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Item No. 11.1.6
Halifax Regional Council
August 5, 2014

TO: Mayor Savage and Members of Halifax Regional Council

SUBMITTED BY: Original Signed by
Mike Labrecque, Acting Chief Administrative Officer

Original Signed by Director
Greg Keefe, Director of Finance & ICT/CFO

DATE: June 27, 2014

SUBJECT: Proposed Administrative Order Number 20014-006-ADM, Respecting Open Data

ORIGIN

Regional Council report dated September 25, 2012- "Open Data Initiative".

LEGISLATIVE AUTHORITY

- *HRM Charter*, Section 59(3): Council may adopt policies on any matter that the Council considers conducive to the effective management of the Municipality.
- Administrative Order 54, Respecting the Procedures for Developing Administrative Orders,

RECOMMENDATION

It is recommended that Halifax Regional Council:

1. Adopt the proposed Administrative Order Number 2014-006-ADM, Respecting Open Data, as set out in Attachment A; and
2. Repeal the Geographic Data Dissemination Policy (GDDP) adopted by Regional Council on June 20, 2006.

BACKGROUND

In September 2012, Halifax Regional Council voted unanimously in support of an open data initiative that enabled public release of a selection of HRM datasets free of charge, and engagement of citizens and industry experts in an open data application contest. The project ran from January, 2013 to January, 2014 with the following milestones achieved:

- Open Data catalogue launch – April 10, 2013
- Apps4Halifax contest launch – August 8, 2013
- Idea submission – August 8 to September 6, 2013
- Apps4Halifax Hackathon – September 13-15, 2013
- Apps submission – September 9 to November 29, 2013
- Public voting – December 2, 2013 to January 6, 2014
- Judging – January 9-13, 2014
- Award ceremony – January 18, 2014

Upon completion of the pilot, staff committed to report to Regional Council on the benefits, costs, and impacts of freely sharing datasets to the public based on knowledge gained from the project, and to provide recommendations on further adoption of Open Data and future use of the existing GIS Data Dissemination Policy. The purpose of this report is to provide the aforementioned information and recommendations.

DISCUSSION

The following section outlines details, benefits, and lessons learned from the Open Data pilot.

1) HRM Open Data pilot facts:

- 17 datasets released through the Open Data catalogue were downloaded 155,887 times and viewed 16,047 times from April 2013 – Jan 2014.
- 276 ideas and 38 applications were submitted. (See details at <http://www.apps4halifax.ca/ideas> and <http://www.apps4halifax.ca/apps>).
- 1 Open Data Hackathon was hosted; approximately 100 people attended. 7 applications/prototypes were created.
- 1,573 public votes on the submitted applications.
- 23 sponsors in total contributed \$24,000 in cash plus in-kind sponsorship towards the contest.
- 24 prizes were awarded with a total cash value of \$50,000.
- Over 250 people attended the award ceremony.
- A core staff team of 6 worked on the project.
- Total cost of the Open Data pilot- \$109,500.

The Open Data Apps4Halifax contest and Hackathon were the first held in Atlantic Canada. The events garnered much media attention, public interest, and support from members of Regional Council and Mayor Savage.

HRM staff involved in the project and HRM officials had opportunities to socialize the Open Data initiative through a number of public events, conferences, and work shops. The project team also responded to public requests on a daily basis.

The Open Data pilot project and the Apps4Halifax contest received media exposure through a series of radio/TV interviews, news articles, public events, and social media coverage. Local media such as CBC, Global News, News95.7, Live105, Chronicle Herald, Metro News, and allnovascotia.com followed and reported on the Open Data project.

2. Benefits of the Open Data pilot

A number of key benefits were demonstrated from the 12 month pilot project. These include:

a) Increased Transparency & Access to Data - The Open Data initiative provided free and equal access to government data previously unavailable to citizens and business. Access to datasets such as trails, park and recreation sites, and solid waste collection provided insights into municipal services and demonstrated a desire on the part of HRM to be more transparent in its interaction with citizens. The provision of LiDAR data allowed for design and engineering consulting companies in HRM to take advantage of this valuable source of data, avoiding unnecessary duplication and associated costs.

b) Enhanced Public Engagement - The Apps4Halifax contest provided an innovative way to engage the public. From its launch, the contest drew much attention through various channels. Continuous dialogue between HRM and the public generated collective intelligence around many aspects of releasing data, such as availability, quality assurance, usability and policies. The Hackathon was an excellent opportunity for HRM staff to work with local, creative minds to develop interesting ideas and build applications of benefit to the municipality.

c) Economic Development - By leveraging the released data, a significant number of new applications were developed that benefitted HRM citizens. The Apps4Halifax contest harvested 38 applications in less than 6 months, at significantly less cost and in less time than if the applications had been developed by HRM staff or outside vendors. The contest offered individuals and local companies the opportunity to showcase their capabilities while enhancing the quality of life for citizens who use the applications.

d) Leadership - The municipality demonstrated leadership by hosting the first Open Data contest in the Atlantic region and by becoming part of the national and global Open Data movement. The Apps4Halifax contest drew attention from many Canadian jurisdictions, as well as organizations from the U.S and Europe.

3. Open Data Lessons Learned

In addition to the benefits listed above, there were a number of “lessons learned” from the pilot which should be taken into consideration with any expansion of the initiative:

a) Subject Matter Complexity - Even though data is made available free of charge, users may not understand its potential use. Access alone does not necessarily equate to use. As well, Geographic Information System (GIS) datasets or formats may not be understood by all, thus limiting their use.

b) Data Quality - The 17 released datasets were of high quality and the Open Data pilot survey showed the majority of users were satisfied with the quality of released data. It is expected that data quality issues will become more apparent and require addressing if the Open Data initiative is expanded.

c) Technical - Although metadata was well maintained for the datasets released during the pilot, a metadata standard will need to be defined for many datasets prior to their release. This will require effort to complete and maintain. As well, some HRM legacy information systems may complicate the release of certain datasets because additional effort is required to meet Open Data technical requirements, such as automated data extraction.

d) Communication - It became apparent throughout the Open Data pilot that communication with internal municipal business units and the public is critical to sustain interest and support. Continuous dialogue between HRM and local groups, such as the application development community, is the basis for success in the open data field.

Open Data Administrative Order

Given the overall positive response and experience associated with the pilot project, it is staff's recommendation that Regional Council formalize an Open Data program through adoption of an Administrative Order. A draft Administrative Order Respecting Open Data is attached for Regional Council's consideration.

The Administrative Order outlines the purpose, scope, definitions, schedule of release, and roles and responsibilities regarding Open Data. The Administrative Order enables structured data, created for the purpose of operating and managing the municipality, to be made open and free for public consumption and use, except data which is confidential, sensitive, or contains personal information. Objectives to be achieved by adoption of the Administrative Order include:

- Making the municipality's data more accessible to the public in order to meet the needs and expectations of citizens by creating an equal opportunity for citizens and businesses to access the municipality's open data in a timely, simple and straightforward manner;
- Enabling innovative ways to engage citizens in community development and public policy issues;
- Improving relations between the municipality and citizens by increasing government transparency;
- Improving data sharing efficiency and decreasing the related operating costs for the municipality;
- Promoting the use of the municipality's open data catalogue; and
- Creating new opportunities to inform citizens about the municipality and enable their participation in municipal government decision making.

To be eligible for designation as HRM open data, a dataset shall meet the following criteria:

- Owned by HRM, or in the custody of the municipality and for which the municipality has authorization from the owners of the datasets to release in accordance with this Administrative Order;
- Relied upon by the municipality for decision-making;
- Machine readable;
- In a non-proprietary, searchable, sortable technology platform-independent format;
- Free of any legal or contractual obligations, or public safety restrictions, that requires it to be kept confidential; and
- Free of personal information protected pursuant to FOIPOP, PIIPDA and other applicable legislation.

The Administrative Order requires an Open Data Catalogue to be established which identifies and contains all datasets available to the public at no cost. Datasets shall be released through the Open Data Catalogue at least once per year, based on requests from the public or from an HRM business unit. The release of requested datasets shall be prioritized based on a number of criteria, including but not limited to, technical complexity of the source system, resource availability, degree of data preparation, and consultation with HRM business units. All datasets shall be reviewed by the HRM Access & Privacy Officer to ensure they do not contain personal information.

Adoption of Administrative Order 2014-006-ADM Respecting Open Data would make the existing Geographic Data Dissemination Policy (GDDP) redundant. Consequently, staff recommend Regional Council consider repealing the GDDP.

A number of requests to release additional datasets were received during the Open Data contest. Staff have reviewed the requests and have determined the following datasets are ready for release as open data: a) tax area rates, b) contour data, c) spot heights, d) parking meters, and e) pre-amalgamation boundaries. Staff recommend inclusion of the aforementioned datasets in the Open Data Catalogue, if the

proposed Administrative Order is adopted.

FINANCIAL IMPLICATIONS

The cost for a permanent technical solution to host an HRM Open Data Catalogue is estimated at \$70,000-\$100,000 per year. The Operating Cost of Capital (OCC) funds are available for a solution in Project Account CI990001 Business Intelligence Services. At this time, it is not anticipated there will be a requirement for additional staff to support the Open Data program. Existing staff in ICT and other business units who currently manage and disseminate HRM data, should be able to manage inquiries likely to be generated by the release of datasets. The potential release of datasets for public use may lead to concerted efforts to improve the accuracy and completeness of certain datasets. While this may represent additional work in the short term, it should be recognized that data quality concerns should be addressed as part of the normal course of municipal business and hence, any costs or effort associated with preparing the release of datasets as open data should not be linked to the Open Data program itself. Depending on the success of the Open Data program, staff levels to support the program may need to be revisited in the future.

COMMUNITY ENGAGEMENT

There were numerous opportunities for public engagement throughout the Open Data pilot. Members of the public were invited to submit ideas for applications at the beginning of the contest. The Hackathon and the Apps4Halifax contest were open to all residents, businesses, and organizations based in Nova Scotia. The 17 released datasets were available for free to anyone who wanted to view or download them. Lastly, the public were invited to vote for their favorite applications as the "People's Choice" in each of the four award categories, resulting in four awards being granted based on public input alone.

ENVIRONMENTAL IMPLICATIONS

There are no environmental implications associated with this report.

ALTERNATIVES

Regional Council may choose not to expand Open Data beyond the pilot project and therefore not adopt the recommended Administrative Order Respecting Open Data. Under this scenario, future data sharing would be guided by and limited to the existing GIS Data Dissemination Policy. The 17 released datasets would either remain open as per Regional Council's direction on September 25, 2012, or revert back to being regulated by the GDDP. This alternative is not recommended as it is contrary to the requested direction of Regional Council and the general direction most Canadian municipalities have moved in over the past five years.

ATTACHMENTS

Attachment A - Draft Administrative Order 2014-006-ADM, Respecting Open Data

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.php> then choose the Appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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**ADMINISTRATIVE ORDER NUMBER 2014-006-ADM
RESPECTING OPEN DATA**

BE IT RESOLVED AS AN ADMINISTRATIVE ORDER of the Council of the Halifax Regional Municipality under the authority of the *Halifax Regional Municipality Charter*, as follows:

Short Title

1. This Administrative Order may be known as the *Open Data Administrative Order*.

Interpretation

2. In this Administrative Order,
 - (a) “CAO” means the Chief Administrative Officer of the Halifax Regional Municipality, or delegate;
 - (b) “Council” means the Council of the Municipality;
 - (c) “Data” means facts, figures and statistics objectively measured according to a standard or scale such as frequency or volumes or occurrences;
 - (d) “Dataset” means a collection of raw, original and machine readable data stored and presented in tabular form with related metadata, but excludes unstructured data;
 - (e) “Machine readable” means being able to allow automated import and processing through computer application;
 - (f) “Metadata” means information about data that describes or characterizes such data to assist in its retrieval, interpretation, or use;
 - (g) “Municipality” means the Halifax Regional Municipality;
 - (h) “Open Data” means datasets that have been approved for public release in accordance with this Administrative Order;
 - (i) “Open Data Catalogue” means a listing of datasets that have been made available as municipal Open Data;

- (j) “Personal information” means recorded information about an identifiable individual as defined in section 461 of the *Municipal Government Act*; and
- (k) “Unstructured data” includes photos, emails, PDF files, word processing documents, and webpages.

Purpose

- 3. The purpose of this Administrative Order is to permit the release and reuse of electronic municipal datasets in machine readable format pursuant to this Administrative Order, at no cost to the public, that meets specified criteria, while protecting personal information in accordance with the municipality’s legislative obligations under Part XX of the *Municipal Government Act*, Freedom of Information and Protection of Privacy, and the municipality’s Privacy Policy.
- 4. The purpose of this Administrative Order will be facilitated by:
 - (a) Making the municipality’s data more accessible to the public in order to meet the needs and expectations of citizens by creating an equal opportunity for citizens and businesses to access the municipality’s open data in a timely, simple and straightforward manner;
 - (b) Enabling innovative ways to engage citizens in community development and public policy issues;
 - (c) Improving relations between the municipality and citizens by increasing government transparency;
 - (d) Improving data sharing efficiency and decreasing the related operating costs for the municipality;
 - (e) Enhancing the social and economic benefit of the municipality’s data; Promoting the use of the municipality’s open data catalogue; and
 - (f) Creating new opportunities to inform citizens about the municipality and enable their participation in municipal government decision making.

Application

- 5. This Administrative Order applies to datasets that:
 - (a) (i) are owned by the municipality; or

- (ii) are in the custody of the municipality and for which the municipality has authorization from the owner of the datasets to release in accordance with this Administrative Order;
 - (b) are relied upon by the municipality for decision-making;
 - (c) are machine readable; and
 - (d) are in a non-proprietary, searchable, sortable, technology platform-independent format.
6. This Administrative Order does not apply to datasets:
- (a) that contain personal information;
 - (b) in respect of which the municipality is subject to a legal or contractual obligation to keep confidential; or
 - (c) for which distribution is restricted for public safety reasons.
7. Nothing in this Administrative Order shall be interpreted to limit or otherwise prescribe Council's general discretion to licence data not contained within the Open Data Catalogue.

Open Data Catalogue

8. Council hereby establishes an Open Data Catalogue, which shall include all datasets made available to the public by the municipality at no cost.
9. Council hereby delegates to the CAO the authority to place terms of use on the use of datasets by the public from the Open Data Catalogue.

Schedule of release

10. The municipality may consider datasets for release as open data upon a request from a member of the public or a request from a municipal business unit.
11. Municipal staff shall release new datasets as open data at least once per year.
12. When requested datasets are eligible for release under this Administrative Order, staff shall prioritize the timing of the release of datasets based on a consideration of the following:
- (a) consultation with municipal business units;

- (b) technical complexity of the source system;
 - (c) resource availability;
 - (d) data preparation; and
 - (e) any other matter staff considers relevant.
13. Where staff has received a request for the release of a dataset as open data in accordance with section 10, the dataset shall be reviewed by the HRM Access & Privacy Officer for a determination as to whether the dataset contains any personal information.
14. Staff may recommend to the CAO that a dataset be included in the Open Data Catalogue where it has been prioritized for release in accordance with section 12 and it has been determined by the HRM Access & Privacy Officer to not include personal information as set out in section 13.

Inclusion of datasets in the Open Data Catalogue

15. Council hereby delegates to the CAO the authority to add datasets to the Open Data Catalogue upon recommendation from staff.

Data Sharing Agreements

16. The municipality may enter into data sharing agreements with third party organizations to provide datasets from the Open Data Catalogue to the third party at no cost where, in the opinion of staff, there is a public benefit or a benefit to the municipality, or where the third party is a government or public sector agency.
17. Council hereby delegates to the CAO the authority to enter into and execute data sharing agreements, including any amendments thereto, in accordance with section 16.

Repeal

18. The Geographic Data Dissemination Policy adopted by Council on June 20, 2006 is hereby repealed.

Done and passed by Council this ____ day of _____, 2014.

Mayor

Municipal Clerk