

# Wards Intelligence Q3 Outlook

**DOUG NEWCOMB**

Senior Industry Analyst • Mobility



- **Why cities are a hotbed** and testbed for new mobility technologies.
- **Technology solutions required** to successfully implement citywide mobility projects.
- **Effective policy approaches** to working with cities on mobility projects.
- **How automakers and technology companies** work with other government agencies, including counties and states.





- **The importance of public-private partnerships** between cities and mobility providers.
- **The value of involving business and community groups** in urban mobility projects.
- **Opinions of 600 auto industry professionals** and nearly 150 government officials on transportation issues facing cities and how mobility providers and cities can best work together.





# Smart Cities: Leading the Way in Mobility



FORT AMSTERDAM "NOW THE BATTERY" IN KIEFT'S DAYS



# Smart Cities: Leading the Way in Mobility




# Smart Cities: Leading the Way in Mobility





# Smart Cities: Leading the Way in Mobility




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 Department of Economic and Social Affairs

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## News



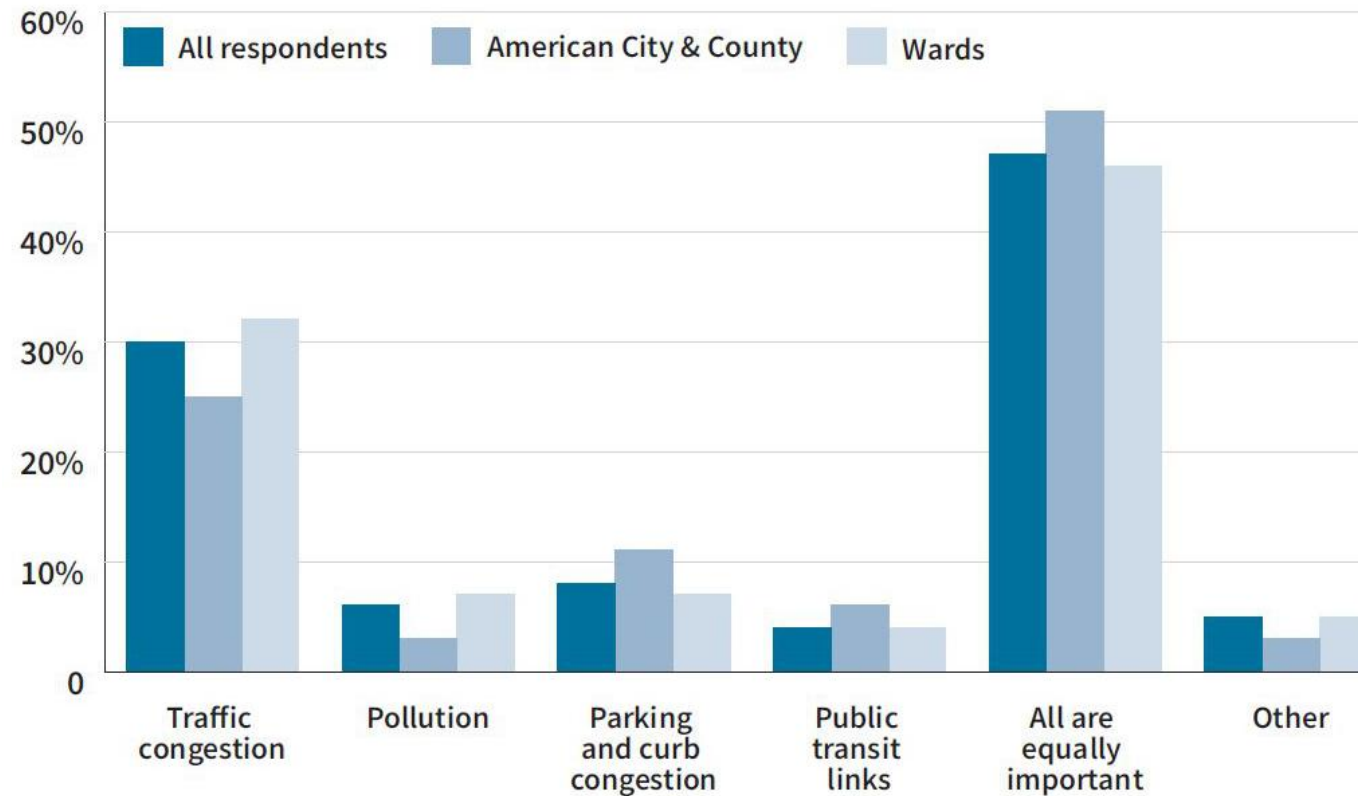
**Around 2.5 billion more people will be living in cities by 2050, projects new UN report**

16 May 2018, New York



# Smart Cities: Leading the Way in Mobility

**What's the most important mobility problem to solve in cities?**



Source: Wards Intelligence 2020 Smart Cities Survey



▲▼ **The traditional choice of public transit or automobiles isn't enough. We've had tremendous population growth that's faster than our ability to keep up the mobility infrastructure."**



Rob Spillar  
Director, Department of Transportation  
Austin, TX

# Smart Cities: Leading the Way in Mobility



**CAR SHARING**



**RIDE HAILING**



**SHARED  
SCOOTERS**



**AV SHUTTLES**

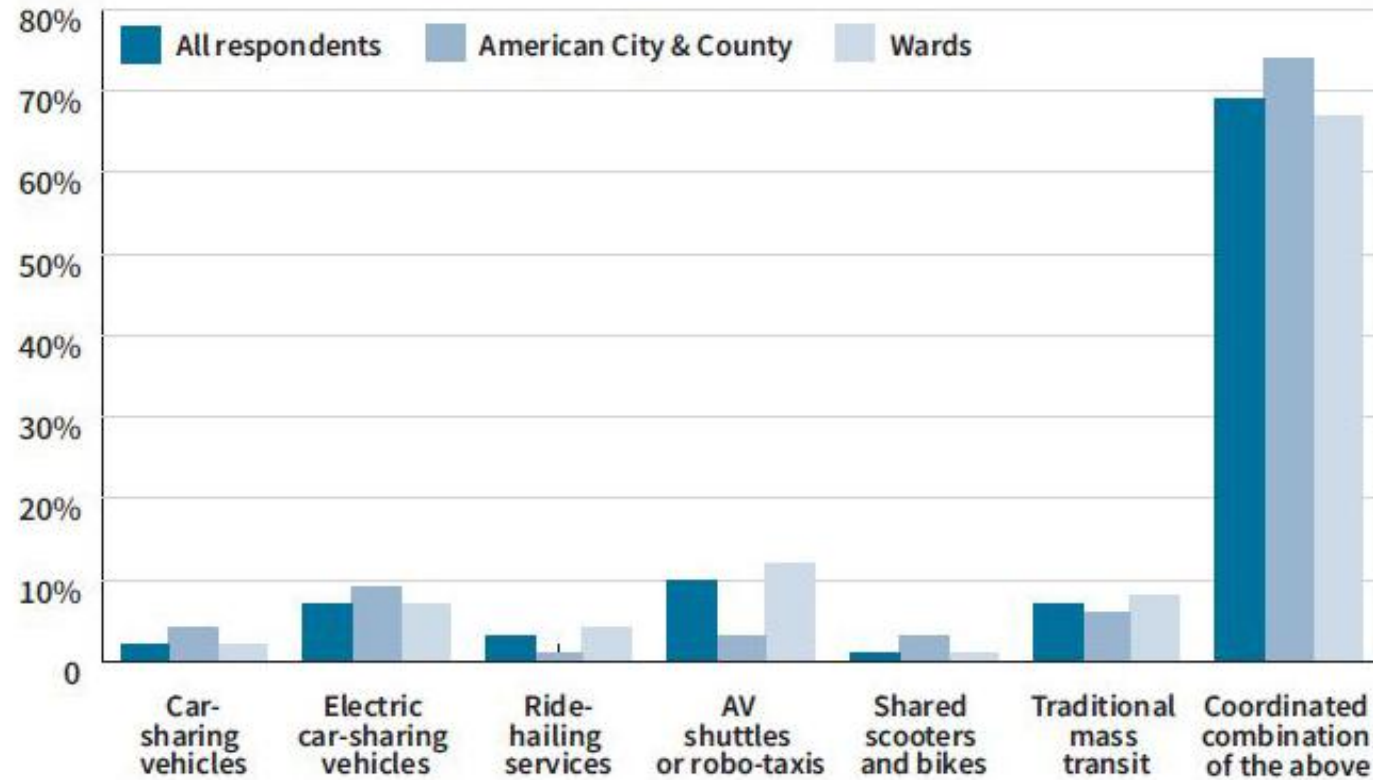
**“We’ve taken the attitude that as a city we want to encourage new mobility to come to town so our folks can take advantage of it. Our goal is to provide as much choice as possible and the market’s going to shift out as those ideas take hold.”**

Rob Spillar  
Director, Department of Transportation, Austin



# Smart Cities: Leading the Way in Mobility

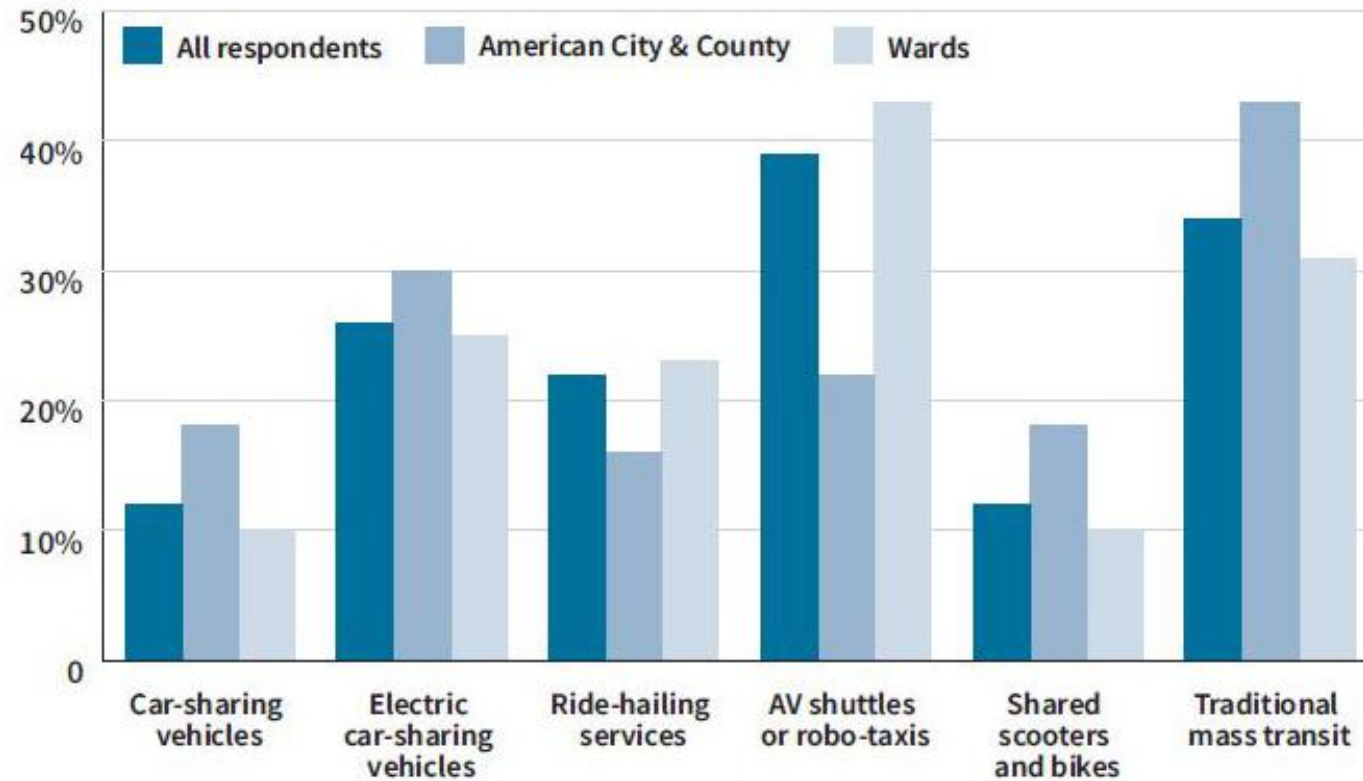
**Which type of mobility is most important for cities in the future?**



Source: Wards Intelligence 2020 Smart Cities Survey

# Smart Cities: Leading the Way in Mobility

**Which service do you most want to see in your city or town? (Select up to two choices)**



Source: Wards Intelligence 2020 Smart Cities Survey




# Smart Cities: Leading the Way in Mobility

BUSINESS INSIDER

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## 15 major cities around the world that are starting to ban cars

Aria Bendix Jan 12, 2019, 8:00 AM

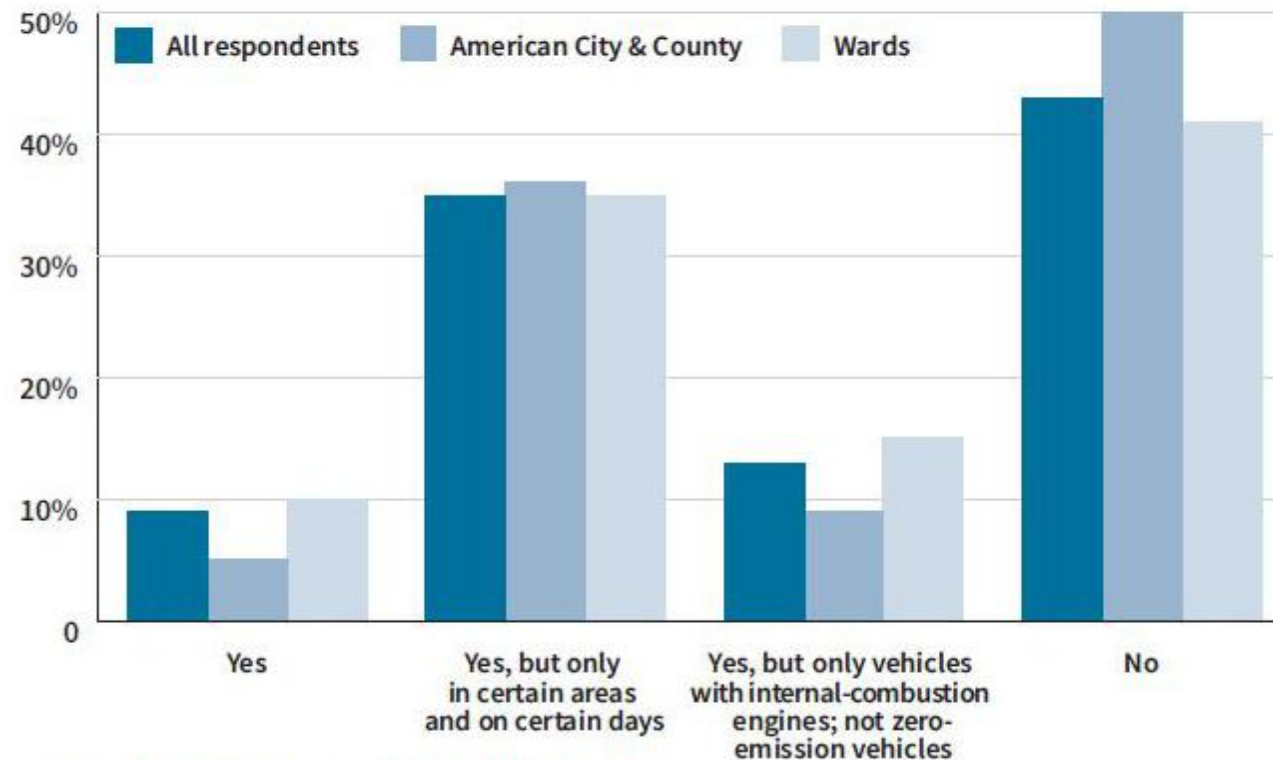


Madrid is at the forefront of the "car-free" movement. [idirector/flickr](#)

- A number of major cities have joined the "car-free" movement, which aims to reduce air pollution and improve safety among residents.
- Most cities that are starting to ban cars are located in Europe, though a few others, such as New York, are making considerable strides.
- In addition to implementing outright bans, cities have enacted measures to encourage cycling and make public spaces more

# Smart Cities: Leading the Way in Mobility

**Should restrictions such as congestion charges and bans be imposed on vehicles entering cities?**

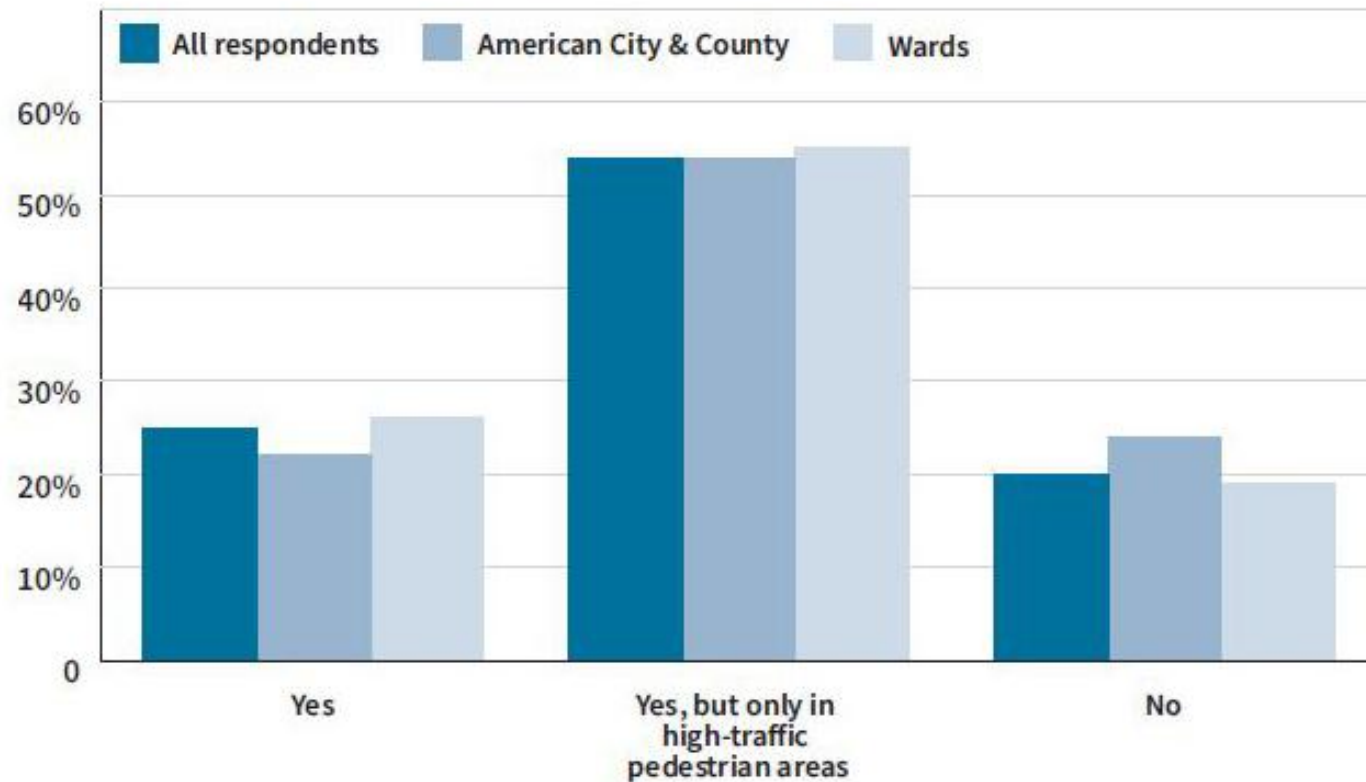


Source: Wards Intelligence 2020 Smart Cities Survey



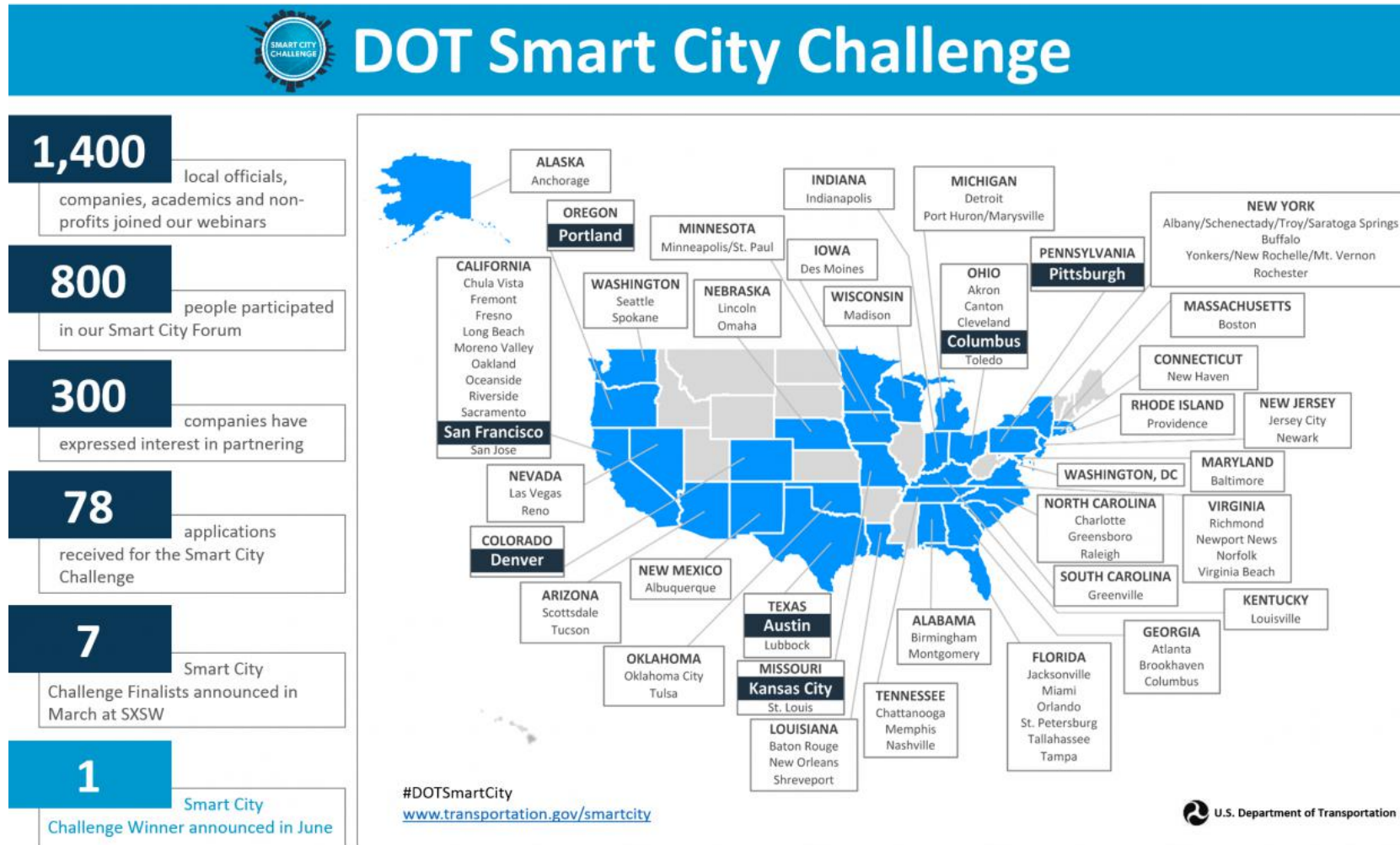
# Smart Cities: Leading the Way in Mobility

**Should cities have areas where no cars are allowed?**



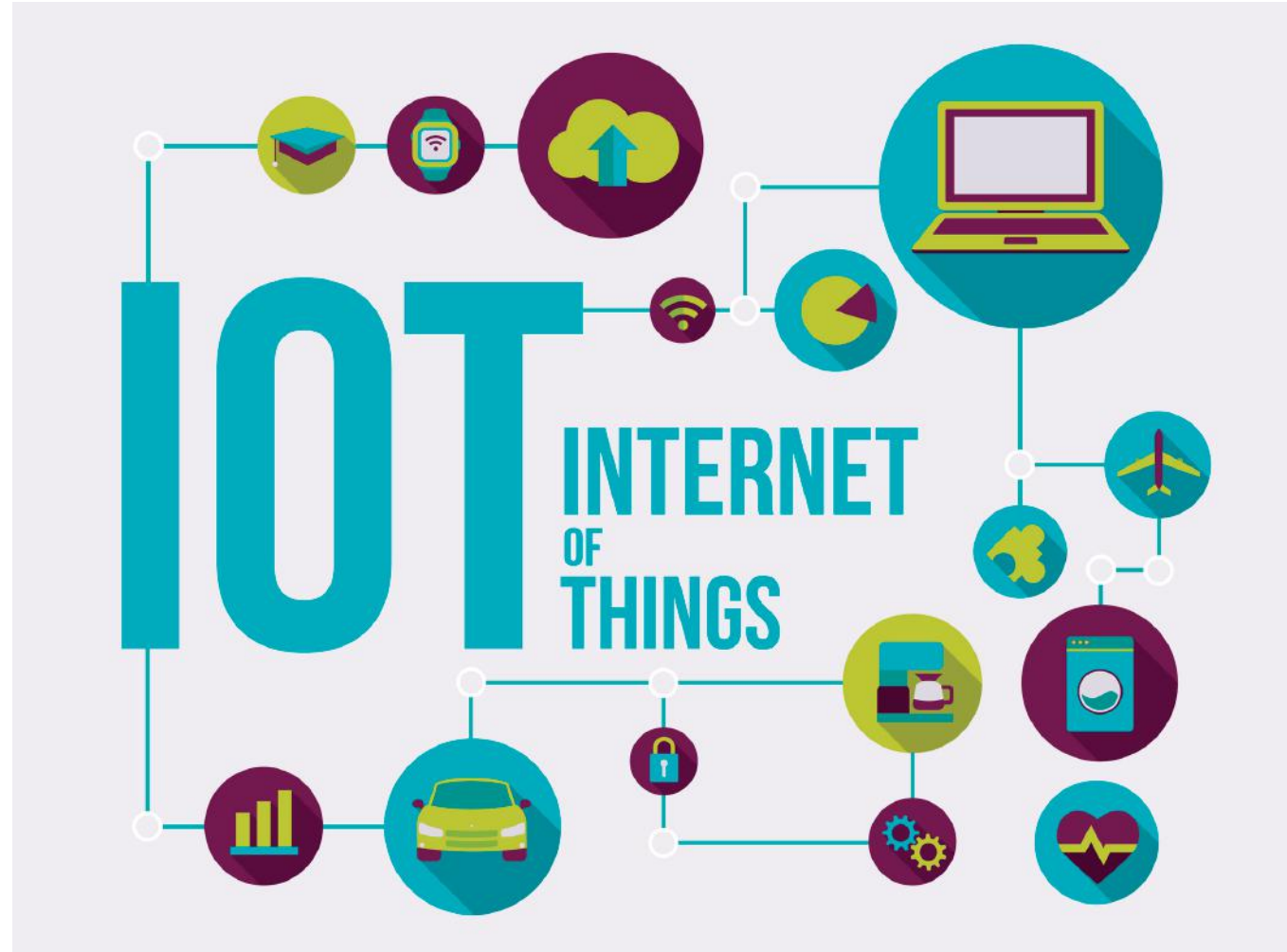
Source: Wards Intelligence 2020 Smart Cities Survey

# Smart Cities: Leading the Way in Mobility

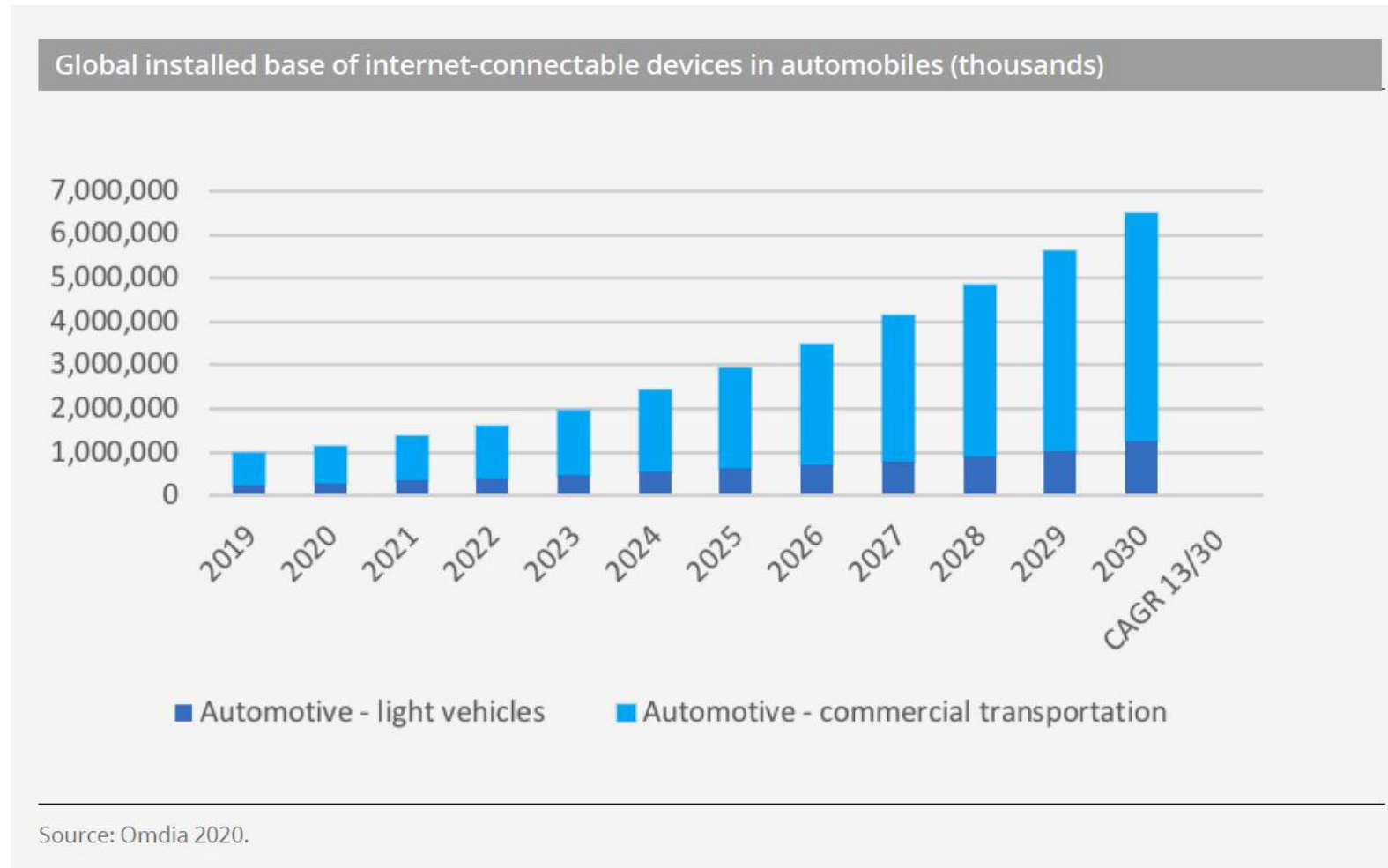




# Smart Cities: Leading the Way in Mobility

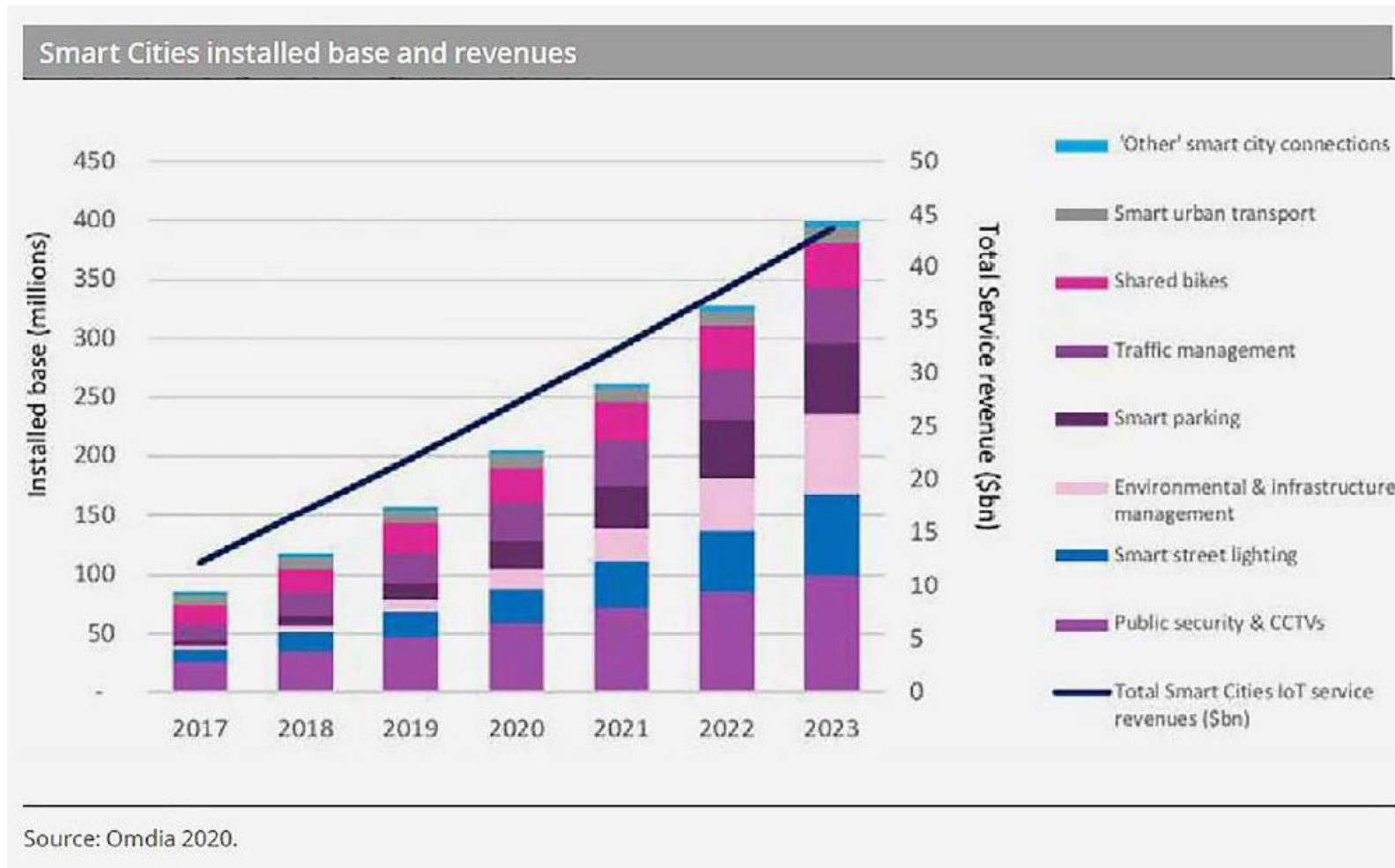


# Smart Cities: Leading the Way in Mobility





# Smart Cities: Leading the Way in Mobility



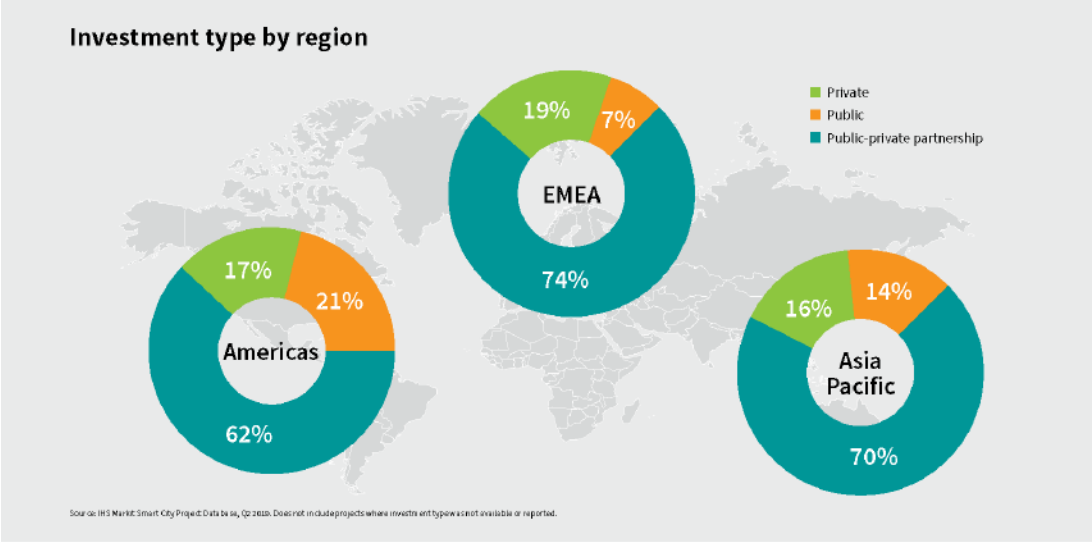
▲▼ **Ideally you want a multi-stakeholder solution that has the public sector and the private sector combining forces and creating this common product. Because then you can get the force of innovation of the private sector as well as the social benefits from the public sector.”**



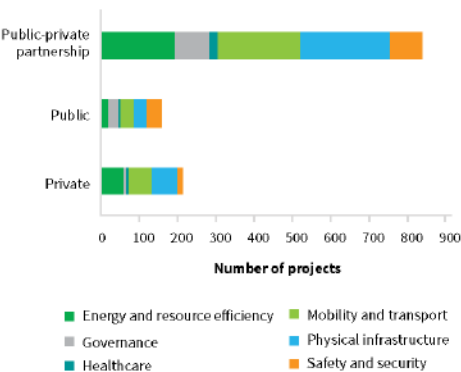
Mouchka Heller  
Automotive & Autonomous Mobility Lead  
World Economic Forum



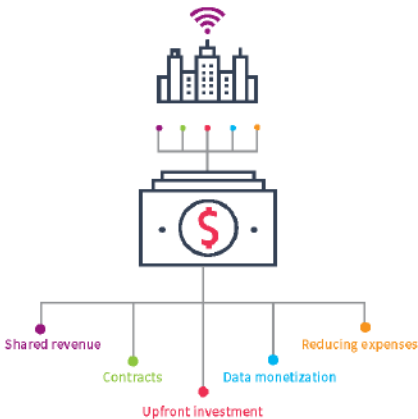
# Smart Cities: Leading the Way in Mobility



**Investment type by city function**

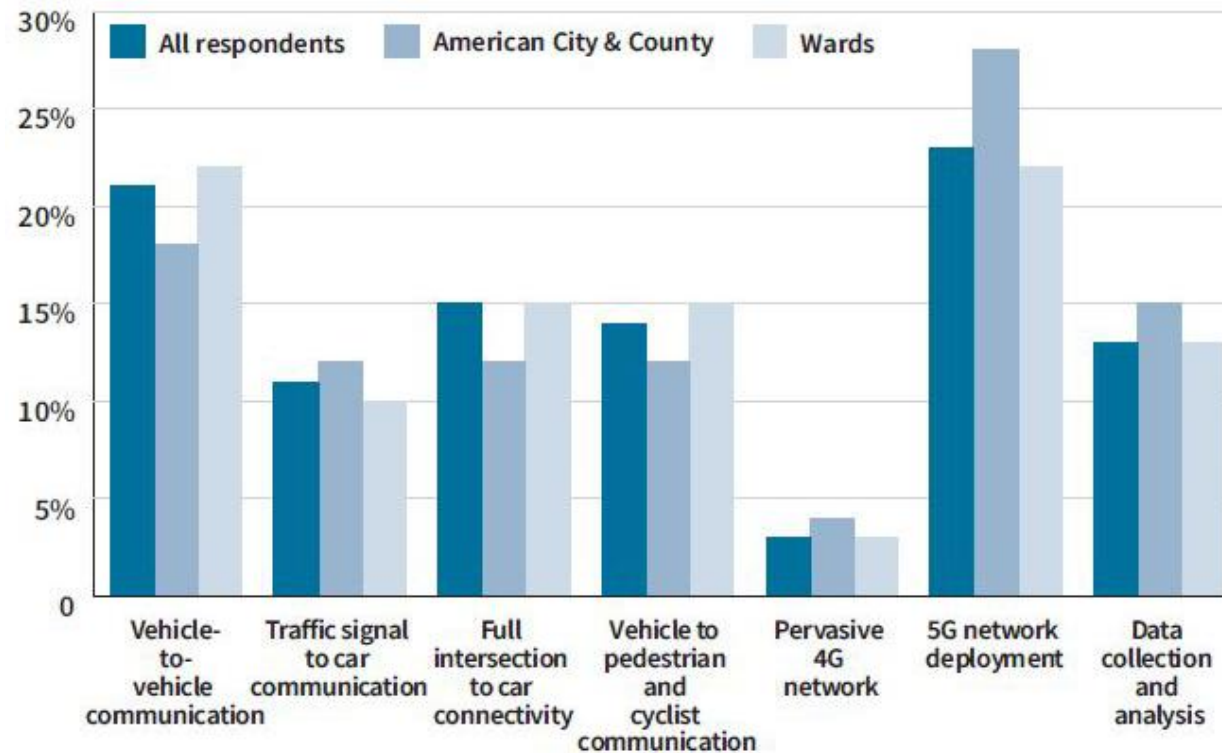


**Funding models**



# Smart Cities: Leading the Way in Mobility

**What is the minimum level of infrastructure technology needed for successful mobility-scheme operation?**

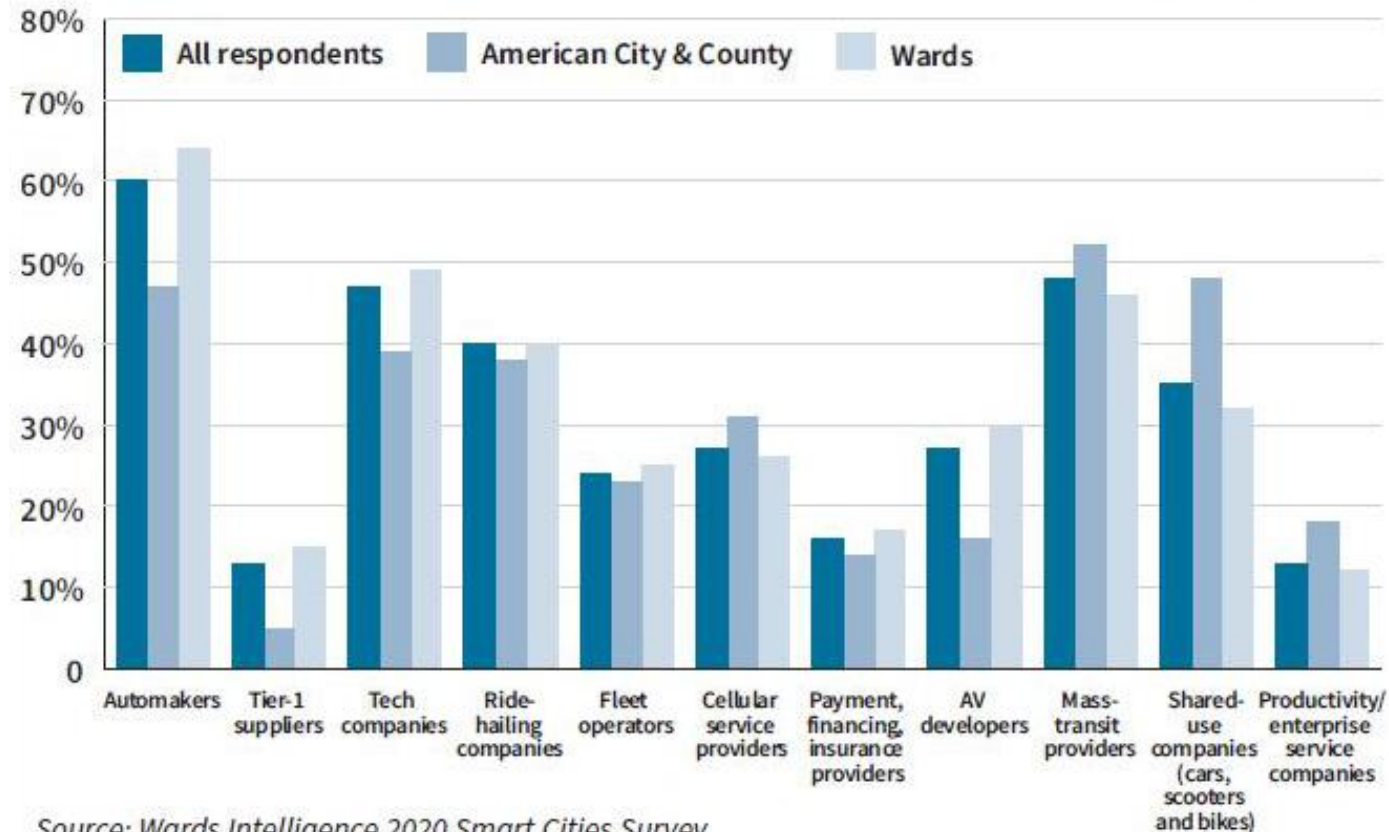


Source: Wards Intelligence 2020 Smart Cities Survey



# Smart Cities: Leading the Way in Mobility

**Which entities have the best chance of partnering with cities on new mobility?**



# Smart Cities: Leading the Way in Mobility

Which entities have the best chance of partnering with cities on new mobility?

	ALL RESPONDENTS	AMERICAN CITY & COUNTY	WARDS	SYSTEMS/COMPONENTS/PARTS	VEHICLE MANUFACTURER	DEALER-SHIP/RETAIL	OTHER
Automakers	60%	47%	64%	62%	74%	60%	60%
Tier-1 suppliers	13%	5%	15%	15%	17%	10%	18%
Tech companies	47%	39%	49%	52%	46%	34%	55%
Ride-hailing companies	40%	38%	40%	38%	50%	25%	42%
Fleet operators	24%	23%	25%	21%	23%	21%	32%
Cellular service providers	27%	31%	26%	22%	26%	25%	32%
Payment, financing, insurance providers	16%	14%	17%	14%	18%	14%	20%
AV developers	27%	16%	30%	27%	41%	18%	32%
Mass-transit providers	48%	52%	46%	52%	39%	40%	47%
Shared-use companies (cars, scooters and bikes)	35%	48%	32%	29%	34%	18%	39%
Productivity/enterprise service companies	13%	18%	12%	10%	9%	10%	19%
<b>Respondent Count</b>	<b>749</b>	<b>159</b>	<b>590</b>	<b>234</b>	<b>125</b>	<b>73</b>	<b>158</b>

# Smart Cities: Leading the Way in Mobility

## Who should lead in developing mobility in cities?

	ALL RESPONDENTS	AMERICAN CITY & COUNTY	WARDS	SYSTEMS/COMPONENTS/PARTS	VEHICLE MANUFACTURER	DEALER-SHIP/RETAIL	OTHER
City officials	30%	49%	26%	25%	19%	35%	27%
Mobility providers	26%	16%	29%	33%	27%	20%	28%
Fleet operators	4%	1%	4%	4%	2%	3%	7%
Automakers	12%	6%	13%	10%	18%	20%	11%
Local businesses and residents	18%	19%	18%	17%	18%	19%	19%
Federal government	9%	9%	10%	11%	15%	3%	7%
<b>Respondent Count</b>	<b>752</b>	<b>158</b>	<b>594</b>	<b>236</b>	<b>125</b>	<b>74</b>	<b>159</b>



# Smart Cities: Leading the Way in Mobility


## CASE STUDY: MOTIONAL'S LAS VEGAS PILOT



▲▼ **These are new relationships. Autonomous mobility services didn't exist anywhere in the world five years ago. We contribute to our city partners' understanding of the technology and its potential positive impact, and these partnerships help us to learn how we can best operate in a city."**



Karl Iagnema  
President and CEO  
Motional

 **We have this great technology and we'll be able to put it on the road and generate revenue and do so in a way that's harmonious with the goals of our city partners. We want to ensure that we stress-test our technology in as many use cases as we can find and being in cities that present us with diversity is extremely valuable to us as a business."**

Karl Iagnema  
President and CEO  
Motional



# Smart Cities: Leading the Way in Mobility

## **CASE STUDY: FORD'S MIAMI AND AUSTIN AV PILOT**



▲▼ **We have plans to launch a self-driving service in 2022 in Miami-Dade County, Austin and Washington, D.C., to move both people and goods.”**



Scott Griffith  
Chief of Autonomous Vehicle Products,  
Marketing and Operations Ford AV division



**We have very healthy, meaningful and trusted relationships with each of our city partners. We regularly update them on our testing and operations and actively seek their support for projects as it relates to permitting and alignment. Each city has been highly supportive in guiding us around how self-driving vehicles can fit into their city.”**

Scott Griffith  
Chief of Autonomous Vehicle Products,  
Marketing and Operations Ford AV division



# Smart Cities: Leading the Way in Mobility

**CASE STUDY:  
MAY  
MOBILITY'S  
AV SHUTTLES,  
MULTIPLE  
CITIES**



▲▼ **Regulatory starts from the very beginning of the conversation. Because most government entities have never operated or regulated an AV shuttle service, they typically have a really open-ended approach and they guide us through the regulations.”**



Tara Lanigan  
Director of Business Development  
May Mobility

 **The city leans in on everything. Anything specific to their city that we might not know, they're very helpful with."**

Tara Lanigan  
Director of Business Development  
May Mobility



# Smart Cities: Leading the Way in Mobility

## **CASE STUDY: MERCEDES- BENZ'S SAN JOSE, CA AV PILOT**



▲▼ **How does public transportation and local transportation and mobility services of all kinds interact? How does a city react towards questions like safety, environmental impact and access? And how is this affecting traffic? Do you need to change certain things in the city? These are some of the questions the city is interested in, and we could provide answers from the pilot.”**

Alex Schaab  
VP Autonomous Driving  
Mercedes-Benz R&D North America

▲▼ **f you start open-minded from both sides, then it evolves. It's a learning process and we'll incorporate what's relevant and best in the long run."**



Alex Schaab  
VP Autonomous Driving  
Mercedes-Benz R&D North America



# Smart Cities: Leading the Way in Mobility


## CASE STUDY: VULOG'S MADRID PROJECT





**We believe you need to offer the convenience to end users to switch from public transportation to bike sharing to car sharing and so on and make it easy to get rid of their cars. We are working to make mobility as a service a reality, easing the life of urban city dwellers by making mobility enjoyable, accessible and sustainable.”**

Gregory Ducongé  
CEO  
Vulog

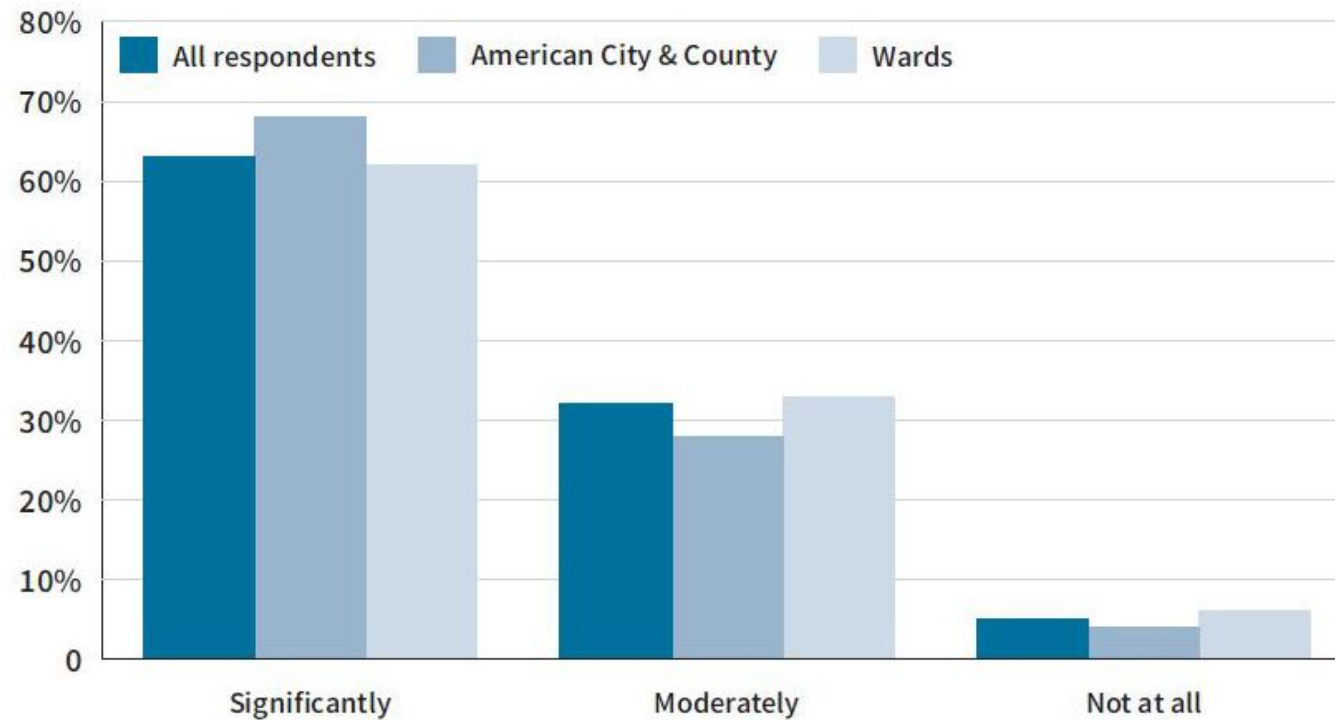
 **We strongly believe that for a car-sharing operator to be successful, it is mandatory to have a close relationship with the city.”**



Gregory Ducongé  
CEO  
Vulog

# Smart Cities: Leading the Way in Mobility

**How will the recent coronavirus crisis affect shared mobility in cities over the next 12 months?**

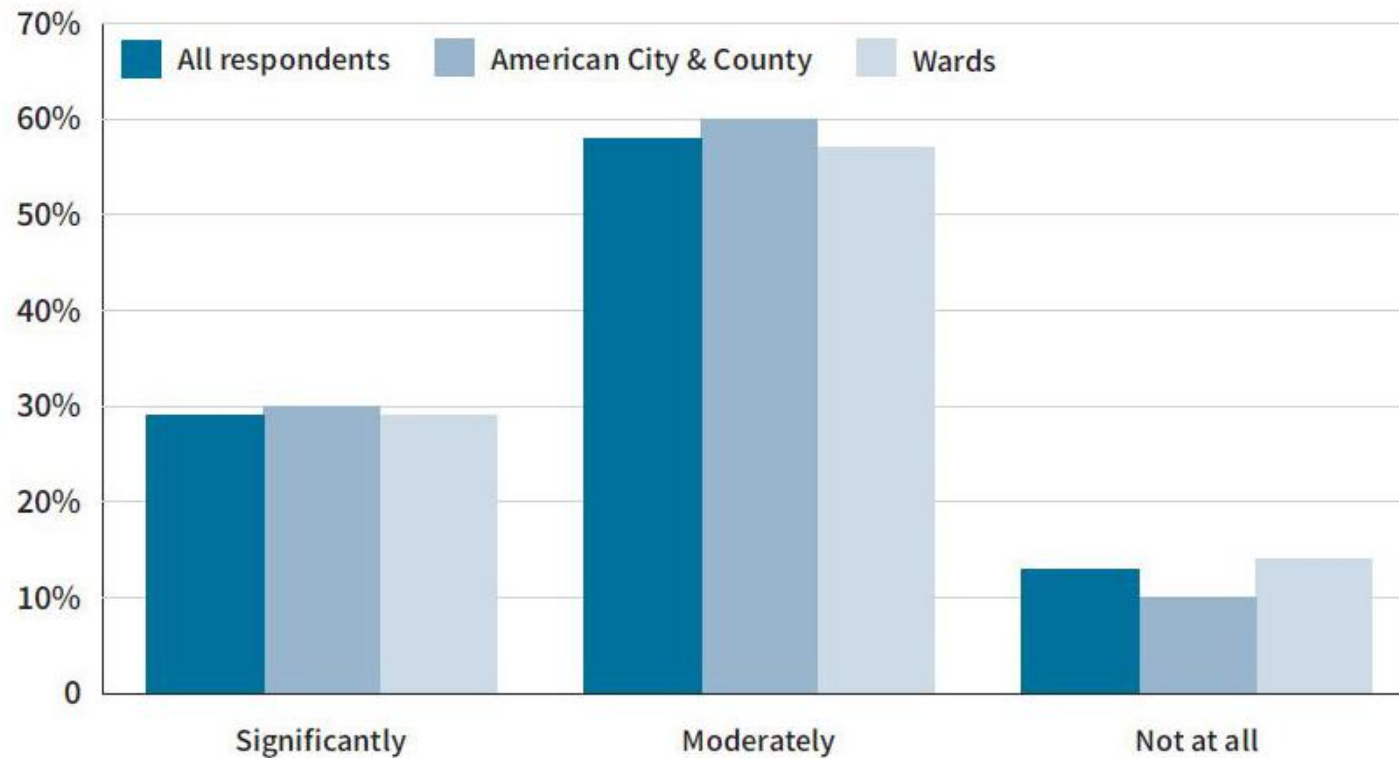


Source: Wards Intelligence 2020 Smart Cities Survey



# Smart Cities: Leading the Way in Mobility

**How will the recent coronavirus crisis affect shared mobility in cities over the next 5 years?**



Source: Wards Intelligence 2020 Smart Cities Survey



## Smart Cities: Leading the Way in Mobility

**“That’s where new technology is deployed – in cities.”**

**“We need to try to make the learning curve as short as possible so that we can manage it. That’s what municipalities do well.”**

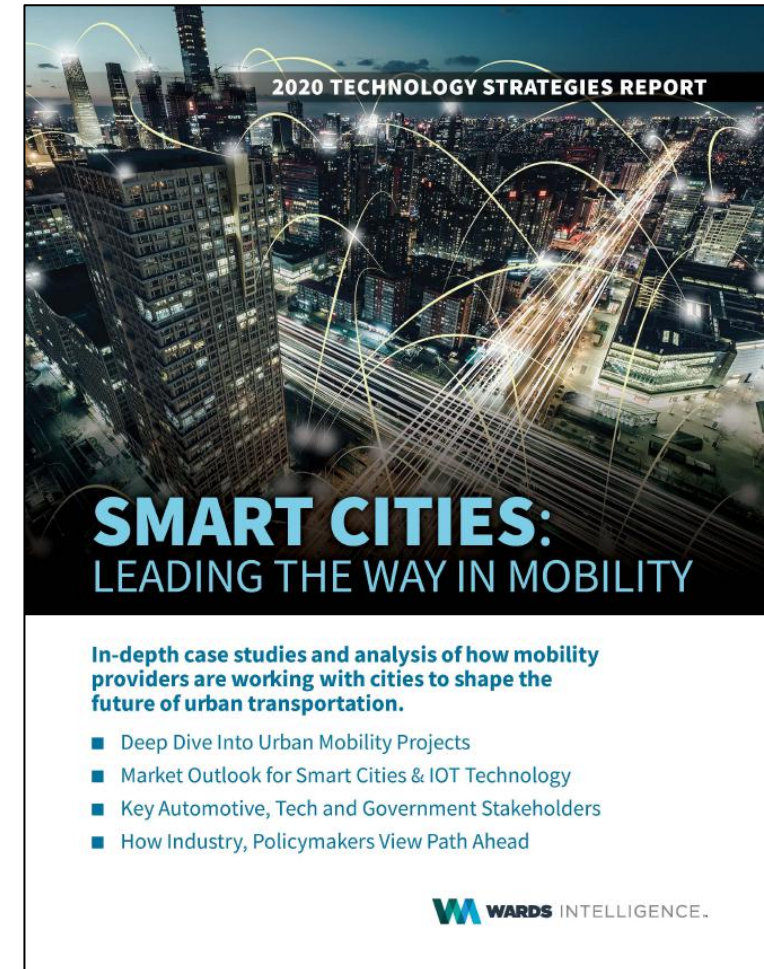
Rob Spillar, Director, Department of  
Transportation, Austin, TX



# Smart Cities: Leading the Way in Mobility

## KEY TAKEAWAYS

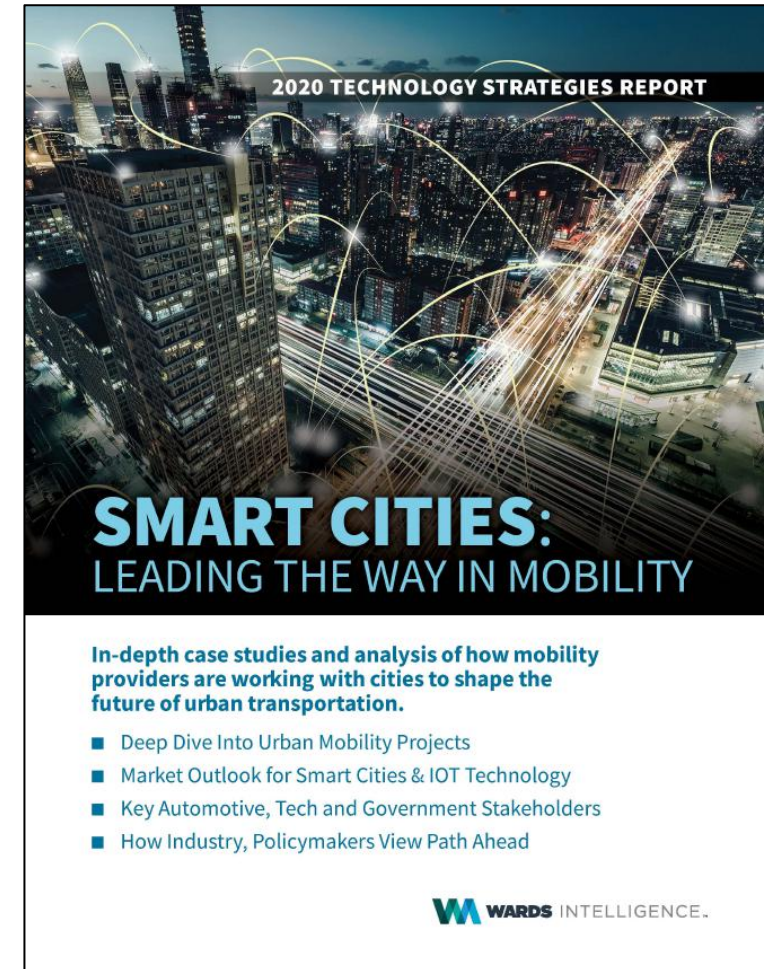
- **Cities are expected to grow** despite pandemic concerns – and so will their mobility needs
- **New mobility technologies** are initially deployed in cities to meet urban transportation gaps.
- **As more cities ban cars** alternative mobility solutions are required
- **IOT and Smart City technology solutions** are being implement in citywide mobility projects
- **IOT and Smart City public-private partnerships** are dominantly mobility-related



# Smart Cities: Leading the Way in Mobility

## KEY TAKEAWAYS

- **Mobility providers and cities are developing policy approaches** for mobility projects on an ad hoc basis
- **Mobility providers gain valuable input** from residents and business groups when deploying mobility projects
- **The 750 auto-industry professionals and government officials surveyed** feel a combination of mobility solutions is needed to solve urban transportation issues
- **Most survey respondents believe automakers** have the best chance of solving mobility issues for cities







# Thank you

**DOUG NEWCOMB**

Senior Industry Analyst • Mobility  
[doug.newcomb@informa.com](mailto:doug.newcomb@informa.com)