

NO: **F009**

COUNCIL DATE: **March 11, 2013**

FINANCE COMMITTEE

TO: **Mayor & Council**

DATE: **March 4, 2013**

FROM: **General Manager, Parks, Recreation and Culture
General Manager, Finance and Technology**

FILE: **1850-01**

SUBJECT: **IBM Smarter Cities Challenge Action Plan for 2013**

RECOMMENDATION

The Parks, Recreation and Culture Department and the Finance and Technology Department recommend that the Finance Committee recommend that Council approve an allocation of \$50,000 from the Council Initiative Fund to support the implementation of the initiatives as generally described in this report that will commence the process of implementing the recommendations of the IBM Smarter Cities Surrey Report related to making the best investments in children and youth in Surrey.

INTENT

The purpose of this report is to seek approval for funding actions that will assist in implementing the recommendation of the IBM Smarter Cities Challenge Report related to children and youth in Surrey.

BACKGROUND

During a three-week period in May and June of 2012, a team of six IBM experts worked in the City of Surrey to gather information about and make recommendations as to how the City of Surrey and its partners could make better investments in children and youth today that would lead to healthier residents and a more sustainable and prosperous community in the future.

The IBM team met with over 60 community stakeholders during their stay in Surrey. Through these interviews, observations, on-site visits and analysis of best practices and evidence-based Early Childhood Development (ECD) research, the team developed a set of recommendations that are focused on making the best investments for children and youth in Surrey. The IBM Smarter Cities Challenge Surrey Report (the "Report") is attached as Appendix A to this report.

Since receiving the Report, staff has held two workshops with community organizations. These sessions focussed on establishing a shared understanding around the Centre of Excellence concept and how to better utilize current resources and partnerships in support of the implementation of the Report's recommendations. Staff has also met with the Children's Partnership (CP) to discuss their ongoing role in the implementation of the Report's recommendations.

DISCUSSION

The Report included six fundamental recommendations as listed below:

1. Establish an Early Childhood Development (ECD) leadership strategy for Surrey;
2. Develop an ECD program framework;
3. Improve data-gathering and sharing for ECD;
4. Implement analytics-driven decision making;
5. Optimize existing ECD resources; and
6. Enhance citizen access and engagement.

To implement the recommendations of the Report a multi-stakeholder partnership is necessary, which will best leverage available resources and result in properly coordinated partner efforts. In this regard City staff intends to work collaboratively with the Children's Partnership table that includes representatives from School District 36 (SD36), the Ministry for Children and Family Development (MCFD), the United Way of the Lower Mainland (UWLM), and the Fraser Health Authority (FHA).

In the short term, the following initiatives are proposed to be undertaken:

1. Secure a Project Manager on a part-time basis to coordinate the development of an action plan that will advance the Report's recommendations, including the ECD Centre of Excellence concept, an integrated funding Memorandum of Understanding (MOU) between the various entities involved in ECD to ensure funding is used effectively for the delivery of ECD services in Surrey, an ECD dashboard and reporting metrics, a social media strategy and other citizen engagement initiatives as outlined within the Report;
2. Establish an internal ECD Smarter Cities Task Force made up of representatives from City Council, the Parks, Recreation and Culture Department, the Social Planning Section, the Economic Development Division, the Library Services Department and the Information Technology Division and link this Task Force with the Children's Partnership table;
3. Proceed with actions to hold an annual round table of leaders, convened by the Mayor and Council, to discuss (a) progress and (b) specific areas for collective influence and action; the Leaders including senior representatives of key provincial ministries, federal departments, the Surrey Board of Trade, the Surrey School District and philanthropic organizations; and
4. The City's Information Technology Division will oversee the implementation of the open data recommendations of the Report.

The City's ECD Smarter Cities Task Force will establish an Action Plan and work collaboratively with the community and the Children's Partnership table to prioritize and oversee the implementation of the Action Plan. A Progress Report will be forwarded to Council in late 2013 that will provide information on the Action Plan.

Some funding is required to implement the above-referenced initiatives. It is proposed that Council approve an allocation of \$50,000 from the Council Initiatives Fund in support of the work. Staff will include an appropriation in the 2014 Financial Plan to continue the work of implementing the Action Plan.

Status of the Council Initiatives Fund:

Appendix “B” attached to this report documents the status of the Council Initiatives Fund on an assumption that Council will approve the recommendation of this report.

SUSTAINABILITY CONSIDERATIONS

The implementation of the recommendations of this report will assist in achieving the objectives of the City’s Sustainability Charter; more particularly the following action items:

SC5: Plan for the Social Well Being of Surrey Residents:

1. By creating a child and youth friendly City;
2. By creating programs and recreation opportunities for children and youth;
3. With initiatives to encourage citizen engagement with social issues and social planning activity to build community capacity; and
4. Through City clean-up programs and civic pride initiatives.

SC15: Literacy, Education and Training:

1. Increasing the number of programs related to early childhood literacy, to ensure that Surrey’s children are ready to learn when they enter school.

SC16: Socio-cultural Infrastructure and Services:

1. Taking steps to stay abreast of emerging trends and opportunities and funding opportunities relative to social service issues;
2. Sharing information, discussing needs, assisting in developing solutions and establishing priorities with other orders of government, funders and community stakeholders; and
3. The implementation of solutions to social service issues through actions that are within the City’s mandated responsibilities.

CONCLUSION

Based on the above discussion, it is recommended that the Finance Committee recommend that Council approve an allocation of \$50,000 from the Council Initiative Fund to support the implementation of the initiatives as generally described in this report that will commence the process of implementing the recommendations of the IBM Smarter Cities Surrey Report related to making the best investments in children and youth in Surrey.

Laurie Cavan
General Manager
Parks, Recreation and Culture

Vivienne Wilke, CGA
General Manager
Finance and Technology

Appendix A – IBM Smarter Cities Challenge Report
Appendix B – 2013 Financial Plan Council Initiatives

IBM Smarter Cities Challenge Report

IBM's Smarter Cities Challenge

Surrey

Report





Contents

3	1. Executive summary
5	2. Introduction
5	A. Smarter Cities Challenge
5	B. The challenge
7	3. Context for recommendations
7	A. General observations and challenges
8	B. Funding challenges
9	C. Planning for the future
9	D. Data to support decisions
10	E. Connecting with the citizen
11	4. Recommendations
11	Recommendation 1: Establish an ECD leadership strategy for Surrey
16	Recommendation 2: ECD program framework
21	Recommendation 3: Improve data-gathering and sharing for ECD
25	Recommendation 4: Implement analytics-driven decision making
32	Recommendation 5: Optimize existing ECD resources
38	Recommendation 6: Enhance citizen access and engagement
43	5. Conclusion
45	6. Appendix
45	A. Acknowledgements
47	B. Team biographies and photos
50	C. References
52	D. Approach
56	E. Using open data to enhance ECD
59	F. Data-driven decisions

1. Executive summary

Introduction

The City of Surrey was one of the 33 cities selected to receive a Smarter Cities® Challenge grant from IBM in 2012 as part of IBM's citizenship efforts to build a Smarter Planet™. Since the program's inception in 2010, 42 cities have received Smarter Cities Challenge grants, and many of these have already made great progress on the road to becoming more instrumented, interconnected and intelligent. During three weeks in May and June 2012, a team of six IBM experts worked to deliver recommendations on a key challenge identified by Mayor Dianne Watts and her senior leadership team.

The challenge

The City of Surrey is evolving into the next metropolitan centre of British Columbia, Canada and is committed to being a child and youth-friendly city. As it continues its transformation into a vibrant, affordable, prosperous and healthy city where residents can live, work and play, it will continue to build on its successful and extensive partnerships with government and community agencies.

The challenge that the IBM team was asked to undertake was:

- Understand how the City and its partners can make better investments today, in young children ages 0-5 and their families, to create healthier residents and a more sustainable and prosperous community for tomorrow
- Recommend approaches to better share information and insights across service providers, funders and supporters, and drive improved and sustainable outcomes in children ages 0-5

Observations

Surrey's population has increased by 28 percent during the past 10 years; a third of the population is under the age of 20. Surrey has the highest birth rate in British Columbia and the largest school district in the province with 70,000 students. The City of Surrey, its partners in the provincial government, Fraser Health Authority, Surrey School District and the community agencies all have a strong vision around early childhood development (ECD).

Through strategic initiatives and investments in the past few years, the City has distinguished itself as a global leader in planning and innovation. With this track record of success, Surrey is well positioned to take a significant leap forward on an initiative focused on ensuring a sustainable and robust ECD environment.

“Understanding and investing in early childhood development is a pressing issue across North America and around the globe,” said Stan Litow, Vice President of IBM Corporate Citizenship & Corporate Affairs and President of the IBM International Foundation. “The positive long-term impacts of upfront investments are well documented; however this issue has yet to be fully addressed by any jurisdiction. Building on substantial existing investments, Surrey has the opportunity to be a model for implementing an integrated, data-driven approach to supporting early childhood development.”

In our interviews with stakeholders, we found that many members of the ECD ecosystem have a great desire and willingness to partner and coordinate efforts for the greater good of the Surrey community. There is agreement among stakeholders on the fundamental needs of young children: a safe, healthy and nurturing home, available and affordable quality childcare, access to appropriate programs and services to position children to be prepared for school. There is also general agreement that investment in ECD in Surrey will, in the long term, develop Surrey's youngest children into productive members of the community in their youth, middle and adult years.

One example of collaborative partnership is the Kensington Prairie Community Centre, where a renovated heritage school site has been transformed into a site focused on early learning, healthy child development and community engagement. Based on an integrated and collaborative approach, the centre is used for childcare, pre school, after-school programs and family support services provided by several different community agencies.

Funding for ECD services in Surrey is spread across a large number of providers, including an array of governmental and community agencies. Budget cuts and constrained resources were frequently cited as a primary challenge to the effectiveness of the ecosystem.

Surrey's social planning and forecasting efforts are challenged by the accelerated influx of new residents and the mobility of residents within the city. These trends put additional requirements and strains on the planning process, indicating the need for a more sophisticated planning model that can evolve with changes in citizens' needs. The rapid growth of the city's population further stresses neighbourhood engagement and participation in social planning.

The value of the Early Development Instrument (EDI) led by the University of British Columbia became apparent during our interviews. All stakeholders appeared to be aligned on the validity and importance of the EDI data as a common Key Performance Indicator (KPI) and benchmark to track the development of early childhood populations over time. The EDI assessment is undertaken of children through an assessment by the kindergarten teacher. The primary challenges that were expressed around EDI were in tracking a child's development prior to the assessment, standardizing the use of the EDI across evaluators and stakeholders, and aligning divergent definitions of neighbourhoods.

While a wealth of services and programs exist for the 0-5 age group, delivered or managed by a broad spectrum of service providers, a challenge exists around the awareness of these services and matching of programs that are specific to the needs of individual families.

A recurring theme that emerged was the importance of establishing sustainable programs. Surrey's powerful sustainability charter paints a holistic vision of a sustainable city. The charter is emerging as a strong candidate to be an overarching framework and guide for several of the City's strategies.

Conclusion

While resources are constrained, Surrey is a fast-growing community, and city leaders recognize that now is the time to invest in initiatives that provide a positive return on investment. The reliance on long-range statistical studies across traditional census intervals is no longer an option because the underlying city fabric experiences constant and rapid change. Surrey's growth requires an approach that will rely more on gathering performance data from its multiple programs and receiving realtime data feeds from multiple sources, including social media. The subsequent analysis of the data will support the decision making process to ensure Surrey is able to answer three fundamental questions: How are we doing? Why is the trend occurring? What should we be doing?

Surrey needs to align its sharing of ECD data and extend its use of analytics to identify meaningful patterns and correlations in data sets to predict future events and assess the attractiveness of various courses of action to drive key investment decisions.

Recommendation highlights

The IBM Smarter Cities Challenge team recommends a three-phase roadmap of concrete actions centered upon making better investments today to create healthier residents and a more sustainable and prosperous community for tomorrow.

- **Strengthen and extend foundations**
 - **(0–6 months):** Set up an ECD task force, expand an ECD strategy and partnership, assess community agency barriers and needs, investigate an ECD Centre of Excellence (CoE), initiate further discussions on data and information-sharing standards, create a Research and Analytics Reporting Team, maximize the joint use of facilities, and revitalize social media outreach.
 - **(6–12 months):** Create a leadership organization with oversight of all ECD programs, evaluate existing program portfolio and develop concepts for new pilots, enhance ECD KPIs and reporting standards, create a multi-scale model for predictive analytics, and develop personalized pathways for citizens to services.
- **Implement and scale (12–24 months):** Prioritize and implement pilot projects, promote an integrated ECD contract with the Ministry of Children and Family Development (MCFD), pilot programs using the City's longitudinal data, share integrated longitudinal data across providers, complement the EDI with leading metrics for ECD, plan to reach hidden populations, introduce neighbourhood-level planning, enhance social media analytics and use predictive analytics to identify meaningful patterns and correlations in data sets to predict future events and assess various planning scenarios.
- **Optimize (24–36 months):** Take successful ECD pilot programs to full scale, evolve CoE into Centre of Social Innovation, enhance a City ECD dashboard, increase quality of childcare, and implement customer relationship management.

2. Introduction

A. Smarter Cities Challenge

In 2010, IBM Corporate Citizenship launched the Smarter Cities Challenge to help 100 cities around the world over a three-year period become smarter through grants of IBM talent. The City of Surrey was selected through a competitive process as one of 33 cities to be awarded a Smarter Cities Challenge grant in 2012. Since the program's inception in 2010, more than 40 cities have received Smarter Cities Challenge grants, and many of these have already made great progress on the road to becoming more instrumented, interconnected and intelligent (additional information is available at www.smartercitieschallenge.org).

During a three-week period in May and June of 2012, a team of six IBM experts worked in the City of Surrey to deliver recommendations around a key issue for Mayor Dianne Watts and the City's leadership team.

B. The challenge

The City of Surrey challenged the IBM team to understand, “How can the City and its partners make better investments in youth today, to create healthier residents and a more sustainable and prosperous community for tomorrow?” The team was asked to focus specifically on ECD – children ages 0-5 and their families.

Many studies recognize that investment in early childhood has significant societal benefits in terms of producing citizens who are more able to contribute to their communities, a more educated population, a more able workforce and lower crime rates. Yet, the mission for ECD is split across many stakeholders and social services providers. The team's challenge was to recommend leadership and support processes that would optimize the available resources and investments in the population age five and younger and their families to help Surrey support its commitment that “The Future Lives Here.”

The IBM Smarter Cities Challenge (Surrey) team was established with members from the United States, Canada and Australia. The team was welcomed on the first day by the Mayor, City Manager and General Manager for Parks, Recreation and Culture.

The Mayor provided the team with an overview of her vision for the city and its citizens. The General Manager of Parks, Recreation and Culture was the City's hosting executive for the team and ensured it had access to the required individuals within the city to facilitate the work. The IBM team interviewed representatives from more than 20 organizations and more than 60 individuals (see Appendix A). Members of the public were also informally interviewed to obtain the public's perspective on the City and its available services.

In addition to the interviews, the team visited several venues such as City Hall, the new City Centre construction site, the main library, several City recreation centres, Surrey School District offices, a Strong Start program at Holly Elementary School, Kla-how-eya Aboriginal Centre, Kensington Prairie Community Centre and the YMCA. The team walked and drove through city neighbourhoods and visited local restaurants, speaking to residents and visitors to get first-hand impressions of Surrey and explored some of the internet and phone-based support services available to new residents of the city. The team also carried out extensive, independent, secondary research on the ECD ecosystem in Surrey and global best practices and case studies for ECD.

During the interviews, various groups and individuals shared their background, experiences, challenges and successes in providing services to children in Surrey. Several themes emerged during these interviews around the vision, challenges and needs, indicating a strong alignment amongst the stakeholders. The amount of positive work being carried out in Surrey was inspiring, and every community partner agency was positive and willing to work with the City.

Following interviews and site visits, the IBM team conducted a review of research on best practices on ECD, collaborative partnerships in cities, use of evidence-based analytics to improve outcomes, and other related studies. After synthesizing this collected information and our research, the team developed a set of recommendations.

3. Context for recommendations

A. General observations and challenges

The City of Surrey, its partners in the provincial government, Fraser Health Authority, Surrey School District and the not-for-profit agencies all have a strong commitment to improving ECD services. Through strategic initiatives and investments, the city has distinguished itself as a global leader in planning and innovation. With this track record of success, Surrey is well-positioned to take a significant leap forward on an initiative focused on ensuring a sustainable and robust ECD environment.

Surrey is one of the only cities in British Columbia with a rapidly growing population of young children. Overall, diverse population growth, including vulnerable populations such as refugees and immigrants, coupled with significant early childhood (0-5 years) and youth population growth, make Surrey unique in the provincial landscape. The community has repeatedly demonstrated that it is action-oriented and willing to take informed risks to ensure “The Future Lives Here”. There is a clear consensus on the need to focus on ECD among all partners, with agreement to recognize the EDI data from the University of British Columbia’s Human Early Learning Partnership (HELP) as a key baseline performance indicator against which to measure progress.

Surrey’s youngest children, ages five and younger, represent the opportunity and hope for the future of the region. The healthy growth and development of these young citizens are critical to their success later in life, and it is in the best interest of all stakeholders to work together in delivering the support to all children in Surrey, especially those who are most vulnerable. The challenge for stakeholders is to coordinate their efforts effectively to optimize resources, actions and outcomes.

There is agreement among stakeholders on the fundamental needs of young children: a safe, healthy and nurturing home, available and affordable quality childcare, and access to appropriate programs and services to position children to be prepared for school. The goal and the long-term view is to encourage participation as productive members of the community in their youth, middle and adult years.

In order for services and programs to meet ECD needs, government and community agencies need a clear vision and strategy for their individual organizations, as well as for a mutually agreed-to, coordinated and supportive ecosystem.

At present, there is no recognized single oversight and leadership structure for ECD programs in Surrey with the authority to drive clear and aligned mandates, policies, organizational structures, innovative investment strategies and accountabilities. Without such leadership, it is difficult for partners and their service delivery personnel to understand their roles and responsibilities in the context of a broader, collaborative ecosystem, and to measure progress in providing a world-class ECD environment.

In the interviews, the IBM Smarter Cities Challenge team found that many members of the ECD ecosystem have a great desire and willingness to partner and coordinate efforts for the greater good of the Surrey community. This includes a strong volunteer workforce, including those in the Royal Canadian Mounted Police (RCMP), and community volunteers.

However, there are also challenges that must be considered when forming a plan to improve. In particular:

- There are differing levels of understanding of the collaborative activities among ECD partners.
- There is the potential for duplication of services across partners.
- Success of interagency programs is heavily dependent upon relationships between individuals at a local level and can be difficult to sustain through personnel changes.
- There are opportunities for partnerships between organizations to be more effectively leveraged.
- Increasing financial stresses discourage partnering between individual organizations, straining trusted relationships between parties.
- There are a large number of community agencies in Surrey that are under-resourced, yet they are the main providers of early childhood programs and interventions.
- There is a clear need and desire for optimized usage of physical space. There are practical barriers to effective sharing of facilities that must be addressed.

Failure to address these issues will result in sub-optimal use of limited resources and will jeopardize Surrey's ability to grow into the premier city in which to raise children in the province.

B. Funding challenges

Funding for ECD services in Surrey is spread across a wide number of providers – both governmental and community agencies. Budget cuts and constrained resources were frequently cited as a primary challenge to the effectiveness of the ecosystem. Agencies have been forced to retrench, making interagency collaboration even more difficult.

The key questions raised were:

- Is the City of Surrey receiving a fair and proportional allocation of available funds based on its population and needs?
- Are the available funds distributed and used optimally?

As a growth community in British Columbia, Surrey represents the future of the province. Adequate funding for the City's services, as well as its partners, is critical to the delivery of quality services to citizens. It appears that current funding algorithms do not take into account Surrey's unique and distinct funding requirements based on the growing demands of families and their young children. Historical funding models at a federal and provincial level have not kept up with the dramatic shifts in the city's demographic makeup. Funding gaps may result from census data collection in 2010 that will not represent the current population and resulting needs.

Models for awarding funds to service providers via competitive procurement or grants appear to have been targeted to specific services and not always coordinated with the broader ECD ecosystem. While this has been an effective model in a different economic climate, given the current environment of tightening budgets, it will be critical to look for economies of scale, leverage existing resources and identify new funding sources to provide for the more complex requirements of a growing and increasingly diverse city.

The leadership of Surrey has effectively advocated and secured additional funding for the community, such as the Vulnerable Learners Fund from the Ministry of Education. The joint efforts of the school district and City are helping to bring over CDN\$2 million of additional funding for services addressing the needs of the most at-risk students in Surrey. This and other successful endeavors highlight Surrey's needs and ability to drive better outcomes from investment provide a model for future proposals.

“Surrey has an opportunity to continue leading by example in early childhood development, especially when you look at the case of Surrey’s First Steps refugee program. If the partners in the city can demonstrate a clear need, collaborative strategy and partnership, I am convinced that funders will come to the table to invest in initiatives to help the youngest citizens of Surrey and their families.”

— Jeff Calbick, Director of Community Impact and Investment,
United Way Lower Mainland, British Columbia.

C. Planning for the future

Surrey's social planning and forecasting efforts are challenged by the accelerated influx of new residents and mobility of residents within the city. These trends put additional requirements and strains on the planning process, indicating the need for a more sophisticated model that can evolve with changes in citizen needs. The rapid growth of the city's population further impedes extensive neighbourhood engagement and participation in social planning. Transportation is seen as a significant barrier to accessing services.

Surrey's powerful sustainability charter paints the vision of a sustainable city. The charter is emerging as a strong candidate to be an overarching strategy and guide for several of the City's strategies. The City has yet to institutionalize triple bottom line accounting (social, economic and environmental) as envisioned in Surrey's sustainability charter and has yet to extend the reporting dashboard to trace back to specific programs and services.

The social planning process is in need of enhanced governance in terms of the extensive information required to support informed decisions, the performance metrics required to measure the effectiveness of these decisions and the communications necessary to communicate key social planning decisions. These will improve internal and external planning, stakeholder engagement and participation.

The team believes that it will be difficult for Surrey to achieve its vision of a sustainable city and great place to live without an enhanced forecasting capability for social planning.

D. Data to support decisions

In approaching the Surrey project, the IBM Smarter Cities Challenge team investigated how its recommendations could support the building of a more instrumented, interconnected and intelligent early childhood environment for the city. These three core themes inform the actions and initiatives to create a Smarter City.

The well-established EDI of the Human Early Learning Program at the University of British Columbia provides for a consistent and trusted metric across populations and over time. EDI is a population-level research tool that collects data, via a questionnaire of 104 questions, measuring five core areas of early child development (ECD) that are good predictors of school readiness, adult health, education and social outcomes. The questionnaire is completed by kindergarten teachers from the Surrey School District for each student who has entered kindergarten and has been in class for several months. The questionnaire measures:

- Physical health and well-being
- Social competence
- Emotional maturity
- Language and cognitive development
- Community skills and general knowledge

There is common agreement across all stakeholders to utilize EDI as the primary instrument to measure progress, identify trends and target programs for vulnerable neighbourhoods and populations of Surrey's children. This longitudinal data would be complemented by the gathering and sharing of data from partners to provide a more complete view of realtime efforts with young children and their families.

The team recommends the continued and strengthened integration of the ECD partners in the city – providing a more interconnected and coordinated ecosystem for the service providers and their funders. A more interconnected system would allow leaders to investigate the EDI trends collaboratively along with data from other sources, prioritize actions and fund pilots. Enhancing the linkages – both formal and informal – as well as personal relationships at the city and local neighbourhood levels, allows for the more effective use of resources among all partners.

The collection of data through instrumentation, coupled with strong interconnections among organizations and people, allows analytic tools and methods to be applied to make the system more data-driven, more effective and more intelligent. Business intelligence tools and predictive analytics provide a view of aggregated data about neighbourhoods and vulnerable populations via dashboards that can inform decision makers with realtime trends and anticipated outcomes.

The value of the EDI data became apparent during the interviews. All stakeholders appeared to be aligned on the validity and importance of the EDI data as a common KPI reflecting the development of early childhood populations over time. The primary challenge that was expressed in using the EDI data across multiple stakeholders was in terms of lining up populations with divergent definitions of neighbourhoods.

A variety of methods are used by stakeholders to collect additional data about services for children five and younger, and their families. The data is stored in a number of disparate databases, spreadsheets, paper files and other formats. Stakeholders expressed the belief that the sharing of data would improve insights into, and the coordination of, ECD activities and delivery of ECD services. There are valid legal, privacy and security reasons for protection of data about children and families. The situation is further complicated by unclear data policies and lack of data exchange standards.

E. Connecting with the citizen

While a wealth of services and programs exist for the 0-5 age group that are delivered or managed by a broad spectrum of service providers, a challenge exists around the awareness and accessing of these services and programs that are specific to the needs of the individual. Many barriers exist to connecting service providers to needy families – including language, cultural sensitivities, gender, mistrust of governmental authority, lack of transportation, access to or understanding of technology, and mental or physical disabilities.

The parent or caregiver currently navigates across all service providers and programs to determine the offerings that meet their needs. However, given the above barriers and the complex model of programs and providers, this is not the most effective means of meeting needs. The City of Surrey and its partners have endeavored to simplify the process of navigating services for early childhood through mechanisms, such as calling 211. Based on interviewee inputs, the team perceives common agreement that more could be done to improve the awareness, efficiency and effectiveness of assessment, referral and delivery of services.

The interviews identified a common concern regarding the “Hidden Population” – those vulnerable children and their families that the City and its partners are unable to quantify or identify. There are emerging studies on strategies to gather information on these populations, such as that performed by the County of Surrey in the United Kingdom titled “Hidden Surrey”. With more accurate information about ECD needs, the City has the ability to plan more effectively for the provision of appropriate services.

A recurring theme in the interviews focused around the importance of establishing sustainable programs. There were frequent concerns about the sustainability of current programs. Unpredictable funding streams, changes in organizational structures and reassignment of program leadership have caused services to be cancelled. A unified leadership structure is critical to quantifying and qualifying inputs and outputs, establishing baseline service levels and KPIs, implementing performance measurement disciplines and communicating results. With Surrey’s complex environment, a performance measurement environment and strong management layer would help establish a framework for sustainability, supporting decisions with fact-based analysis and strategically applied resources.

4. Recommendations

Recommendation 1: Establish an ECD leadership strategy for Surrey

Recommendation 1: Coherent strategy for ECD leadership in Surrey

Mayor and Council take specific actions to further strengthen, coordinate and consolidate the citywide ECD strategy.

Scope and expected outcomes

By demonstrating leadership in defining, coordinating and consolidating the numerous stakeholder organizations involved in ECD in Surrey, the City can strengthen the overall ECD and family experience while demonstrating continually improving results for children and families as evidenced by improved results on metrics such as the EDI.

Expected outcomes

Establishment of an ECD leadership strategy will result in effective use of available resources, identification and filling of gaps in services and a world-class environment for ECD.

Proposed owner and stakeholder

Owner: Mayor and Council

Key stakeholders: Mayor, Council, representatives of City departments and ECD stakeholders

Recommendation 1.1: Leadership organization for ECD Programs

Mayor and Council convene a task force on ECD.

Scope and expected outcomes

Appoint a task force on ECD. The mission for the task force will be to develop a recommended leadership organization to provide coordinated oversight of all ECD activities.

The ECD ecosystem is complex, involving many stakeholders and no single owner. In the current structure, the ECD mission is spread among various offices, agencies and council committees. For example, within the municipal government alone, the current council committee structure spreads the ECD mission over several committees, including: the Social Planning Advisory Committee; the Parks, Recreation and Sport Tourism Committee; and the Diversity and Inclusivity Advisory Committee. By convening a task force, the City can help to define a leadership structure that will focus and coordinate the activities of all stakeholders.

The focus of the task force would be to define the structure of a leadership organization with the authority to oversee all major aspects of ECD – child care, parenting education, pre-school strategies, ECD metrics (including, but not limited to, the EDI), resources for families in need, and outreach to immigrant, refugee and aboriginal families with ECD needs.

An empowered leadership organization, mutually agreed to by key stakeholders and service providers, will increase the focus and effectiveness of the available ECD resources. This will allow the City to establish and maintain a best-of-class ECD environment in Surrey that can serve as an example to other cities globally.

A range of possible leadership options exist – from a strong multi-stakeholder office – such as an enhanced Office of ECD, Learning and Care – to a full Council Select Committee on ECD – as was recently done by the City for the senior citizens of Surrey when the Council Seniors Advisory and Accessibility Committee was formed in January 2012.

The ECD leadership organization should publish an annual report on progress against ECD metrics.

Expected Outcomes

The task force will provide a recommended structure for an ECD leadership organization with the authority to coordinate all ECD activities in Surrey. The City and stakeholders can then form the organization by mutual agreement.

Without a unified ECD leadership organization it is likely that coordination between ECD stakeholders will remain spotty and ad hoc, resulting in the overlap of missions, dilution of available resources and suboptimal outcomes.

Recommendation 1.1: Leadership organization for ECD Programs (continued)

Proposed owner and stakeholders	Suggested resources needed
<p>Owner: Mayor and Council Key Stakeholders: Surrey School District; Not-for-profit organizations impacting the 0-5 population and their families; Office of ECD Learning and Care; Fraser Health Authority; Ministry of Child and Family Development; Ministry of Education; Royal Canadian Mounted Police; Representatives from the community and private sector businesses</p>	<p>Members of the City government and representatives from aligned governmental and community organizations. Cost is expected to be minimal since the process and support for task force activity is well established.</p>
Dependencies	Key milestones, activities and timeframe
<ul style="list-style-type: none"> • Can be implemented independently of other recommendations • Requires strong council support and leadership, and strong buy-in from key stakeholders outside of City government 	<ol style="list-style-type: none"> 1. Council and Mayor create task force and define mission (immediately) 2. Appoint a chair and task force members (immediately) 3. Task force evaluates and recommends options for a unified leadership organization for ECD in Surrey (six months after milestones 1 and 2) 4. Mayor and Council determine which recommendation of the task force to adopt and act to establish the appropriate leadership organization (one month after milestone 3) 5. City works with stake holders to establish and support ECD leadership structure (three months after milestone 4) 6. Annual ECD report (one year after milestones 1 and 2 and annually thereafter)
Priority status	
<p>High</p>	

Recommendation 1.2: ECD leadership organization develops and implements strategic pilot programs and defines routes to full-scale implementation for successful pilots

ECD leadership organization works with all stakeholders to define, prioritize and implement new pilot programs that impact ECD in Surrey. The organization defines a strategy to scale successful pilots into full-scale deployment.

Scope and expected outcomes

As the highest-level coordinating body for ECD efforts in the Surrey community, the ECD leadership organization will be in the best position to engage stakeholders. A critical role for the organization will be to bring complimentary ideas and capabilities from across all stakeholders to bear on the ECD challenges.

The organization should assess current ECD programs against needs. Programs that do not meet the standards for efficiencies, cost, sustainability and results should be realigned, put on hold or cancelled. Programs that meet the standards should be extended and promoted.

In addition, the organization should define, develop, prioritize and implement new pilot programs to enhance the ECD environment citywide.

A critical requirement will be adequate funding to carry out pilots and scale successful pilots to sustainable programs. The leadership organization will need to identify sources of funding from provincial funds (see Recommendation 1.3) and discretionary City funds. The leadership organization should also initiate efforts to attract additional funding from the private sector by leveraging interest from the Board of Trade and individual businesses in Surrey.

By helping to identify funding sources and providing a progression pathway from successful pilot to full-scale deployment, the organization will help to ensure that effective programs grow to full implementation.

Expected outcomes

The activities in this recommendation will establish an optimal portfolio of programs, new pilots and a progression path from pilot to production for ECD services.

Proposed owner and stakeholders	Suggested resources needed
<p>Owner: ECD leadership organization Key stakeholders: Surrey School District; Not-for-profit organizations impacting the 0-5 population and their families; Office of ECD Learning and Care; Fraser Health Authority; Ministry of Child and Family Development; Ministry of Education; Royal Canadian Mounted Police; Representatives from the community and private sector businesses</p>	<p>Skills from relevant stakeholder groups and City departments. Seed funding from charities, City discretionary budget, provincial ministries and private sector</p>
Dependencies	Key milestones, activities and timeframe
<p>Requires establishment of an effective leadership organization based on recommendations of the ECD task force and buy-in from all stakeholders (Recommendation 1.1)</p>	<ol style="list-style-type: none"> 1. Define process for identifying and prioritizing existing projects and new pilot projects (six months from inception) 2. Identify sources of seed funding (six months from inception) 3. Develop a process for progressing successful pilots to full and sustainable implementation (nine months from inception) 4. Fund and start pilots (ongoing beginning six months from inception) 5. Scale successful pilots to production (beginning one year after the start of a successful pilot)

Priority status

High

Recommendation 1.3: Create an integrated MCFD contract for ECD services in Surrey

Define, create and champion a request for an integrated contract from the MCFD for early childhood services in Surrey in collaboration with community partners.

Scope and expected outcomes

There are strong benefits to the City in the creation of a unified integrated contract for the services provided in Surrey funded by the MCFD. Currently, multiple contracts exist. Situations arise where stakeholders compete for the same contract or where duplication of funded services can occur. There is also the potential for gaps in services as a result of gaps in funding. The development of a unified approach will enable all parties to create a holistic system that will create efficiencies of scale, strengthen partnerships and, most importantly, establish a cohesive approach to social service provision.

The City should create the business case and justification for a single, unifying early childhood contract from the MCFD that would help to coordinate, rationalize and measure the activities across all ECD service providers operating in the City of Surrey. If successful, this will maximize MCFD funding to Surrey and optimize the impact of the funds. It will also create a precedent for other cities to emulate.

If the status quo is maintained, investment will continue to be ad hoc and minimally coordinated.

Expected outcomes

A single contract between MCFD and the City will allow the optimal distribution of funds across programs and community agencies and ensure that duplication of services is minimized and gaps in services are addressed.

This effort may have the effect of advantaging Surrey at the expense of other municipalities in the province, given the current provincial budget constraints. While the team believes the benefits outweigh the consequences, City government will need to evaluate the potential roadblocks and barriers.

Proposed owner and stakeholders	Suggested resources needed
ECD leadership organization and Department of Social Planning for development of business case. Mayor and Council for communication with MCFD	People, data and analytics
Dependencies	Key milestones, activities and timeframe
Dependencies on Recommendations 1.1, 3 and 4	<ol style="list-style-type: none"> 1. Develop a proposal for a unified contract with MCFD (three months from inception) 2. Socialize concept with MCFD, ECD stakeholders and providers (ongoing) 3. Formal request from Mayor to MCFD (one month after completion of proposal)

Priority status

High

Recommendation 2: ECD program framework

Recommendation 2: Establish an ECD program framework

Establish an ECD program framework, making it easier for partner agencies (government and community alike) to operate in Surrey and create programs that are more sustainable.

Scope and expected outcomes

The ECD program framework is designed to create an operating environment that attracts and strengthens ECD service provider partnerships. The framework will also help the City run its own ECD programs in a way that consumes as few resources as possible to achieve the maximum impact on EDI scores and the three pillars of sustainability (social, economic and environmental) as defined in the City Sustainability Charter (see Appendix C, reference 7).

Proposed owner and stakeholder

Owner: ECD leadership organization

Recommendation 2.1: Create an ECD partnership-friendly environment

Design and implement a framework which makes Surrey the city of choice for community organizations to deliver services.

Scope and expected outcomes

Create an ECD partner-friendly environment to encourage greater partner involvement and focus on ECD service delivery to the Surrey community. In setting up the environment, the City will focus on addressing what is limiting the capabilities of community organizations to deliver services, what can be done to reduce the burden of service delivery, and what additional incentives can be provided to strengthen the partnering environment. The key goal is to make Surrey a destination city for services delivery and funding, as opposed to other cities. This approach has been advocated by several global best practices studies (see Appendix C, references 33-35).

To strengthen the current environment, it is critical to get key stakeholder agreement that a partner-friendly approach is necessary and that there is commitment to leverage the environment and its resources. The first step to setting up such an environment would be to assess the barriers and understand the needs.

The City may also need to:

1. Create an incentive to partner in order to deliver more services. This may equate to a small amount of seed money or resources to assist in setting up partnership agreements between small and medium sized community agencies or to extend their capabilities and increase service coverage.
2. Invest in and run workshops around key areas of concern, inviting speakers from larger Canadian community agencies to attend and present on how service delivery can be improved.
3. Create a set of shared resources, such as meeting facilities, online discussion spaces, training and support materials.
4. Create an ECD CoE focused on knowledge and understanding of the available government programs and funding. This may also include creating a grant application coordinating role. As the CoE operates for a period of time, new methods of better engaging with the Surrey partners and citizens would be explored and naturally adopted. Its success will need to be evaluated at regular intervals, and consideration should be given to finding innovative ways to harness the untapped energy in Surrey. Innovation will be fundamental to turning the various unique challenges that Surrey faces into opportunities where businesses, government agencies, community agencies and citizens come together to share new ideas that resolve the social, cultural, economic and environmental challenges. The CoE can eventually be opened up to the broader community for deeper engagement and participation as a Centre of Social Innovation (see Appendix C, reference 36).

In the long term, the City should consider publishing its sustainability reports using the Global Reporting Initiative's sustainability reporting framework, whose mission is to make sustainability reporting a standard practice for all organizations (see Appendix C, reference 38).

Expected outcomes

- An environment that would identify Surrey as a destination city to deliver ECD services
 - A model for partnering to deliver social outcomes
 - Improvement of EDI scores due to enhanced partner focus
-

Recommendation 2.1: Create an ECD partnership-friendly environment (continued)

Proposed owner and stakeholders	Suggested resources needed
Task force to recommend	Existing resources are available in the various partners and stakeholders. Incremental resources may be required to lead and staff the CoE
Dependencies	Key milestones, activities and timeframe
None	<p>Short-term:</p> <ol style="list-style-type: none"> 1. Assess community agencies barriers and needs 2. Gain commitment from partners for a CoE 3. Create an ECD CoE for partners <ol style="list-style-type: none"> a. Set up a grant-coordination role b. Set up basic infrastructure, such as website and meeting facilities c. Appoint a cybrarian (manages online space, such as discussion boards and shared files) d. Set up template support materials, such as project, business case, partnership/Memorandum of Understanding (MOU) and other promising practices e. Provide case studies and real-life examples f. Provide training materials and tools <p>Long-term:</p> <ol style="list-style-type: none"> 4. Evolve CoE to Centre of Social Innovation
Priority status	
High	

Recommendation 2.2: Create management system for City-run ECD programs

Create a management system to ensure the sustainability of City-run ECD programs.

Scope and expected outcomes

The ability of the City to provide effective programs is well established. Program sustainability is challenged by a number of factors, such as funding reallocations and changes in roles and responsibilities. Sustainable program management includes Sustainability Charter considerations and the needs of the present as well as future generations, throughout the program lifecycle.

The important elements are:

- **Applying suitable practices and analytical techniques:** Initial analysis and planning needs to address the key concern of making the right investments in ECD, which will provide long-term and sustainable benefits. Cost-benefit analysis and multi-criteria analysis should include sustainability pillar considerations in early decisions. Funding allocations would be based on metrics that are linked to performance/outcomes, not just outputs (such as the number of children served).
- **Acquiring and using good information:** Sustainable program management requires reliable, evidence-based information on the potential and actual effects on society, the environment and the economy. Suitable performance indicators, well-functioning measurement and accounting systems and analysis are important for understanding and regularly monitoring the effects on the three pillars of sustainability. Reviewing this information with public/neighbourhood input will ultimately help with continuation decisions and planning.
- **Applying the three spheres of influence:** The City can play a significant role in bringing together stakeholders to work together to sustain programs of importance, such as ECD programs, when establishing links with social, environmental and economic effects during the development of program proposals.

The management system will instill a disciplined and consistent environment for applying these three elements in the regular plan-do-check-improve lifecycle of ECD programs, raising performance in a repeatable and sustainable manner.

Expected outcomes

- Easy for programs to incorporate the disciplines in a standardized way
 - Consistently managed and sustainable ECD programs with buy-in from partnerships at multiple levels (such as participation and funding)
 - Triple bottom line accounting for reporting program outcomes
 - Integrated decision making and established traceability between EDI dimensions and program outcomes
-

Recommendation 2.2: Create management system for City-run ECD programs (continued)

Proposed owner and stakeholders	Suggested resources needed
Owner: Department of Parks and Recreation: Program Manager Key stakeholders: City Planner, Social Planner and CFO	People: Additional ECD social planners depending on number of programs per recreation centre or neighbourhood
Dependencies	Key milestones, activities and timeframe
City can act unilaterally	Short-term: <ol style="list-style-type: none"> 1. Develop triple bottom line indicators for ECD programs, including links with the EDI dimensions 2. Create program management jumpstart material, templates and tools, and identify incentives for adoption 3. Pilot the management system with a few strategic programs and gather metrics 4. Create a scorecard/dashboard for programs (sustainability reporting) Medium-term: <ol style="list-style-type: none"> 5. Upgrade budgeting, planning and forecasting capabilities to include analytics-based what-if scenario modelling using the EDI linked and triple bottom line KPIs to determine priorities and funding allocations
Priority status	
High	

Recommendation 3: Improve data-gathering and sharing for ECD

Recommendation 3: Improve data-gathering and sharing for ECD

Enhance the ability to securely gather, share and analyze ECD data across City departments, community agencies, government agencies, partners and citizens to provide a more complete view of needs, programmes, recipients and the impact of ECD activities.

Scope and expected outcomes

Surrey's Open Data Community Framework will bring transparency and accountability, while reducing costs. It will improve operations among organizations to accessing data and help change the culture for data-driven decisions and outcome-based management. Open data is the concept that certain data should be freely accessible to all relevant stakeholders to use as they wish. By developing a community framework for sharing open data, Surrey can make data relevant to ECD freely available for use. The community framework is an information technology platform for sharing open data, such as a website with appropriate curation and governance. The goal of the Open Data Community Framework will be to make information available and actionable. Appendix E gives further information on open data and references to the use of open data by government organizations.

In the face of constrained IT budgets, the City will be limited in terms of IT services or applications it can provide. The amount of time that public employees will be able to spend on collecting and producing data is small compared to their regular duties. This is further compounded by growing information complexity. The way to deal with this challenge is to engage all of the owners of ECD data to contribute and update their data through the framework.

Proposed owner and stakeholder

Owner: City IT department

Recommendation 3.1: Establish Open Data Community Framework to strengthen and extend data-gathering and sharing for ECD

The City of Surrey takes a leadership role by establishing the Open Data Community Framework to enhance the processes and technologies behind data-gathering and sharing for ECD.

Scope and expected outcomes

Surrey's Open Data Community Framework would involve development of data standards and reporting tools. Specifically, the project would entail:

- Establishing a standard, automated approach for data-gathering and collection, leveraging open data principles
 - City departments publishing the data (human and machine-readable) in adherence with common data and reporting standards, definitions of geographic boundaries and populations, and privacy laws to facilitate aggregation of data, without overburdening city departments.
-

Expected outcomes

- Cohesive data and better quality of data as input to analytics
 - Helps the stakeholders within the city to make better and informed decisions
 - Standards and guidelines strengthen the Surrey Open Data Community Framework initiative.
-

Proposed owner and stakeholders	Suggested resources needed
Owners: City leadership team, service providers and IT department	Project manager, data modelling and design architect
Dependencies	Key milestones, activities and timeframe
Agreement of parties on open data framework and data sharing among the City departments	Short-term: <ul style="list-style-type: none"> • City of Surrey leadership team establishes Open Data Community Framework and designates a team for hosting gathered data (setting up a data repository) • Create cross-organizational team to work with the University of British Columbia's Human Early Learning Partnership (UBC HELP) to review and agree upon new neighbourhood boundaries for EDI reporting • Republish standards and guidelines, and establish standard format for data-gathering among the departments within the city • Create a mandate to share the data by the departments within the city • Execute analytics and reporting based on the data gathered • Publish reports to City departments

Priority status

High

Recommendation 3.2: Implement and scale data-gathering and sharing

Link and scale the enhanced Open Data Community Framework with greater participation from community agencies.

Scope and expected outcomes

Linking and scaling enables the City to play a catalyst role in the Surrey open data movement rather than attempting to do it alone. Once it gathers momentum, the Open Data Community Framework will take a life of its own and will sustain itself – open data enables better collaboration through crowdsourcing.

A key goal of open data projects is to promote interoperability through the use of standardized data and standardized interfaces, but Surrey must also go one step further and show how key data sets can be linked, such as linking EDI data with deprivation index data or service demand data. Linked data sets will be key to sustainability reporting. The City departments and its partners will all contribute towards enhancing the open data catalogue with these necessary links.

Expected outcomes

- Linking and scaling data through the Open Data Community Framework will provide better-quality data to the City for use in focusing its efforts where there is a greater ECD need. Lower income group settlement areas would be more easily identified and population dynamics would be better understood.
 - Partners will have better access to qualitative and quantitative data which will lead to enhanced delivery of ECD programs across the community of ECD stakeholders.
-

Proposed owner and stakeholders	Suggested resources needed
Owner: City IT department or a City-managed shared services department	Existing IT department or shared services
Dependencies	Key milestones, activities and timeframe
Agreement of parties on open data framework and data sharing among the City departments	<p>Medium-term:</p> <ul style="list-style-type: none"> • Develop a data governance process that allows owners of data to contribute to the Open Data Community Framework in a certifiable way • Categorize City-owned and partner-owned services • Design open data feedback mechanisms • Facilitate exploratory workshops on EDI linkages • Pilot programs with City longitudinal data • Ongoing public workshops and training sessions on open data tools

Priority status

High

Recommendation 3.3: Optimize ECD programs through the use of open data

Optimize ECD programs through the use of Open Data Community Framework and create a case to drive innovative change.

Scope and expected outcomes

Open data would support a system-wide assessment on how services can be improved. When the use of open data is included in the program planning process and across the ecosystem, there will be greater transparency and ultimately confidence about the effectiveness of the program. The City and its partners can ultimately look to driving innovative change in how and what services it delivers to the early childhood population based on better-quality data and its linkages with the EDI.

The City and its partners will need to:

- Engage in discussions on data-driven ECD program changes
 - Leverage open data as part of the research and analysis steps in program planning
 - Use the analysis of the data as a feedback loop to continued improvement on the production of open data and its innovative use
 - Improve consistency with the Canadian Open Data initiative and global trends.
-

Expected outcomes

- An extended open data catalogue with additional data sets
 - Recognizing and initiating discussions with different open data communities
 - Adoption of lessons learned from other initiatives in Canada (Toronto, Ottawa, Edmonton and Vancouver) and abroad
 - Improving interoperability with partners
 - Improving data quality and data analytics
 - Analysis of all open data, City program data and social media data will identify patterns and linkages with the EDI, ultimately determining how to shape programs in order to determine best ECD outcomes
 - Improvement on ECD services across the ecosystem
-

Proposed owner and stakeholders	Suggested resources needed
Owner: City IT department or City-managed shared services department	Existing IT department or shared services
Dependencies	Key milestones, activities and timeframe
Agreement of parties on open data framework and data sharing among the City departments	<p>Long-term:</p> <ul style="list-style-type: none"> • Fully integrated and interconnected system to pull structured and unstructured data from a variety of sources in realtime and run continuous predictive analytics to reflect the KPI scores and metrics for ECD • Data repository with anonymous access shared with universities for research and improvement of metrics • Enhance the data with other data sources to have better results via analytics • Extend the open data catalogue • Facilitate discussions on data-driven program changes • Formalize the use of open data in program planning

Priority status

High

Recommendation 4: Implement analytics-driven decision making

Recommendation 4: Implement analytics-driven decision making

A deeper reporting and analytics capability would empower the City to make decisions regarding which programs and services best meet their goals of reducing early childhood vulnerability, with an immediate focus on improving the EDI scores for the 0-5 age group, thus ensuring its children are best prepared for school.

Scope and expected outcomes

Initially, business analytics can be applied for an immediate short-term advantage in analyzing the current offerings and programs offered to the communities the City is supporting. A longer-term initiative around open data models, community stakeholders and data collection and sharing can lead to a holistic, increasingly valuable source of insight for the City.

Expected outcomes

Driving decisions based on data in a cohesive, methodical way will lead to smarter decisions that lead to smarter solutions.

Proposed owner and stakeholder

Owner: City IT department

Recommendation 4.1: Analyze current data sets

Perform analysis of current programs and services offered by the City.

Scope and expected outcomes

Using the current Department of Parks and Recreation data, create an initial reporting framework that will provide clarity into the success of the current programs being offered. As an initial data set, this will provide the City with enough insight to determine which programs align with its ECD goals.

This is intended as an initial step towards building a data-driven decision environment. From this starting point, the data set can be enhanced to include the EDI or ECD-centric measures, such as those shown in Appendix G.

Expected outcomes

The City will be able to determine which programs align with its mandate of improving the EDI, to be able to identify those programs that have the greatest impact on raising the EDI scores over time, and identify those that are most cost-effective. Coupled with other recommendations, such as an enhanced EDI metric, they will be able to make strategic decisions about shifting funding to those programs that best suit its goals.

Proposed owner and stakeholders	Suggested resources needed
Owners: City IT department, ECD leadership organization	Existing City IT department
Dependencies	Key milestones, activities and timeframe
<ul style="list-style-type: none"> • Define KPIs • Technical and business user training 	<p>Short-term:</p> <ul style="list-style-type: none"> • Define and align on requirements, such as additional EDI KPIs (0-6 months) <p>Medium-term:</p> <ul style="list-style-type: none"> • Create pilot reports for initial review. Establish method for consumption, distribution and feedback

Priority status

High

Recommendation 4.2 Create shared-services analytics team

Create a shared services analytics team within the City focused initially on ECD metrics.

Scope and expected outcomes

Create a shared services analytics team to obtain cost savings and gains in subject-matter expertise. Currently, each City department hires analysts and creates studies/reports when they are needed. A centralized model would provide economies of scale and drive a consistent approach. In addition, it would build domain knowledge within the City which will enable a culture of data-driven decision making.

The shared services analytics team would include research capabilities, business, predictive and social media analytics. Once formed, this team will take over the mission from Recommendation 4.1.

In an example of a successful data-driven approach, the Surrey fire department hired a statistician to analyze its data around where a fire is most likely to occur and its causes. Once their highest risk factors were identified, the fire department realigned their preventative strategy and education materials accordingly. By tailoring its approach to fire prevention, it was able to target the sectors at highest risk reducing incidents by 20-30 percent. This has proved highly valuable in driving a data-driven decision model that allows the best, most efficient use of time and effort to be focused on where it has the most effect.

Expected outcomes

By being able to streamline, coordinate and develop a rich report set, the shared service analytics team will empower the City to make decisions that are in alignment with its ECD goals in the most cost efficient manner.

Proposed owner and stakeholders	Suggested resources needed
Owners: City IT department, ECD Leadership Organization	Project manager, shared services analytics team, report designer, training resources for end users
Dependencies	Key milestones, activities and timeframe
<ul style="list-style-type: none"> Define KPI Technical and business user training 	<p>Short-term:</p> <ul style="list-style-type: none"> Define and align on requirements, such as additional EDI KPIs (0-6 months) <p>Medium-term:</p> <ul style="list-style-type: none"> Create pilot reports for initial review. Establish method for consumption, distribution and feedback (6-12 months)

Priority status

High

Recommendation 4.3 Complement the EDI with metrics for holistic ECD

Develop complementary metrics to the EDI that provide headlights into the development of children five years and younger.

Scope and expected outcomes

The EDI data is the common point of understanding for all stakeholders. It measures one point in time at the age of five – the end point of the ECD timeframe.

Metrics leading up to the EDI score at the age of five are few and far between. Complementing the EDI data with other metrics focused on the younger ages (0-4), coupled with other appropriate factors, such as:

- Health services (dental, optical, auditory, mental, physical)
 - Financial data
 - Social and recreation programs
 - Parenting and support groups
 - Library service usage
 - Food bank usage or other emergency support
 - RCMP and emergency services touch points with the community
 - Sports readiness
 - Family well-being
 - Participation in Strong Start
 - Participation in Parents As Literacy Supporters (PALS).
-

Expected outcomes

The expected outcomes of a successfully implemented expansion of new metrics into the 0-5 age range would be early identification of communities or neighbourhoods at risk.

Proposed owner and stakeholders	Suggested resources needed
<p>Owners: City Shared Services Analytics Team, ECD Leadership Organization</p>	<p>Project manager, shared services analytics team, report designer, training resources for end users</p>
Dependencies	Key milestones, activities and timeframe
<ul style="list-style-type: none"> • Define KPI (in addition to standard EDI) • Technical and business user training • Create a business intelligence environment 	<p>Short-term:</p> <ul style="list-style-type: none"> • Define and align on requirements, such as additional EDI KPIs (0-6 months) <p>Medium-term:</p> <ul style="list-style-type: none"> • Enhance data set for creation or enhancement of reports and dashboards (6-12 months) • Publish in a “State of the City” the EDI scorecard and/or dashboard for annual reporting to the public (6-12 months)

Priority status

High

Recommendation 4.4: Develop a predictive analytics solution

Develop a robust predictive analytics solution to identify ECD trends and risks.

Scope and expected outcomes

A strong predictive analytics solution applied to the holistic view of the community would be a powerful tool for the City in proactively identifying at-risk populations, possibly before intervention or support becomes critical.

With a rich data set, such as the one suggested in Recommendation 4.2, the ability to model solutions and their predicted outcomes is a powerful tool to drive decisions that will ensure the City is using its resources in the most effective manner possible. Over time, with a disciplined and ordered approach, rich data models will feed enhanced prediction models.

A powerful example of predictive analytics driving solutions is demonstrated by the Medway City Council in the UK. Its implementation of a predictive solution drove significant improvements in identifying risk factors for youth not in education, employment or training (see Appendix C reference 22). Surrey's own example of using predictive analytics to determine the best location of a fire engine in order to reduce operational costs and risk should be extended to all spheres of social planning.

Expected outcomes

A successfully implemented predictive analytics solution would enable:

- The ability to view and analyze trends and patterns and identify risks as early as possible
 - The ability to assess those risks and guide decisions to avoid, offset or mitigate them
 - The ability to shift resources proactively, or be ready to shift resources, as needed, based on hard data.
-

Proposed owner and stakeholders	Suggested resources needed
Owners: City Shared Services Analytics Team, ECD Leadership Organization	Shared Services Analytics Team enhanced with a predictive analytics specialist

Dependencies	Key milestones, activities and timeframe
<ul style="list-style-type: none"> • Enhanced data set (Recommendation 4.1) • Technical and business user training 	<p>Short-term:</p> <ul style="list-style-type: none"> • Define and align on requirements (0-6 months) <p>Medium-term:</p> <ul style="list-style-type: none"> • Create pilot (6-12 months) <p>Medium- to long-term:</p> <ul style="list-style-type: none"> • Publish results of analytics pilot (6-12 months) <p>Long-term:</p> <ul style="list-style-type: none"> • Scale and optimize the solution (12-24 months)

Priority status

High

Recommendation 4.5: Enhance dashboard reporting

The City has a robust and rich sustainability dashboard, which, if enhanced to report upon improved ECD progress, would allow the City to continue a dialogue with its citizens regarding the groundbreaking progress it is making in the world of ECD.

Scope and expected outcomes

The initial offering would enhance the existing sustainability dashboard with another dimension or offering regarding ECD/the EDI. Over time, this could be further enriched as additional data is incorporated into the City's offerings. There is enormous potential to continue leveraging the open data/shared data model initiated by the City at its recent GIS open hackathon.

Potential data sources would be those referenced in Recommendations 4.3, 4.4 and 4.6.

Expected outcomes

Clearer view into the data and the decisions it drives made available to the public.

Proposed owner and stakeholders	Suggested resources needed
Owners: City Shared Services Analytics Team, ECD Leadership Organization	Possible additional capacity within the City engineering team
Dependencies	Key milestones, activities and timeframe
Successful implementation of Recommendations 4.1, 4.2, 4.3 and 4.4	Short-term: <ul style="list-style-type: none"> Define and align on requirements; publish against current EDI and enhance as other metrics become available (0-6 months)

Priority status

Medium

Recommendation 4.6: Enhance social media analytics

Perform analytics on available social media data relevant to understanding ECD environment in Surrey.

Scope and expected outcomes

The opportunity for the City of Surrey to gain insight into its citizens' view of their home, government, programs and services is critical to understanding and reaching the populace.

The gathering and analysis of the data gleaned from social media sources, such as Twitter, Facebook, blogs and news, would enable the City to understand the needs, sensitivities and how well its efforts are received. The ability to engage in "realtime" conversations with the citizens of Surrey in order to gain insight would mean the City would be able to feel the pulse and temperature from a new perspective.

This approach could also engage those who would not respond to more mainstream methods of communication such as phone, written or engagement surveys, including those who tend not to engage with authority but are comfortable with social media.

One potential way to leverage social media is to perform short, efficient pulse surveys to engage the citizens in a powerful two-way engagement. It could also be used to evaluate the key stakeholders opinions and concerns.

Expected outcomes

Application of a robust social analytics tool would enrich the data the City can use to ensure they are adding value-added services and programs where they are most needed.

Proposed owner and stakeholders	Suggested resources needed
Owners: City shared services analytics team, City IT department and ECD leadership organization	Possible capacity in the shared reporting and analytics team, and/or collaboration with the current social media content team
Dependencies	Key milestones, activities and timeframe
None	<p>Short-term:</p> <ul style="list-style-type: none"> Define and align on requirements; application design and pilot; report design and distribution model (0-6 months) <p>Ongoing:</p> <ul style="list-style-type: none"> Enhance usage of social media analytics (6-12 months)

Priority status

Medium

Recommendation 5: Optimize existing ECD resources

Recommendation 5: Optimize existing ECD resources

Optimize and extend existing ECD resources in Surrey.

Scope and expected outcomes

This set of recommendations would build the policies, support systems and processes to enhance the collaborative efforts of the service providers of early childhood services in Surrey. Currently, there are a number of community and public agencies which have established areas of expertise in providing specialized services to young children and their families. These agencies are often constrained by the lack of availability of physical space or human capital to provide these services in locations close to the families.

The City of Surrey and its partners, through the Early Childhood Partnership Table, have created a forum to discuss approaches to collaboration. Many examples of effective collaborative efforts exist in the city, especially on a local level where relationships between individual service providers and their communities have enabled complementary activities to take place in common facilities.

Expected outcomes

Increase the beneficial impact of early childhood service providers on vulnerable populations by efficiently managing scarce resources, such as childcare and early learning facilities, and volunteers, while removing barriers to sharing.

Proposed owner and stakeholder

Owner: Mayor's Task Force on ECD

Key Stakeholders: City of Surrey, Surrey School District, Fraser Health Authority, MCFD, Community Agencies, RCMP and Surrey Board of Trade

Recommendation 5.1: Optimize joint-use facilities agreements between ecosystem partners

Enable the early childhood service providers to better utilize the existing facilities in Surrey to increase availability of services and support planning for future sites.

Scope and expected outcomes

Given Surrey's large geography and transportation challenges, and the requirement for specialized facilities to support the needs of young children, shared facilities would enable more services to be provided in local neighbourhoods, ensuring easier access for citizens. Currently the City of Surrey, the School Board, the British Columbia provincial government, as well as several community agencies, have both formal and informal agreements in place to share facilities and collaborate in the delivery of services to young children.

The Strong Start program operates in 22 elementary schools in the Surrey School District. At Holly Elementary School, a specially provisioned classroom is used during the morning hours for a drop-in pre school class for young children and their parents or caregivers. Guest speakers share programs from community and city agencies provide valuable information to parents. During the afternoon hours, the same classroom is used for childcare by the city.

By building on the collaborative agreements that exist for the sharing or renting of facilities in Surrey that can accommodate programs and services for young children, and removing barriers to sharing physical space, more space can be made available for ECD programs.

Existing contracts and agreements need to be reviewed, extended or restructured to promote further collaboration and sharing of physical space, with a clearer understanding of the barriers to optimizing shared facility use, such as mismatch of financial expectations of programs, building permitting approvals, restrictions of use due to labour contracts, and distribution of actual costs and expenses across the participants. Additional areas for improvement include:

- Identification of current linkages and complementary services that could be extended citywide
- Prioritization of target neighbourhoods where the greatest impact on vulnerable young children and their families could be achieved
- Consideration for co-location and shared usage in the plans for new building projects.

One example that can inform the review of existing, and establishment of new, collaborative agreements is from South Australia, where local governments, schools and community partners conducted research on shared-use policies (see Appendix C, reference 39).

Expected outcomes

Increased access to, and participation in, early childhood programs by vulnerable children age five and younger and their families that are in their local neighbourhoods.

Recommendation 5.1: Optimize joint-use facilities agreements between ecosystem partners (continued)

Proposed owner and stakeholders	Suggested resources needed
<p>Owner: Mayor's task force Key Stakeholders: City of Surrey, Surrey School District, Fraser Health Authority, and community agencies</p>	<p>Possible capacity in the shared reporting and analytics team, and/or collaboration with the current social media content team</p>
Dependencies	Key milestones, activities and timeframe
<p>Strong executive leadership that removes barriers to the shared-use of facilities for young children and their families</p>	<p>Short-term:</p> <ul style="list-style-type: none"> Review current agreements; assess currently available facilities; identify barriers to shared-use; define an approach to maximize usage <p>Long-term:</p> <ul style="list-style-type: none"> Expand agreements with the focus on further improvement of the EDI scores of the vulnerable 0-5 age range; factor shared-use vision into plans for future building projects
Priority status	
<p>High</p>	

Recommendation 5.2: Mobilize Surrey's volunteer community to support the early childhood cause

Mobilize community members through fundraising and/or volunteer activities to maximize their positive impact on young children and their families in Surrey.

Scope and expected outcomes

There is a wide variety of volunteer resources within public and private organizations, including individual citizens. The RCMP, the Board of Trade, and many community agencies and groups have volunteer organizations. There also is an active online community to encourage volunteering.

The opportunities to fundraise or volunteer in early childhood settings with young children and their families are not well understood, coordinated or managed. The use of the volunteer work force should be coordinated and directed to raise funds and provide support for at-risk and vulnerable neighbourhoods. Priorities will be set by the ECD leadership and efforts guided by the ECD framework.

With analytics-driven prioritization of ECD needs, the City of Surrey can best match skill sets to local community needs.

Expected outcomes

By centrally managing and focusing opportunities for volunteers to align with Surrey's priorities for early childhood, the City will increase volunteer participation and impact in needy communities.

Proposed owner and stakeholders	Suggested resources needed
Owner: Board of Trade, United Way and Options Key Stakeholders: City of Surrey, Surrey School District, Community Agencies, RCMP and Surrey Board of Trade	ECD volunteer coordinator
Dependencies	Key milestones, activities and timeframe
None	Short-term: <ul style="list-style-type: none"> • Determine owning agency for early childhood volunteer coordinating role • Create website for information on early childhood volunteer opportunities • Work with partners and community organizations to identify sources of volunteers and vet candidates, and prioritize activities and neighbourhoods for highest impact on the EDI indicators • Establish training for volunteers that provides the general and specific resources needed to be effective in working with the families of young children. Create incentives for volunteers Medium-term: <ul style="list-style-type: none"> • Establish a volunteer strategy that is informed by analytics-driven needs assessment by the neighbourhood and population • Create metrics for measuring the impact of volunteers on the EDI indicators

Priority status

Medium

Recommendation 5.3: Increase availability of quality pre school and child care through Early Learning Centres shared-use modular units on elementary school sites

Build upon Surrey's collaborative activities for shared-use facilities and the 2011 Child Care Gap Assessment to develop a strategy and pilot for shared-use Early Learning Centres on elementary school sites. These centres would provide a broad range of services for young children and their families through the school district, City, health authority and community agencies. Pilot centres in the most vulnerable neighbourhoods with constrained availability of quality pre school and childcare centres.

Scope and expected outcomes

Surrey has established a strong base of support for expanding the availability of quality childcare through its community-developed reports.

The Surrey Child Care Gap Assessment quantified the shortage of child care openings in the community. The report estimates availability of more than 8,000 spaces for children five years and younger, with an additional need of more than 15,000 spaces to fill the need.

With a requirement for an almost 200 percent increase over current spaces, a multi-dimensional approach to expanding the City's child care capacity is needed.

The Child and Youth Friendly Strategy recommends actions for increased access to affordable and quality child care by removing planning policy barriers, developing a child care strategy, expanding city-provided childcare, and advocating for increased funding for capacity.

Many barriers exist to access to quality child care, including cost, availability and transportation.

The following recommendations provide the initial roadmap to addressing the ECD needs of the community:

- Develop a unified strategy for Early Learning Centres for the City of Surrey among all stakeholders.
- Identify the review of City policies and incentives for businesses and developers to encourage construction of child care facilities in business parks and office buildings. One example of this approach is the Ritchie Brothers Auction House.
- Encourage expansion of cooperative or parent-participation pre schools in local communities. This model engages parents and caregivers to lower the cost of providing child care, while delivering high-quality child care.
- Promote and deliver enrichment activities for adult family members and young children to broaden the child's exposure to a more diverse set of learning and social experiences.
- Build a plan to more effectively use facilities for care of young children through shared-use agreements and joint plan development.

In addition to these recommendations, the Surrey community should investigate emerging and innovative models for encouraging and incentivizing the establishment of more child care centres and early childhood educators.

Expected outcomes

Increased quality childcare and pre school availability in the neediest neighbourhoods in Surrey.

Recommendation 5.3: Increase availability of quality pre school and child care through Early Learning Centres shared-use modular units on elementary school sites (continued)

Proposed owner and stakeholders	Suggested resources needed
Owner: Mayor's task force Key Stakeholders: City of Surrey, Surrey School District, Fraser Health Authority, MCFD, community agencies, RCMP and Surrey Board of Trade	Possible capacity in the shared reporting and analytics team, and/or collaboration with the current social media content team
Dependencies	Key milestones, activities and timeframe
None	Short-term: <ul style="list-style-type: none"> • Act on recommendations from Surrey's Child and Youth Friendly Report • Convene a cross-organizational team to develop the strategy and plan for Early Learning Centres Medium-term: <ul style="list-style-type: none"> • Jointly advocate to the Ministry of Education and Ministry of Child and Family Development, as well as the business and philanthropic communities, for funding for this innovative, shared-use model in vulnerable populations • Pilot Early Learning Centre in high-priority neighbourhoods
Priority status	
High	

Recommendation 6: Enhance citizen access and engagement

Recommendation 6: Enhance citizen access and engagement

Use technology to enhance citizen access and engagement.

Scope and expected outcomes

A resident-centric, cooperative approach needs to be taken to consolidate, organize and publish information to help the public navigate, learn about and access available services more effortlessly and effectively. This initiative will help to ensure that all residents, including hidden populations, have an increased awareness of all available ECD services. A comprehensive strategy must take into account the communications requirements and preferences of all residents. A key element of the strategy will be the increased use of social media tools, which will enhance awareness while creating a means of citizen engagement through two-way communication. Resident feedback and interaction via social media will create a rich data source that can be leveraged to gain insight that can aid in planning future communications and service delivery.

Recommendation 6.1: Develop pathways to services and reach hidden populations

Scope and expected outcomes

A “pathways to services” approach will help provide information regarding the full range of available services to all residents of Surrey specific to their circumstance and need. The key steps to creating the pathways would include:

- Create a comprehensive online catalogue of all available early childhood services
- Assess how citizens currently access services
- Personalize services for communities with similar needs and wants
- Create a fast-track approach to getting citizens to and through their services
- Identify and address the complexity of people’s circumstances
- Create a “no wrong door” policy with pre-defined pathways to access appropriate services (see Appendix C, reference 37).

A “no wrong door” approach is about being helpful from a whole-of-client need perspective and considering all the services a client may require. Wherever citizens go for help, they will get advice, guidance and support for their need regardless of who owns or delivers the service offering. This will lead to additional resident participation in services and programs, in turn leading to improved outcomes.

A key element to the success of pathways will be a focus on determining all possible means of communicating the available information. Solutions will need to be created that take into account the fact that many residents may seek information by visiting a community centre, a school, local business, library or place of worship.

Inaction will result in the loss of benefits associated with increased awareness and usage of available services. This lost opportunity will be most profound for the disadvantaged, including those on a low income, refugees, immigrants and the hidden population.

Expected outcomes

Residents of Surrey will have a more comprehensive understanding of all of the services available to them based on their specific requirements as individuals and families. A better awareness and understanding of availability of services will in turn lead to increased use of services, which will then lead to better outcomes. Informed citizens will be empowered to make choices, selecting the best service available including location and time. The “no wrong door” policy will help the service providers make sure residents are aware of, and directed to, complimentary and additional services of which they might not otherwise be aware. This also leads to additional resident participation in services and programs, leading to improved outcomes. A more comprehensive data set will emerge from an environment where residents make truly informed choices about the services that best meet their needs. This new data will lead to better planning for the provision of future services.

Proposed owner and stakeholders	Suggested resources needed
Owner: City, MCFD, Surrey School District and not-for-profit organizations	<ul style="list-style-type: none"> • Service delivery subject-matter experts • Surrey’s IT department and its Geographic Information Systems staff • Communications departments
Dependencies	Key milestones, activities and timeframe
<ul style="list-style-type: none"> • Stakeholder buy-in and commitment • Agreement to collaborate on grouping information into categories that best represent the combinations of services that meet the needs of residents • Effectiveness of communications strategies 	<p>Short-term:</p> <ul style="list-style-type: none"> • Assessment of available services • Creation of pathways • Pathways communication strategy

Priority status

High

Recommendation 6.2: Enhance social media outreach

Develop a program to enhance social media outreach.

Scope and expected outcomes

The City can assess the relevance and impact of its current usage of social media, leverage lessons learned and consider additional techniques or technologies to bring incremental value or target specific areas.

In parallel, the City can look to other organizations for best practices and select a pilot project for implementation.

The City will need to collect resident feedback and information, then incorporate this as additional input to the analytics methodology. The social media data and existing metrics will serve as valuable new data sources for effective planning.

The resulting benefit is services that are more aligned with citizen needs, increased awareness and greater usage.

Expected outcomes

The use of social media will enhance residents' awareness and understanding of available services. Research has found that consumers look to others online who are users of similar products and services for advice and perspective. Residents will consult with one another to communicate both needs and successful outcomes as they engage in social media. This will serve to broaden the message via a new medium – one that can scale easily. Social media tends to create groups of users, or communities of users, who share common interests. The formation of these groups tends to be user-based and organic. As shared needs and interests emerge and disappear, so do groups and communities with that focus. Current needs and interests will be evident to the City and stakeholders at any given time. This will help ensure that services-planning takes place in the context of current residents needs. This forum also represents a realtime, two-way mechanism for resident and City/service provider interaction. Residents will have a direct means of communication to the City and service providers to communicate feedback and input regarding service information and delivery. This will enable the City and service providers to adjust in realtime and have an additional data source for planning.

Proposed owner and stakeholders	Suggested resources needed
Owners: City Business operations and IT department	<ul style="list-style-type: none"> • Service-delivery subject-matter experts • Surrey's IT department and its Geographic Information Systems staff • Communications department
Dependencies	Key milestones, activities and timeframe
Stakeholder buy-in and commitment	<p>Short-term:</p> <ul style="list-style-type: none"> • Commitment to proceed, followed by implementation of existing tools and the selection and implementation of new ones. Determine and implement a means of collecting and analyzing data. Make improvements based on feedback <p>Medium-term:</p> <ul style="list-style-type: none"> • Leverage lessons learned to improve usage of the tools and information

Priority status

High

Recommendation 6.3: Implement customer relationship management

Implement a Customer Relationship Management (CRM) system to better engage with citizens and create a single view of City services, placing them in the centre of service delivery.

Scope and expected outcomes

Several trends drive CRM programs in government, including:

- Service improvement and reducing inefficiency and costs
- Providing citizen-centric services
- Improve response times
- Making the interactions between citizens, community providers and government agencies efficient and, more importantly, effective.

ECD services would be a starting point to improving the handling of a much wider variety of citizen needs, partly because the system can retain a vast amount of citizen preferences and usage of services.

The CRM solution should capture service request details, route the request to the proper agency, track workflow progress and measure performance. This coordinated approach helps to improve agency efficiency and bridge municipal silos. City staff can use the CRM solution as they interact with residents, helping them better understand residents' needs, enhance service delivery and suggest additional services.

The City will need to assess various CRM packaged solutions and consider migrating or integrating its "Class" registrations system to the CRM solution. A website using either the "Class" system or CRM data to advertise available childcare would be of high value.

Benefits would include:

- Common citizen account for online and face-to-face interactions to unify information, processes and people to provide a 360-degree view
- Management of the data models of citizens and their complex family relationships, eligibilities and entitlements along with all information required for programs and providers. Supports contribution-based and needs-based models
- Needs-based triage and self-service
- Platform for outreach programs and campaigns
- Link between client needs, goals, services and outcomes
- Extend registration system capability to capture all customer contact and interactions and, in special cases, case management.

The City can use this solution as a long-term, ongoing, central data source. The system will contain data that can be mined and analyzed to help in planning future services types, locations and delivery times.

Expected outcomes

Use of CRM will ensure that the City has a comprehensive view of the services participation of residents. The City will have a view to all of the services that an individual registers for and utilizes. This will enhance the residents' experience when they interact with the City. The City employees will have a comprehensive 360-degree view of the resident and their usage of services, and will thus be able to make informed suggestions regarding additional services of potential interest.

The system will also enable targeted outreach for general and specific programs designed to meet the needs of the residents based on needs-based planning. A comprehensive view of the resident creates an opportunity to measure outcomes, engaging the resident through the full lifecycle of service delivery. The data in this system will grow with time, reflecting the changing needs of the residents of Surrey, creating an immensely valuable data set for understanding resident use, measuring outcomes and effective planning.

Recommendation 6.3: Implement customer relationship management (continued)

Proposed owner and stakeholders	Suggested resources needed
Owners: Business operations and IT	IT to write RFP and work with business optimization to engage city departments
Dependencies	Key milestones, activities and timeframe
None	<p>Short-term:</p> <ul style="list-style-type: none"> • Selection and implementation of solution • Input historical data • Determine new data sets to be collected • Determine plans to analyze, manage and utilize the data <p>Medium-term:</p> <ul style="list-style-type: none"> • Learn from short-term to build on best practices

Priority status

Medium

5. Conclusions

Surrey's population has increased by 28 percent over the past 10 years, and a third of the population is under the age of 20. Surrey has the highest birth rate in British Columbia and the largest school district in the province, with 70,000 students. Surrey is focused on creating a healthy community with an emphasis on ECD, youth and families.

While resources are constrained, Surrey is a fast-growing, young and diverse community, and it is recognized that now is the time to invest in initiatives that provide a positive return on investment. The reliance on long-range statistical studies across traditional census intervals is no longer an option, because the underlying fabric of the city is under constant and rapid change. Surrey's growth requires an approach that will rely more on gathering performance data from its multiple programs and receiving realtime data feeds from multiple sources, including social media. Analysis of this data is needed to support the decision making process to ensure Surrey is able to answer three fundamental questions: How are we doing? Why is the trend occurring? What should we be doing?

The IBM team recommends a three-phase roadmap of concrete actions towards making better investments today to create healthier residents and a more sustainable and prosperous community for tomorrow.

- **Strengthen and extend foundations:**
 - **(0-6 months):** Set up an ECD task force, expand an ECD strategy and partnership, assess community agency barriers and needs, evolve towards an ECD CoE, initiate further discussions on open data and information-sharing standards, create a research and analytics reporting team, optimize joint-use facilities, and revitalize social media outreach.
 - **(6-12 months):** Create a leadership organization with oversight of all ECD programs, evaluate existing program portfolio and develop concepts for new pilots, enhance ECD KPIs and reporting standards, create multi-scale model for predictive analytics, and develop pathways to services.
- **Implement and scale (12-24 months):** Prioritize and implement pilot projects, promote integrated contract with MCFD, pilot programs with City longitudinal data, share integrated longitudinal open data, complement the EDI with leading metrics for ECD, plan to reach hidden populations, introduce neighbourhood planning, enhance social media analytics and use predictive analytics to identify meaningful patterns and correlations in data sets to predict future events and assess the attractiveness of various courses of action to drive key decisions.
- **Optimize (24-36 months):** Implement full scale ECD programs, evolve CoE into Centre of Social Innovation, enhance City's ECD dashboard, increase quality of childcare, and implement customer relationship management.

6. Appendix

A. Acknowledgements

Name	Title and Organisation
Dianne Watts	Mayor of Surrey
Laurie Cavan	City of Surrey, GM Parks, Recreation & Culture
Councillor Linda Hepner	City of Surrey, Chair Parks, Recreation and Sport Tourism Committee
Councillor Barinder Rasode	City of Surrey, Liaison Surrey Crime Prevention Society
Murray Dinwoodie	City of Surrey, City Manager
Lisa White	City of Surrey, Mgr. Community & Recreation
Stacey Rennie	City of Surrey, Mgr. South Surrey Recreation Centre
Angela Bath	City of Surrey, Mgr. Newton Recreation Centre
Daljit Gill-Badesha	City of Surrey, Mgr. Middle Childhood
Shaun Scott	City of Surrey, CSC 2 Chuck Bailey Recreation Centre
Geoff Samson	City of Surrey, IT Manager
David Sadler	City of Surrey, Child and Youth Engagement Manager
Melanie Houlden	City of Surrey, Chief Librarian
Don Luymes	City of Surrey, Mgr. Community Planning Division
Sean Simpson	City of Surrey, GIS Section Manager
Colleen Kerr	City of Surrey, Crime Reduction Manager
Aileen Murphy	City of Surrey, Senior Social Planner
Anna Mathewson	City of Surrey, Sustainability Manager
Larry Thomas	City of Surrey, Deputy Fire Chief
Councillor Mary Martin	City of Surrey, Chair Healthy Community Committee
Arielle Patterson	City of Surrey, CSC 2 Community Development Services Section
Shaun Greffard	City of Surrey, GM Investment and Intergovernmental Relations
Vivienne Wilke	City of Surrey, GM, Finance & Technology
Jerome Thibaudeau	City of Surrey, Business Operations Manager
Mike McGreer	City of Surrey, Economic Development Analyst
Penny Bradley	Alexandra House, Executive Director
Gerard Bremault	Centre for Child and Family Development, CEO
Helgi Rimmelg	Children's Foundation, Program Director
Susan Papadionissiou	Children's Partnership, Partnership Coordinator
Harpal Johl	DiverseCity Community Resources Society, Director of Family Services

Name	Title and Organisation
Penny Priddy	Former City Councilor, MLA, and MP
Leslie Bonshor	Fraser Health, Director Aboriginal Health
Rowena Rizzotti	Fraser Health, Executive Director Women's Health
Dr. Victoria Lee	Fraser Health, Medical Health Officer
Dr. Helena Swinkels	Fraser Health, Medical Health Officer Surgery
Debra Hoggan	Kla-How-Eya, Executive Director
Mary Jane Stenberg	Kwantlen Polytechnic College, Executive Director External Relations
Laura Soon	Ministry for Children and Family Development, Community Liaison for Surrey
Amarjit S Sahota	Ministry for Children & Family Development, Director of Practice
Heather Lynch	Options, Assistant Manager, Youth Services
Sharlene Wedel	Options, Assistant Program Manager, Early Childhood Services
Michel Pouliot	Pacific Community Resources Society, Manager of the Newton Youth Resource Centre
Inspector Bob Couture	RCMP, Operations Support Line Officer
Corporal Craig Rempel	RCMP, School Liaison Team Supervisor
Laurel Tien	Semiahmoo Family Place, Executive Director
Mathew Grant	SFU, Associate Director, Marketing, Communications and Partnerships
David Young	Sources Community Resource Centre, Executive Director
Anita Huberman	Surrey Board of Trade, CEO
Mike McKay	Surrey School District No. 36, Superintendent
Trevor McQuarrie	Surrey School District No. 36, District Vice Principal
Laurie McNally	Surrey School District No. 36, Chair School Trustee
Pat Horstead	Surrey School District No. 36, Assistant Superintendent
Christy Northway	Surrey School District No. 36, Principal – Strong Start Program
Jonathon Ross	Surrey School District No. 36, District Social Worker WRAP (Safe Schools)
Michelle McKenzie	Surrey School District No. 36, Strong Start Facilitator
Clyde Hertzman	UBC, Director of HELP
Joanne Schroeder	UBC, Deputy Director and Knowledge Translation Director at HELP
Jeff Calbick	United Way Lower Mainland, Director Strategic Priorities
John Wooglar	YMCA-General Manager

B. Team biographies and photos



Naeem Altaf
Senior Technical Staff Member,
Chief Solutions Architect,
Smarter Physical Infrastructure,
IBM Industry Solutions

Naeem Altaf is a Senior Technical Staff Member, Chief Solutions Architect in IBM's Industry Solutions team. He received a Bachelor of Science in Computer Science from the University of Texas at Austin, USA. Altaf is recognized as a technical expert in integrating many discrete technologies to create innovative solutions for IBM clients. His specific areas of interest are distributed systems and applications, intelligence in industrial equipment, sustainable energy, data analytics and data visualization.

Since joining IBM in 2000, Altaf has been involved in varied roles including design, quality and architecture, and possesses a deep level of expertise in working on systems and applications in distributed environments. He has worked around the world directly with enterprise customers throughout industries such as banking, telecommunications, insurance, retail, medical and industrial.

Altaf is a thought leader in analytics and sustainability energy and has led the architecture, design and development of numerous solutions that support IBM Smarter Planet initiatives. Recently, he integrated Smarter Buildings architecture with Smarter Cities for an integrated platform. He has also taken a lead responsibility in creating solutions architecture for oil and gas, petroleum and mining industries in growth markets. He is already leading solutions architecture work for smarter cell towers, Smarter Buildings and green data centers, supporting broader IBM Smarter Planet projects.

In recognition of his technical contributions to distributed systems computing and monitoring, Altaf received IBM's highest technical recognition, the IBM Corporate Award. He has also received four IBM Outstanding Technical Achievement Awards for his contributions to distributed computing, integrating solutions and green energy solutions. Altaf is co-author of two books and numerous technical white papers, and has participated in many conferences around the globe. He mentors many colleagues in IBM from all over the world.



Brian Purcell
Manager, Sales Transaction Hub,
IBM Canada Ltd.

Brian Purcell is Manager of the Sales Transaction Hub for IBM Canada. He leads the Canadian organization supporting sellers and sales teams in the creation and development of bids and proposals across the public and private sectors.

Since joining IBM in 1995, Purcell has held a variety of sales and management positions working with both public and private sector customers. He is a Certified Client Executive with extensive experience across numerous provincial ministries, agencies, boards, commissions and Crown corporations. Purcell has held sales management roles in IBM's ibm.com and General Business divisions focusing on Canadian customers ranging from municipal, provincial and federal governments to manufacturing, industrial and professional services. During 2003-2004, he was a member of an advisory panel to the Ontario Minister of Education.

Purcell lives in Toronto with his wife and two daughters.



Joseph M. Jasinski, Ph.D.
IBM Distinguished Engineer
Global Industry Executive,
Smarter Healthcare and Life Sciences,
IBM Research

Dr. Joseph M. Jasinski is an IBM Distinguished Engineer and the Global Industry Executive for Smarter Healthcare and Life Sciences at IBM Research. In this role, he is responsible for developing strategies and coordinating research efforts across IBM's Research Division in areas ranging from the use of information technology in payer/provider healthcare, to computational studies in molecular biology.

Previously, Jasinski was Worldwide Operations Manager for IBM Life Sciences, responsible for daily operations and strategy for one of IBM's fastest-growing new businesses. During his 30-year career with IBM he has also served as the Senior Manager of the Computational Biology Centre at IBM Research and managed and carried out research in nanotechnology, materials chemistry, chemical kinetics, K-12 education and public health. He has also been involved as a technical advisor to a number of IBM community outreach projects, including reinventing education, the world community grid, IBM's global pandemic initiative and the Genographic Project. He spent a number of years as a volunteer teacher in IBM Research's Saturday Science program for students in grades 3-5.

Jasinski graduated from Dartmouth College in 1976 with a Bachelor of Arts in mathematics and chemistry. He received a PhD in chemistry from Stanford University in 1980, where he held a National Science Foundation pre-doctoral fellowship. Following post-doctoral work at the University of California, Berkeley, he joined the IBM Thomas J. Watson Research Centre as a Research Staff Member in 1982. He is a Fellow of the American Physical Society and the American Association for the Advancement of Science. He has authored or co-authored over 60 scientific papers and holds two patents.

Jasinski lives with his wife, Francoise, and their two beagles in Westchester County, New York. He has two grown daughters – Claire, who is finishing her Ph.D. in computer science, and Emily, who is a first-grade teacher.



Levine Naidoo
Business Sales & Delivery Executive,
Business Analytics and Optimization
IBM Global Business Services

Levine Naidoo is a subject-matter expert in regulatory reporting using standardized data, and leads the IBM Business Analytics and Optimization practice in this area. He also has responsibility for thought leadership and developing strategy and capability enablement. Naidoo has presented at conferences and to a number of clients across multiple sectors around the globe, sharing his breadth and depth of experience across the entire standardized-reporting supply chain. He has held the role of IBM Chief Architect on a large Australian multi-agency program designed to reduce the regulatory reporting burden on Australian businesses. He has also worked with leading financial institutions to improve their prudential regulatory reporting capability.

Naidoo has been with IBM for ten years and has more than a decade of public sector experience in Australia and New Zealand. He has led a number of transformation programs to improve service delivery and information management.

Naidoo lives with his wife and two children in Canberra, Australia. He is a Cub Scouts Leader and enjoys riding his bike.



Patricia A. Sullivan
Education Solutions Executive,
IBM Global Education Industry

Patricia (Patty) A. Sullivan is the Education Solutions Executive for IBM Global Education Industry. She leads the effort to create offerings responsive to the needs of higher education and K-12 schools. Her current area of emphasis is the creation of solutions built on IBM's cloud computing and analytics capabilities to improve student and institutional outcomes.

Sullivan is a graduate of Stanford University with a Bachelor of Science in Mathematical Sciences. Sullivan is board officer chairperson for the Foundation for California Community Colleges, advises several not-for-profit organizations serving the elderly and higher education outreach, and is a professional mentor for women executives. She has one daughter.



Dawn Bailey
Certified Project Manager,
Product Engineering Reporting
and Infrastructure, Education,
and Accessibility,
IBM Software Group

Dawn Bailey is a certified project manager who currently manages a reporting team responsible for delivering on-demand data for IBM software releases, she also manages an education team that works on delivering high-quality, focused training to our developers, and is responsible for making sure IBM products are accessible by users who are differently abled. Bailey joined Cognos 17 years ago and subsequently IBM as part of an acquisition. Bailey has held a variety of roles during this time, including customer telephone support, developing and managing website creation teams, participating in software test teams ensuring the multilingual functionality of IBM products, and managing vendors across the globe.

C. References

Surrey and British Columbia planning and strategy references:

- 1 Child and Youth Friendly City Strategy, City of Surrey, November 2010; www.surrey.ca/files/Child_and_Youth_Friendly_City_Strategy_City_of_Surrey.pdf
- 2 Surrey Child Care Gap Assessment, Build Surrey: Build a Foundation for Families; Children's Partnership Surrey – White Rock, October 2011; www.southfrasercyc.com/wp-content/uploads/2011/11/CHILD-CARE-GAP-ASSESSMENT-FINAL.pdf
- 3 Crime Reduction Strategy, Annual Report; City of Surrey, 2011; www.surrey.ca/files/Crime_Reduction_Annual_Report_2011%281%29.pdf
- 4 Early Learning Framework, Ministry of Health and Ministry of Child and Family Development, 2008; www.bced.gov.bc.ca/early_learning/pdfs/early_learning_framework.pdf
- 5 2011/12 – 2013/14 Service Plan; Fraser Health Authority, 2011; www.fraserhealth.ca/media/ServicePlan%20_2011.pdf
- 6 Snapshot of Fraser Health Services; Rowena Rizzotti, 2012; www.fraserhealth.ca/media/Board_02Feb2012_Surrey%20.pdf
- 7 Sustainability Charter – A Commitment to Sustainability, City of Surrey, 2010; www.surrey.ca/files/Sustainability_Charter.pdf
- 8 The Early Development Index and related reference documents, Human Early Learning Partnership, Clyde Hertzman, et al.; <http://earlylearning.ubc.ca/documents>
- 9 Framework for the Social Determinants of Early Childhood Development; Clyde Hertzman, 2010; www.child-encyclopedia.com/documents/HertzmanANGxp.pdf
- 10 Social Determinants of Health, The Canadian Facts; Juha Mikkonen, Dennis Raphael, 2010; www.nsgamingfoundation.org/articlesReports/Report_Social_Determinants_of_Health_The_Canadian_Facts.pdf
- 11 A Science-based Framework for Early Childhood Policy, Using Evidence to Improve Outcomes in Learning, Behavior, and Health for Vulnerable Children; Centre on the Developing Child, Harvard University, 2007; http://developingchild.harvard.edu/index.php/download_file/-/view/63
- 12 High/Scope Perry Preschool Study Through Age 40; Lawrence Schweinhardt, et al., 2005 www.highscope.org/file/Research/PerryProject/specialsummary_rev2011_02_2.pdf
- 13 Pathways to Early School Success, Effective Preschool Strategies and Teaching Strategies; Lisa Klein, Jane Knitzer, 2006; http://nccp.org/publications/pdf/text_668.pdf
- 14 Early Childhood Experiences: Laying the Foundation for Health Across a Lifetime; Commission to Build a Healthier America, Robert Wood Johnson Foundation, 2008, www.rwjf.org/files/research/sdohearlychildhoodissuebrief20110324.pdf
- 15 Understanding the Aboriginal/Non-Aboriginal Gap in Student Performance; John Richards, Jennifer Hove, Kemi Afolabi, C.D. Howe Institute Commentary, 2008; www.cdhowe.org/pdf/commentary_276.pdf
- 16 Reducing Gaps in Health – a Focus on Socio-Economic Status in Urban Canada; Canadian Population Health Initiative, 2008; https://secure.cihi.ca/free_products/Reducing_Gaps_in_Health_Report_EN_081009.pdf
- 17 Using GIS-based methods of multi-criteria analysis to construct socio-economic deprivation indices; Nathaniel Bell, Nadine Schuurman and Michael V Hayes, 2007; www.ij-healthgeographics.com/content/pdf/1476-072X-6-17.pdf
- 18 Cost-Effective Early Childhood Development Programs from Preschool to Third Grade; Arthur J. Reynolds and Judy A. Temple, The Annual Review of Clinical Psychology, 2008; <https://www2.hhh.umn.edu/publications/4912/document.pdf>
- 19 Child Care Co-operatives, A Place in Canada's Universal Child Care Plan; Canadian Cooperative Association, 2007; www.coopzone.coop/files/ChildCareCoops_PartoftheUniversalChildCarePlan.pdf

Selected research:

- 8 The Early Development Index and related reference documents, Human Early Learning Partnership, Clyde Hertzman, et al.; <http://earlylearning.ubc.ca/documents>
- 9 Framework for the Social Determinants of Early Childhood Development; Clyde Hertzman, 2010; www.child-encyclopedia.com/documents/HertzmanANGxp.pdf
- 10 Social Determinants of Health, The Canadian Facts; Juha Mikkonen, Dennis Raphael, 2010; www.nsgamingfoundation.org/articlesReports/Report_Social_Determinants_of_Health_The_Canadian_Facts.pdf
- 11 A Science-based Framework for Early Childhood Policy, Using Evidence to Improve Outcomes in Learning, Behavior, and Health for Vulnerable Children; Centre on the Developing Child, Harvard University, 2007; http://developingchild.harvard.edu/index.php/download_file/-/view/63
- 12 High/Scope Perry Preschool Study Through Age 40; Lawrence Schweinhardt, et al., 2005 www.highscope.org/file/Research/PerryProject/specialsummary_rev2011_02_2.pdf
- 13 Pathways to Early School Success, Effective Preschool Strategies and Teaching Strategies; Lisa Klein, Jane Knitzer, 2006; http://nccp.org/publications/pdf/text_668.pdf
- 14 Early Childhood Experiences: Laying the Foundation for Health Across a Lifetime; Commission to Build a Healthier America, Robert Wood Johnson Foundation, 2008, www.rwjf.org/files/research/sdohearlychildhoodissuebrief20110324.pdf
- 15 Understanding the Aboriginal/Non-Aboriginal Gap in Student Performance; John Richards, Jennifer Hove, Kemi Afolabi, C.D. Howe Institute Commentary, 2008; www.cdhowe.org/pdf/commentary_276.pdf
- 16 Reducing Gaps in Health – a Focus on Socio-Economic Status in Urban Canada; Canadian Population Health Initiative, 2008; https://secure.cihi.ca/free_products/Reducing_Gaps_in_Health_Report_EN_081009.pdf
- 17 Using GIS-based methods of multi-criteria analysis to construct socio-economic deprivation indices; Nathaniel Bell, Nadine Schuurman and Michael V Hayes, 2007; www.ij-healthgeographics.com/content/pdf/1476-072X-6-17.pdf
- 18 Cost-Effective Early Childhood Development Programs from Preschool to Third Grade; Arthur J. Reynolds and Judy A. Temple, The Annual Review of Clinical Psychology, 2008; <https://www2.hhh.umn.edu/publications/4912/document.pdf>
- 19 Child Care Co-operatives, A Place in Canada's Universal Child Care Plan; Canadian Cooperative Association, 2007; www.coopzone.coop/files/ChildCareCoops_PartoftheUniversalChildCarePlan.pdf

Sampling of best practices:

- 20 Medway's Review of Child and Young People's Plan; Medway, UK, 2011; www.medwaychildrenstrust.co.uk/documents/medway-2011-cypp-review-1317747759.pdf and case study at: www.ibm.com/smarterplanet/global/files/uk_en_uk_medway_youth_trust.pdf
- 21 Young People Not in Education, Employment or Training (NEETS); Research Paper, Northern Ireland Assembly, 2009; www.niassembly.gov.uk/researchandlibrary/2009/11009.pdf
- 22 Reducing the Proportion of Young People not in Education, Employment or Training in Wales – Delivering Skills that Work for Wales; Department for Children, Education, Lifelong Learning and Skills, Welsh Assembly Government, 2009; <http://wales.gov.uk/docs/dcells/publications/090430youngpeoplenotineduen.pdf>
- 23 The Partnership Project: an Ontario Government Strategy to Create a Stronger Partnership with the Not-for-Profit Sector, 2011; www.citizenship.gov.on.ca/images/pp/downloads/MCI_Partnership_Project_accessible_030211.pdf
- 24 RightServicing – an New Business Approach for Enabling a Differential Response in Social Program Management; Brian Lee-Archer, Curam Research Institute, 2012; www.curamsoftware.com/sites/default/files/documents/RightServicing_Apr2012.pdf
- 25 Citizen Relationship Management, Dashboard, Social Media examples:
- Council of Brent, Citizen Relationship Management www.youtube.com/watch?v=r72hgtYUTaQ
 - RAIDS Online – Reduce crime and improve public safety – Dashboard: <http://raidsonline.com>
 - City Dashboard, UK: <http://citydashboard.org/london>
 - Livehoods – Understanding cities through social media: <http://livehoods.org>
- 26 Strengthening Non-Profits: A Capacity Builders Resource Library; www.strengtheningnonprofits.org
- 27 No Wrong Door; Hume Region, State of Victoria, Australia; www.nowrongdoor.org.au/home.html
- 28 City of Chicago's Data Portal; Chicago, Illinois; www.cityofchicago.org/city/en/narr/foia/CityData.html
- 29 Eight Principles of Open Government Data; Open Knowledge Foundation; www.opengovdata.org/home/8principles
- 30 ASU Loadstar Centre for Philanthropy and Nonprofit Innovation; <http://lodestar.asu.edu>
- 31 Partnership Project; Strengthening Ontario's Not-For-Profit Sector; www.citizenship.gov.on.ca/english/pp/index.shtml
- 32 Hidden Surrey; Helen Bowcock, Surrey Community Foundation, United Kingdom, 2009; www.cfsurrey.org.uk/pdfs/Hidden%20Surrey%20Report%20-%20March%202009.pdf
- 33 Strengthening Nonprofits: A Capacity Builders Resource Library; www.strengtheningnonprofits.org
- 34 ASU Loadstar Centre for Philanthropy and Nonprofit Innovation; <http://lodestar.asu.edu>
- 35 Partnership Project – Strengthening Ontario's Not-For-Profit Sector; www.citizenship.gov.on.ca/english/pp/index.shtml
- 36 Toronto Centre for Social Innovation; <http://socialinnovation.ca>
- 37 Hume Health Region of Victoria; www.nowrongdoor.org.au
- 38 Global Reporting Initiative; www.globalreporting.org
- 39 Policy Research and Directions for Sustainable Recreation and Sports Facilities; Local Government Sport and Recreation Facilities Sustainability Group; Local Government of South Australia; www.lga.sa.gov.au/webdata/resources/files/2010_15_-_Sustainable_Sport_Recreation_Facilities_-_Shared_Use_of_Schools_Report_-_June_2011.pdf

Selected early childhood parent references:

- 40 Early Years, Parent Handbook for Preschool, City of Surrey; www.surrey.ca/files/%2811960%29_Kensington_Prairie_Preschool_Parent_Handbook_FINAL.pdf
- 41 Welcome to StrongStart!, Surrey Schools; www.sd36.bc.ca/general/programs/StrongStart.pdf
- 42 Ready, Set, Learn – Helping Your Preschooler Get Ready for School; ReadNow BC; www.bced.gov.bc.ca/early_learning/rsl/2009/rsl_english09.pdf

D. Approach

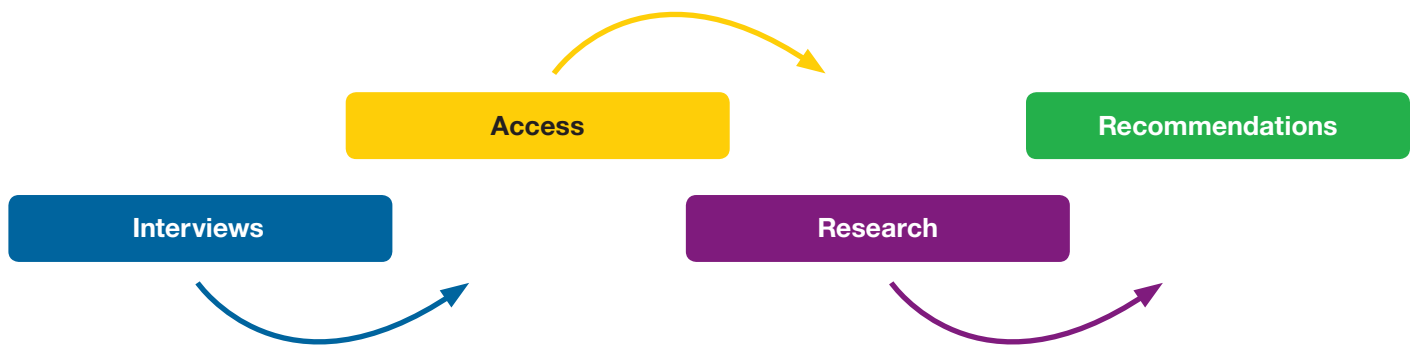


Figure 1
Starting with the EDI as a common metric, the IBM team used the Smarter Cities Challenge approach and methodology



Figure 2
Focus on early childhood development (ECD)

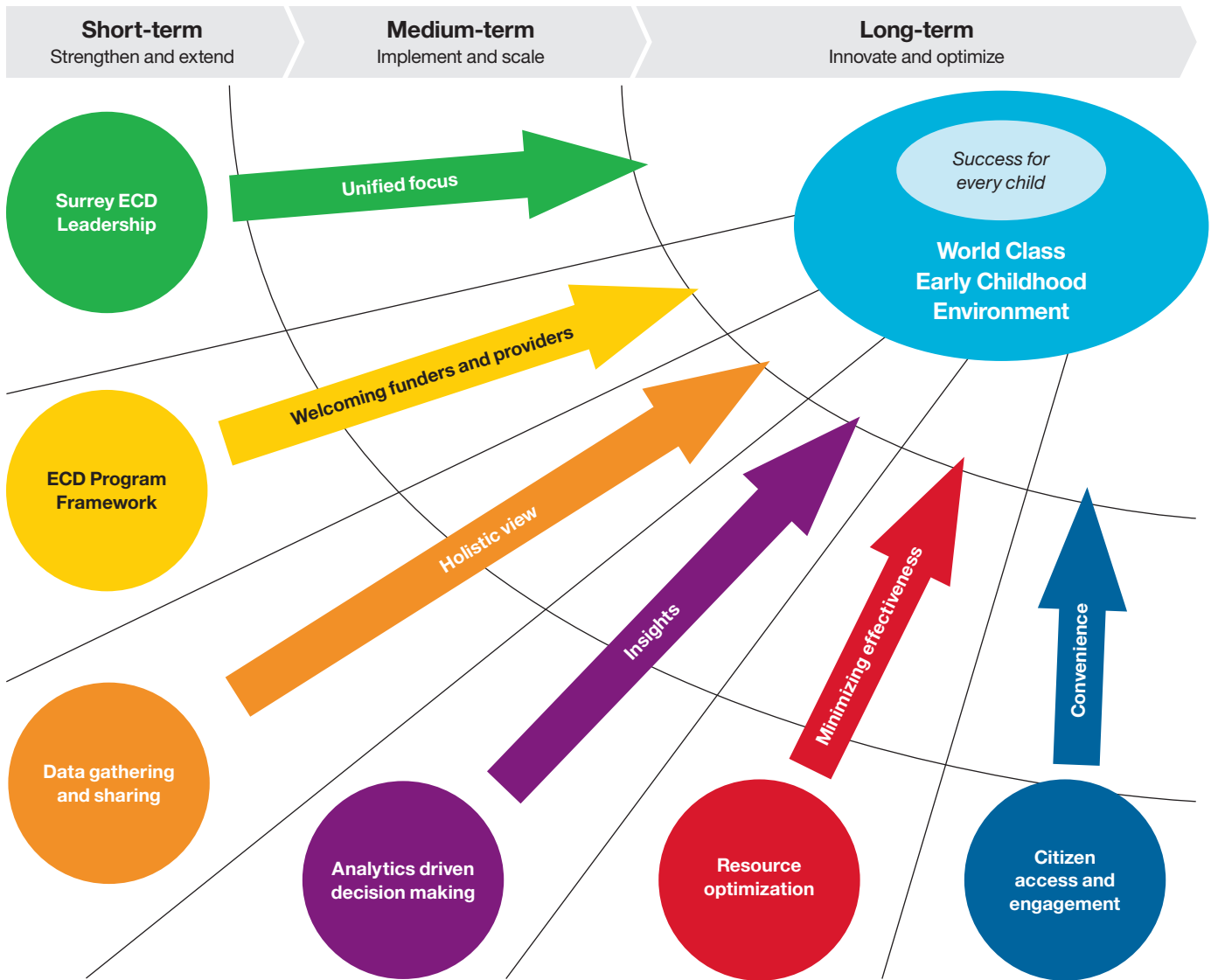


Figure 3
Roadmap for early childhood development – summary

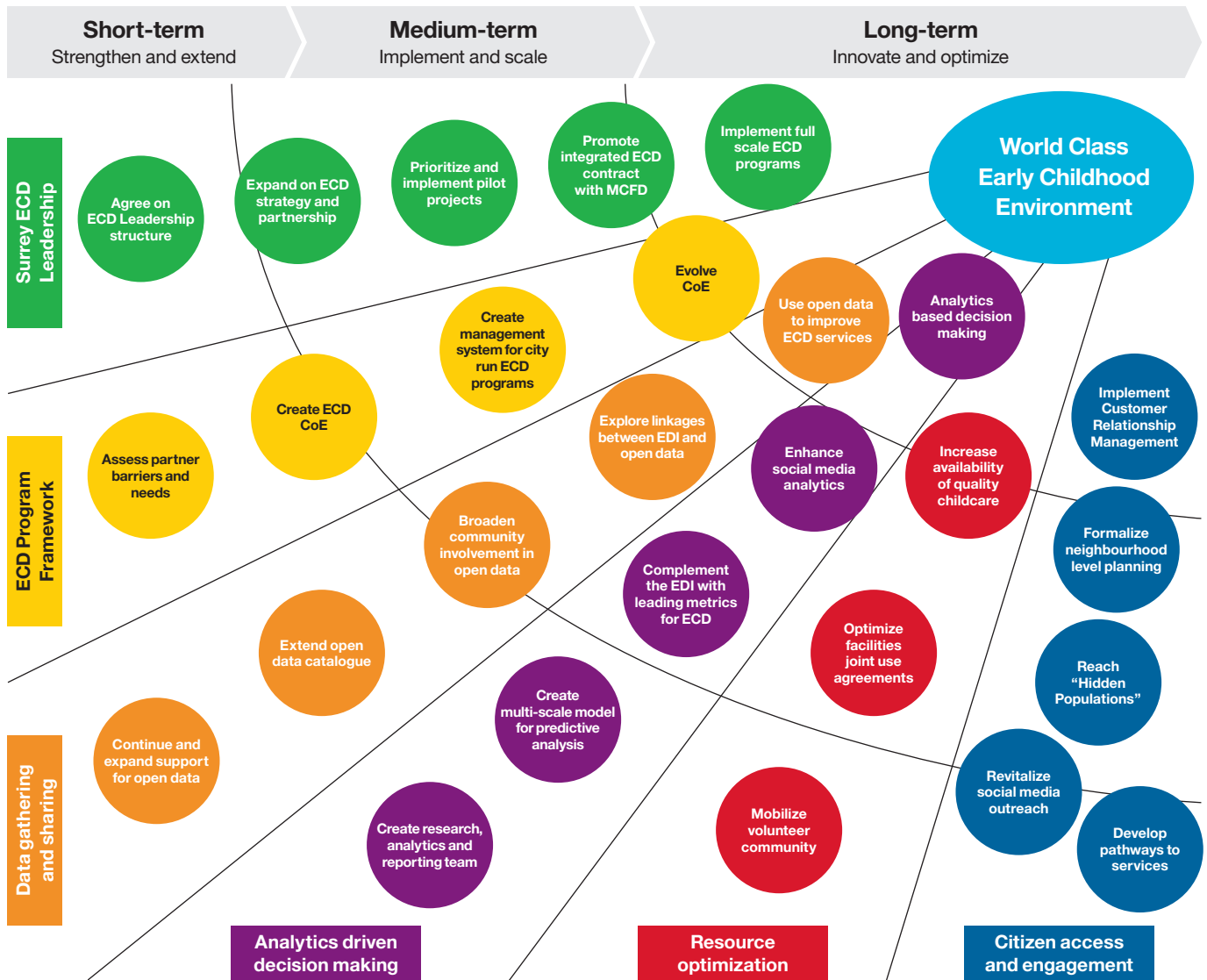


Figure 4
Roadmap for early childhood development – detail



Figure 5
Immediate actions for early childhood development (ages 0-5)

E. Using open data to enhance ECD

“Open data makes government data available in machine-readable formats for citizens, private sector organizations and not-for-profit organizations to reuse in innovative ways. Open data is data that is made freely available to all stakeholders to use and republish. Open data allows Canadians to explore our data sets to find information that is of value to them.”

—Canadian Open Data Initiative, www.open.gc.ca/open-ouvert/data-donnees-eng.asp

Open data has the potential to transform society, government and the economy, and is now seen by many as a better way to engage with citizens and partners. There is an explosive growth in open data with significant uptake in government, research and elsewhere. The open data movement is spreading rapidly and today many countries, states, regions and cities are taking their first steps with open data sites. The Canadian Open Data Portal now has more than 272,000 data sets from 20 participating organizations, up from 10 at the launch of the portal.

The cities of Toronto, Ottawa, Edmonton and Vancouver are collaborating as the G4 to improve open data standards and licenses. The City of Surrey will need to accelerate its involvement in the open data movement and implement some of the additional components necessary to grow a sustainable, repeatable platform, process and ecosystem, to leverage the principles of open data, and to turn it into information, into action and into change. A key goal of open data projects is to promote interoperability through the use of standardized data and standardized interfaces, but Surrey must also go one step further and show how key data sets can be linked, such as linking EDI data with deprivation index data or service demand data. Linked data sets will be key to sustainability reporting.

“At the root, the focus on open data is driven by a belief in democratic processes: openness will lead to greater awareness, greater awareness will lead to increased participation and increased participation will enable the city to draw on the knowledge and creativity of its citizens to address problems and realize its opportunities.”

—IBM Smarter Cities Challenge Helsinki report

The most important consideration is that the City does not have to create an open data roadmap on its own; the entire value proposition of open data is that it is a collaborative “crowd sourcing” approach and the best way forward would be for the City to catalyze and enable this approach.

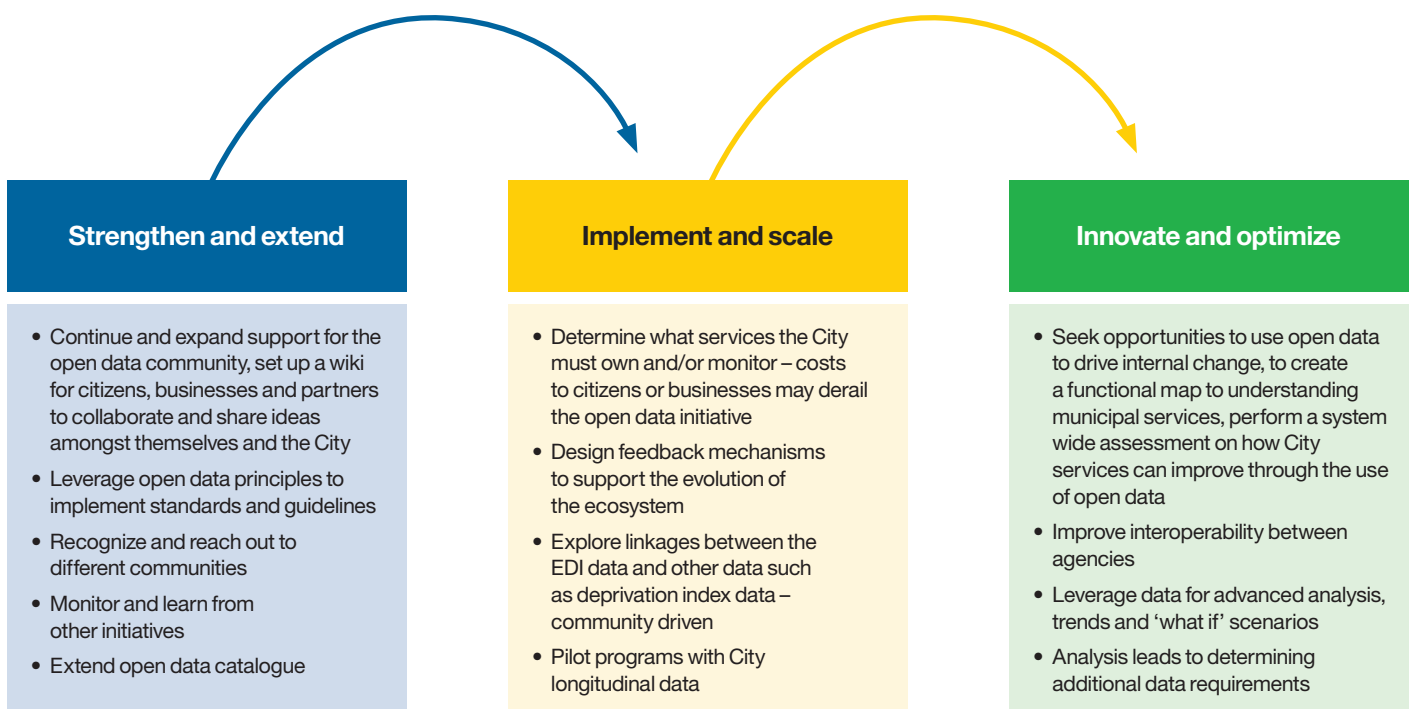


Figure 6
Recommended steps to raise overall maturity across the ecosystem

Open data reference sites

- www.data.gc.ca
- <http://data.vancouver.ca>
- www.toronto.ca/open
- <http://blog.opendataottawa.ca>
- <http://data.edmonton.ca>
- www.data.gov/
- www.whitehouse.gov/open
- <http://data.cityofchicago.org/>
- www.everyblock.com/
- <http://data.gov.uk/>
- <http://data.un.org/>
- <http://linkeddata.org/>
- <http://wiki.civiccommons.org/Initiatives>
- http://smartercitieschallenge.org/executive_reports/SCC_ExecutiveSummary_Helsinki.pdf

F. Data-driven decisions

The City already has basic information on the programs it offers. In the short term, an initial analysis would allow the City to determine who is registering for which programs, from which neighbourhoods, where they have the most programs, and other metrics. Analysis would allow the City to immediately see the “what, when, who, where” and allow them to decide where to invest at the program level.

The framework shown in Figure 7 highlights how data and analytics can be combined, both within the City and in the longer-term partnership with community agencies, to leverage a holistic system of robust data-driven decisions.

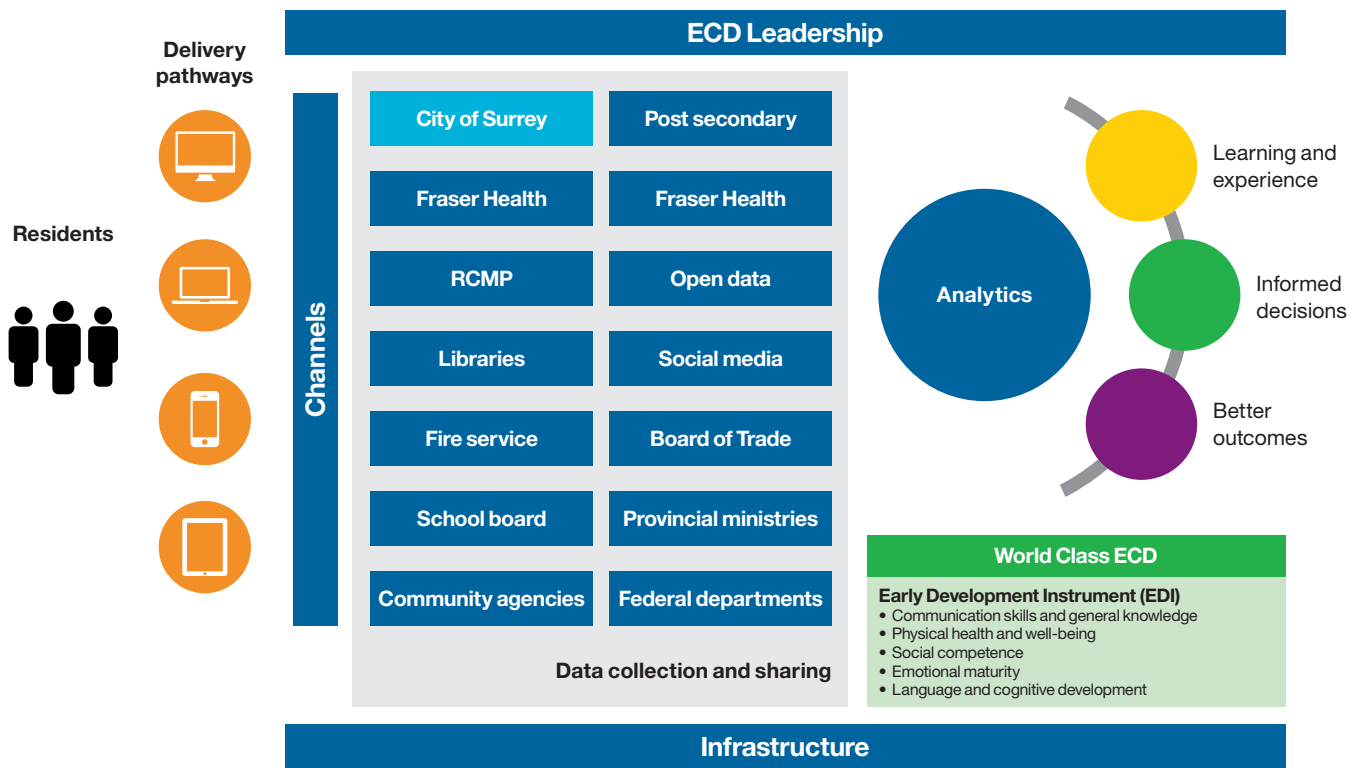


Figure 7
Proposed logical architecture overview diagram

Example

As a simplistic example, if a basic data set* such as the one below exists, analysis coupled with establishing governance around the usage of this data, would potentially help answer questions such as:

- Which neighbourhoods or communities should be targeted for programs in order to focus on improving low EDI scores in a particular area?
- Which programs are most effective in meeting the goals of raising the EDI scores and which are not effective?
- Which programs should be modified to address multiple EDI segments?
- Which programs need to be cancelled due to higher cost or minimal returns (taking into account social and environmental goals and not just economic considerations)?
- Which programs are available in languages other than English and therefore can, or cannot, be offered in certain communities?

For example, if a neighbourhood has low EDI in physical and social segments, the City could offer multigenerational** team-based sports programs to that community, rather than individual sports such as swimming. Enriching current courses with content that will enhance multiple EDI segments instead of one or two may also add value.

Another option would be to consider offering parenting or PALS-type programming at the same location where programs do not require parental participation. Analysis of the data would highlight which programs are effective in raising scores, and which have no affect.

This could also give the City insight into answers on topics like why people cancel. Such analysis could lead to understanding barriers to participation. As an example, this may expose transportation concerns that can be addressed by working with transportation planners to propose alternative bus routes.

Examples of fields

Program name	Dates or times offered
Program type	Primary EDI target* physical/social/emotional/cognitive/language
Program number	Secondary EDI target* physical/social/emotional/cognitive/language
Registrants – families and individuals	Recommendations (edit content, cancel, postpone and so on)
Duration	Cancellations
Content	Cancellation reasons (why people cancel, such as transportation)
Location	Target age range
Instructor	Status (current, on hold, seasonal)
Language	Single or multigenerational**
Prerequisites	Cost of Delivery fields – Instructors, location, supplies
Recommended next program/level	Miscellaneous – open text
Parent involvement required	Yes or no

* Intended as an example only; not intended to be a comprehensive data set.

** Based on research conducted by Harvard University reference¹¹, multigenerational programs have been shown to have potentially greater effect on overall readiness for school.

In the long term, a holistic view that includes a broad data set from multiple sources would provide sophisticated analytic capability to drive decision making across multiple channels to improve the EDI scores as part of achieving a world-class ECD environment.



Vancouver

Nanaimo

Richmond

Ladysmith

Duncan

Cobble Hill

Sooke

Sidney T.

Oak

Vic

101

18

1A

17

14

1

1

Gillies Bay

TEXADA

Halfmoon Bay

Parksville

Lantzville

Englishman River Falls

Prov. Park

Cassidy

Chemainus

Youbou

Lake Cowichan

Cowichan R. Prov. Pk.

Mt. Modeste 3686 ft.

Juan de Fuca Prov. Park

Goldstream Prov. Park

Jordan River

Esquimalt

Port Mellon

Sechelt

Gibsons

Nanaimo Arpt.

Dionisio Point Prov. Pk.

Crofton

Fulford Harbour

Salt Spring I.

Cobble Hill

Bamberton Prov. Park

Sidney T.

Victoria Int'l. Arpt.

Oak

Vic

Esquimalt

Esquimalt

Esquimalt

Esquimalt

Esquimalt

Esquimalt



© Copyright IBM Corporation 2012

IBM Corporate Citizenship & Corporate Affairs
1 New Orchard Road
Armonk
NY 10504

Produced in the United States of America
July 2012
All Rights Reserved

IBM, the IBM logo, ibm.com, Smarter Cities and Smarter Planet are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at “Copyright and trademark information” at: ibm.com/legal/copytrade.shtml

Other product, company or service names may be trademarks or service marks of others.

References in this publication to IBM products or services do not imply that IBM intends to make them available in all countries in which IBM operates.



Please Recycle



**2013 FINANCIAL PLAN
COUNCIL INITIATIVES**

Description	Amount	Allocation	
		to date	Remaining
Carried Forward from Prior Year	253,126		
2013 Approved Budget	<u>250,000</u>		\$ 503,126
Arts Umbrella Surrey (3rd year of 3-year program)	25,000		
2013 Women's BC OPEN Water Polo Tournament	5,000		
Comedy Courage Sponsorship	5,000		
Surrey Community Summit	25,000		
Sponsorship Appreciation Event	10,000		
Clayton Heights Enhanced Programming	85,000		
Cloverdale Skating Club	5,000		
Early Childhood Development (ECD) Smarter Cities Funding	50,000		
Allocations for 2013		<u>\$ 210,000</u>	<u>\$ 293,126</u>