



..... Intelligent
Traffic
Signals



.....
Homesharing

Street Sensors



Ridesharing



Cities and the Innovation Economy: Perceptions of Local Leaders



CENTER FOR CITY SOLUTIONS

About the National League of Cities

The National League of Cities (NLC) is the nation's leading advocacy organization devoted to strengthening and promoting cities as centers of opportunity, leadership and governance. Through its membership and partnerships with state municipal leagues, NLC serves as a resource and advocate for more than 19,000 cities and towns and more than 218 million Americans. NLC's Center for City Solutions provides research and analysis on key topics and trends important to cities, creative solutions to improve the quality of life in communities, inspiration and ideas for local officials to use in tackling tough issues, and opportunities for city leaders to connect with peers, share experiences and learn about innovative approaches in cities.

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Executive Summary

The National League of Cities' (NLC) *Cities and the Innovation Economy: Perceptions of Local Leaders* is a nationwide analysis of the current state of the 'sharing economy' and smart city technologies—including drones—and their impact on cities. Transportation network companies (TNCs) like Lyft and Uber as well as homesharing applications like Airbnb are having a transformative effect on cities in a myriad of ways. The regulatory environment has been upended in recent years as the concept of shared vehicles and homes has become mainstream. More recently, drones and smart city technologies of all types are permeating the urban environment at an accelerated pace.

The impact of these new technological interventions on local governments is still

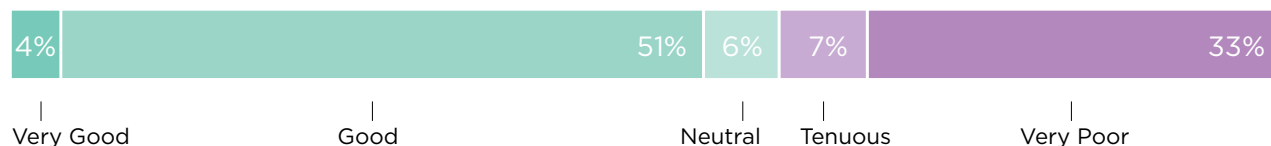
evolving. Broadly speaking, city leaders welcome the innovation that these new services provide to constituents, but the operating environment presents both opportunities and challenges to cities. To better understand the current state of the sharing economy in cities, NLC posed questions about cities' relationships with sharing economy companies, their level of support for these companies and the formal partnerships that have been formed since their inception.

In order to best measure city leaders' perceptions of the current innovation economy environment, this survey was conducted as a part of NLC's biennial *Local Economic Conditions* survey, which measures the performance of economic indicators and drivers of local fiscal health.



Report Highlights

How would you describe your city's relationship with sharing economy companies like Uber/Lyft or Airbnb?



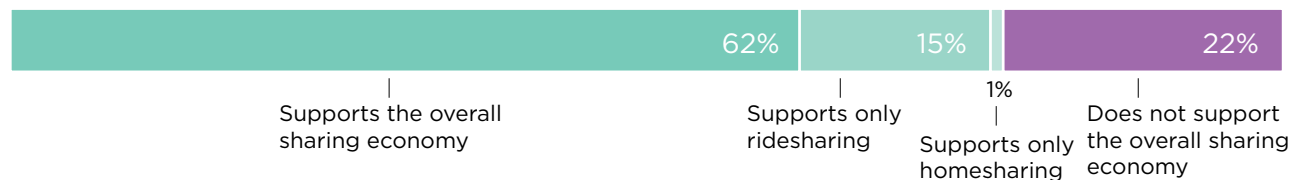
Have you or any entity in your city entered into any type of partnership with a sharing economy company?



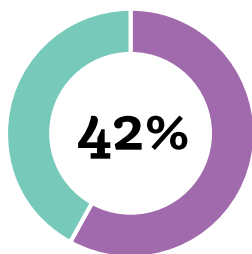
If no, would you be open to a partnership?



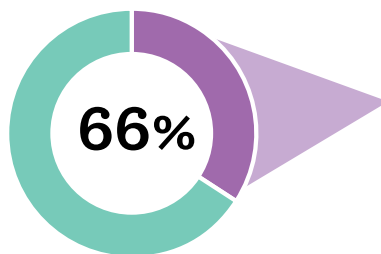
Please select the response that best describes your local government's support of the growth of the sharing economy.



New Technologies



of cities are using or considering drones for a municipal operation



of cities investing in smart city technology

Of the **34%** of cities without any smart city systems, **25%** said they were currently exploring implementing some sort of smart city application

Introduction

In June of 2015, the National League of Cities (NLC) released the first national quantitative survey of local elected officials' viewpoints on the sharing economy.² The report, *City Survey on the Sharing Economy: Shifting Perceptions of Collaborative Consumption*,³ assessed the ways in which local elected officials were thinking about, responding to and regulating the sharing economy. At that time, the rapid growth, excitement and disruption surrounding the emergence of sharing economy companies was casting a feverish grip over communities of all sizes across America.

Today, the sharing economy has become nearly ubiquitous with day-to-day life in cities. Companies like Uber, Lyft and Airbnb are now operating in both large urban markets and smaller suburban markets. And most communities across the country have acted in some way to regulate, control or embrace these new services. Even so, the sharing economy is unique in that it presents an oft-changing regulatory environment that forces cities to be nimble and re-evaluate regulations on a regular basis.

This survey, *Cities and the Innovation Economy: Perceptions of Local Leaders*, asks several of the same questions as well as some specific variants to those that we asked in 2015 in order to assess the changing landscape of the sharing economy and other technology-based market innovations. This year's iteration of the survey provides some longitudinal data about how cities' interaction with the sharing economy has changed over the past two

years. New questions have been included to provide broader insight on the ways new technological innovations are impacting cities.

Core Analysis

Our survey of city officials represents cities of all sizes and geography nationwide. When sharing economy companies began to proliferate, they were initially found, for the most part, in large metropolitan areas. This is no longer the case. Since the deployment of our first survey, the sharing economy has entered cities of all sizes around the world, and serves populations with different needs, cultural inclinations and geographies.

This survey explores the continued impacts of peer-to-peer business models on local economies, and reflects cities' preferences, concerns and experiences integrating them into their economies. It also explores the impacts of new technological interventions that have proliferated widely in the last two years.



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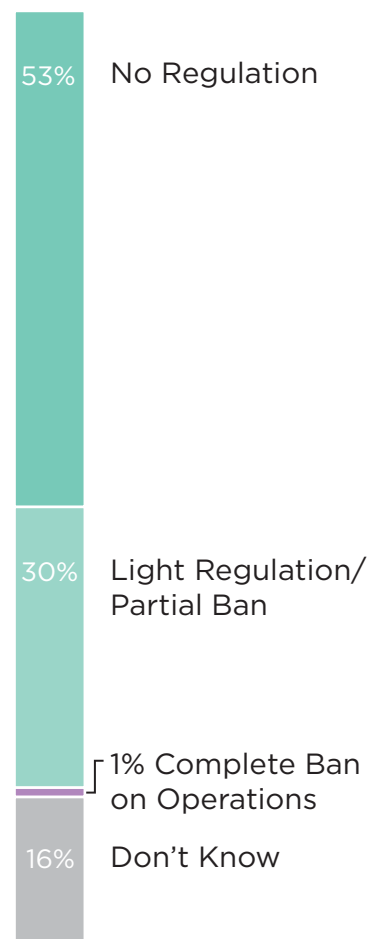
Policies and Regulations

NLC's 2015 survey on the sharing economy focused primarily on policy and regulatory efforts, many of which were newly underway or under development at the time. Many communities have now passed laws, and some have even revisited and amended those laws in light of the rapidly changing nature of the peer-to-peer marketplace. Therefore, the follow-up questions in this year's survey aim to capture the ways in which responses and regulations may have changed or subtly shifted.

The survey also aims to capture a comparative analysis of how cities benchmark themselves to their peer cities. Responses to initial inquiries in 2015 may have lacked this context, as many city policies were nascent and the peer-to-peer conversations with neighboring or similar municipalities were in their infancy.

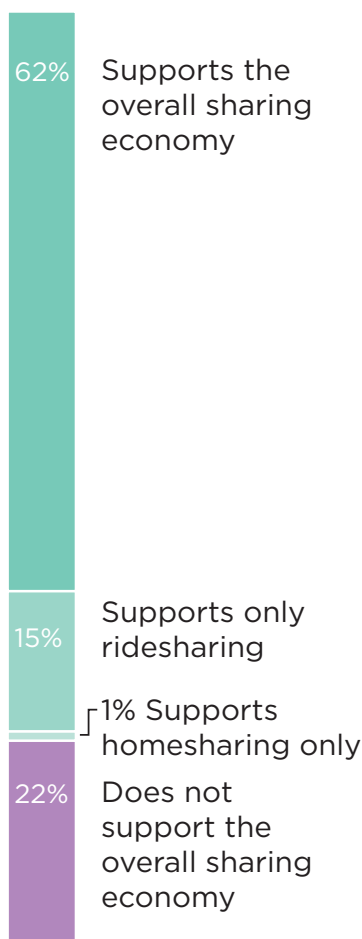
This year, over half of the elected officials surveyed (53 percent) reported that their local government imposed no regulation on the sharing economy. This is broadly in line with our 2015 survey numbers. However, 30 percent of local elected officials indicated that their city had imposed light regulation or a partial ban on the sharing economy, compared to 6 percent in 2015. The difference between these figures might account for the increased number and kinds of regulatory frameworks that have been put in place in recent years. One percent of cities instituted a complete ban on sharing economy companies, which was consistent with previous numbers.

How would you categorize your city's response to the sharing economy?



Growth in the Sharing Economy

Please select the response that best describes your local government's support of the growth of the sharing economy.



NLC's first survey on the sharing economy was deployed at a time when sharing economy platforms were rapidly growing in new markets. There was a great deal of ambivalence among city officials regarding how and when these companies were entering cities and how they operated.

Today, local governments are supportive of sharing economy growth. More than three quarters of cities (78 percent) are broadly supportive of sharing economy growth. This figure increased 7 points from 71 percent in 2015. Of those that support that growth, 62 percent support growth in the sharing economy overall, 15 percent support ridesharing growth specifically and 1 percent support homesharing growth.

On the other hand, 22 percent of cities do not support the growth of the sharing economy—dropping from 29 percent of cities expressing this in 2015.

These shifts indicate that, overall, more elected officials are supportive of the growth and changes brought on by the sharing economy compared to their perceptions in 2015.

Relationships with Sharing Economy Companies

For many cities, relationships with sharing economy companies have evolved. Earlier in their development, there was reluctance or consternation in many cities—this has now shifted, in some instances, to more amicable and even formal partnerships.

When asked about their local government's relationship with sharing economy companies like Uber, Lyft and Airbnb, more than half of local elected officials (55 percent) reported very strong or good relationships with these companies. Six percent of local elected officials reported a neutral relationship with sharing economy companies and 39 percent classified the relationship as tenuous or very poor.

Sixteen percent of respondents indicated that they had entered into a formal partnership with a sharing economy company that operates in their city. These include arrangements to collect tax revenue, share data and solidify partnerships with local transit services and/or Departments of Transportations (DOTs).

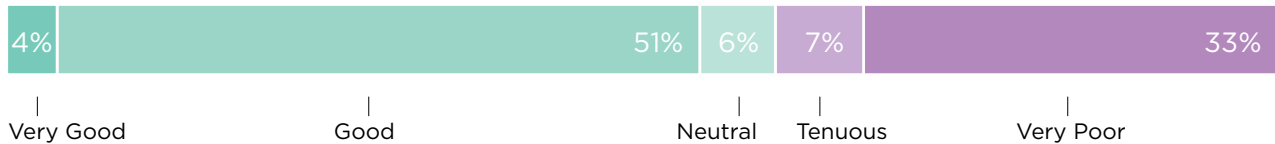
One city official specified that even though their home state has preempted cities from prohibiting short-term rentals, their city established an arrangement with Airbnb in which the company has offered to collect sales taxes on residential properties engaged in short-term rentals. Another city official described a partnership their city established with Lyft to provide transportation to and from a light rail station.

Some cities do not have formal partnerships in place, but engage in informal collaborations across different departments. One city official

explained that while they do not have formal partnerships with sharing economy companies, the city does work with them to ensure they operate in full legal and regulatory compliance, including on applicable taxes and fees. Also, various departments in the city engage in ad hoc collaborations with some sharing economy companies, leveraging their expertise and data to do things like generate heat maps for transit and retail studies.

While the majority of cities (84 percent) reported not having a formal partnership in place with sharing economy companies, 79 percent of those city officials indicated openness to forming some sort of partnership.

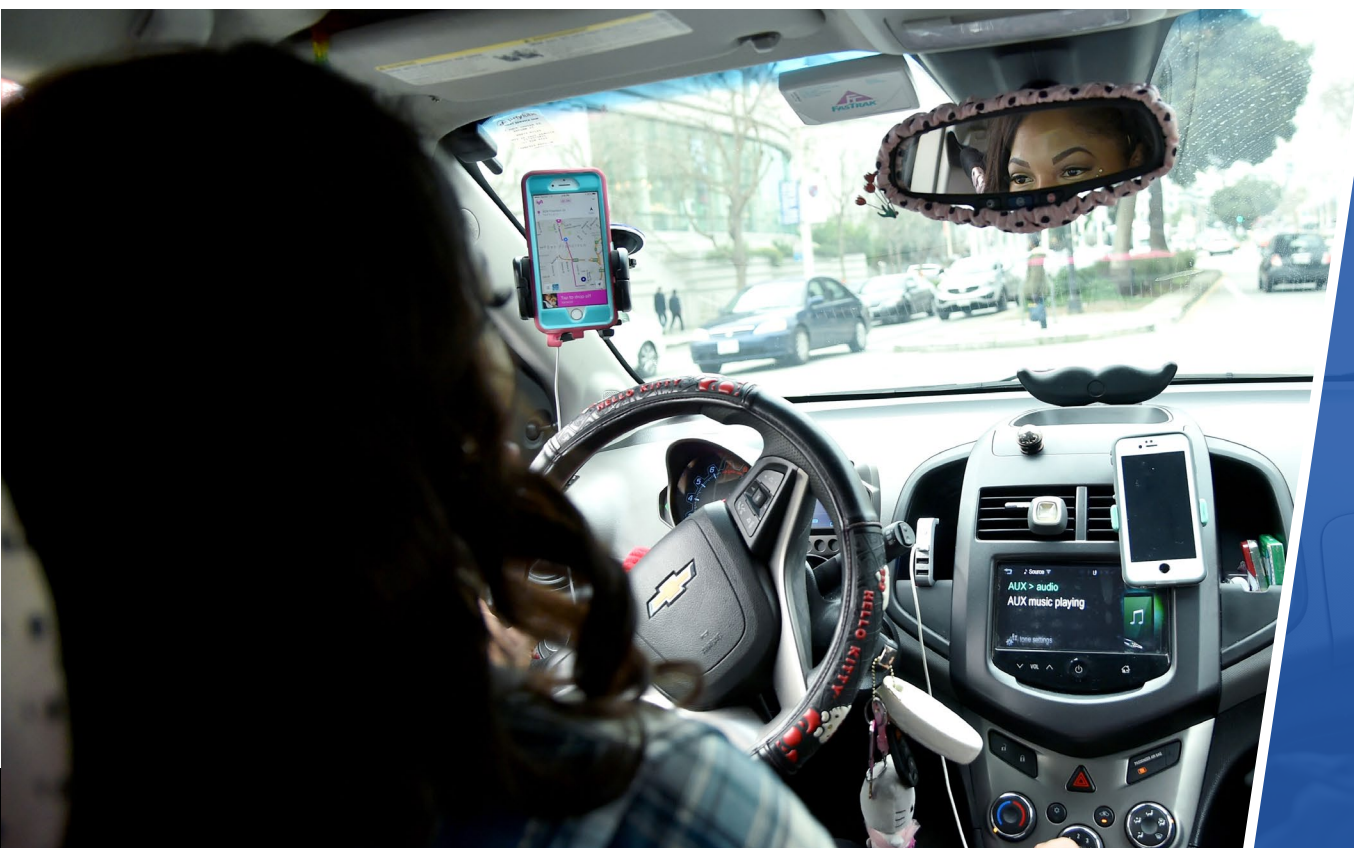
How would you describe your city's relationship with sharing economy companies like Uber/Lyft or Airbnb?



Have you or any entity in your city entered into any type of partnership with a sharing economy company?



If no, would you be open to a partnership?

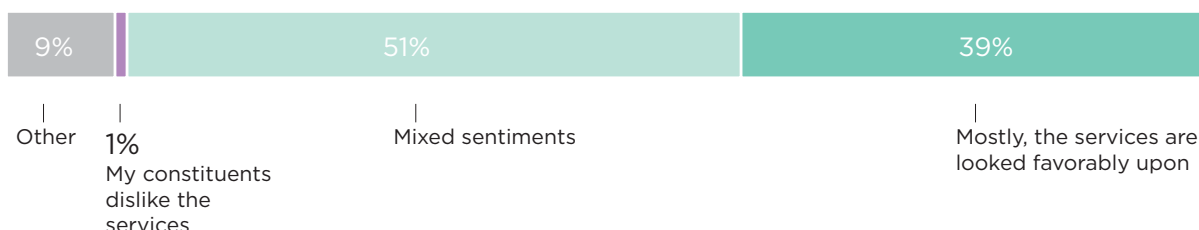


Resident Perspectives

When it comes to the perception of city residents, 39 percent of local elected officials indicated that sharing economy services were viewed favorably, 51 percent indicated that their constituencies had mixed sentiments, and 1 percent indicated that their constituencies disliked sharing economy companies.

Nine percent responded 'other' to this question. We found that in most cases this indicated the respondent either did not know how their constituents felt or they did not have those services in their communities.

How do your constituents react to the services offered by sharing economy companies?



Benefits and Concerns

The services provided by sharing economy business models seek a uniformity in delivery so that someone that uses an on-demand app in one city experiences a similar outcome in another across the country. Even though Uber or Lyft looks essentially the same everywhere, every city is different—and the way they each incorporate and regulate these companies should be based on local conditions.

When we conducted this survey in 2015, policymakers offered a wide array of answers when asked about the greatest benefits of

new sharing economy businesses. The three benefits most frequently cited by survey respondents then included **improved services** (22 percent), **increased economic activity** (20 percent) and **increased entrepreneurial activity** (16 percent).

This year's survey broke benefits and concerns out separately for ridesharing and homesharing. Additionally, we provided respondents with the option in this survey to choose all that apply rather than seeking to have cities choose among these specific areas.

Benefits

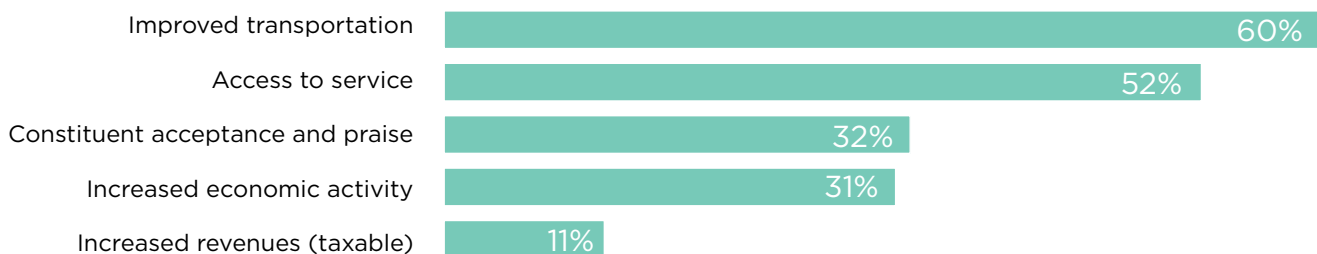
The top three most commonly cited benefits city officials saw in ridesharing included **improved transportation efficiencies** (60 percent), **accessibility of service** (52 percent) and **constituent acceptance and praise** (32 percent).⁴

The three most commonly cited benefits for homesharing included **increased entrepreneurial activity** (38 percent), **increased taxable revenues** (28 percent)

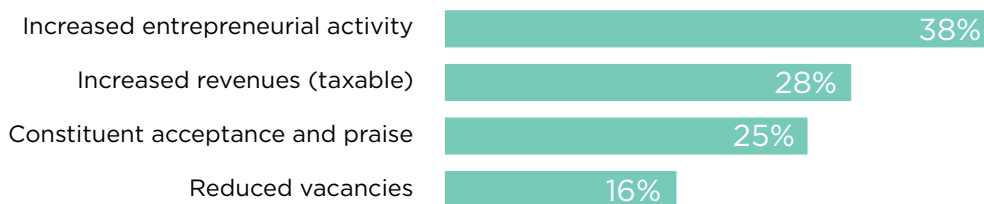
and **constituent acceptance and praise** (25 percent).

The benefits identified here imply that while local elected officials recognize that their constituents love the services offered by sharing economy companies, there are also many ways in which the services improve locally offered services and the local economy.

What do you see, if any, as the largest benefits of TNCs? (Select all that apply).



What do you see, if any, as the largest benefits of short-term rentals? (Select all that apply).



Concerns

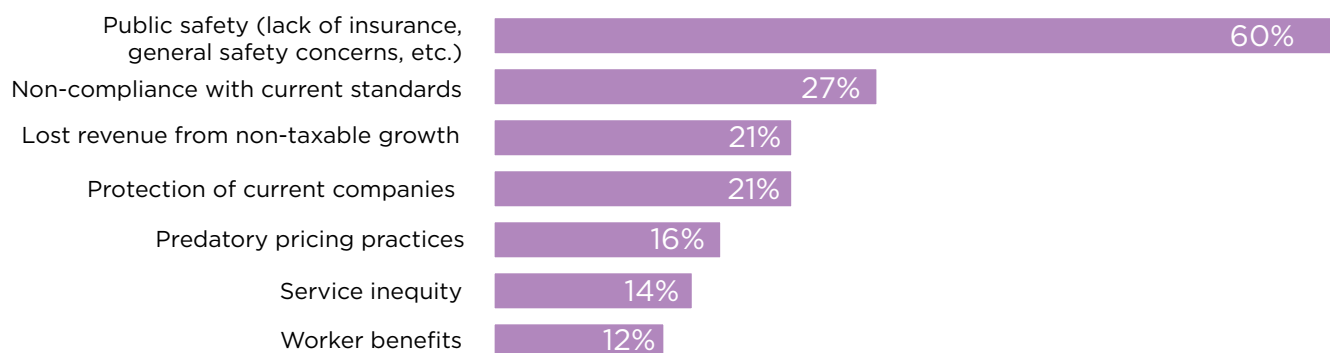
When asked about their concerns with the sharing economy, 2015 respondents overwhelmingly reported **public safety** as the primary issue (61 percent). Other major concerns included **protection of traditional service providers and industry participants** (10 percent), **noncompliance with current standards** (9 percent).

This year, survey respondents asked about TNCs again cited **public safety** (60 percent), **noncompliance with current standards**

(27 percent), and **protection of traditional service providers and industry participants** (21 percent). Also among the top concerns, tied with the former, is the concern over **lost revenue from nontaxable growth**.

Top concerns cited for homesharing included **public safety** (57 percent), **non-compliance with current standards** (52 percent) and the **inability of cities to collect revenue** on this activity (45 percent).

What are your city's largest concerns in regard to the growth of TNCs? (Select all that apply).



What are your cities largest concerns in regard to the growth of short-term rentals? (Select all that apply).





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Every city is different—and the way they each incorporate and regulate these companies should be based on local conditions.

New Technologies: Drones and Smart Cities

Drones

This year's survey included additional questions on new technologies—specifically on how drones and smart city technologies are being utilized in cities.

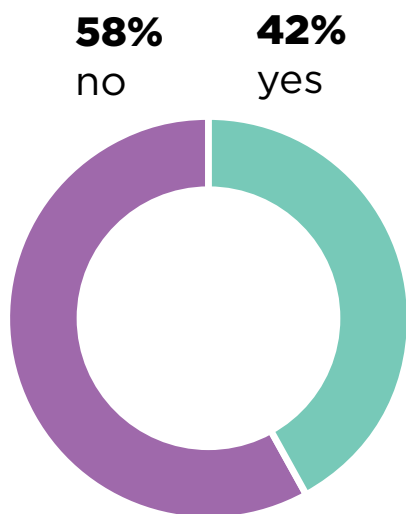
Forty-two percent of cities reported that they are either already using or considering the usage of drones for municipal operations. These municipal uses for drones include:

- Inspection of physical assets (infrastructure, parks, construction projects, map making)

- Public safety (fire and police surveillance, tracking, emergency management)
- Aerial photography

One respondent explained that their city currently uses drones for public works and mapping, adding that they will soon utilize them for police investigations as well. Another respondent indicated that their city's storm water authority uses drones to monitor floodway and floodplain projects.

Does your city currently use drones or is it considering the use of drones for any type of municipal operation?



How are Cities Using Drones?

- Aerial photography
- Marketing
- Recording special events
- Surveying economic and land development prospects
- Inspection of physical assets (building permits, infrastructure inspection, assessment of property for numerous uses)
- Map making
- Public safety (fire and police, surveillance of damaged or flooded areas, tracking, emergency management)

Smart city technology

Sixty-six percent of cities have invested in “smart city” technology for municipal operations or services. These smart city applications include:

- Smart meters for utilities
- Intelligent traffic signals
- E-governance applications
- Wifi kiosks
- Radio frequency identification (RFID) sensors in pavement

Many respondents mentioned using smart city applications for traffic management and utility plant and usage monitoring. One city official specified that smart technology is used to monitor their water plant and lift stations.

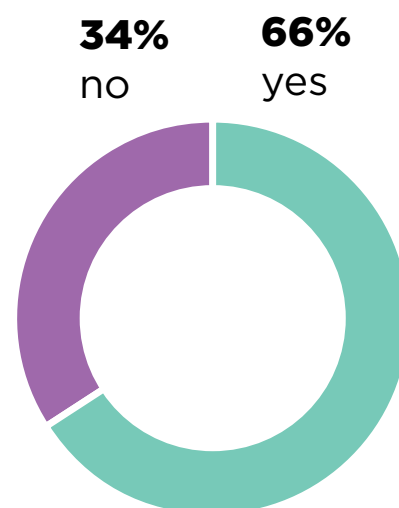
A number of cities are using smart city technologies and platforms to improve the interface between the city administration and residents. One respondent indicated that their city has an official mobile app that connects the city to its residents and visitors.

Another respondent indicated that smart city technology was used to measure service delivery through a data management system that assesses the daily score for delivery of city services across municipal government. Other cities cited various apps used by citizens to access services and increased transparency efforts related to the release of public data.

Of the 34 percent of cities without any smart city systems in place, a quarter of them said their cities were currently exploring implementing some sort of smart city application. Prospective smart city programs being explored by these cities include body cameras for police officers, smart streetlights and the enhancement of fiber networks that could increase internet connections and attract new businesses and residents.



Has your city invested in "smart city" technologies for municipal operations or services?



Of the 34% answering “no,” 25% said they were exploring some sort of smart city application.

Discussion and Conclusion

Cities are incubators for new technology. Overall, the nation's city officials are embracing new technologies and sharing economy platforms, and these leaders recognize the value that these new services bring to their cities and residents. The success of these technology-driven endeavors signals a new era in which on-demand services and collaborative consumption has become mainstream.

City leaders understandably have concerns about ensuring these business and applications are deployed equitably and safely, but their aim is never to stifle innovation or efficiency. In most cases, city officials are working to bring these new technologies to their cities in response to constituent demands for improved services. However, as financial stewards and public servants, our city leaders must put the best interests of all their community members first.

New technologies do not always fit into the same regulatory frameworks as similar traditional services. This requires city leaders to assess the impact of new technological interventions on existing businesses and make sure that the best interests of community members is at the forefront. Above all, city officials' primary concern should center on the well-being of the people in their community, both the providers and consumers. Equity is a key consideration in our nation's cities and technology has the ability to both create and alleviate broad inequality. Technology can improve lives and solve problems, but decision making must be intentional—local leaders ensure every day that our cities are cities for all—and the sharing economy and broader innovation economy is now a core component of our future.

An aerial, top-down view of a busy city intersection. The image is heavily tinted with a dark blue color. In the center, a yellow taxi is moving through the intersection, indicated by a large white arrow pointing forward. To its left, another yellow taxi is stopped. To its right, a white car is stopped. Further back, a black SUV and a black sedan are also visible. Pedestrians are crossing the street at a crosswalk marked with white stripes. A white van is parked on the left side of the street. The overall scene depicts a complex urban environment with multiple vehicles and pedestrians interacting.

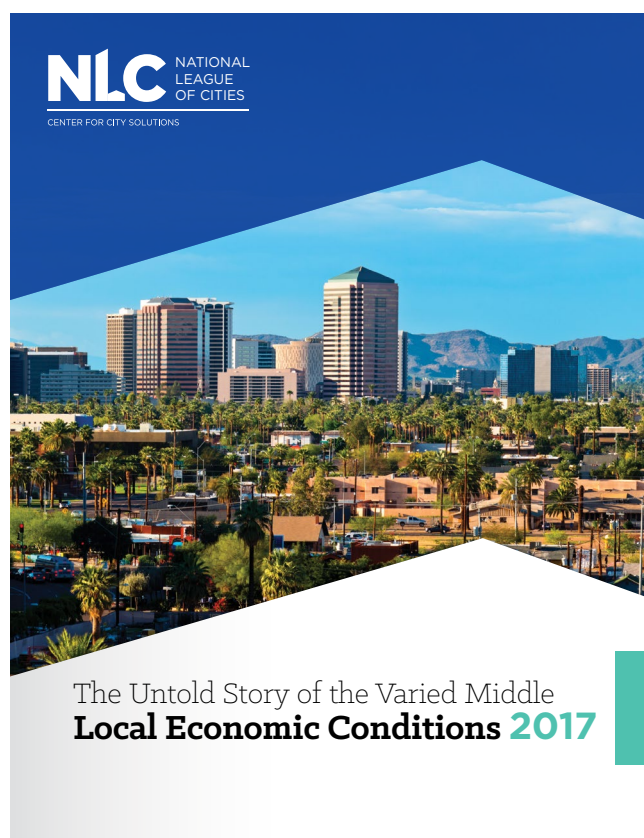
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Methodology

Data about the innovation economy used in this brief was derived from questions specific to the sharing economy in the broader 2017 Local Economic Conditions survey. The National League of Cities 2017 Local Economic Conditions survey is a biennial national email survey that asks city government officials to assess their local economic conditions. The first survey was

conducted in 2013, and the second in 2015. For this current assessment, surveys were distributed to chief elected officials in a sample of 1,072 cities from February through May 2017. In total, the data from this report were drawn from 224 cities for a response rate of 21 percent and a margin of error of +/-5 percent.



Local Economic Conditions 2017

Previous Work on the Innovation Economy

In addition to the previous iteration of this survey, NLC has conducted additional research on the sharing economy, the impact of drones in cities, and a best practice analysis of smart city technologies.

Our first sharing economy related study, *The Sharing Economy: An Analysis of Current Sentiment Surrounding Homesharing and Ridesharing*,⁵ aimed to measure the sentiment and direction of the sharing economy in America's 30 largest cities.⁶ Among the 30 cities analyzed in our sample, we found that nine cities showed overall positive sentiment and 21 had mixed sentiment toward these new business models.⁷ Additionally, we found that 15 of the 30 cities experienced regulatory action or other intervention from state policymakers, indicating that these actors are playing a significant role in the sharing economy policy discussion.⁸

NLC's second sharing economy study, *Cities, the Sharing Economy, and What's Next*,⁹ was conducted together with the Fels Institute of Government at the University of Pennsylvania.¹⁰ Several themes emerged in

this report, and the research team identified questions and issues that municipal leaders should consider when they respond to the influx of sharing economy companies. The interviews reinforced a need for quantitative data along with the notion that there is no singular way for cities to approach the management of these new business models.

NLC's study on drone usage, *Cities and Drones*,¹¹ was released in 2016. This resource was meant to serve as a municipal action guide and primer on drones for local officials, providing insight into the recently released federal rules relating to drone operation, as well as offering suggestions for how local governments can craft their own drone ordinances.

Most recently, NLC released a report entitled *Trends in Smart City Development*,¹² in the beginning of 2017. The report presents comparative case studies among different cities deploying smart city technology and also provides recommendations to help local governments consider and plan smart city projects.

Endnotes

1 McFarland, C.K. and Emily Robbins (2017). *The Untold Story of the Varied Middle: Local Economic Conditions 2017*

2 This report uses the terms “sharing economy,” “peer-to-peer economy,” “innovation economy” and “on-demand economy” to refer to these business models. While we recognize the nuanced differences between these terms, we use them interchangeably throughout.

3 DuPuis, N. and Brooks Rainwater, (2015). *Shifting Perceptions of Collaborative Consumption*

4 The series of questions related to benefits and concerns enabled respondents to “select all that apply” which is why the combined percentages from each from each response do not add up to 100%.

5 DuPuis, N. and Brooks Rainwater (2014). *The Sharing Economy: An Analysis of Current Sentiment Surrounding Homesharing and Ridesharing*

6 The findings in this study are reflective of the sentiment in each city at the time of our data collection and analysis. Because of the rapidly changing and fluctuating nature of this policy arena, it is possible that the current sentiment or relevant policy may have changed since our original classification.

7 The findings in this study are based on a content analysis of media sources covering: 1) the subject of sharing-economy services; 2) the introduction of sharing-economy services in cities; 3) the overall sentiment pertaining to sharing-economy services; 4) policies and regulation on sharing-economy services.

8 State level interventions ranged from legislation to regulatory rulings to state legal action.

9 Hirshon, L., Dana Levin, Kathryn McCarty, Benjamin Morano, Brooks Rainwater, and Sarah Simon, (2015). *Cities, the Sharing Economy, and What’s Next*

10 Researchers from Fels Consulting conducted 12 interviews with city officials from a geographically diverse range of cities.

11 DuPuis, N., Elias Stahl, and Kathryn Zickuhr (2016). *Cities and Drones*

12 National League of Cities (2016). *Trends in Smart City Development*



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