NLC NATIONAL LEAGUE OF CITIES

CITIES STRONG TOGETHER

Public-Private Partnerships Powering Cities

About the National League of Cities
The National League of Cities (NLC) is the voice of America's cities, towns and villages, representing more than 200 million people. NLC relentlessly advocates for, and protects the interests of cities, towns and villages by influencing federal policy, strengthening local leadership, and driving innovative solutions.

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Introduction

LOCAL leaders know that progress and problem-solving require collaboration. The COVID-19 pandemic highlighted the importance of partnership, as cities coordinated with county health departments, pharmacies, local non-profits, and countless other companies and organizations to support their residents. Successful partnerships can provide resources and knowledge where there is a gap, foster operational efficiency and agility, and encourage experimentation and innovation.[1,2]

Now, as cities shift to rebuilding with the help of critical federal funds from the American Rescue Plan Act (ARPA) and Infrastructure Investment and Jobs Act (IIJA), **it is more important than ever to leverage the expertise, resources, and innovation of the private and public sectors to build a better future.** These historic federal investments have created a once-in-a-lifetime opportunity for communities to rebuild through partnership and cross-sector collaboration.

That's why NLC created the Capstone Challenge Series, a program that brings together NLC member cities and strategic partners to create solutions to the real needs of municipalities. Through this program, groups of cities and private sector partners worked together on a variety of projects over the course of eight months. For example, in the pilot cohort, Tyler Technologies worked with North Lauderdale, FL and Alexandria, LA to explore how local governments can create a cybersecurity culture, and Uber partnered with Washington, DC to remove transportation as a barrier to accessibility of the COVID-19 vaccine. A total of eight projects were completed in the pilot cohort.

This report dives into the details of several projects and the successes and learning opportunities from the program's pilot year. NLC member cities are invited to explore the case studies developed through the program and consider opportunities and examples of public-private partnership.

Program Goals

The central goal of the Capstone Challenge Series is to bring together the expertise and resources of the private and public sectors to respond, recover, and rebuild for a better future. This goal is broken down into three sub-goals:

1 Create meaningful dialogue and authentic, long-term engagement between partners and members, bringing mutual value to both groups.

2 Provide technical assistance and support to NLC members through pro bono services from partners; extend support to non-participant members by sharing resources, case studies, and best practices developed in the program.

3 Add to the existing literature about municipal cross-sector collaboration and share learnings with NLC's broader audience.

Program Structure

The 2021 Capstone Challenge program was open to NLC Capstone Partners, Enterprise Partners, and member cities. The application first opened to partners, who were invited to submit up to three project or topic ideas under the category of "Respond, Recover, Rebuild" – the theme of then-NLC President Kathy Maness during her 2021 presidential year. Member cities subsequently applied by ranking the proposed projects that they were interested in. Both members and partners had to confirm that they had the time and willingness to commit to this project, and partners agreed to provide their services pro bono.

NLC selected eight partners and 17 municipalities to participate in the pilot cohort of this program. Each partner was matched with one to three municipalities that had indicated interest in their project. NLC evaluated the participants based on strength of their application, while taking into account diversity of region, city size, and profile. It was a priority to ensure that small and rural municipalities were represented, given the challenges they often face attracting national investment.[3]

Each working group was assigned an NLC staff liaison to assist as needed. NLC was the convener and thought partner in this program, but the work was driven by members identifying real issues in their cities and partners offering innovative solutions.

The program launched on June 9, 2021. The working groups were asked to meet at least once monthly and to submit a detailed project plan and monthly reports to NLC. NLC convened a mid-point check-in call with the full cohort in September and hosted an event at City Summit to share the innovative work being done with attendees. The program concludes with a final showcase on February 9 and 10, 2022, during which each group will share the outcomes of their projects, and the most innovative and impactful project will be recognized with an award.

Capstone Challenge Timeline

April 26, 2021
Partner Applications Due

May 21, 2021
Member Applications Due

June 9, 2021
Kick-off Event

September 14, 2021
Mid-Point Check-in

November 16, 2021
City Summit Event: Innovative Partnerships – Solutions for Cities from the Capstone Challenge Series

February 9-10, 2022
Capstone Challenge Showcase & Awards; Application for 2022 cohort opens

Project and Participant Snapshots

8 strategic partners

17 municipalities representing
15 states and the District of Columbia,
5,658,902 residents

Among those 17 municipalities
7 are small cities, 4 are mid-size cities, 6 are large cities;
3 are state capital cities, 1 is the nation's capital
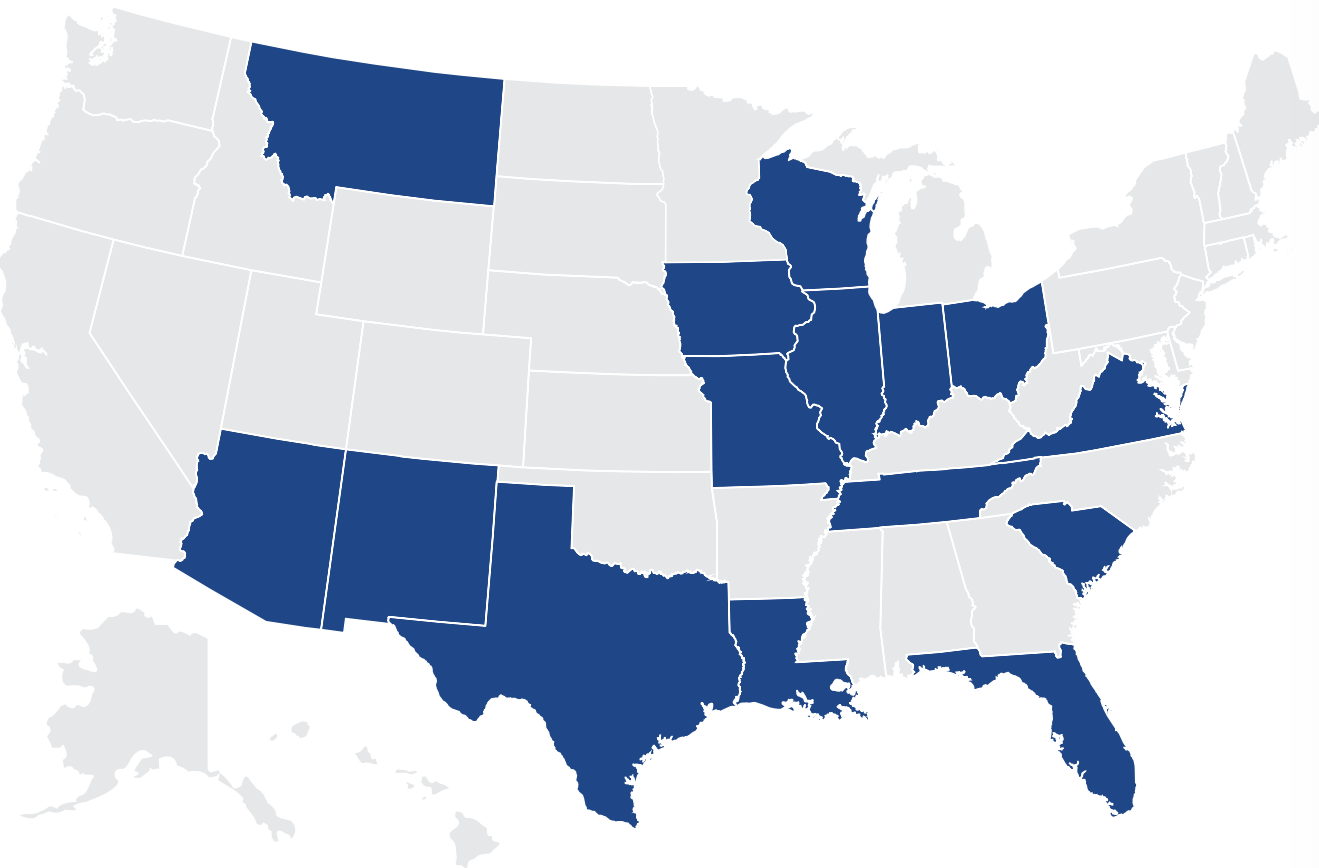
Project snapshots

Esri worked with **Cedar Rapids, IA, Butte-Silver Bow, MT,** and **Purcellville, VA** to survey and map broadband availability in each community, identify priority areas from a social equity perspective, and create a strategic plan for equitable broadband expansion.

Tyler Technologies worked with **North Lauderdale, FL** and **Alexandria, LA** to implement a five-step cybersecurity culture to advance security efforts that ensure both a top-down and bottom-up approach to ownership of cybersecurity in local government.

Accela and **Madison, WI** worked together to upgrade Madison's Report A Problem software, making the system more efficient and user-friendly.

Polco worked with **New Orleans, LA, Dublin, OH,** and **Broadview, IL**, as well as partners at Arizona State University and Envisio to develop metrics to measure the amount of trust that residents have in their local governments.

Axon worked with **Phoenix, AZ** to implement virtual reality (VR) training for law enforcement officers so they can better respond to a variety of crisis situations.

Uber worked with **Washington, DC** to remove transportation as a barrier to the COVID-19 vaccine. They partnered with a community organization to provide rides to those without credit cards or smart phones and provided free rides to support DC's vaccination campaign.

Amazon is working with **South Bend, IN, Jackson, TN,** and **Sunland Park, NM** to create a toolkit for how cities can support retail businesses in this new reality. This toolkit seeks to answer the question: what does a seller need to be successful in the future of retail and how can cities support them?

Enterprise Holdings worked with **Houston, TX, St. Louis, MO,** and **Columbia, SC** to analyze mobility equity in communities and contribute to a research study and report to better understand the importance of socioeconomic equity of new mobility—particularly electric mobility. The group also brought in Nelson/Nygaard to act as advisors and project managers.

Project Highlights

Bringing Affordable, Reliable Broadband to All Residents Through GIS

City Names
Cedar Rapids, IA; Butte-Silver Bow, MT; and Purcellville, VA

Partner Name
Esri

Background

Broadband is a critical infrastructure that supports effective economic growth, education, workforce development, telehealth, and more. Strong broadband is a requirement for cities to compete in the global economy and provide equitable opportunities for its residents. COVID-19 raised awareness of the gaps in service levels and access, emphasizing the need for both rural and urban municipalities to address this issue.

Problem

Cities recognize the importance of addressing broadband access, but many do not know where to start. City leaders are not always aware that GIS provides critical tools to collect, examine, and model data that will allow them to properly plan for equitable broadband expansion.

With an influx of federal stimulus dollars for broadband and a growing need to address underserved areas, where should city leaders start?

An effective broadband strategy must address the question of "where." Where is there existing access? Where are services and access lacking? Where is the existing broadband infrastructure? Where are the students, the teleworkers, the residents who can't afford services? Where are the local businesses who need it? Most importantly – where should we spend our dollars to make the biggest impact?

Solution

Despite the varying sizes and makeup of their unique communities, Cedar Rapids, Butte Silver-Bow and Purcellville face similar challenges with broadband. Esri provided these communities with a series of geographic solutions to prioritize future broadband investment, understand the needs of their residents, more quickly and efficiently partner with providers, and secure federal and state funding.

First, each jurisdiction needed to better understand what areas had existing broadband access, how fast and reliable that broadband was, and what demographics lacked access. Each city launched an ArcGIS Survey123 app, incorporating Ookla's Speed Test app, that allowed them to crowdsource internet speed tests from households. In addition, the survey asked residents to describe how their current internet service impacts their lives. Using this survey data, the participating cities will validate or correct federally reported internet coverage and speeds from external data sources and establish an authoritative dataset to inform future decisions. Using customizable features in the survey app, each city was able to add in unique questions and categories to help them capture information specific to their community. For example, the survey from Cedar Rapids prioritized the needs of local businesses in addition to households. They also deployed an additional survey on library kiosks that allowed those without internet access at home to identify their broadband needs. Within a few weeks of launching the survey, Cedar-Rapids had over 1,000 responses from across the city. The survey from Butte Silver-Bow focused on affordability, as Butte Silver-Bow is a more rural community with a limited number of service providers. Their survey asked households to identify their internet provider and average cost in addition to measuring their broadband speed.

With foundational, authoritative data captured, the three cities needed a way to map the survey data from residents and businesses and analyze the demographic and socioeconomic breakdown across the community. To do this, they leveraged Esri's new Social Equity Analysis solution, allowing them to understand gaps in broadband coverage in relation to vulnerable populations using key indicators such as Census demographics. The tool was developed with input from the Government Alliance on Race & Equity (GARE) and works to incorporate social equity and civic inclusion into any policy workflow. The output from the tool allows cities to identify the areas within the community that are adversely affected by lack of reliable broadband access. With this insight, cities can make data-driven decisions on where to allocate resources or investment.

Outcome

With a geographic approach, three member cities were able to begin strategic planning for broadband expansion, efficiently partner with providers, secure funding, and fast-track local broadband investment. For example, once the Cedar Rapids team analyzes the survey results, they will be able to identify where they need to prioritize resources and funding and make more data-driven decisions. They will also have baselines and authoritative data that they can communicate back to residents, so they are more transparent on the actions they are taking to address broadband needs in the community. The survey data and analysis will help these cities apply for state and federal dollars and identify a strategic target area to fund and execute their broadband expansion.

Through this working group with these three cities, Esri was able to identify and repurpose existing solutions and identify a repeatable pattern that every city can follow to address broadband. Esri benefited from the real-world discussions about city operations and honest dialogue about city difficulties in addressing these new trends.

Cybersecurity Culture Best Practices

City Names:
North Lauderdale, FL; Alexandria, LA

Partner Name
Tyler Technologies, Inc.

Background

In the current cyber threat environment of a continuous bombardment of attacks by hackers, malicious insiders, hacktivists, or even nation-state actors, vigilance begins with preparation. Being prepared starts with being aware. To be successful, cities need to develop cybersecurity awareness throughout the entire organization, which leads to organizational practices that support the secure execution of business strategy. Cities need to create a culture of cybersecurity.

Problem

To defend themselves, North Lauderdale and Alexandria identified a need for improved understanding of cybersecurity. Organizations and cities are under constant attack. Attempts to compromise their missions through malicious activities, such as business email compromise, account takeovers, zero-day vulnerabilities, insider threats, and cities being held hostage by ransomware attacks have dangerous consequences for local government cyber resiliency.

Depending on budgets, the state of local government cybersecurity program maturity can widely vary. Unlike other areas of critical infrastructure, like financial institutions and the healthcare sector, local government is not required to follow specific compliance guidelines. We often assume that the information housed by a local government is public information, but there is still sensitive information that needs to be protected.

Moreover, most local governments existed before the term "cybersecurity" was coined – many even before the term "IT." Trying to incorporate new methods of operations is difficult and sometimes requires a sea change for an organization. Without a comprehensive cybersecurity strategy, local governments are vulnerable to targeted attacks today and will continue to be into the future.

Solution

In this project, Tyler Technologies is working with North Lauderdale, FL and Alexandria, LA to develop a five-step cybersecurity culture to advance security efforts that ensure both a top-down and bottom-up approach to ownership of cybersecurity in local government. All members of a workforce have a role to play in protecting their organization. We are all on the frontline.

Cybersecurity Culture, or Continuity Culture©, is achieved when an organization's people, process, and technology are aligned with secure execution of the business strategy. People in every position understand that their functional role includes protection of information, customers, assets, other employees, and the organization's mission. All workforce members understand the functions and risks associated with the technology they use. Processes are designed to create closed-loop accountability, as well as provide service and

contribute to the active institutional memory contained in documentation of those processes. Leadership sets the tone and invests in the culture of "know."

To create a cybersecurity culture, these are the five steps that local governments need to take:

◆ **Institutional Knowledge**: Ensure that knowledge is documented through policies, standard operating procedures (SOP), continuity of operations plans, etc., so that knowledge does not leave the organization when key personnel leave.

◆ **People**: People are the most important piece of any organization. They need the right tools at the right time to be both effective and efficient. People conceive, design, configure, and use all the tools of business and create all the information. Without people, there's nothing to protect. Leadership must set the tone of accountability. Job descriptions should include cybersecurity responsibilities for each role type. All roles should receive IT training and go through regular phishing testing. Results of testing activity and policy performance should be included in performance reviews.

◆ **Processes**: Every process should contribute to institutional knowledge, learning, and improvement. Every process should be comprised of accountability touchpoints and provide end-to-end corroboration of the function it represents. Relevant processes include an Information Security Plan, user & equipment provisioning, change management, cyber-risk management, incident response, disaster recovery, business continuity, account review, account activity, threat intelligence, and system lifecycle management.

◆ **Technology**: Relevant technologies are key to cybersecurity. Some technologies that help protect the cybersecurity of organizations include firewalls, IDS/IPS, zero-day protection, multi-factor authentication, security information and event management, and performance management.

◆ **Practice**: People need appropriate processes to know what to do and how to do it. They also need the proper technology by which to carry out their tasks. One cannot think one's way into playing the piano. Employees must practice good cybersecurity behavior, following processes, and using technologies. These elements should be tested regularly as well.

People, process, and technology – in that order – are the key components of building a cybersecurity culture. City leaders must foster the culture of continuity through institutional memory, leading by example, and demonstrated investment. Processes should be engineered to constantly improve and should have built-in accountability. Technology needs buy-in, practice, and testing. By focusing on these steps, city leaders can create a cybersecurity culture in their local government.

Outcome

Tyler Technologies worked with North Lauderdale, FL and Alexandria, LA to provide a high-level overview of their Cybersecurity Maturity program highlighting examples of where cybersecurity, in terms of people, processes, and technology can be improved. The training imparted knowledge that cybersecurity is not a tool or a technology, but a managerial strategy that needs to be baked in as part of the City's mission. It is part of an organization's business philosophy, which is ever-changing. As Susan Broussard, Chief of Staff for the City of Alexandria, LA, explained, "After working with Tyler Technologies, the City of Alexandria got a better understanding of its cyber readiness. To build on its existing cybersecurity program, the City learned ways to improve awareness and culture among its employees. One specific takeaway is further developing cybersecurity training during the employee onboarding process."

Progress requires action from all stakeholders at all levels of the business and milestones must be determined to be measured. An organization can spend as little or as much as they need but creating that Continuity Culture starts with leadership embracing the concept that cybersecurity is a journey, not a destination.

Enhancing City Responsiveness to Resident Service Requests

City Name
Madison, WI

Partner Name
Accela

Background

The City of Madison's Report a Problem website allows residents to easily alert the City to a variety of community issues and needs, such as pothole reporting, street clearing requests, and restaurant complaints. About 15,000 reports are submitted every year. Multiple City departments and services are accessible from this web portal, creating a user-friendly 'one-stop shop' for residents to utilize.

Problem

While residents could reliably find all the complaint and request forms they might need in one place, the actual behind-the-scenes processing of Report a Problem submissions was less uniform. Email distribution lists delivered the text of each submission to department email accounts where the details were manually copied and pasted, line by line, into other systems. This manual step relied on humans to nudge the issue forward and prevented ongoing and automated tracking of the report and associated activities. The public also had no visibility into the status of their requests or complaints, such as if their request was received, if it had been assigned, and when it might be addressed. This unsatisfying, one-way relationship hampered opportunities to improve the response process and better serve residents.

From an equity and engagement perspective, City officials knew that not everyone in the Madison community was taking full advantage of the Report a Problem service. This suggested an imperfect picture of the City's challenges and opportunities and illuminated the possibility that public services were potentially not being shared equally by residents.

Solution

The City convened a 12-member cross-departmental and cross-disciplinary team, including colleagues from the Mayor's office and the City's Racial Equity & Social Justice Initiative (RESJI) team. In partnership with Accela, a provider of cloud solutions trusted by governments across the globe to accelerate their digital transformation and deliver vital services, the project team selected five highly used Report a Problem forms and upgraded them using Accela software.

Today when a request is submitted through those forms, it flows in the Accela system and is automatically assigned for action; its status can be tracked as City staff investigate, act on, and work to close the request. An advanced interface routes submissions to and from external software systems where necessary, providing a comparable level of trackable detail for all departments. Residents can also log in to see the history and status of their submissions.

To ensure resident awareness of the services, the City and Accela also created a compelling communications campaign through which the City, its departments,

and Public Information Officers will drive more resident engagement to utilize the Report a Problem website. City staff took extra care to re-write the materials in "plain language," a style of writing that makes it easier for the public to read, understand, and use government communications.

Outcome

For Madison residents, the Report a Problem page continues to provide the same pathways for reporting community issues and remains accessible via any modern web browser and device. On the other side of every transaction, however, Accela's powerful automation is at work ensuring that the right data gets to the right team for efficient and timely resolution.

These strategic, data-driven enhancements deliver several key benefits. Automation alleviates staff workload previously spent manually tracking and managing submissions. Managers can better monitor performance indicators and shift resources as needed, in alignment with the City's Performance Excellence initiative, a municipality-wide mission to provide high-quality public services. City leadership are likewise empowered to leverage this data to develop insights on and solutions for issues affecting underserved communities.

More accessible language and the system's ability to "close the loop" with visibility into results also reinforces a positive resident/municipal relationship. Perhaps most importantly, an improved and effective Report a Problem service increases residents' sense of ownership in their community by empowering them to take the first step in addressing issues the City may not otherwise be aware of, possibly before the issue worsens.

Overcoming a number of technical challenges and a short timeline, the City delivered a significant cross-departmental effort to bring this project from vision to reality. "We had our experts in IT, web development and each of the teams represented by these forms working collaboratively and eliminating challenges one-by-one," says Eric Olson, Web Development Manager at the City of Madison. "The lessons learned drove improvements at every level. These processes will now serve as the model to upscale each of the remaining forms."

"

If we save one minute per submission, with 15,000 or more submissions per year, we will save 250 staff hours. That's just on data entry. The ability to perform robust data analysis is priceless.**"**

David Faust, Assistant Director of Information Technology

Measuring Trust in Local Government

City Names
Broadview, IL; Dublin, OH; New Orleans, LA

Partner Name
Polco

Background

Local government has long been the most trusted level of government. But with the onset of COVID-19 and resulting discussions about inequality and exclusion, recent data indicates waning levels of trust. However, no one has developed an index exclusively to measure trust independent of other data.

Problem

There is no standard way to measure how much residents trust their local government that is specific enough to be meaningful but general enough to be used in very different communities. Metrics on trust should have credibility with current research by major universities and could be benchmarked against existing data from resident satisfaction surveys. Additionally, defining and measuring trust is a challenge because it encompasses many facets of interaction with local government. Do residents trust that they are being treated fairly? Do they believe their local government will follow through with their promises? Would they say their local government acts in the overall best interest of the community?

Solution

The survey experts at Polco worked with researchers at Arizona State University (ASU), Envisio, and the communities of Broadview, IL; Dublin, OH; and New Orleans, LA to develop a trust index. A literature review was done to determine what research had been done regarding resident trust in government. Polco then identified questions from The National Community Survey (The NCS) that could be used to benchmark resident trust in a Trust Index.

New Orleans had already begun an initiative called Project Why, looking at how residents view the city. They had already started to collect some data on trust. Polco survey experts mapped the results of the literature review, the data from Project Why, and The NCS data to determine a number of topics to explore. The communities and researchers then identified important constructs of trust such as competency, integrity, equity, responsiveness, and openness. New Orleans, Broadview, and Dublin assessed the survey map and key constructs. They discussed the most meaningful data to collect that could not only measure trust, but also provide insight into how trust could be improved.

As the communities are very different in terms of community size, average income, and race, they provided different perspectives and collectively determined what was most important to measure. They also provided important context based on their conversations with residents about where and how trust gaps were evident.

Based on the work of the cohort, a short survey was developed that included demographic questions. The survey can be used to measure how much residents trust local government, and the cities will be able to sort and filter information based on different perspectives such as age, race, and gender. Important considerations in developing the survey instrument included accessibility by residents of lower literacy levels, respondent demographics, and where data already exists that can be used to develop benchmarks.

Outcome

The cross-sector team of the three municipalities, Polco, Envisio, and ASU developed an index that diverse municipalities across the United States can use to measure resident trust. The survey was deployed by all three communities the first week of January 2022. Preliminary results will be available for the Final Capstone Presentation, although data collection may continue past that date. The survey and index will be made available to other municipalities through Polco after the presentation.

Next Generation Virtual Reality Police Training

City Name
Phoenix, AZ Police Department

Partner Name
Axon

Background

The intent of the City of Phoenix Police Department and Axon partnership is to build a new training program that integrates virtual reality training and programs based on performance science for a holistic approach to "Building a Higher Performing Police Officer."

The program design uses the observe–orient–decide–act framework of decision-making and aims to build a modern training/professional development program focused on outcomes and overall officer development.

Problem

Law enforcement training is costly, difficult to administer, and may not align with the growing and ever-changing needs of a community.

The majority of law enforcement training is focused on the catastrophic 1%. Training for the remaining 99% should aim for the highest form of police-citizen interaction – when an officer seizes the opportunity to create a mutually beneficial outcome for all parties involved, with officers and citizens feeling safe during the interaction. Training should focus on critical thinking skills development, de-escalation techniques, and building community trust.

Can virtual reality training centered around community engagement be the catalyst to transform law enforcement training?

Solution

Axon and the City of Phoenix Police Department implemented a virtual reality training program on Community Engagement for their officers.

Community Engagement Training focuses on providing key situational learning objectives and de-escalation tactics when encountering a wide variety of real-world scenarios. These training are delivered in 360° videos with branching narratives, meaning that officers can select different tactics and responses at key decision points throughout the narrative. This allows officers to see the steps they can take to de-escalate a scene.

By completing Axon's Community Engagement Training, officers gain a better understanding of what an individual in crisis is experiencing as law enforcement is called on the scene. Additionally, officers will be able to describe the basic symptoms of psychiatric or developmental conditions, as well as identify best practices when conducting verbal de-escalations or determining use of force on individuals in crisis. The nine VR training modules covered the following topics: Autism, Schizophrenia, Suicide, Domestic Violence, Peer Intervention, Peer Intervention C, Alzheimers, and Profound Agitation.

The utilization of VR headsets provides officers with an accurate first-person perspective of an individual in a state of crisis that otherwise could not be experienced. Given that VR has been shown to have higher rates of memory

retention than traditional educational tools, these trainings will increase an officer's application of learned soft skills in difficult, high-stakes situations.

Throughout the VR training, officers have an opportunity to experience both viewpoints to better understand a situation and attempt to de-escalate the situation to reach a successful outcome.

Outcome

Axon and the Phoenix Police Department measured the impact of VR training on officers' level of confidence to carry out their duties. Three sets of surveys were sent out to officers. They took a baseline survey at the beginning of the study before receiving any VR training. This was followed by a series of surveys following each of the VR training modules and a final survey at the end of the study. The surveys analyzed three main themes: learning, job behavior, and ultimate value of the training.

The test and evaluation of Virtual Reality training is successful based off the limited survey results from the study precinct at the City of Phoenix Police Department. The study has found that most respondents find virtual reality community engagement training to be effective. 81.4% of participants found that at least one of the VR training modules was effective in preparing them to adapt their approach to a call.

One of the primary advantages of Axon's Virtual Reality training program is that it is a mobile program. It is difficult and costly for the Phoenix Police Department to remove officers off the street and have them travel long distances to the training facility. The ease and mobility of VR technology will allow more officers to be trained faster and at their home precincts. This will save the City of Phoenix significant costs while allowing officers to receive new training more often and ensuring they are able to spend more time in their precincts.

VR is a valuable training tool that must continue to be invested in to identify the sustainable impact on officers' performance and outcomes. The partnership between the City of Phoenix Police Department and Axon will continue. The initial study will be expanded into new precincts to capture more data and show the value of the training.

Removing Transportation as a Barrier to Vaccines

City Name
Washington, DC

Partner Name
Uber Technologies, Inc.

Background

In late 2020/early 2021, the COVID-19 vaccine became available to the public, starting with frontline workers, the elderly, and vulnerable individuals. This distribution was the first sign of protection against COVID-19, which had gripped the world the year before. The initial requirement for full vaccination required two doses, with the single shot dose becoming available shortly afterwards. As pharmacies, hospitals, nursing homes, and public vaccination sites all worked to distribute the single or double doses needed for full vaccination, leaders in cities and states across the country encouraged their residents to get vaccinated.

Problem

In Washington, D.C., the Mayor's office sought to distribute the vaccine to every eligible resident. Even with these efforts, there were residents who lacked access to reliable transportation to vaccination appointments. Unlike the annual flu shot, two of the approved COVID-19 vaccines required more than one shot, which meant taking multiple trips to one of the designated vaccine sites. Without a reliable way of getting to and from each shot, some residents were either going to miss the second shot, keeping them from full vaccination, or would forgo getting the vaccine altogether. For the city to reach its vaccine goals and ensure that every eligible resident could receive a vaccine, it would be vital that it had a transportation strategy that could remove any barriers for those seeking to get to and from their vaccine appointments.

Solution

In December of 2020, Uber announced that it would provide 10 million free or discounted rides to help make sure that transportation is not a barrier to getting the vaccine. Hoping to coordinate with state and local governments to distribute these rides, Uber partnered with several jurisdictions, including Washington, D.C. to provide free and discounted transportation at no cost to the city. One purpose of this partnership was to help address a hurdle some residents were facing as they sought to get vaccinated – a lack of transportation.

Through the partnership, the city would distribute the rides in one of two ways. First, Uber created a special code (10MVDCHope) that District residents could enter directly into the app, which would provide riders up to four rides up to $25 off each. This meant that District residents receiving one of the two shot vaccines could get 4 free or discounted rides to and from a vaccination site—hopefully improving the chances for full vaccination. To guarantee that the free rides were taken to the vaccination sites, Uber placed a geofence around the codes, meaning those rides could only be taken to pre-determined vaccine sites identified by the city.

Second, recognizing that some residents face technological challenges or do not own a smartphone, Uber worked with one of the city's community-based partners in Ward 8, Far Southeast Family Strengthening Collaborative, to set up

an Uber Health account. Residents could call the community-based partner to schedule a ride to and from their vaccination appointments.

Finally, as Washington, D.C. turned to its network of neighborhood volunteers to encourage residents to get vaccinated, Uber provided those volunteers with transportation to each volunteer site.

Outcome

The partnership between Uber and Washington, D.C. made it easier for residents to get vaccinated, particularly those residents who lacked access to reliable transportation. The city used its resources to spread the word to residents through flyers and social media, as well as its network of neighborhood volunteers who contacted residents directly. In addition to sharing codes with residents, the city and Uber worked together to expand the rides program to volunteers who were knocking on doors and encouraging residents to get vaccinated—an important effort taken by Mayor Bowser's office to inform every resident about the vaccine. By the end of 2021, every District resident who wanted a free ride and needed transportation had been provided with the opportunity to get to and from a vaccination site at no cost.

Conclusion

THE 2021 Capstone Challenge cohort tackled issues ranging from equity in electric vehicle mobility to how to measure trust in government. This program demonstrated the value of cross-sector collaboration for cities and their residents: innovation, efficiency, expertise, and resources.

> **"**
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> **As city employees, we know the heartbeat of our residents, but we don't necessarily know all the best practices. Having the experts in those fields come in and help us shape that work was critical."**[4]
>
> Abby Webber, Innovation Analyst City of New Orleans, LA

The broadband survey and equity project led by Esri presents a clear example of the benefits to both sides. Cedar Rapids' city leaders identified the need to better understand their broadband landscape, and as Stephanie Schrader, the Community Service Coordinator for Cedar Rapids explained, **"this project would not have moved forward nearly as fast without this partnership. It gave us structure and support, whereas we would have been starting from scratch without that collaboration."**[5] From the Esri perspective, the partnership allowed them to have honest, real-world discussions with city leaders and re-purpose their existing solutions for the benefit of all cities looking to address broadband.

Beyond the project outcomes, many city leaders identified the connection opportunities as a highlight of the program. Monica Riehl, the Assistant City Manager of Sunland Park, NM who worked on the Amazon project, noted **"The best thing about this was connecting with NLC, connecting with Amazon, connecting with the other municipalities, identifying where everybody is and learning from one another."[6]**

Of course, there were challenges as well. For example, several cohort members were not able to participate as fully as expected because of bandwidth issues, unanticipated team restructuring, or new projects that arose. In future cohorts, we will ensure that every city and partner has at least two team members participating fully to create continuity if one must step back.

We are evaluating the program through interviews with a sample of participants as well as a survey to all participants. We look forward to analyzing those results and using the information to continue improving the program for future cohorts. The Capstone Challenge represents a new model of engagement between NLC member cities and strategic partners, and with the continued innovation and dedication of both sectors, a better future is within reach.

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CYBERSECURITY CULTURE BEST PRACTICES

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TYLER TECHNOLOGIES

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Becky Metivier
Senior Manager, Civic Services Marketing

Loren Lachapelle
Marketing Specialist, Cybersecurity

Tim Walsh
Sales Manager, Cybersecurity

ALEXANDRIA, LA

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Chief of Staff

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Information Systems Manager

Bill Cotton
Systems Analyst

Gary Walker
Network Administrator

NORTH LAUDERDALE, FL

Ana Ziade
Mayor

Mitch Williams
Chief Information Technology Officer

Tammy Reed-Holguin
Community Development Director

ENHANCING CITY RESPONSIVENESS TO RESIDENT SERVICE REQUESTS

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NLC Staff Liaison, Midwest Regional
Membership Manager

ACCELA

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Senior Vice President, Marketing

Darryl Booth
Managing Director, Accela Center of
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Ken Anderson
Director of Sales

Lu Fisher
Customer Success Architect

Valerie Pressley
Sr. Marketing Communications Manager

Kelly Delaney
Marketing Specialist

MADISON, WI

Satya Rhodes-Conway
Mayor

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Assistant Director of Information Technology

Riki Sjachrani
Applications Development Manager

Danielle Fossum
IT Specialist

Brenden Pautsch
Database Administrator/IT Specialist

Eric Olson
Senior Project Manager, Technical Lead

Abigail Ferguson
Customer Service Coordinator

Paul O'Leary
IT Specialist

Jane Schneider
Apps Dev Team Developer

Katie Crawley
Communications

Gabriela Arteaga
Communications

Kristin Brodowsky
Communications

MEASURING TRUST IN LOCAL GOVERNMENT

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Enterprise Partnerships

POLCO

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Michelle Kobayashi
Senior VP of Innovation, Polco

BROADVIEW, IL

Katrina Thompson
Mayor

LeTisa Jones
Village Administrator

DUBLIN, OH

Brandon Brown
Director of Performance Analytics

Bruce Edwards
Digital & Brand Manager

NEW ORLEANS, LA

Liana Elliott
Director of Policy & Government Operations

Abby Webber
Innovation Analyst

IN COLLABORATION WITH ARIZONA STATE UNIVERSITY AND ENVISIO

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CEO, Envisio

Liz Steward
VP Marketing, Envisio

NEXT GENERATION VIRTUAL REALITY POLICE TRAINING

Quineesa Smith
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AXON

Esmael Ansari
Vice President, Government Affairs

Patrick Madden
Vice President and Head of TASER

Robert Murphy
Senior Director, Virtual & Augmented Reality

Jaspaul Chung
Head of TASER Use of Force Data and Research

PHOENIX, AZ

Commander Aimee Smith
Community Engagement Bureau

Commander Nicholas Diponzio
South Mountain Precinct

Bryan Chapman
Assistant Chief of Police, Community Engagement & Organizational Development Division

Joshua Calle
Sergeant, Police Training Academy

Christopher Stone
Officer, Tactical Training Detail

REMOVING TRANSPORTATION AS A BARRIER TO VACCINES

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NLC Staff Liaisons, Strategic Communications Specialist

Melissa Williams
NLC Staff Liaisons, Program Director, Marketing & Communications

UBER

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Public Policy Manager, Mid-Atlantic

Emilie Boman
Director, Global Public Policy, Safety & Delivery

WASHINGTON, DC

Rich Harrington
Associate Director, Mayor's Office of Policy

Tomás Talamante
Deputy Chief of Staff to the Mayor

TOOLKIT FOR THE FUTURE OF RETAIL IN CITIES

Tina Lee
NLC Staff Liaison, Senior Research Specialist

AMAZON

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Public Policy Manager

Anna Spitz
Public Policy Intern

Elsa Jensen
Public Policy Intern

JACKSON, TN

Justin Searcy
Director of Community Development

SOUTH BEND, IN

Denise Riedl
Chief Innovation Officer

Brian Donoghue
Director of Civic Innovation

SUNLAND PARK, NM

Monica Riehl
Assistant City Manager, Director of Community and Economic Development

EQUITY IN MOBILITY SERVICES AND ELECTRIC VEHICLE (EV) TECHNOLOGY

Heyward Harvin
NLC Staff Liaison, Director, Strategic Partnerships

ENTERPRISE HOLDINGS

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Chris Tabourne
Vice President, Strategic Diversity Initiatives

Chris Haffenreffer
Mobility and Electrification Strategy & Innovation

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Executive Assistant, Government and Public Affairs

COLUMBIA, SC

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David Foster
Fleet Administrator

Kelvin Keisler
Support Services Administrator

Andrea Kimpson
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HOUSTON, TX

Lara Cottingham
Chief of Staff & Chief Sustainability Officer,
Administration & Regulatory Affairs Department

Chris George
Executive Director, EVolve Houston

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Program Manager, EVolve Houston

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Operations, EVolve Houston

ST. LOUIS, MO

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Climate Advisor to City of St. Louis and
Councilmember, City of Richmond Heights

Scott Ogilvie
Program Manager, Complete Streets

SUPPORTED BY NELSON\NYGAARD

Sahar Shirazi
Principal and Co-lead, Mobility
Management, Access and Policy

Evan Costagliola
Principal, Seattle Office Leader

Endnotes

1 Freedman Consulting, LLC and Bloomberg Philanthropies. (2013). (rep.). *The Collaborative City: How partnerships between public and private sectors can achieve common goals*. Retrieved January 6, 2022, from http://www.bbhub.io/dotorg/sites/2/2015/07/The_Collaborative_City.pdf.

2 World Bank. (2020). (rep.). *Municipal Public-Private Partnership Framework*. Retrieved January 6, 2022, from https://openknowledge.worldbank.org/handle/10986/33572.

3 Halstead, J. M., Mohr, R. D., Deller, S. C., & Girard, P. (2007). Public–private partnerships and cooperative agreements in small and rural municipalities. *International Advances in Economic Research, 13(4), 522–523*. https://doi.org/10.1007/s11294-007-9118-7

4 Osborne, A., & Webber, A. (2022, January 4). Interview with Abby Webber, Innovation Analyst, City of New Orleans, LA. personal.

5 Osborne, A., & Schrader, S. (2022, January 7). Interview with Stephanie Schrader, Community Service Coordinator, City of Cedar Rapids, IA. personal.

6 Osborne, A., &; Riehl, M. (2022, January 5). Interview with Monica Riehl, Assistant City Manager, City of Sunland Park, NM. personal