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TO: Jimmy Morales, City Manager
FROM: Ricky Arriola, Commissioner
DATE: March 1, 2016
SUBJECT: **REFERRAL TO THE FINANCE & CITYWIDE PROJECTS COMMITTEE
TO DISCUSS IMPLEMENTING AN OPEN DATA POLICY**

Executive Summary

Open data is a cornerstone of modern American democracy. On his first day in office, President Obama signed an executive order to make open and machine readable data the new federal standard.¹ Open data appeals not only to residents who demand a transparent government, but also policy makers who need accurate and timely information to make data-driven decisions. Miami Beach should recognize the value of data as a strategic asset and adopt a comprehensive open data policy.

Background

The idea of open government in the United States can be traced back to the passage of the Freedom of Information Act (FOIA).² The FOIA sought to foster a stronger relationship between government and its citizens. The digital revolution now serves as the propelling force behind the open data movement of the 21st century. Open data is based on the principle of collaboration. We recognize that government should treat residents not only as clients, but also as partners in building a better society. Technology is an invaluable tool to build a better society. It is also a resource whose capabilities continue to expand, while its costs are reduced. Data is now capable of systematic collection, cheap storage, and advanced analysis. A 2013 McKinsey study reported that open data can yield over \$3 trillion a year in added value to the economy. Governments that adopt open data policies will be able to siphon from this new emerging market. Major US cities like New York, San Francisco, DC, Austin, and many more already embrace open data.

Motivating Factors for Implementing An Open Data Policy

What constitutes open data? Several factors distinguish data as truly “open.” An open government ensures public information is: (a) free for the general public to access, (b) free to redistribute without licenses, (c) machine readable to allow for processing, and (d) subject to privacy and security limitations. Data provides both tangible and intangible benefits to societies that effectively utilize it as an instrument to orchestrate strategy. Open data policies are crafted to promote: (1) service efficiency, (2) accountability, (3) transparency, (4) civic engagement, and (5) economic development.

1. *Service Efficiency* – Cities of the past allowed their departments to compartmentalize data. Cities of the future demand that data silos be knocked down. When data flows freely between departments, there is a greater degree of collaboration. Collaboration drives efficiency and eliminates duplication of effort. Los Angeles, for example, developed an online application called *Street Wize*, which allows users to visualize current and future construction projects on the city right of way.³ By using *Street Wize*, a street excavation project can be planned for *alongside* a utility undergrounding project rather than both projects bookending each other. Still, these types of applications would be rendered useless by inaccurate data.

2. *Accountability* – “*You can’t manage what you don’t measure.*” In one line, Peter Drucker underlined why data matters. The City of Boston recently deployed *City Score*, a succinct dashboard that displays how efficiently the city is operating.⁴ *City Score* holds city departments accountable and pushes them to provide accurate and up-to-date data. A method to ensure reliable data is to automate its collection and calculation whenever possible. The Internet of Things (IoT) leverages sensor technologies to provide precise data in real-time. By utilizing objective machines, the public can always trust the information they are provided is not manipulated.

3. *Transparency* – Making data readily accessible is a major step in rebuilding trust between residents and local government. Gallup released a nationwide poll in 2014, which found that only 24% of respondents had a great deal of trust in local government.⁵ The *US City Open Data Census* tracks the degree in which municipalities provide open access to its datasets. Currently, Miami Beach is not scored. However, Miami-Dade County ranks #30 in the country. Striving to top that list will boost resident pride and promote civic engagement.

4. *Civic Engagement* – The greater purpose of open data is to involve citizens in the political process. Washington, DC published a thorough on-line open data catalogue in 2008. Immediately after the release, DC hosted a “*civic hackathon*” which challenged local programmers to design government applications. The hackathon resulted in the creation of 47 apps with an estimated value of over \$2.3 million.⁶ Open data creates a new format for residents to intimately engage with government.

5. *Economic Development* – Today’s businesses depend on technology to be competitive in the global market. Many cities across the US are experiencing a surge in business enterprises because they have adopted tech friendly policies. Chattanooga, Tennessee started delivering public gigabit internet service in 2009 and within five years venture capital investments went from virtually nothing to over \$50 million.⁷ Locally, Rokk3r Labs (a Miami Beach based tech incubator), raised \$5 million in 2015 and plans to co-build 100 companies in 5 years.⁸ Creating an environment that continues to attract tech startups is crucial so that Miami Beach can continue to diversify its economy.

Recommendation: Develop a Comprehensive Open Data Policy

Executing a successful open data policy requires a comprehensive approach. It is recommended that Miami Beach pursue an open data strategy that will:

1. Establish an Open Data Task Force
 - (a) Assemble a task force consisting of a chief data officer and open data coordinators.
 - Assign the role of chief data officer to execute an open data policy and ensure data collaboration across departments.
 - Designate an open data coordinator from each department.
 - (b) Produce an annual open data progress report.
2. Produce Comprehensive Datasets
 - (a) Release all available datasets through a city data portal.
 - Adhere to the US City Open Data Census standard.
 - (b) Ensure all datasets are reliable, accurate, and as up to date as possible.
 - (c) Guarantee all datasets are as machine readable as possible.
 - Include tabular and spatial data.
 - (d) Develop real-time data capture methodologies that leverage the IoT.
 - (e) Prioritize privacy and security when considering which datasets to release.
3. Create an Open Data Portal
 - (a) Establish and maintain a web portal by or on behalf of the City of Miami Beach to be administered it by the Information Technology Department.
 - Locate the data portal at data.miamibeach.gov.
4. Build a City Dashboard Application
 - (a) Display key performance metrics from each department.
 - Include real-time measures as well as historical trends.
 - (b) Calculate a city index by aggregating department level metrics.
5. Foster Community Partnerships
 - (a) Hold tutorials for residents to familiarize themselves with the open data portal.
 - (b) Fund civic hackathons to promote application development.
 - (c) Seek to engage non-profits like Code for America and the Knight Foundation.
 - (d) Leverage local technology businesses like Rokk3r Labs.

Conclusion

A 21st century city promotes open government because its leaders and residents know that the possibilities are endless when they work together. Miami Beach faces 21st century problems, which is why leveraging tools like technology and open data is *the* 21st century solution. Opening city data will serve to elevate resident confidence and improve services throughout Miami Beach.

¹ McKinsey and Company. *Open data: Unlocking Innovation and Performance with Liquid Information*. 2013

² Smart Cities Council. *Smart Cities Open Data Guide*. 2015.

³ Miller, Ben. *Los Angeles Turns to Mapping to Break Data Silos, Improve Efficiency*. GovTech. 2016.

⁴ Bidgood, Jess. *Tracking Boston's Progress With Just One Number*. The New York Times. 2015.

⁵ McCarthy, Justin. *Americans Still Trust Local Government More Than State*. Gallup. 2014.

⁶ ISL. *Apps For Democracy: An Innovation Contest*. <https://isl.co/work/apps-for-democracy-contest/>

⁷ Executive Office of the President. *Community Based Broadband Solutions*. 2015

⁸ Dahlberg, Nancy. *Rokk3r Labs Attracts \$5 Million in Venture Funding*. The Miami Herald. 2015