Annual Open Data Report
Louisville Metro Government
September 1, 2018

This serves as the fifth OPEN DATA REPORT to the Mayor in accordance with the requirements set forth in Mayor Greg Fischer's Executive Order No. 1, Series 2013, dated October 11, 2013. The purpose is to summarize the current state of data availability from Louisville Metro Government (LMG) to the public and to outline opportunities for continued improvement of access to public information through our Open Data Platform (ODP) at *data.louisvilleky.gov*. Previous Open Data Reports can be found on our ODP on the Mayor's Executive Order page.

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1. THE STATE OF OPEN DATA

RANK. Louisville ranks 9th out of 90+ active cities on the Sunlight Foundation's Open Data City Census. We improved 9 spots this year due to our new releases of Business Listings, Public Facilities, and Traffic Crashes and the launch of a new city census with some new data sets. We are working on releasing Emergency Calls and Police Use-of-Force data; the city does not currently collect Lobbyist Activity. Other county-wide data needs to be fully released from agencies outside of the city's jurisdiction, including Property Assessment, Property Transfers, and Parcels, and the CDO is either currently working or willing to work with these agencies to help them release their data to the public.


Sunlight Foundation US City Census Ranking

ODP SITE TRAFFIC. Since the launch of the new ODP in Oct 2016, we've had 380,000 page views and 128,000 user sessions. Between March 2017 and September 2017 we had high usage, around 10,000 sessions each month, due to co-hosting many hackathons and the press/projects related to those. When the hackathon frequency decreased, our numbers stabilized back to around 4,000 users per month.

QUALITY METRIC. We have a LouieStat KPI called *Open Data Usage*, which tracks data set downloads. The goal of *Open Data Usage* is to focus on quality and engagement. This KPI encourages us to release information that our departments and the public will find valuable by showing us what data is being accessed. Our most popular data downloads are crime, salary, property maintenance inspections, restaurant inspections, and 311 data. Since the new ODP launched, the download counts have been between 1,000 to 2,000 files a month. The January - September 2017 increase was due to hiring a new CDO, co-hosting hackathons, press coverage, and releasing some key data sets.
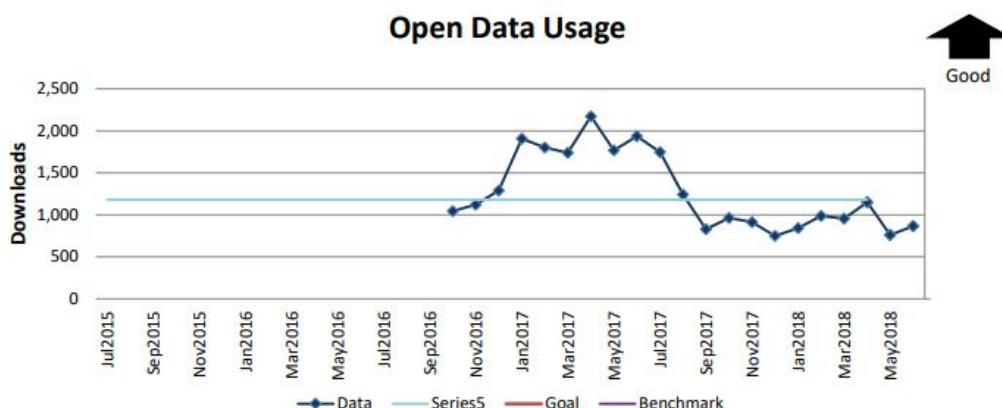
NEW DATA SETS. Since the last open data report, we have released the following new key data sets to the public, either on our open data site or in coordination with LOJIC:

- Traffic collisions
- EV charging station location ideas
- Light generating devices from LG&E
- Business registrations
- Urban Heat Management Study data
- Urban alleys
- Downtown pedestrian counts

- PARC citations
- Police training
- OpenStreetMap extracts
- Voting precinct outlines
- Voting Locations
- Traffic signalized intersections
- Policy documents
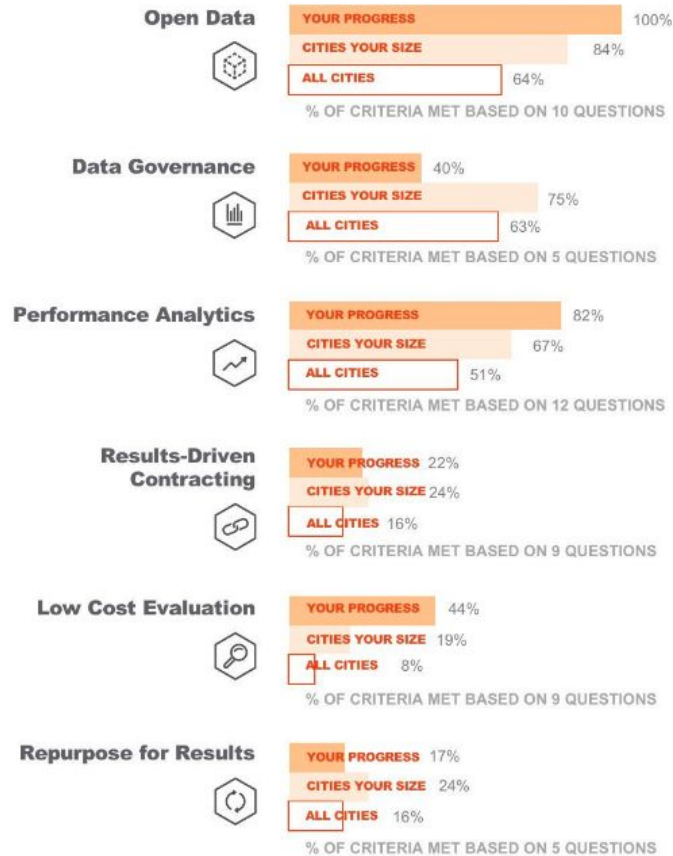
The Office of Civic Innovation is currently working with internal departments and external agencies to potentially release:

- Police use of force
- 911 Calls for service
- Property deeds and transfers
- Crime report latitude and longitude
- Parking meter locations

- Fire hydrants
- Waze traffic data
- Bird scooter usage data
- Recent home sales
- Garbage bins

This year we will be automating and improving some of our data extracts using our new internal Accela project. If there is data you'd like to see released, please let us know.

2. OPEN DATA INITIATIVES

WHAT WORKS CITIES CERTIFICATION. Over 230 US cities applied for data-driven decision making certification through What Works Cities (WWC), and Louisville was one of only 9 cities to get certification. This year our goal is to be the first city to obtain the highest level of Platinum certification. Our certification included scoring 100% in the open data category. This year we are working on obtaining 100% on Data Governance, which involves defining data standards, a data inventory, and data classifications.

Open Data	YOUR PROGRESS	100%
	CITIES YOUR SIZE	84%
	ALL CITIES	64%

% OF CRITERIA MET BASED ON 10 QUESTIONS

Data Governance	YOUR PROGRESS	40%
	CITIES YOUR SIZE	75%
	ALL CITIES	63%

% OF CRITERIA MET BASED ON 5 QUESTIONS

Performance Analytics	YOUR PROGRESS	82%
	CITIES YOUR SIZE	67%
	ALL CITIES	51%

% OF CRITERIA MET BASED ON 12 QUESTIONS

Results-Driven Contracting	YOUR PROGRESS	22%
	CITIES YOUR SIZE	24%
	ALL CITIES	16%

% OF CRITERIA MET BASED ON 9 QUESTIONS

Low Cost Evaluation	YOUR PROGRESS	44%
	CITIES YOUR SIZE	19%
	ALL CITIES	8%

% OF CRITERIA MET BASED ON 9 QUESTIONS

Repurpose for Results	YOUR PROGRESS	17%
	CITIES YOUR SIZE	24%
	ALL CITIES	16%

% OF CRITERIA MET BASED ON 5 QUESTIONS

DATA INVENTORY. As we work to follow best practices, WWC recommendations, and align to our future data warehousing efforts, our Data Governance group has undertaken a comprehensive **data inventory and data classification** project. Each department has a data lead that is documenting what information we have, and adding detailed metadata, and a department-level *Progress Report Card* is in the works. We plan to have the first inventory complete in the coming months and it will be reviewed annually. A portion of the inventory's metadata will be published as open data and aid in data discovery internally and externally.

PARTNERSHIPS. We have continued our data sharing agreements with Waze, Yelp, Develop Louisville, LOJIC, the Harvard Ash Center's Civic Analytics Network, and the Louisville Downtown Partnership. We have created new partnerships with University of Louisville's Speed School of Engineering and University of Pennsylvania's Master of Urban Spatial Analytics program for capstone projects. We are working on new partnerships with local non-profits, corporations, state agencies, and federal agencies such as the USDOT.

PUBLIC FACILITIES. We continue to have great public usage of our two facilities: the LouieLab, a co-working space connected to our offices and managed by us, and the PNC Gigabit Experience Center, in West Louisville managed by LCCC. Both have been used for open data related events like city sponsored hackathons, data governance meetings, data ethics training for government employees, public meetups, and collaborations with local and national organizations.

3. OPEN DATA PLATFORM

OPEN DATA SERVICES. We think of services that provide data to the public as part of building our open data platform. This year we added more data from our live data APIs into our Smart Louisville IFTTT platform. We are constantly creating open source projects and sharing them online with residents and other governments -- see our city's official Github repositories for more details.

ODP ENHANCEMENTS. There is a shift in the open data community to provide more than just raw data, but also visuals and tools to help non-technical residents understand the data, as was pointed out by a local news station WFPL. We are working with DKAN to add new features like public comments on each dataset, an integrated forum, API improvements, and better data visualizations on the site, and the city collaborated with CivicActions for an international Open Data Day Hackathon.

HACKATHONS. We have organized, hosted, or participated in hackathons to drive open data usage, grow our civic tech community, and create innovative solutions for our residents. These include Code for America's National Day of Civic Hacking, enhancing our open source site on Open Data Day, our first neighborhood hackathon with council-person Brandon Coan, a Feed Louisville hackathon (with support from Humana, Dare 2 Care, UofL, KY Harvest, IDEAS xLab) at the Gigabit Experience Center, a Data for Democracy nationwide event, the annual Derby Hacks at FirstBuild, and an "analog hackathon" internal road show" with Ed Blayney and Michael Schnuerle which gets employees comfortable with hackathons to encourage participation and build a culture of innovation.

4. DATA COLLABORATIONS AND PARTNERSHIPS

OPEN COLLABORATION. Louisville has created a framework for governments to publicly work on technical open source solutions to common problems, called the Open Government Coalition. The OGC allows a network of government agencies to manage projects together, funded and built by private companies, and hosted in the cloud. This creates projects with reproducible, impactful results, saving time and money.


PROJECT 1: Waze data processor and mobility analysis. Allows traffic teams and others within governments to store, analyze, visualize, and take action on Waze's Connected Citizen Platform (CCP) program data. Funded by Amazon, built by Slingshot with other cities, and promoted by Waze, it includes a data processor, database, APIs, interactive map, and a traffic study replacement tool and other use cases. A dozen governments have deployed the free solution (including Anchorage, Los Angeles, Peru, and New Zealand) and over 80 governments are interested gathering support to deploy. We are working to enhance the tool with partners like Microsoft, Google, Carto and others.
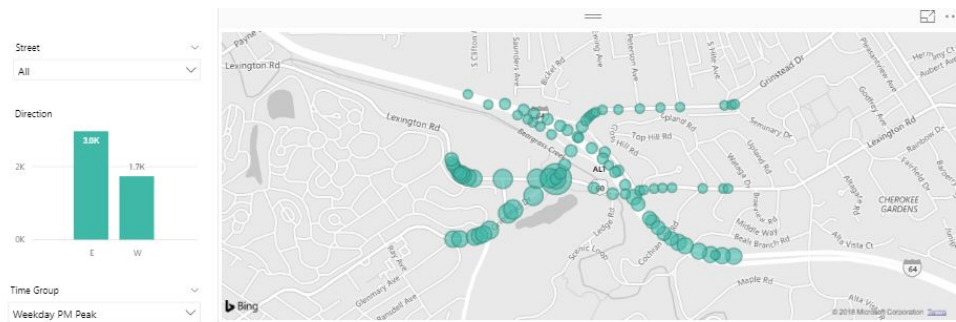

PROJECT 2: SpeedUp USA Internet Speed Map. A map used for digital inclusion policy that pulls individual, crowd-sourced internet speed test open data from M-Lab and breaks down the results on maps and charts by points, census blocks, ISP, date range, and speed. We have some potential funders and collaborators lined up and we have the data, source code, vision, roadmap, and outcomes.
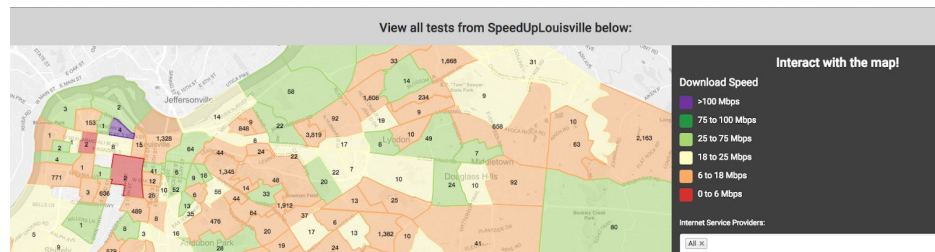
PROJECT 3: IFTTT Smart City Open Data Integrator. Allows residents to usefully consume open datasets (crime reports in their neighborhood, favorite restaurant health scores, 311 calls around work, construction in an area, etc) from any open data platform to the service of their choice (text, email, smart device, etc) using the free web and mobile application IFTTT. Edmonton Canada reproduced our air quality + smart light IFTTT applet and used it as part of their Smart Canada proposal. We are working with IFTTT to develop and expand their Data Access Project and collaborate with cities on features. This project will allow us to expand our existing Smart Louisville efforts, democratize open data for our residents, and give other cities a roadmap to use IFTTT in the same way.
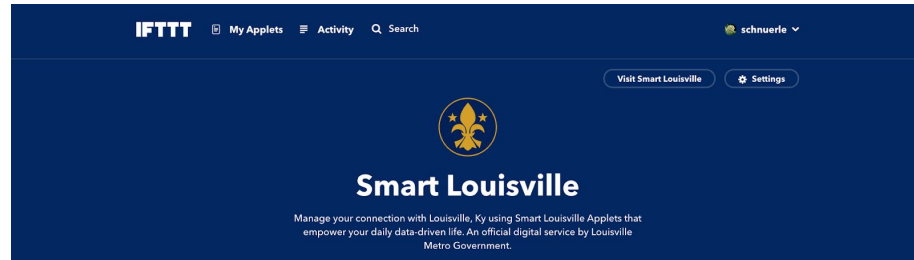
SAFETY ANALYSIS. Louisville was one of four cities to participate in University of Pennsylvania's annual Master of Urban Spatial Analytics (MUSA) capstone project. We shared over 20 public datasets and 1 private one (Waze) with students. They created a reproducible "Automobile Collision Prediction" machine-learning model for the city. The analysis includes over 32 built-environment risk factors that can show our traffic safety team where to focus their efforts. The detailed analysis is available online (including source code) with an interactive hot-spot collision risk score map. See Insider Louisville's in-depth write-up of the project.
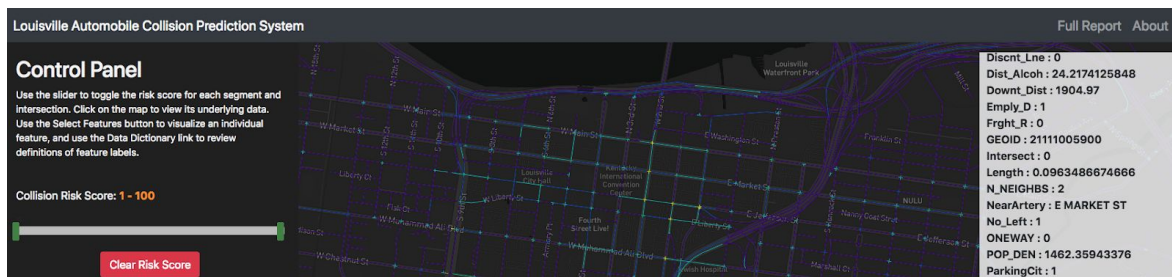
MOSQUITO ANALYSIS. Harvard researcher Jonathan Jay used open 311 data from Louisville, New Orleans, and Chicago to look at how flood events and temperature affect mosquito populations. He worked with Nick Hart in our Health Department to understand the data, and helped determine the optimal times for cities to use mosquito treatments.
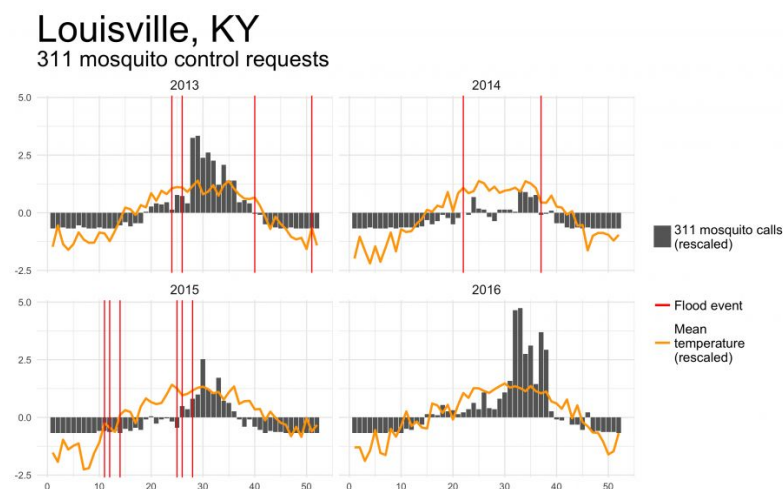
5. INTERNAL DATA PROJECTS

DATA STANDARDS. Louisville continues to align our data to useful data standards like GTFS, LIVES, Waze CCP, and Open311, and is working alongside cities and communities to expand existing standards and define new ones where needed. We have created a data standard policy for how we collect Sex and Gender information, and are working on Street Addresses, Date/Time, and Race/Nationality among others. These standards help us align our data across departments, align to best practices, meet WWC recommendations, and automate our data warehousing efforts.

DATA GOVERNANCE. Our 50 person cross-departmental Data Governance team members are responsible for maintaining their department's open data, participating in working groups, writing data policy, and doing data tool/ethics/best practice trainings, including one by GovEx from Johns Hopkins at Love City focused on Microsoft Power BI and ESRI ArcGIS Online.

Working Groups include efforts on a data inventory, data standards policy, data warehousing, data visualization, and open data policy revisions.

GovEx data analytics, ethics, and tool training at Love City.

METRO BADGES. We encourage employees' data and innovation efforts through our new Louisville Badges program, which has tracks for being a Data Scout and an Innovation Pioneer and works like Girl Scout merit badges to reward and encourage data-driven work. This digital and physical badge framework has spread to Cyber Security and Resilience and Community Services.
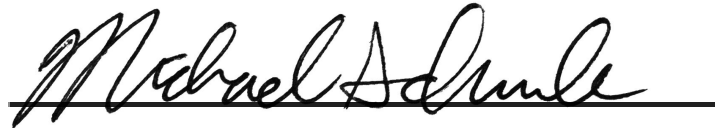
ADDITIONAL RECOGNITION. All of the above successes required the collaboration and hard work of many city employees. I would like to commend and thank Mary Hampton, Matt Gotth-Olsen, Ed Blayney, Carmen Moreno-Rivera, Rebecca Hollenbach, and Grace Simrall from OPI², Matt Gantner and Mike Reynolds from DoIT, the department chiefs and directors, Mayor Fischer and his staff, and the members of our Data Governance Team for all of their focus and dedication to creating a data-driven culture at the city. I would also like to thank our community organizations and the local press for encouraging LMG to release new and useful data and putting our data to good use for our residents.

6. CONCLUSION

Open data, public transparency, and data-driven efforts in Louisville remain a strong and continuing priority for Mayor Greg Fischer, the employees of LMG, and the Office of Civic Innovation. LMG will continue to release new data the public values, improve existing data sets, and increase the frequency of data updates. We will drive usage and adoption by hosting public events, driving usage internally, communicating via press and social media, partnering with the civic tech community, and improving our data services. The goal is a transparent government, improved services for citizens, reduced costs, an informed and educated populous, and empowered data-driven decision making.

Respectfully submitted on ___September 1, 2018___

Michael Schnuerle
Data Officer, Office of Civic Innovation, OPI²

**OFFICE OF
PERFORMANCE
IMPROVEMENT
AND INNOVATION**