

CASE
STUDY

Louisville Goes Lean to Help Low-Income Residents Cover Home Energy Bills



THE CHALLENGE: Louisville residents living at or below 130% of the federal poverty line rely on the [Low-Income Home Energy Assistance Program \(LIHEAP\)](#) to help cover costly home energy bills each year. However, the local LIHEAP application process was inefficient and time consuming, requiring residents to make multiple in-person visits and wait in long lines to complete their applications. The application process was inefficient for Louisville government staff as well, leaving them too little time to serve all eligible clients and award all available local LIHEAP funds.

THE APPROACH: Louisville government's [Office of Resilience and Community Services](#), which administers the local LIHEAP program, partnered with Louisville's Mayor's [Office of Performance Improvement and Innovation](#) to use a process improvement methodology to enhance program quality and create a better experience for residents. They developed an improvement plan that included new 24-7 phone and online scheduling options, laptops and scanners to process applications more quickly, and doubling the number of LIHEAP application sites from three to six.

THE RESULTS: In a customer experience survey for the 2017-2018 LIHEAP season administered by Louisville's [Office of Resilience and Community Services](#), over 75% of Louisville residents reported a "much better" experience and over 84% of Louisville residents reported shorter wait times compared with previous years. Residents can now schedule application appointments from a computer or phone in fewer than five minutes. The application process – previously a multi-day endeavor – now takes an average of 22 to 25 minutes from the moment a resident arrives at a local LIHEAP site. During the crisis phase of the 2017-2018 LIHEAP season – the phase covering the coldest winter months when residents most need home energy assistance – 100% of available LIHEAP funds were distributed to residents compared with 79% of funds distributed in the 2015-2016 LIHEAP season's crisis phase. Louisville approved 2,955 more applications in 2017-2018 compared with the 2015-2016 LIHEAP season.

RESULTS
FOR AMERICA

September 26, 2018

INTRODUCTION

In August 2016, the Louisville Mayor's [Office of Performance Improvement and Innovation \(OPI2\)](#), in partnership with Louisville's [Office of Resilience and Community Services \(RCS\)](#) staff, teamed up to improve the delivery of Louisville's [Low-Income Home Energy Assistance Program \(LIHEAP\)](#). LIHEAP is an income-based energy bill assistance program that is federally funded through the U.S. Department of Health and Human Services. Federal LIHEAP funds are allocated to all states, and in Kentucky, the State contracts with Community Action Agencies to receive applications and deliver benefits to residents.¹ In Louisville, LIHEAP is administered by RCS.

Each year, approximately 30,000 Louisville families are eligible for assistance paying for their home energy bills through LIHEAP. However, due to challenges with program administration, the application process for residents was long and cumbersome.

Each LIHEAP season runs from October through March and funding is awarded in two phases – the initial “subsidy” phase and the “crisis” phase that spans the coldest winter months when the need for home energy assistance is most

critical. In the 2015–2016 season, over 30% of the total local LIHEAP funding was left unspent, leaving \$1.5 million in valuable funding intended to support residents on the table.²

Louisville's RCS was interested in delivering better results for residents and requested support from OPI2. [Daro Mott](#), Louisville Chief of Performance Improvement and Results for America Local Government Fellow, oversaw the OPI2 team responsible for the local LIHEAP process improvement efforts. In partnership with RCS, OPI2 used a Lean process improvement methodology (see full description below) to streamline service delivery and increase resident satisfaction with the local LIHEAP process, while simultaneously increasing the number of residents served.

THE CHALLENGE

In 2015, approximately 30,000 low-income Louisville families were eligible to receive [Low-Income Home Energy Assistance Program \(LIHEAP\)](#) funds to help cover their home energy bills. In order to receive assistance, residents in households at or below 130% of the federal poverty line must submit an application within specified dates each year proving their eligibility. However, up until 2015, the LIHEAP application

The Lean process improvement methodology is an approach that was originally designed to trim excess activity in manufacturing. It has since been adapted to a variety of settings, including in the public sector in federal, state, and local governments.

The Lean methodology involves mapping out all of the steps in a given process and identifying areas of waste or inefficiency. Common areas of waste include waiting, excess processing, not effectively using employees, and overproduction. Once areas of inefficiency are identified, solutions are generated and prioritized according to impact and feasibility. Finally, an implementation plan is created and carried out.

Lean methodology is commonly recognized as being easy to learn and apply to additional processes within a department or program.³ More information about Lean methodology can be found on the [Government Finance Officers Association website](#).

THE CHALLENGE (CONTINUED)

process in Louisville was inefficient and time-consuming for residents who were already struggling to make ends meet, making it difficult for residents to receive the support they needed.

In order to apply for financial assistance, residents were required to make multiple in-person visits to one of three designated application sites. First, residents had to come in-person and wait in line simply to make an appointment. They would then need to return on their scheduled appointment date to complete the application for financial assistance.

Due to this multi-step process, LIHEAP clients often had to wait in line for several hours to receive assistance, and in many cases low-income residents had to miss two days of work to keep their heat on.

In addition to the time-consuming process for applicants, the process was inefficient for Louisville government staff as well, leaving them too little time to serve all eligible clients and

“ LIHEAP is a critical program for thousands of Louisville families. We’re pleased to make the process of getting this critical assistance easier for citizens, and we’ll continue to look for more ways to improve Metro Government processes so we can serve citizens with even greater efficiency. ”

— GREG FISCHER
Mayor of
Louisville



Louisville Mayor Greg Fischer speaks at the LeRoy Neiman Art Studio at Central High School.

THE CHALLENGE (CONTINUED)

award all available LIHEAP funds. Ultimately, residents and staff were burdened with a complicated, lengthy process and some eligible residents were not receiving the support they needed. During the 2015–2016 LIHEAP season, only 68% of available local LIHEAP funding (\$4.8 million) was used, leaving over \$1.5 million in funding unspent.

THE APPROACH

Louisville government recognized that there were opportunities to improve the local [Low-Income Home Energy Assistance Program \(LIHEAP\)](#) to live up to the mission and values of the [Office of Resilience and Community Services \(RCS\)](#) and Louisville Mayor Greg Fischer's commitment to serve city residents compassionately while delivering critical services in an efficient and customer-friendly manner.

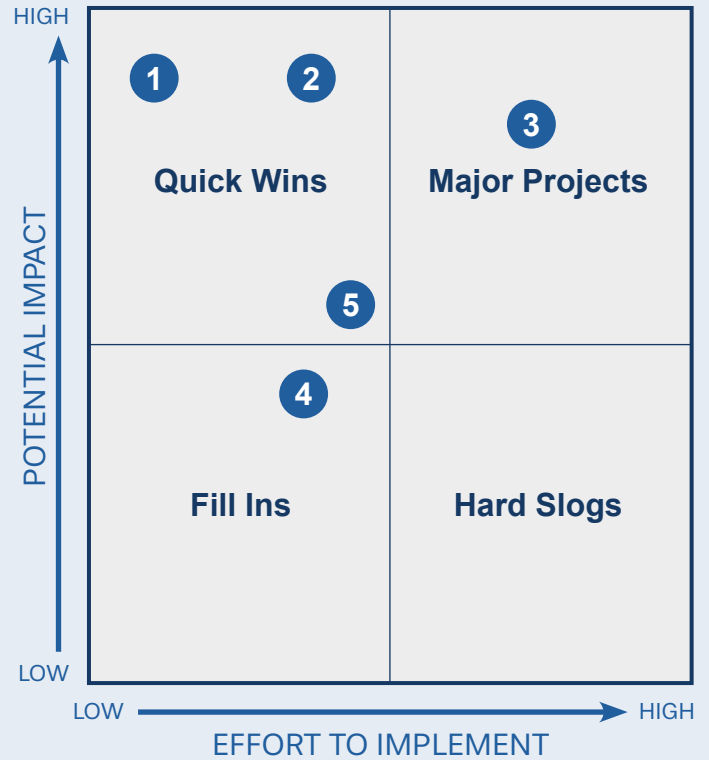
In August of 2016, to improve the local LIHEAP process, RCS partnered with Louisville's [Office of Performance Improvement and Innovation \(OPI2\)](#). Together, they used the Lean process improvement methodology to identify areas of waste and create a more efficient and compassionate service delivery system. The Lean methodology seeks to improve processes by eliminating waste, redundancy, and other inefficiencies on a small-scale process first, and then building organizational capabilities that will allow for faster and larger improvements over time. The goal is to improve quality and reduce cost, while also developing a culture of continuous improvement.⁴

By using the Lean methodology, OPI2 and RCS staff were able to identify areas of inefficiency such as long wait times, duplicate work, and excess processing steps. The team employed the following Lean process improvement steps to inform the local LIHEAP changes:

- 1. Map the current process.** Members of the OPI2 and RCS staff mapped out the current LIHEAP process in detail.
- 2. Identify value-added and non-value-added steps.** Mapping the process then allowed the team to identify what was working well in the LIHEAP process, as well as areas of waste.
- 3. Prioritize areas of waste in the process.** Staff identified five areas of waste in the LIHEAP processes, including waiting in line to schedule appointments, redundant work in the application process, excessive processing associated with paper applications, and travel time required to access LIHEAP site locations. The highest priority area of waste, long wait times, involved the multiple trips residents had to make in order to first schedule their appointment then return to complete their application.
- 4. Generate solutions to minimize areas of waste.** With areas of waste identified, members of the OPI2 and RCS staff identified solutions to improve the process. They determined that many areas of waste could be addressed by increasing the program's use of technology in scheduling and application processing.
- 5. Prioritize the solutions using an [impact effort matrix](#).** An impact effort matrix is a tool used in Lean methodology to help users assess solutions based on their relative impact given the effort required. It provides a quick way to filter out solutions that might not be worth the effort.⁵

Louisville LIHEAP’s Prioritized Solutions and Impact Effort Matrix

Root Problem	Solutions	Prioritization
Antiquated scheduling system	Phone/Online options for scheduling appointments	1
Lack of technology in the process	Laptops for workers	2
	Central electronic storage space	3
	Scanners	4
Lack of sites	Open up more LIHEAP sites	5



SOURCE: LOUISVILLE OFFICE OF PERFORMANCE IMPROVEMENT AND INNOVATION (OPI2), 2018

THE APPROACH (CONTINUED)

The LIHEAP improvement process project resulted in several key changes including:

- A new 24/7 phone and online scheduling option.** Phone and online scheduling eliminated the need for residents to make multiple visits to service locations and resulted in a significant reduction in processing time for applicants. Rather than make an initial trip to a LIHEAP site to schedule an appointment, residents now schedule their appointments in fewer than five minutes using a phone or computer. Application processing appointments that once took one to two hours on average now take no more than 22 to 25 minutes from the moment an applicant enters the building.
- All LIHEAP staff now have laptops.** Previously, LIHEAP administrators processed information by hand before inputting it into a computer. Now, everyone in the office can process applications digitally from start to finish.
- All workstations now have scanners.** Previously, delays occurred when multiple people had to scan and print application documents from a single machine. Multiple scanners help create a fast and easy electronic system.
- A central electronic storage space for documents.** Electronically storing documents allows all necessary paperwork to be saved in one central and easily accessible place. Electronic storage increases efficiency and prevents

THE APPROACH (CONTINUED)

sensitive paper application materials from getting lost.

- **A simple staff training manual.** Due to the seasonal nature of LIHEAP, temporary staff are hired each fall and winter to supplement the program administration. A short employee manual helps explain the process to the new staff and ensures consistency.
- **Double the number of application sites from three to six.** Originally, there were three LIHEAP application sites in locations that were not easily accessible to residents. The Director of RCS decided to strategically locate the new LIHEAP sites in existing Neighborhood Place locations. The [Neighborhood Place](#) initiative includes a network of community-based service centers where residents can access a range of social service benefits.
- **A customer experience survey.** Residents now fill out a paper customer service survey directly after their appointment and provide feedback on their customer experience compared to the previous year. The survey allows LIHEAP staff to measure the impact of process improvements on residents and identify new opportunities for continuous improvement.

TIPS FOR REPLICATION

- **Seize Project Momentum:** Process improvement should be fast-paced to keep stakeholders engaged and working towards achievable goals. In Louisville, the Lean process mapping and improvement plan were completed within two weeks, initial improvements were made within three weeks, and all improvements were fully executed within

“ The LIHEAP project is a great example of how process improvement can benefit residents and vulnerable populations. ”

— DARO MOTT
Louisville Chief of
Performance Improvement

two months. When staff and customers see immediate benefits it helps to energize and validate the process improvement work.

- **Mix Fresh Eyes with Experience:** Staff from Louisville's [Office of Performance Improvement and Innovation \(OPI2\)](#) helped Louisville's [Office of Resilience and Community Services \(RCS\)](#) staff identify areas of waste in their process by approaching the problem from an outsider's perspective. For example, the program had historically operated with separate staff to 1) collect information; 2) pre-screen applicants; and 3) process applications. OPI2 helped RCS staff determine that all program staff could be cross-trained to expedite the process.
- **Collect Resident Feedback:** In order to ensure that program improvements are achieving their intended goals, Louisville created a new resident survey that is provided to all program applicants. The survey allows the team to track customer satisfaction and experiences as well as identify new opportunities for continuous improvement.



Office of Resilience and Community Services' Brandon O'Neal with Louisville residents.

TIPS FOR REPLICATION (CONTINUED)

- **Lean Process Improvement Provides a Lasting Skillset:** After applying the Lean methodology to the [Low-Income Home Energy Assistance Program \(LIHEAP\)](#), RCS now looks for new areas of improvement and uses data to inform their work. For example, RCS recently applied a similar process to review their current strategies for connecting homeless families with housing, and they created an improvement plan to help families access shelters more quickly. The Lean

methodology can be learned quickly and can easily be applied to a wide range of processes.

- **Program Improvements Can Have Positive Spillover Effects:** Improvements to LIHEAP have positively impacted other related city programs. For example, the new scheduling technology implemented as a part of Louisville's LIHEAP process is now being used by Louisville's [Volunteer Income Tax Assistance \(VITA\)](#), a program that provides free tax help to qualifying residents.

THE RESULTS⁶

Multiple process improvements have increased efficiency in the [Low-Income Home Energy Assistance Program \(LIHEAP\)](#) process, allowing Louisville to better serve residents in need.

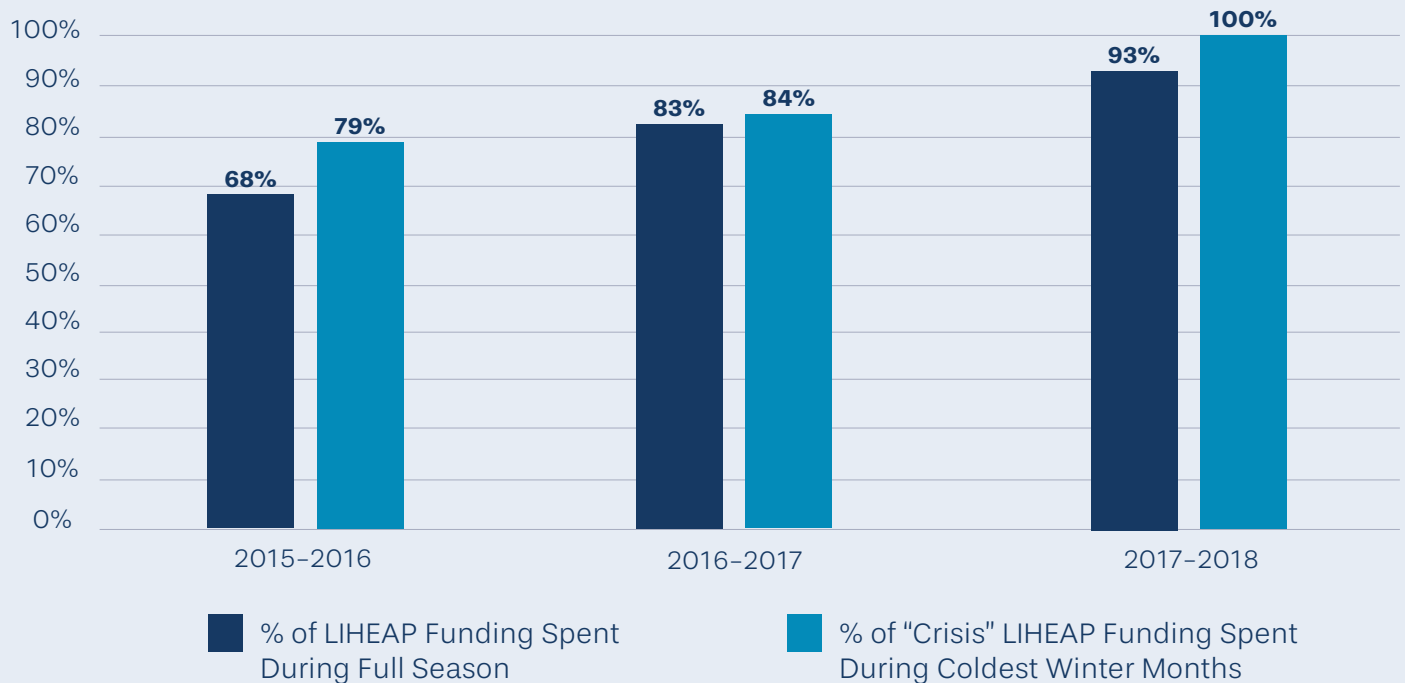
The LIHEAP improvement process has resulted in the following positive outcomes:

- According to survey results for the 2017–2018 LIHEAP season, more than 75% of respondents reported that their LIHEAP experience was "much better" compared to previous years; more than 84% of respondents reported a shorter wait time compared to previous years; and more than 85% of respondents reported they were very satisfied with the online or phone appointment scheduling option. More than 80% of respondents rated the

new scheduling system to be "simple and easy to understand."

- Because of improved service delivery, more LIHEAP funds are now being distributed to residents. During the 2015–2016 LIHEAP season, only 68% of funds were distributed, leaving over \$1.5 million unspent. By the end of the 2016–2017 LIHEAP season, 83% of funds were distributed and by the end of the 2017–2018 LIHEAP season, 93% of funds were distributed to residents. In the 2017–2018 LIHEAP season crisis phase, during which residents most urgently need home heating assistance, the LIHEAP program was able to spend 100% of available funding compared to 79% in the 2015–2016 crisis phase.

TOTAL PERCENTAGE OF LIHEAP FUNDS SPENT



LOUISVILLE OFFICE OF PERFORMANCE IMPROVEMENT AND INNOVATION
AND THE OFFICE OF RESILIENCE AND COMMUNITY SERVICES, 2018

THE RESULTS (CONTINUED)

- As a result of the new appointment system and the addition of laptops and scanners, a process that once took multiple days has been reduced to an average of 22 to 25 minutes. Residents now make appointments in fewer than five minutes using the phone or online scheduling system.
- Faster scheduling and processing times have allowed Louisville LIHEAP staff to process more applications and serve more residents. Nearly 3,000 additional applications were processed in 2017–2018 (21,590 total applications processed) compared to 2015–2016 (18,635 total applications processed).
- Following the LIHEAP process improvement, Louisville's Metro 311 service request call line saw a dramatic reduction in LIHEAP calls. Between October 1, 2016 and December 21, 2016, there were 2,736 LIHEAP-related calls. For the same October–December period in 2017, this number was reduced by more than 50% and Louisville's Metro 311 service fielded just 1,146 calls.
- In 2016, LIHEAP service locations doubled from three to six. The team used data from Louisville's annual community needs survey to ensure new locations

would be convenient for residents with the highest needs and transportation barriers. The use of the [Neighborhood Place](#) initiative for the new LIHEAP sites allows more Louisville residents to access the program within their neighborhood. The Neighborhood Place approach co-locates a range of services, allowing LIHEAP clients to access health, education, employment, and other social services in one convenient location.

The Louisville [Office of Performance Improvement and Innovation](#), in partnership with Louisville's [Office of Resilience and Community Services](#), used a Lean process improvement methodology to make local LIHEAP services more efficient and resident-friendly. In doing so, they also created a shift in mindset toward continual improvement across all operations.

RESULTS SPOTLIGHT

- **84%** of 2017–2018 LIHEAP survey respondents reported a shorter wait time compared to previous years
- **100%** of funds were spent during the 2017–2018 LIHEAP season crisis period
- **2,955** more LIHEAP applications were processed in 2017–2018 compared with the 2015–2016 LIHEAP season

ABOUT RESULTS FOR AMERICA'S LOCAL GOVERNMENT FELLOWSHIP PROGRAM

Results for America's Local Government Fellows program was founded in September 2014 to provide an advanced group of local government leaders in diverse and influential cities and counties across the country the knowledge and support to implement strategies that consistently use data and evidence to drive policy and budget decisions on major policy challenges. With the support and guidance of Results for America, the Local Government Fellows lead their governments toward advanced stages of data-driven and evidence-based policymaking in order to address major policy challenges in their communities. The **16 cities and counties** represented in the Fellowship collectively represent more than **28 million** people and **\$148 billion** in local government spending.

RFA engages its local government Fellows in:

- Defining short- and long-term policy goals;
- Developing research partnerships with academics;
- Sharing best practices and demonstration projects;
- Problem solving among peers;
- Receiving individual feedback and coaching; and
- Participating in a national network and peer cohort.

Louisville has also worked with Results for America through Bloomberg Philanthropies' What Works Cities initiative to develop the capacity to conduct low-cost real time program evaluations and strengthen its open data practices. You can find more information here: <https://whatworkscities.bloomberg.org/works-city-feature-louisville-ky/>

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ADDITIONAL RESOURCES

- Discover more about the Lean government methodology by reading, "[Getting Started with Process Improvement](#)" by David Melbye (2010) and "[Making Government Work Better with Lean Process Improvement](#)" by Shayne C. Kavanagh (2010)
- Learn more about LIHEAP on [Benefits.gov](#) and the [U.S. Department of Health & Human Services](#) websites
- Learn more about Results for America's **Local Government Fellowship** at <http://results4america.org>

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PHOTOS

Cover Photo: Ohio River Bridges Project
Page 3 & 7: Louisville Metro Government

ABOUT THE INVEST IN WHAT WORKS POLICY SERIES

This report is part of Results for America's Invest in What Works Policy Series, which provides ideas and supporting research to policymakers to drive public funds toward evidence-based, results-driven solutions. Results for America is committed to improving outcomes for young people, their families, and communities by shifting public resources toward programs and practices that use evidence and data to improve quality and get better results.

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