ANALYTICSCALGARY – Advanced Analytics

EXECUTIVE SUMMARY
AnalyticsCalgary is a corporate wide program comprised of six initiatives including Advanced Analytics, which aims to further integrate data driven decision making across The Corporation through a collaborative process.

Through the AnalyticsCalgary program, The City of Calgary is laying the foundation for advancing the city's ability to effectively use big data analytics and data management to gain further insight into future needs based on existing City data collected over many years.

A demonstration of advanced analytics will be provided to the committee to show how practical data driven decisions can be made through the use of scenario analysis, forecasting and resource optimization modeling tools. This will be a real-life scenario showing what can be done with actual City data.

ADMINISTRATION RECOMMENDATION(S)
That Priorities and Finance Committee receive this report for information.

BACKGROUND
The six initiatives which were identified to focus on specific areas of work within the AnalyticsCalgary Program are:
- Advanced Analytics
- Business Intelligence
- Civic Innovation YYC
- Internal Consulting
- Open Data
- Research

In June of 2015, AnalyticsCalgary, an 18 month corporate program, was launched with the aim to further enable data driven decision making through collaboration. The goal of the program is to promote collaboration by connecting the many innovative pilot programs, initiatives and dynamic projects already underway within business units across the organization. Ultimately, the driver for this work is to support business units in maximizing efficiency and value in service delivery to citizens.

AnalyticsCalgary is a connector, enabler and facilitator, and will;
- Connect people so they can share ideas
- Enable new projects and elevate existing work
- Facilitate information sharing for better decision making

Analytics is the ability to collect and use data to generate insights that support fact based decision making. Analytics often involves studying current and historical data to research potential trends, to analyze the effects of certain decisions or events, or to evaluate the performance of a given tool or scenario.

Deputy City Manager's Office Report to
Priorities and Finance Committee
2016 September 20

ISC: **UNRESTRICTED**
PFC2016-0722
Page 2 of 3

ANALYTICSCALGARY – Advanced Analytics

This initiative aims to make advanced analytics and data science easily accessible to all staff and business units. Convenient, consistent and reliable access to advanced analytics by business units substantially reduces the time and money needed to analyze data and gain valuable insight into civic services, issues and challenges. Advanced analytics builds upon existing business intelligence and spatial analysis that is critical to The City of Calgary's ability to be efficient and effective in the delivery of services to citizens.

The focus of the Advanced Analytics initiative is to not only provide access to expertise in analytics, but to also help business units make better use of data through the integration of visualization, modeling and forecasting tools. These tools demonstrate the business benefits that are possible through applying the insight revealed by the tools, directly to operational decisions.

Through the program, AnalyticsCalgary will deliver these initiatives by:
- Developing and delivering strategies for data driven decision making;
- Initiating policy changes or amendments to support a data centric culture;
- Building robust communities of practice to support corporate knowledge sharing and collaboration; and
- Initiating showcase projects and actions that demonstrate what's possible with intentional collaboration.

Advanced Analytics is an emerging field responding to the availability of big data, the internet of things, transparency, as well as keeping pace with what other cities are doing with open data, and moving The City of Calgary forward as technology changes. Using and sharing data in new and different ways is helping to shift the culture of this organization.

In 2016, we won the award for Limitless Business Intelligence Dashboard for North America with The City of Calgary's 311 Dashboard at the Infosol Business Intelligence Seminar. This award demonstrates that we are setting a high standard in what governments are able to produce using data and tools we already had in place and the right staff. The first version of this award winning dashboard was developed over a period of four weeks, building on the learning of a previous dashboard which took us 10 weeks to develop.

INVESTIGATION: ALTERNATIVES AND ANALYSIS
Aligned with corporate strategies, Advanced Analytics will:
- Provide an integrated framework for analytics across the corporation;
- Provide stakeholders with knowledge, best practices and examples of what can be done;
- Be an enabler of analytics services for business units, programs and projects; and
- Act as an agent of change.

Strategic Alignment
AnalyticsCalgary is aligned with a number of corporate strategies including:
- A well run city (Council priorities);
- Collaborative workforce to better serve citizens (Leadership Strategic Plan);
- A culture of innovation and improvement (Cut Red Tape);

Deputy City Manager's Office Report to
Priorities and Finance Committee
2016 September 20

ISC: UNRESTRICTED
PFC2016-0722
Page 3 of 3

ANALYTICSCALGARY – Advanced Analytics

- Accessible services, partnerships, transparency, participation, innovation (Digital Strategy); and
- Accuracy, timeliness and accessibility of The City's information assets (IT Governance Policy).

Social, Environmental, Economic (External)
The deliverables of AnalyticsCalgary are in response to the increasing demand for meaningful citizen engagement to shape cost effective and high value service delivery. Advanced Analytics provides a framework for analytics to help business units maximize the use of data in all relevant decisions.

Financial Capacity
Advanced Analytics current budget which includes two resources allocated to this work.

Risk Assessment
There are no significant risks associated with this recommendation.

REASON(S) FOR RECOMMENDATION(S):
Information presented in this report, and additional information that becomes available over time may be used in support of business cases being prepared for the evolution of AnalyticsCalgary beyond 2017.