they routinely conduct surveys of residents, businesses and users of services. While complaint tracking regimes are fairly common, our research found that regular statistical surveying of citizens as part of a performance measurement system occurs less frequently.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Rigorous survey information can be useful in setting and tracking progress on strategic priorities, and in understanding where improvements are needed in service levels.

The City of Williamsburg, Virginia for example identifies new strategic objectives for the city every two years. Their biennial “Goals, Initiatives and Outcomes” report provides an expression of city priorities, including measurable desired outcomes for nine broad goals. For each goal they conduct extensive survey information every two years to evaluate and refine their priorities.

In Kansas City, they have adopted annual five year rolling business plans that support six strategic goal statements related to Customer Service, Finance and Governance, Infrastructure and Transportation, Neighbourhoods and Healthy Communities, Planning, Zoning and Economic Development, and Public Safety. They make extensive use of citizen satisfaction in measurement, and set targets and track progress for each measure.

The City of Calgary’s Customer Service area conducts “Citizen Satisfaction Surveys” annually and has “Citizen’s View” which is “is an online panel that The City uses to collect your input. Calgary’s population is diverse and Citizens’ View makes it easier for a wide range of Calgarians to share thoughts and opinions on topics that matter in our community.”¹⁰

In Irving, Texas the city is strongly committed to customer-focused outcomes. They use in-house resources to conduct resident surveys every two years and a business survey and employee survey in the alternating year. Surveys provide statistically valid information about quality of services as well as citizen perceptions of community experience, quality of life, public safety, place to live, etc. The alternating years approach gives more time for analysis and action strategies to be developed and implemented. They also have focus groups to get a deeper perspective on issues, and to understand what the results really mean and what actions could be taken. This helps get information from underrepresented groups and improves citizen engagement. The city also conducts point of service surveys through various departments citywide to obtain customer feedback for continuous improvement in service delivery.

As the City of Hamilton moves forward with developing and implementing a performance measurement program and the related dashboards, the level of community engagement needs to be considered. At a minimum, conducting a resident survey bi-annually would be a good practice. Community engagement to determine which measures should appear on City dashboards also needs to be given serious consideration.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Organization and Dedicated Resources

One of the most common best practices in implementing a performance measurement regime was the establishment of a dedicated team to provide the resources necessary to ensure a consistent approach and successful outcome.

Variously called “Office of Performance and Accountability”, “Innovation and Performance Office”, “City-Wide Analytics Team”, “Organizational Performance Team”, etc. these units have the mandate to ensure performance metrics and analytics are carried out in an effective and consistent manner, that departments and programs have the support they need for performance tracking and that Senior Leadership, Council and the Public are presented with performance information that is timely, reliable and understandable.

In our research, the size of such an office ranged from between three and 25 people. The functional responsibilities varied somewhat, as in some cases other functional areas of a particular city took on some of these roles. For example, in some cities strategic planning may be a function carried out by the performance office or it may be separately established elsewhere. Other such functions included open data and resident/customer surveys.

At its core, however, the performance office was the area responsible for putting in place a corporate wide regime of performance measures, including reporting mechanisms, for providing training and consulting on performance metrics and analytics, with the goal of ensuring each department had a vigorous performance measurement system.

In cases where the city had implemented a “CitiStat” approach modelled after Baltimore, this unit provided the analytic support to that program.

In Irving, for example, the office is responsible for process improvement/innovation, consulting and training, performance measures development, tracking and reporting, regular resident and local business surveys, strategic planning and business intelligence analytics. Where dashboards have been put in place as for example in Niagara Region, the Performance Management and Data Analytics team are the champions of data driven government.

They exercise their expertise in visualizing data through charts and interactive dashboards, by using their data analysis and process improvement skills to assist departments in setting up the performance measures that will be used and the data feeds for those measures. They have a role in monitoring and verifying the performance information and in assisting with deeper analysis requirements. In many cases best practice cities have capabilities in business process improvement, Lean Six Sigma, etc. which is used to assist departments in following through with improvement opportunities.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

These functions are continuously innovating the way performance information is presented to different audiences, and adding or removing content such as the measures, benchmarks and baseline information.

In our estimation a suitable unit for the City would bring together existing positions and/or add new ones to form a team of between five to seven FTE's depending on the roles and functions assumed.

Wellbeing Measures

Perhaps the most challenging aspect of performance measurement is in developing indicators that can convey the full dimension of a successful, healthy and thriving community. There has been much research in the last few years on measuring health and wellbeing of communities. The intent behind such efforts is to develop full understanding of the vitality and quality of life experienced by citizens in a region in order for those who manage cities to be able to be responsive to the policy and service needs of their community.

Traditional measures such as GDP per capita fall short of being broad enough to measure social progress and wellbeing in communities. A few cities have experimented with the development of measures that provide insights into citizen health and engagement, quality of life, economic opportunity, environment, safety and sustainability. Indicators from all these areas are brought together into an index that portrays the vitality of a city and wellbeing of citizens.

Two municipalities in Ontario that have been visionary in undertaking this work are the City of Guelph and Peel Region, which built their efforts around the Canadian Index of Well Being. The Canadian Index of Well Being is made up of eight domains or themes, each containing eight indicators (64 in total). Data is collected and used to evaluate wellbeing under the themes of community vitality, democratic engagement, education, environment, healthy population, leisure and culture, living standards and time use. The index and measures can be used to develop important insights into their respective regions.

There have been challenges in collecting reliable data for all of the variables. Peel Region for example was able to collect data for 35 of the 64 indicators. Working with the University of Waterloo they were nevertheless able to create a snapshot of baseline status of Peel's wellbeing that could be used in concert with other measures and furnish population level measurement for their strategic plans and priorities. Another early adopter of the Canadian Index of Well Being approach is the Region of Waterloo. Similar to Guelph, the Kitchener and Waterloo Community Foundation used a survey instrument to assess each domain of the Index.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

In Hamilton, there is an important contribution being made to providing broader based measurement by the Hamilton Community Foundation. Their “Vital Signs” report analyzes major economic indicators, rental housing, jobs, security of employment and barriers in order to evaluate key areas of vitality and quality of life in the community.

Another source of broad performance information is the indicators for City services and quality of life published by the International Organization for Standardization as ISO37120. The standard was developed from extensive testing by more than 250 cities worldwide. It includes 100 indicators that measure a city’s social, economic and environmental performance. Cities can be certified under ISO37120 by the World Council on City Data at different levels depending on metrics used and validated.

Perhaps the most extensive work done on wellbeing indicators has been Santa Monica’s Well Being Project. Santa Monica, CA was one of five cities to win Bloomberg Philanthropies Mayors Challenge, a competition that encourages cities to generate innovative ideas to improve city life. They partnered with the RAND Corporation and UK-based New Economies Foundation and a panel of international experts to develop The Wellbeing Index, a methodology that uses a robust and comprehensive approach to measure city wellbeing across multiple dimensions. Data from public and private agencies, survey and social media are used to portray wellbeing along five dimensions – Community, Place, Learning, Health, and Economy plus the personal outlook and life satisfaction of citizens. From the Index, they developed strong insights into their community, identified areas for policy and program action and set a baseline for strategic priorities going forward.

Santa Monica’s methods and materials are available to other cities to assist them in the developing their own index. In our view, the City of Hamilton has the opportunity to work with anchor institutions in the community to conduct similar research using this approach that aligns closely with the themes of its strategic plan and community vision (Our Future Hamilton), please see Appendix “C” to report AUD16022. For many components of well-being, the City of Hamilton is not the only service provider for services to the community that contribute to well-being or other community goals (as outlined in the “Our Future Hamilton” community vision and its six themes). Partnerships could be leveraged in future collaboration on a “community dashboard”. There could be a collaborative effort for reporting on the themes and areas that are important to Hamiltonians.

While a “community dashboard” is important in the longer term, it is not the immediate priority item based on the findings from the external research that was conducted. It is recommended that key “community indicators” that are readily available be included in early versions of the dashboard (such as the unemployment rate, crime rate, air quality), while further work needs to be completed with key community institutions to determine the priority outcomes that are to be reported and the measures associated (and how to calculate them) with these outcomes.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

A “community dashboard” may be an appropriate venue for reporting measures where the city does not control (i.e. population outcomes) or have the data. There have been some preliminary discussions between McMaster University and the City of Hamilton. The expertise of Hamilton’s academic institutions and community organizations creates opportunities for mutual cooperation in meeting the measurement and data collection challenge ahead.

Summary of Internal Research

Performance measurement activities quantify the efficiency and effectiveness of past actions in evaluating how well organizations deliver value to its stakeholders.

A performance measurement framework promotes a culture of continuous improvement by selecting the right measures and targets to use resources in an efficient and effective manner. Performance measures link activities to the organizations priorities and corporate strategic plan. Currently at the City, there is no corporate-wide performance measurement framework. Although the majority of service areas have some type of performance measures, they operate in isolation and do not link performance measures to the strategic plan or consistently set performance targets or goals. As not many service areas have set targets to strive toward, most action taken is reactionary and not factored into strategic planning. Opportunities for improvement include:

- Developing a performance measurement framework that breaks silos and aligns performance across all service areas to the corporate strategic plan;
- Developing outcome measures and targets that tie to the strategic plan;
- Developing business and budget plans that align with performance targets; and
- Regularly reviewing performance measures for relevance and appropriateness.

A performance measurement framework includes communication of performance results to stakeholders. Currently at the City, there is no standard or expectation on how performance measures and results are communicated to management, Council and citizens. Although some service areas report performance results to Council annually, this information is difficult to find. Opportunities for improvement include:

- Developing a standard to track and report corporate-wide performance results to Council on an annual basis; and
- Publishing performance measures and results of interest to stakeholders on an accessible and user friendly dashboard.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Organizational culture underpins all performance measurement. Without appropriate resources, knowledge, support and reinforcement, employees may be unable or unmotivated to find more efficient and effective ways of delivering services. Currently at the City, the level of performance measurement activities varies across service areas and very few management have been formally trained on performance measurement. Opportunities for improvement include:

- Developing a corporate-wide training program for all levels of the organization;
- Dedicating resources (e.g. people, systems, money and time) to further develop, and implement a corporate-wide performance measurement program; and
- Rewarding a culture that fosters strategic thinking and continuous improvement.

Top Five Service Areas

Based on the internal research that was conducted, five service areas have more mature performance measurement processes when compared to the rest of the organization. The top five service areas for performance measurement at the City of Hamilton currently are: Animal Services, Emergency Medical Services, Public Transportation, Energy Management and Long-Term Care are the top performing service areas, with common features that include:

- Having outcome measures;
- Reporting to Council at least on an annual basis;
- Utilizing graphs and illustrations to depict performance results;
- Using performance results either reactively or proactively to guide process and program changes; and
- Requesting additional resources to specifically improve performance outcomes.

Please refer to Appendix “D” to Report AUD16022 for a graphical depiction of how the top five service areas compare to the average of all service areas, based on the research that was conducted internally.

For one of these top five service areas (Public Transportation), Audit Services worked with management to develop a mock-up of dashboard for this particular service area. Please see Appendix “B” to report AUD16022.

Example of a High Potential Area (Hamilton Water)

There are other areas at the City of Hamilton that have the potential to have a high level maturity for performance measurement. Currently, Hamilton Water has quantitative and qualitative, short term, output and outcome measures that relate to their mission statement. However, there is no direct link to the corporate strategic plan.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Targets have been set for some measures based on regulatory requirements and/or established service levels. Measures are used to support the annual rate budget submission and indirectly to make responsive service decisions. Front-line staff in are normally not involved or trained in performance measurement.

Hamilton Water is in the process of collecting performance measures from each section to create an inventory of measures. Once this exercise is complete, Hamilton Water plans to report their performance annually and to use measures to decide on what services and how to offer these services.

A mature future state for performance measurement for Hamilton Water would include the following components:

- Strategic outcome measures;
- Regular review and update of measures to reflect changing environmental factors;
- Targets have been set for each performance measure;
- Performance results are reported annually to Council;
- Hamilton Water contributes to a public-facing dashboard to communicate their performance;
- Measures are linked to business and strategic plans to proactively guide decision making; and
- Staff are trained and supported in performance measurement.

Organizational Barriers/Challenges:

Identified by Management to Placing Measures on a Public-Facing Dashboard

- Resources
Limited time, staffing and/or financial resources are available to carry out performance measurement activities (e.g. collect/extract data, calculate measures) in a timely manner.
- Data Integrity
Data currently used to measure performance indicators may not be accurate, complete or timely.
- Low Public Interest
Management believes their internal service area is of little interest to the general public so dashboard measures are unnecessary
- Technology
No automated system is in place or the current system cannot collect data or generate the necessary information to support performance measurement.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Five service areas are in the process of obtaining or investigating technological solutions that may alleviate this barrier.

- Public Perception
The public may misinterpret performance results or embarrass Council if performance is not achieved.

Identified During Research

Culture

Based on the internal research that was conducted, performance measures are not consistently part of the current organizational culture at the City of Hamilton. There are pockets of the organization that utilize performance measures as part of their day-to-day, but this is not pervasive throughout the broader organization. Changing the culture will be one of the most challenging components of implementing a corporate-wide performance measurement system, it is also the most important.

Change Management

Throughout this research project, it became apparent that performance measurement is a big change for the organization. As noted above, there is not currently a culture of performance measurement that is pervasive throughout the organization. Successfully educating, training and transitioning the organization will require a comprehensive change management plan.

The City of Hamilton has a corporate standard for change management, the PROSCI change management methodology which will assist the process, but an overall strategy for change management with respect to performance should be developed.

Maintenance-Transitioning to an Ongoing Program

Ongoing maintenance is critical for a successful dashboard and performance measurement program. Performance measurement is not a “project”. Performance measurement and a dashboard are ongoing programs of work that should not be completed on a short-term basis.

While a higher level of effort is needed to support the program when it is first being developed and implemented, ongoing and sustained efforts are needed to enable the success of the overall program.

Related Topics

The initial area that was of interest to both management and members of Council were City or Citizen dashboards at municipalities. Other related best practices we found were:

- Open Government
Open government-the dashboards were part of efforts for cities’ to be more transparent about their results and demonstrated accountability to their residents and other community stakeholders.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- Business Planning/Multi-Year Budgeting

Many of the cities visited had multi-year budgeting processes that fit in to the overall performance measurement framework. City of Edmonton and City of Calgary had linkages between their overall performance measurement process and business planning/multi-year budgeting.

- Vision and Strategic Plan

The cities visited all had strategic plans. Many of the cities visited also had a community vision (similar to Hamilton's "Our Future Hamilton"). Hamilton has already completed a lot of good work with the recently completed Community Vision (Our Future Hamilton) and the 2016-2025 Strategic Plan containing themes that align directly with "Our Future Hamilton. The next opportunity for alignment will come later in 2016 with the introduction of business planning and multi-year budgeting. Please refer to Appendix "C" to Report AUD16022 for the diagram for how all of this work aligns. Multi-year budgeting and business planning are part of the "Work Planning" tier of the diagram. The performance measures used by some of our researched best practice cities could help inform the measures used.

- Business Intelligence

Definition: "Business intelligence (BI) is an umbrella term that includes the applications, infrastructure and tools, and best practices that enable access to and analysis of information to improve and optimize decisions and performance."¹¹

The City of Hamilton has business intelligence efforts underway for the about the past five years. The integration of business intelligence efforts with the performance measures project would be important to ensure a mature, functioning performance framework.

- Performance Accountability & Development

Many leading organizations link their performance appraisal system with their performance measurement system. Both the City of Burlington and the City Calgary have this component integrated as part of their overall performance accountability structure.

- Mayor's Task Force for Intelligent Cities

In the fall of 2015, the City of Hamilton applied for an "Intelligent Communities" designation with the Intelligent Communities Forum (ICF).

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

Hamilton was one of 360 communities around the world to be awarded a Smart 21 designation on October 21st, 2015.

A Smart 21 City indicates our ability to adopt technology and create vision-driven, community based, smart solutions to some of our most urgent problems. The Intelligent Communities Forum is an international think tank and non-profit that examines the capability of individual cities to prosper in a Broad Band Economy and remain competitive within the marketplace.

Upon presentation of Information Report PED16038 about the ICF designation, a motion was passed to create a Mayor's Task Force.

The Mayor's Intelligent Community Task Force will provide the leadership and direction to explore and address Hamilton's weaknesses while leveraging the strengths, as they relate to an Intelligent Community.

Specific objectives include:

- to examine and assess Hamilton's IT infrastructure
- to develop a city-wide digital strategy, supported by an action plan
- to improve Hamilton's strengths and assets as they pertain to ICF indicators

The Mayor's Task Force consists of members of Council, City Staff, representatives from local non-profit organizations and institutions, the Chamber of Commerce, and local industry leaders. The first meeting was held in September, 2016.

Next Steps

The Audit Services Division presented our research findings to the Senior Leadership Team (SLT) in August 2016. Several additional meetings were also held with the City Manager and staff from his office.

Based on the internal and external research that was completed, the following next steps are needed to move performance measurement forward at the City of Hamilton. The City Manager has enthusiastically agreed to all of these next steps and will begin to implement them under the authority of By-law 08-307 in the near future. These next steps are as follows:

- (i) That the City, based on the research of this report, develop, design and implement a public facing City Dashboard as part of a broader strategy to improve the efficacy and use of performance measures in City management.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- (ii) That an office of Performance Excellence be established by the City Manager to provide dedicated resources to oversee and coordinate the development of a mature performance measurement regime.
- (iii) That the Performance Excellence team be charged with the responsibility of working with departments in the development of robust performance measures and analytics, establishment and tracking of strategic plans, business plans and key initiatives, process improvement opportunities, customer/resident research, aligning organizational practices with recognized criteria and acknowledged better practices in municipal management and producing an annual Performance Measurement Progress Report.
- (iv) That the City of Hamilton adopt the formal methodologies of a results-based corporate-wide performance accountability framework (e.g. “Results-Based Accountability”) to enable consistency in performance measurement maturity and inculcate a vigorous culture of performance excellence through commonality of language and understanding.
- (v) That the City adopt practices that model other cities integration of performance measurement, with other activities such as strategic planning, open data, business planning and business intelligence.
- (vi) That the City establish a strong accountability regime modelled on the CitiStat approach.
- (vii) That the City, with its Community partners, explore the development of community indicators that could be used to bring greater dimension to the City’s strengths and challenges across key elements of well being, sustainability, and citizen experience.
- (viii) That the City adopt a broadly targeted training regime in innovation, measurement, analytics, and process improvement to inculcate a strong culture of performance accountability and ensure the capacity and skills for successful implementation of a robust performance measurement system.
- (ix) That the City put into place an annual performance report of all City programs and services that explain to residents the quality, impact and satisfaction with services that has been achieved, in light of previous historical trends and targets established.
- (x) That the City put in place a system of regular measurement of resident satisfaction and business satisfaction with services and programs delivered by the City and incorporate that information into ongoing measurement, strategic planning, business planning and the annual performance report.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.

- (xi) That the City establish the relevant policies and procedures for this work including: Performance Measurement Policy, Open Data Policy, Citizen Survey Policy.
- (xii) That the City identify and procure the appropriate software tool for the City's dashboard and open data portal.

ALTERNATIVES FOR CONSIDERATION

(Include Financial, Staffing, Legal and Policy Implications and Pros and Cons for each alternative)

Not Applicable

ALIGNMENT TO THE 2016 – 2025 STRATEGIC PLAN

Community Engagement & Participation

Hamilton has an open, transparent and accessible approach to City government that engages with and empowers all citizens to be involved in their community.

Our People and Performance

Hamiltonians have a high level of trust and confidence in their City government.

APPENDICES AND SCHEDULES ATTACHED

Appendix "A" – Works Cited

Appendix "B" – Screenshots of dashboard mock-up (transit)

Appendix "C" – Linkages Between Performance Measurement and Existing Corporate Initiatives (vision, strategic plan, etc.)

Appendix "D" – Infographic of Internal Research

Appendix "E" – Baldrige Framework

Appendix "F" – Best Practices for Performance Measurement

Appendix "G" – Types of Performance Measures

Appendix "H" – List of websites for Various Cities

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

OUR Priorities: Community Engagement & Participation; Economic Prosperity and Growth; Healthy and Safe Communities; Clean and Green; Built Environment and Infrastructure; Culture and Diversity and Our People and Performance.