Annual Open Data Report
Louisville Metro Government

September 1, 2020

This serves as the seventh 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 https://data.louisvilleky.gov. Previous Open Data Reports can be found on our ODP on the Mayor's Executive Order page.

Louisville's employees collect and use data as part of their daily work to provide services and support to residents. Our open data program shares a portion of this data publicly, with a process for privacy concerns and legal requirements.

The Louisville open data program:

1. Increases government transparency, accountability, and accessibility.
2. Makes the information we collect transparent, shows what public institutions do for you, and provides your right to use that information for yourself.
3. Eases data sharing internally and with our external partners.
4. Lets the public check our work so we can improve our own processes and data quality.
5. Allows journalists to understand and report on the operations of our city.
6. Allows analysis and insights by researchers which can lead to improvements in our city.
7. Provides data for private companies and organizations that can improve residents' lives more directly in the apps and services they already use.
8. Reduces our costs and time fulfilling open records requests.

These outcomes align with the city's goals of government transparency, improved services for citizens, reducing cost by increasing efficiencies, an informed and educated populace, and empowering data-driven decision making.

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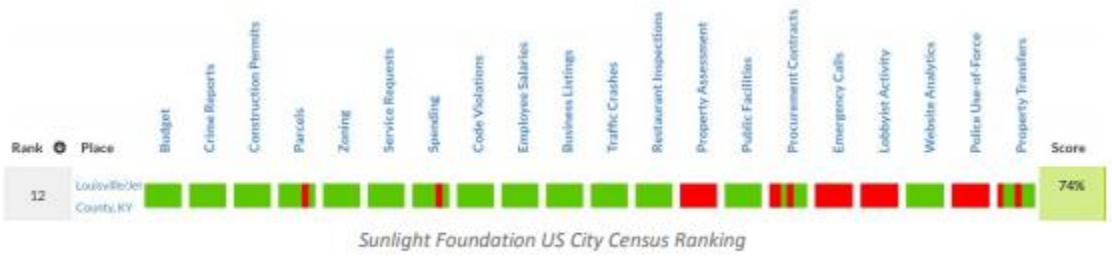
1. THE STATE OF OPEN DATA

Rank. The Sunlight Foundation, responsible for the Open Data City Census, closed in September 2020. No other national organization has stepped forward to host a similar benchmarking system. An archive of the Open Data City Census can be found at Open Data Census. In 2019, Louisville ranked 12th out of 100+ active cities on the Open Data City Census. We are still working on releasing Emergency Calls and Police Use-of-Force data, which the Open Data City Census required. Other gaps include Lobbyist

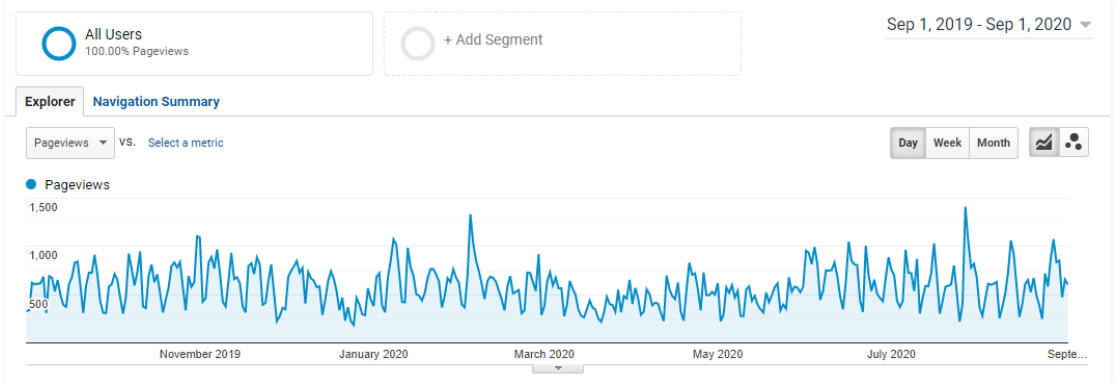
Activity which the city does not collect, and data from agencies outside the city's jurisdiction, including Property Assessment, Property Transfers, and Parcels all from our Property Valuation Administration (see their data fee structure) which is run at the Kentucky state level. The city administration is willing to work with the PVA to help them release their data to the public.



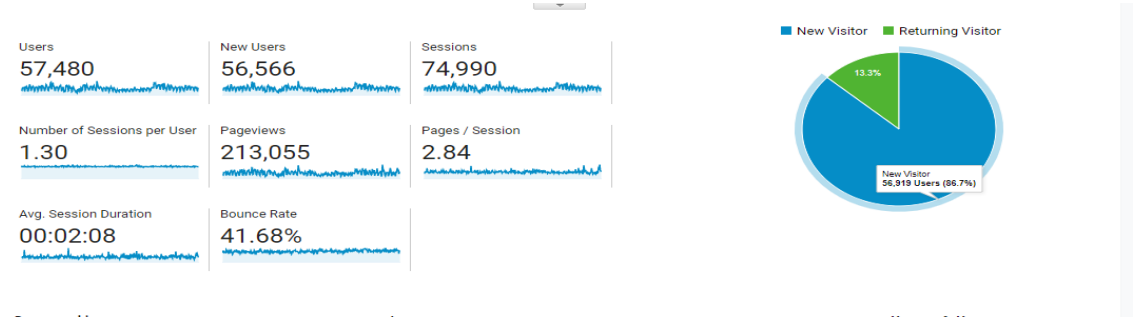
Sunlight Foundation US City Census Ranking

ODP SITE TRAFFIC. Since the launch of the new ODP in Oct 2016, we've had 794,461 page views and 266,032 user sessions. This year we've seen our usage increase to 213,055 page views due to releasing or improving datasets (Dockless Trips, LouVelo, COVID-19 Expense reports, COVID-19 daily case counts), adding data visualizations, participating online with meetup data related meetings, and collaborative university data analytics projects.

****The image below for the period September 1st, 2019-September 1st, 2020**



Open data website pageviews over the last year

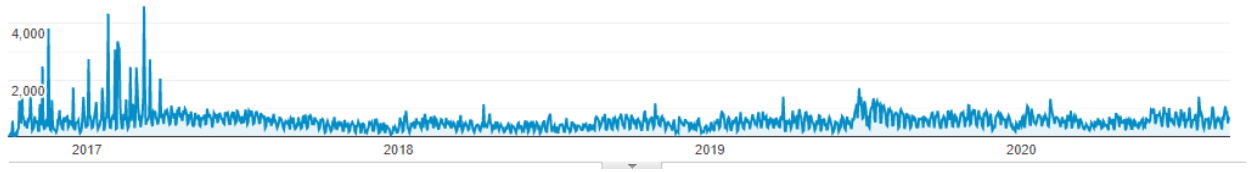


Statistics from September 1, 2019- September 1, 2020

QUALITY METRIC. We have a LouieStat Key Performance Indicator (KPI) called Open Data Usage, which tracks data set downloads. The goal of Open Data Usage KPI 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 this year, in order, are salaries, crime reports, restaurant inspection, dockless trips, foreclosure sales, sex offender registry, fire incidents, redlining Louisville, uniform citation data.

Page	Pageviews ↓	Unique Pageviews	Avg. Time on Page	Entrances	Bounce Rate	% Exit	Page Value
	213,055 % of Total: 100.00% (213,055)	144,707 % of Total: 100.00% (144,707)	00:01:09 Avg for View: 00:01:09 (0.00%)	74,651 % of Total: 100.00% (74,651)	41.68% Avg for View: 41.68% (0.00%)	35.04% Avg for View: 35.04% (0.00%)	$0.00 % of Total: 0.00% ($0.00)
1. /dataset/employee-salary-data	**24,910** (11.69%)	18,166 (12.55%)	00:03:12	17,214 (23.06%)	54.50%	66.62%	$0.00 (0.00%)
2. /dataset/crime-reports	**19,304** (9.06%)	12,514 (8.65%)	00:01:37	11,568 (15.50%)	36.32%	50.53%	$0.00 (0.00%)
3. /	**13,340** (6.26%)	9,347 (6.46%)	00:00:50	7,542 (10.10%)	26.48%	28.34%	$0.00 (0.00%)
4. /dataset/restaurant-inspection-data	**7,168** (3.36%)	3,832 (2.65%)	00:00:57	3,662 (4.91%)	17.21%	28.81%	$0.00 (0.00%)
5. /dataset/dockless-vehicles	**6,569** (3.08%)	4,402 (3.04%)	00:03:19	3,775 (5.06%)	56.21%	56.90%	$0.00 (0.00%)
6. /search/type/dataset	**6,564** (3.08%)	4,527 (3.13%)	00:00:36	2,020 (2.71%)	33.38%	19.49%	$0.00 (0.00%)
7. /dataset/upcoming-foreclosure-sales	**5,912** (2.77%)	3,247 (2.24%)	00:01:12	3,156 (4.23%)	22.17%	44.47%	$0.00 (0.00%)
8. /dataset/kentucky-sex-offender-registry	**5,772** (2.71%)	3,999 (2.76%)	00:01:14	3,972 (5.32%)	28.79%	60.36%	$0.00 (0.00%)
9. /dataset/employee-salary-data/resource/c175cdeb-d4e8-4341-9d80-4db0fed6fb0a	**4,426** (2.08%)	1,993 (1.38%)	00:00:37	321 (0.43%)	18.35%	20.38%	$0.00 (0.00%)
10. /dataset/upcoming-foreclosure-sales/resource/51bf4ced-4ea6-4427-b010-97fb3b0853f7	**3,046** (1.43%)	826 (0.57%)	00:00:18	58 (0.08%)	47.37%	12.93%	$0.00 (0.00%)

Since the new ODP launched, the download counts have been between 1,000 to 2,000 files a month. Note these numbers are from people using a browser to download files, and do not include automated, direct file, or API downloads. Dataset raw downloads monthly over the past 4 years



NEW DATA SETS. Since the last open data report, we have released or refreshed 47 key data sets to the public, either on our open data site or in coordination with Louisville/Jefferson County Information Consortium (LOJIC):

Landbank sales for the past 5 years, LouVelo, COVID-19 in Jefferson County, Jefferson County Suburban Fire district stations, Russell Public WiFi , Sanitary Junk Pickup routes,▪Louisville Metro County Boundaries, TARC Bus Routes , Kentucky National Register Landmarks, Aerial Photogrids, Jefferson County Right of Ways, KY Airport footprints, National Flood Hazard-Cross Sections, COVID-19 Expense report, Jefferson County Spot Heights, Jefferson County Soil Survey, Jefferson County Building without Building Heights, Louisville Metro Areas of interest, Louisville Litter Bins, Louisville Recycling Pickup routes, Louisville Urban Service District, Louisville Metro Major roads, Louisville Ky voting locations, Louisville Free Public Libraries, Louisville Post Offices, Jefferson County Schools, Jefferson County Survey Control Markers, National Flood Hazard-FIRM Panels, National Flood Hazard-LOMA, National Flood

Hazard-Base Flood Elevations, TARC Bus Stops, TARC Bus Shelters, Jefferson County Voting Location History, KY Data Tiles Point Cloud, KY 20K Tile Imagery Index, KY 10K Tile Imagery Index, KY DEM data tiles, KY Tiles Imagery 1 Foot, KY Tiles Imagery 6 Inch, Jefferson County Enterprise Zone, Jefferson County Proposed Subdivision, Metro Map Grid, Jefferson County Street Intersections, National Flood Hazard LOMR, Jefferson County Road System Development Zone, Metro Council Districts before 2010 redistricting, Snow Routes.

The Office of Civic Innovation and Technology is 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
- Waze traffic data
- Recent home sales
- Alleyways

We will be piloting a low-cost data automation and processing system (ETL) and data warehouse which will increase the number and frequency of datasets that are updated. If there is data you'd like to see released, please let us know.

2. OPEN DATA INITIATIVES

WHAT WORKS CITIES CERTIFICATION. Out of 1,400 eligible U.S. cities, Louisville has achieved Platinum certification for data-driven decision making through Bloomberg Philanthropies What Works Cities (WWC), only one of two cities to do so. Our certification included scoring 100% in the general management, open data, data governance, and public stakeholder engagement categories. Last year, Louisville achieved Gold certification, and the year before the last, we achieved Silver status. Read our WWC reports for 2018 and 2019 posted on our open data website; the 2020 report will be added once it's available from WWC.

DATA INVENTORY. Our Data Governance group has undertaken a comprehensive data inventory and data classification project as part of our WWC certification. Each department has a data lead who has documented what information we have, added detailed metadata, participated in training, and is following our annual maintenance plan. The results are shown on a department-level Progress Report Card. The inventory is published as open data and aids in data discovery both internally and externally.

Department	Designated Lead	Inventory Progress	Verified	Updated Open Metadata	Percent Published	Total Progress
Air Pollution Control	✓	●	⚑	⚑	◔	
Animal Services	✓	◔	⚑	⚑	◔	
Codes & Regulations	✓	◔	⚑	⚑	◔	
Community Services	✓	◔	⚑	⚑	◔	
Corrections	✓	◔	⚑	⚑	◔	
Develop Louisville	✓	●	⚑	⚑	◔	
Economic Development	✓	◔	⚑	⚑	◔	

Sample of our data inventory progress report card for departments

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

PUBLIC FACILITIES. Prior to the lockdowns driven by COVID-19, we had great public usage of the LouieLab, a co-working space co-located with our offices and managed by us. With the opening of the Entrepreneurship Center by SIDIS, we expanded our network of public spaces to host open data related events such as city sponsored hackathons, data governance meetings, data ethics training for government employees, public meetups, and collaborations with local and national organizations.

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3. OPEN DATA PLATFORM

OPEN DATA SERVICES. Our Open Data Platform uses free and open source software called DKAN. We think of services that provide data to the public as part of building our open data platform. We continue to support our live data APIs into our Smart Louisville IFTTT platform, and are looking at creating new integrations between IFTTT and open data. We are constantly creating open source projects and sharing them online with residents and other governments -- see our city's two official Github repositories for more details.

ODP VISUALIZATIONS. We work to provide more than just raw data, adding visuals and tools to help non-technical residents understand the data, as was pointed out by a local news station WFPL. We worked with the DKAN community to add new features like public comments on each dataset, an integrated forum, API improvements, and better data visualizations on the site. We now have embedded custom interactive visualizations directly on dockless vehicle, and LouVelo Bicycles; Also instructions on how to use the embedded visuals to filter and export data are added for each dataset. Our focus in 2020 was building, maintaining and enhancing the Jefferson County Public COVID-19 Dashboard.

PUBLIC FEEDBACK. We have Open Data Contact and Open Data Gallery Submission forms and Data Collaboration and Partnership form. Additionally, we have an integrated feedback page where people can suggest and discuss new datasets and features, and discussions on individual dataset pages; Also a meeting was conducted on 07/16/2020 with University of Louisville Graduates and IQSresearch to provide full information on Open Data Portal and how suggestions and recommendations can be submitted, this meeting was an opportunity as well to interact with and get feedback from public and what public would like to see in Open Data Portal.

HACKATHONS. Because our resources were focused on the COVID-19 pandemic, our efforts to hold hackathons with the public were disrupted. However, we are moving forward in the near future to hosting online and remote hackathons until it is safe to convene publicly; Hackathons play a role in driving open data usage, growing our civic tech community, and creating innovative solutions for our residents.

4. DATA COLLABORATIONS AND PARTNERSHIPS

OPEN GOVERNMENT COALITION. Louisville has 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. This work led to 2018's Breakthrough Guru award for Louisville Metro Government.

These OGC projects include the Waze WARP, SpeedUp USA, and IFTTT Open Data Integrator. Waze WARP is about to release version 3.0 of its platform, which adds an interactive map, APIs, and some speed and data enhancements. SpeedUp USA is being managed by Tech Oregon who is looking to build out the tool with help from partner organizations like M-Lab.

OPEN MOBILITY FOUNDATION. Louisville is a founding member of the global non-profit, the Open Mobility Foundation (OMF). Louisville is one of 15 founding cities that are working together with private companies to develop policy, open source tools, and standards that benefit residents in the mobility space. The foundation includes private companies like Microsoft, Bird, Stae, Spin, Lacuna, and Blue Systems, and is partially funded by the Rockefeller Foundation.

Louisville Metro has attended OMF meetings for MDS, for using Mobility data to solve Pandemic challenges, and Scooter patterns across different cities and MDS data privacy.

DATA ANALYSIS. Louisville was one of four cities to participate in University of Pennsylvania's annual Master of Urban Spatial Analytics (MUSA) capstone project. Once CDO is appointed, we will move forward with future data projects analysis.

OPEN DATA WEBSITES. The University of Louisville Christina Lee Brown Envirome Institute had launched the Louisville Data Commons, an open data website designed to store and share data generated by Louisville community members and non-profit organizations. The city of Louisville is a founding supporter along with Brightside and the Greater Louisville Project. This site is the third open data site in our city, including our city site and the geospatial open data site run by LOJIC.

RESEARCH AND JOURNALISM. This year a number of universities and journalists used our open data for their projects, analysis, and stories using our open data sets like Dockless Vehicles, Expenditures Data, LMPD Hate Crimes, Assaulted Officers, Employee Salary, Lien Holder, Health Inspections, Restaurant Inspections, Syringe Exchange program and Short Term Rental.

5. INTERNAL DATA WORK

DATA STANDARDS. Louisville continues to align our data to useful data standards like MDS, GBFS, 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. Due to the COVID-19 pandemic, meetings were stopped temporarily but will be resuming remotely for now until it is safe to convene publicly. Earlier this year, we held two meetings,

one for the Year End Celebration and another in February. We will be having our next meeting on December 3rd virtually and will be continuing with monthly meetings throughout the next year.

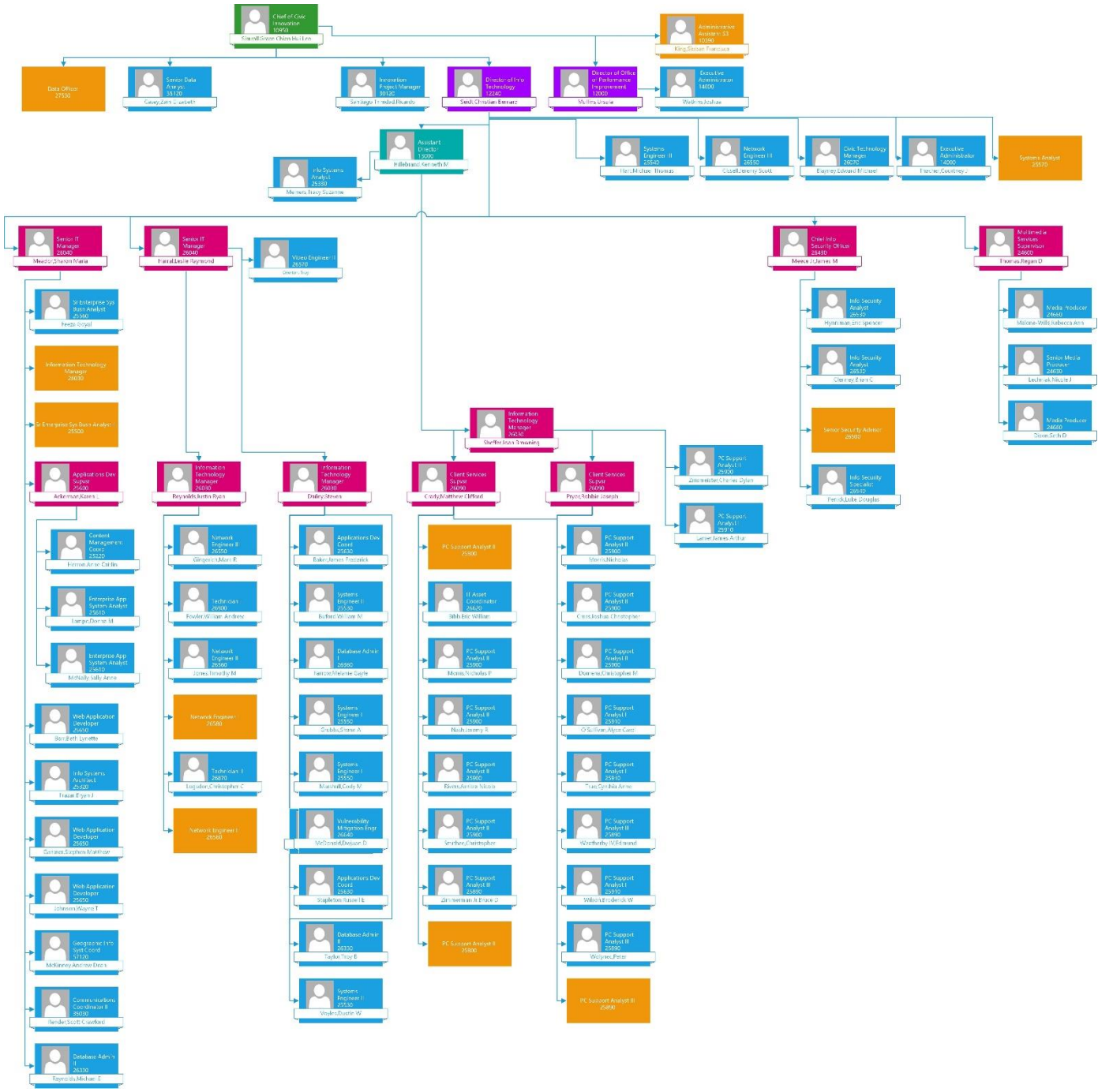
Our 65 person cross-departmental Data Governance team members are responsible for maintaining their department's open data, integrating into LouieStat, participating in working groups, writing data policy, and doing data tool/ethics/best practice trainings, including one by Tandem from focused on advanced Microsoft Power BI techniques.

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

SITUATION UNIT. It was clear in the early days of our COVID-19 response that we would need data to monitor and manage the pandemic in Jefferson County. As part of our Incident Management Team structure, the Situation Unit within the Planning Section was tasked with identifying data sources and building both internal and public facing COVID-19 dashboards. Resources from across Louisville Metro Government joined the effort: Tyler Starnes, Cody Ashbaugh, Beth Allen from Metrosafe; Andrew McKinney, Mike Reynolds, Beth Barr, Zain Casey from CIT; Dondre Jefferson from Parks and Recreation; Scott Stepro from Public Works; Yu-Ting Chen from Louisville Metro Public Health and Wellness. The team built an almost fully automated system from the ground up and assisted the Commonwealth on their data management and visualization efforts.

BUSINESS INTELLIGENCE. The Office of Civic Innovation and Technology and the Office of Performance Improvement partnered to choose one best-in-class data analysis and visualization tool for our enterprise solution. Microsoft's Power BI allows us to visualize complex datasets using the free desktop platform and has helped improve our data quality at the source by identifying inconsistencies.

NEW ALIGNMENT AND AUTOMATION. Last year the Office of Performance Improvement and Innovation (OPI²) was reorganized into two separate entities. The Office of Performance Improvement (OPI) is now its own stand-alone department. Civic Innovation merged with the Department of Information Technology (DoIT) to become the new Office of Civic Innovation and Technology (CIT).



The alignment created by CIT allows Metro to spread the use of innovative technology into our core enterprise services and staff, puts Open Data into one department, and allows more nimble

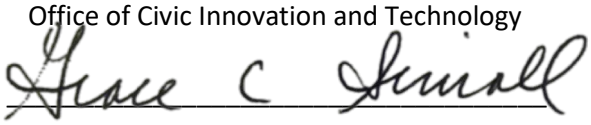
management of Innovation technical projects around data automation, application development, data warehousing, and data movement, while aligning policy around and data access, privacy, and security.

ADDITIONAL RECOGNITION. All of the above successes required the collaboration and hard work of many city employees. I would like to commend and thank Michael Schnuerle, Ed Blayney, Carmen Moreno-Rivera, Rebecca Hollenbach, Matt Gantner, 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 doing great data-driven work in 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 efficiency in Louisville remain a strong and continuing priority for Mayor Greg Fischer, the employees of LMG, and the Office of Civic Innovation and Technology. 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 populace, and empowered data-driven decision making.

Respectfully submitted on September 1, 2020
Grace Simrall, Chief of Civic Innovation and Technology,
Office of Civic Innovation and Technology



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