INDUSTRY RESEARCH: PUBLIC SECTOR



2015 Connected Cities Report

A Ranking of U.S. Cities and Their Use of Digital Technologies to Connect with Residents

About This Report

A connected city is one that joins people, process and government. Digital technologies– such as social, mobile, cloud and data science–empowers cities with the insights and targeted tools they need to provide residents, employees and businesses with a transparent and participatory government.

To explore current attitudes and methods in how residents in U.S. cities are communicating with their local governments with digital technologies, Salesforce conducted its "2015 Connected Cities Report." In May, an online survey was conducted by Harris Poll on behalf of Salesforce among 3,075 adults aged 18+ across 15 of some of the largest U.S. markets by population and designated market area, including: Boston, Chicago, Dallas, Denver, Detroit, Houston, Indianapolis, Los Angeles, New York, Philadelphia, Phoenix, San Antonio, San Francisco, Seattle, and Washington, D.C. In the report, digital technologies are defined as mobile apps, websites, email, text messages or social media channels.

Based on responses from more than 3,000 adults across 15 markets, the report found that residents want to use modern digital technologies to connect with their city governments on issues such as paying fees, public transportation issues and public safety. However, they generally report low usage of these technologies when interacting with their local governments.

In the report, Salesforce grouped responses from residents along six key government service categories:

- **1. General city services**, such as paying fees or learning about garbage pick-up times
- 2. Public safety, including reporting a crime or receiving notifications on dangerous weather events
- **3.** Transportation, such as real-time public transportation delays
- 4. Civic engagement, such as registering to vote
- 5. Energy use, including how residents and cities better manage energy usage
- **6. Future vision**, including how cities prioritize technology in their future plans

Salesforce ranked the cities in six categories, and while San Antonio, Texas, had the highest aggregate ranking overall, there is still a clear call-to-action for local governments to more effectively manage and communicate city services with their residents via digital services. This is particularly apparent in the last section of the report, entitled "What Residents Want," which highlights the digital services residents want to use to take advantage of local government services, participate in civic issues and receive information on city policies.

Overall Connected City Rankings:

- #1 San Antonio
- #2 New York
- #3 Washington, D.C.
- #4 Dallas
- #5 Indianapolis
- #6 Chicago
- #7 Philadelphia
- #8 Phoenix
- #9 Denver
- #10 Houston
- #11 Boston
- #12 Seattle
- #13 San Francisco
- #14 Los Angeles
- #15 Detroit

Most Connected City:

San Antonio, Texas

San Antonio Rankings by Category:

General City Services	#1
Public Safety	#4
Transportation	#2
Civic Engagement	#2
Energy Use	#1
Future Vision	#1 (TIED)



01 General City Services

General city services encompass a range of activities, including tracking garbage pickup times, applying for permits online, reporting graffiti removal and more. While both New York and Dallas ranked high in terms of residents using digital services to get information on street cleaning and garbage pickup schedules, San Antonio topped the rankings in residents using digital tools to apply for food stamps, secure parking permits and manage overall service issues.

Most Connected City for General City Services:

San Antonio

Does your city provide street cleaning information through digital technologies?

1 New York	38%
2 Los Angeles	34%
3 Boston	30%
4 Denver	28%
5 Chicago	27%
5 Philadelphia	27%
7 Detroit	24%
⁸ Washington D.C.	21%
9 Houston	17%
9 San Antonio	17%
9 Indianapolis	17%
12 San Francisco	16%
12 Dallas	16%
12 Phoenix	16%
15 Seattle	11%
AUEDAGE: 220/	2

Average: 23%

Percentages are those residents who answered "yes."

Does your city provide the ability to use digital technologies to **apply for a parking permit?**

1	San Antonio			30%
2	Los Angeles		23	3%
3	Dallas		22	%
4	Washington D.C.		219	%
4	Philadelphia		219	%
6	New York		209	6
6	Chicago		209	6
6	Indianapolis		209	6
9	Seattle		18%)
10	Houston	1	6%	
11	Boston	1	5%	
12	Denver	14	%	
13	Detroit	139	%	
14	San Francisco	129	6	
14	Phoenix	129	6	

AVERAGE: 19%



Does your city provide information on garbage/ recycling pickups through digital technologies?

1	New York				48%
1	Dallas				48%
3	San Antonio			4	2%
3	Phoenix			4	2%
5	Washington D.C.			399	%
6	Detroit			389	6
7	Chicago			37%	C
7	Boston			37%	S
9	Los Angeles			36%	
10	Denver		3	5%	
10	Indianapolis		3	5%	
12	Houston		33	3%	
13	Seattle		319	%	
14	Philadelphia		309	6	
15	San Francisco		28%		
	AVERAGE: 379	6			

Does your city provide the ability to **report a road issue** (e.g., potholes) through digital technologies?

1 Indianapolis	44%
2 Denver	41%
³ San Antonio	37%
4 Houston	36%
4 Washington D.C.	36%
6 Chicago	34%
6 Philadelphia	34%
8 New York	33%
⁸ Boston	33%
10 Los Angeles	31%
10 Dallas	31%
12 Seattle	27%
13 Phoenix	26%
14 Detroit	23%
15 San Francisco	21%
Average: 33	%

Does your city provide the ability to **report an abandoned vehicle** with digital technologies?

1 New York		30%
1 Indianapolis		30%
³ Philadelphia		29%
4 Chicago		27%
5 Dallas		24%
5 Denver		24%
5 San Antonio		24%
8 Los Angeles		22%
⁸ Seattle		22%
⁸ Houston		22%
⁸ Washington D.C.		22%
⁸ Boston		22%
13 Phoenix		20%
14 Detroit		18%
15 San Francisco	1	4%
Average: 23%	D	



Does your city provide the ability to **report a need for graffiti removal** through digital technologies?

1	Los Angeles			28%
2	Chicago			24%
2	Denver			24%
4	Phoenix			21%
4	Indianapolis			21%
6	New York			20%
6	San Antonio			20%
8	Philadelphia			19%
9	San Francisco		-	18%
10	Seattle		15	%
10	Dallas		15	%
12	Washington D.C.		14	%
13	Boston		129	6
14	Houston		11%)
15	Detroit		8%	
	AVERAGE: 189	6		

Does your city provide the ability to use digital technologies to pay for parking/driving tickets, fines, fees?

1 Dallas	41%
² Washington D.C.	40%
³ San Francisco	37%
3 Indianapolis	37%
5 Houston	36%
6 New York	35%
6 Los Angeles	35%
6 Chicago	35%
6 Boston	35%
10 Seattle	34%
11 San Antonio	31%
12 Philadelphia	30%
13 Denver	28%
14 Phoenix	23%
15 Detroit	20%
AVERAGE: 33	%

Does your city provide the ability to use digital technologies to **apply for or submit a building/home construction permit?**

1	Dallas		20%
2	Washington D.C.		19%
3	Houston		17%
4	San Antonio		17%
5	Phoenix		15%
6	Indianapolis		15%
7	Philadelphia		14%
8	Seattle		13%
9	Detroit		13%
10	Chicago		12%
11	Los Angeles	1	1%
12	Boston	1	1%
13	San Francisco	ç	9%
14	New York	8	%
15	Denver	7	%

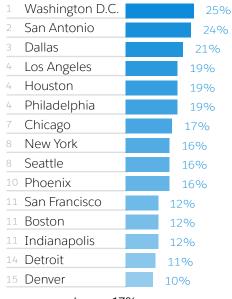
Average: 13%



Does your city provide the ability to use digital technologies to **apply for food stamps?**

1	San Antonio			28%
2	Houston			24%
2	Philadelphia			24%
4	Dallas			23%
5	New York			22%
5	Seattle			22%
7	Los Angeles			20%
7	Chicago			20%
7	Indianapolis			20%
10	Detroit			18%
11	Phoenix		1	7%
12	Denver		15	5%
13	Washington D.C.		14	%
14	San Francisco		13	%
15	Boston		119	6
	Average: 19%	, o		

Does your city provide the ability to use digital technologies to **manage and track service issues?**



Average: 17%

Public Safety

The public safety category includes reporting crimes with digital technologies, such as Twitter and mobile apps, as well as receiving notifications on more wide-reaching city emergencies, such as severe weather events. New York City and Houston tied for top ranking in this category, due to residents in those cities reporting they use digital technologies to report crimes, general safety concerns and complaints about cabs/taxis. In general, reporting a crime using digital technologies was the highest use case in public safety, but still only had a 32% average level of use across the 15 cities. Residents using digital technologies to report a safety concern or fire/EMT-related emergency reported similarly low levels of use, at 30% and 27%, respectively.

Most Connected Cities for Public Safety:



Does your city provide the ability to use digital technologies to **report a crime?**

1 Houston	42%
2 New York	39%
2 San Antonio	39%
4 Denver	35%
4 Indianapolis	35%
6 Los Angeles	32%
6 Washington D.	C. 32%
6 Philadelphia	32%
9 Dallas	30%
9 Boston	30%
11 Chicago	29%
11 Seattle	29%
13 Detroit	28%
13 Phoenix	28%
15 San Francisco	25%

Average: 32%

Percentages are those residents who answered "yes."

Does your city offer the use of digital technologies to **report a safety concern?**

1	Houston			37%
1	Indianapolis			37%
3	New York			36%
4	Boston			35%
5	Philadelphia			34%
6	Washington D.C.			33%
7	Denver			30%
8	Los Angeles		2	9%
8	San Antonio		2	9%
10	Dallas		2	8%
11	Chicago		27	7%
11	Seattle		27	7%
13	Phoenix		26	%
14	Detroit		22%)
15	San Francisco		20%	
	Average: 30%)		

02

02 Public Safety

Does your city provide the ability to use digital technologies to **report a fire or EMT-related emergency?**

1 New York				37%
1 San Antonio				37%
³ Indianapolis				36%
4 Houston				35%
5 Philadelphia				32%
6 Denver			3	0%
7 Chicago			28	3%
⁸ Boston			269	%
9 Washington D.C.			25%	6
10 Seattle			24%)
11 Los Angeles			23%	
12 Detroit			22%	
12 Phoenix			22%	
14 Dallas		2	20%	
15 San Francisco		159	%	
Average: 279	6			

Does your city offer the ability to use digital technologies to **report a drunk driver?**

1	Denver				32%
2	Indianapolis				30%
3	Houston				29%
3	San Antonio				29%
5	New York				25%
6	Los Angeles			2	25%
7	Seattle			23	3%
8	Dallas			22	2%
9	Washington D.C.			22	2%
10	Philadelphia			22	2%
11	Chicago			21	%
12	Boston			20	%
12	Detroit			20	%
14	Phoenix		1	6%	
15	San Francisco		13	%	
	Average: 23%	ð			

Does your city offer the ability to use digital technologies to report a complaint about a cab/taxi?

1 New York	23%
2 Washington D.C.	19%
³ Chicago	18%
3 Houston	18%
5 Philadelphia	17%
6 Seattle	16%
7 Boston	15%
7 Denver	15%
7 San Antonio	15%
7 Indianapolis	15%
11 Dallas	14%
11 Phoenix	14%
13 Los Angeles	10%
14 Detroit	8%
15 San Francisco	6%
Average: 15%	D

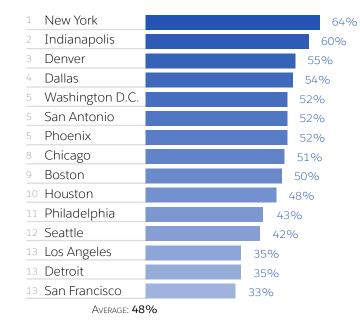
03 Transportation

Transportation issues in the report range from information on public transportation schedules to road closures due to weather. New York City, with its multi-faceted public transportation system, ranked highlyacross most categories, but San Antonio ranked #1 in the transportation category due to residents' high use of digital tools when getting road closure information, public transportation delays and realtime schedules. Residents on average most used digital technologies for notifications of potentially dangerous weather at 48%, while tracking real-time schedules for public transportation was the lowest overall average in the category at 30% -- with only 13% of Detroit residents using digital technologies to track schedules.

Most Connected City **for Transportation:**

New York

Does your city offer notifications of potentially dangerous weather through digital technologies?



03 Transportation

Does your city offer the ability to use digital technologies to **get road closure information** due to bad weather?

1	San Antonio			58%
2	New York			52%
2	Denver			52%
4	Phoenix			50%
5	Washington D.C.			48%
5	Indianapolis			48%
7	Seattle			46%
8	Dallas			43%
9	Chicago			42%
9	Philadelphia			42%
11	Boston		4	1%
12	Houston		37	%
13	Detroit	3	32%	
14	San Francisco	3	1%	
15	Los Angeles	30)%	
	Average: 439	6		

Does your city offer **real time schedules/arrivals for public transportation** through digital technologies?

1 New York		38%
² Washington D.C.		37%
2 San Antonio		37%
4 Seattle		35%
5 Chicago		33%
6 Los Angeles		32%
6 San Francisco		32%
⁸ Indianapolis		30%
9 Philadelphia		29%
9 Boston		29%
11 Phoenix		28%
12 Dallas		25%
12 Houston		25%
14 Denver		24%
15 Detroit	13%	
Average: 30%		

Does your city offers **public transportation delay information** through digital technologies?

1	New York		47%
2	San Antonio		45%
2	Washington DC		45%
4	Seattle		44%
4	Denver		44%
6	Los Angeles		43%
7	Phoenix		42%
8	Chicago		40%
8	San Francisco		40%
10	Indianapolis		39%
11	Philly	33	%
11	Boston	33	%
13	Dallas	329	%
13	Houston	329	%
15	Detroit	25%	
	Average: 39%	, 0	

04 Civic Engagement

In this report, civic engagement with digital technologies includes how residents actively engage with their local governments over key government issues. Unfortunately, in an era of more transparent government and digital town halls, residents across the 15 cities reported low use or awareness overall in this category, with only 34% of respondents on average aware if their city offers information on key civic issues through the use of digital services, and only 27% on average using digital technologies to register to vote.

Most Connected City for Civic Engagement:



Does your city offer information on key civic issues through digital technologies?

1 Dallas		45%
2 New York		38%
2 Chicago		38%
2 Washington D.C.		38%
5 San Antonio		36%
6 Boston		34%
7 Denver		33%
⁸ San Francisco		32%
8 Philadelphia		32%
⁸ Phoenix		32%
11 Houston		31%
11 Detroit		31%
13 Seattle	2	29%
13 Indianapolis	2	29%
15 Los Angeles	2	8%
2.00		

Average: 34%

Percentages are those residents who answered "yes."

Does your city provide the ability to use digital technologies **to register to vote?**

1	Phoenix			38%
2	San Antonio			36%
3	Washington D.C.			34%
3	Denver			34%
5	Seattle		3	30%
6	San Francisco		28	3%
6	Houston		28	3%
8	Indianapolis		27	%
9	Los Angeles		269	%
9	Chicago		269	%
9	Dallas		269	%
12	New York		22%	
13	Philadelphia		21%	
14	Boston		18%	
15	Detroit	1	.7%	
	AUGDACE: 2796			

AVERAGE: 27%

Energy Use

05

Energy issues covers how residents use digital technologies to receive notifications of power outages from their cities, as well as IoT-based smart technologies in their homes to more efficiently manage energy use. San Antonio was tops again, due to its ability to communicate to its residents around local outages and its overall high use of smart thermostats and meters by residents. Not surprisingly, tech-friendly San Francisco -- currently facing a drought -ranked high in citizen use of smart water meters at 17%. However, overall use of smart home technologies by residents across all 15 markets was low, with only 13% of residents surveyed using connected thermostats and 9% of residents surveyed using smart water meters.

Most Connected City for Energy Use:

San Antonio

Does your city offer notification of power outages through digital technologies?

1 New York			45%
2 San Antoni	0		38%
3 Boston			36%
4 Chicago			34%
4 Indianapol	is		34%
6 Dallas			32%
6 Phoenix			32%
8 Washington	n D.C.		31%
9 Los Angele	S		30%
10 San Francis	CO		28%
10 Philadelph	ia		28%
10 Detroit			28%
13 Seattle			26%
13 Denver			26%
15 Houston		2	0%

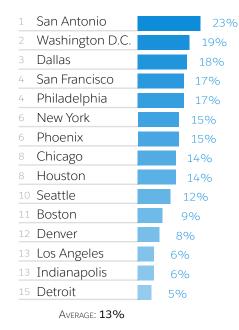
AVERAGE: 31%

05 Energy Use

Do you currently use **smart water meters or mobile apps** to monitor your home or apartment water use?

1 San Francisco	17%
2 New York	16%
³ San Antonio	14%
4 Houston	11%
4 Washington D.C	. 11%
6 Philadelphia	10%
6 Boston	10%
⁸ Chicago	9%
8 Dallas	9%
8 Phoenix	9%
11 Los Angeles	6%
12 Detroit	4%
12 Indianapolis	4%
14 Seattle	3%
14 Denver	3%
Average: 9	%

Do you currently use connected thermostats or mobile apps to monitor energy use?





Cities who paint positives visions for their futures using technology have the potential to attract new companies, new residents and new public-private partnerships. In this report, future vision includes whether residents believe their cities have the right technology infrastructure, as well as whether their mayors have made technology a key priority. Texas cities Dallas and San Antonio rate high in this category, tying for the top spot. New York City residents give the highest grade for their city's use of digital technologies to be more transparent with the highest percentage of residents giving their local government a "B" grade or above.

Most Connected Cities for Future Vision:



Do you agree with the statement that **businesses are attracted to my city because of its technology infrastructure?**

1 Dallas		54%
2 San Antonio		51%
3 New York		47%
³ Washington D.C.		47%
5 Indianapolis		47%
6 Seattle		42%
7 San Francisco		41%
8 Houston		36%
8 Phoenix		36%
10 Chicago		35%
10 Boston		35%
10 Denver		35%
13 Los Angeles		33%
14 Philadelphia		31%
15 Detroit	22	%

Average: 39%

07 Future Vision

Do you agree with the statement that **my city has made tech innovation a priority?**

1	Dallas				54%
2	San Antonio				51%
3	New York			41%)
3	San Francisco			41%)
5	Washington D.C.			40%	
5	Philadelphia			40%	
7	Seattle			38%	
7	Indianapolis			38%	
9	Houston			37%	
10	Chicago			36%	
11	Boston			35%	
11	Denver			35%	
13	Los Angeles			34%	
14	Phoenix			31%	
15	Detroit		249	6	
	Average: 389	6			

Do you agree that your city's mayor has made the use of technology in the government a priority?

1	Dallas			42%
2	San Antonio			41%
3	Chicago			40%
4	New York			39%
4	Philadelphia			39%
6	Houston			38%
7	San Francisco			37%
7	Indianapolis			37%
9	Washington D.C.		3	4%
10	Seattle		33	3%
11	Boston		32	%
12	Los Angeles		319	%
13	Phoenix		309	6
14	Denver		28%	D
14	Detroit		28%	C
	AVERAGE: 359	%		

Would you give your city's use of digital technologies to **be more transparent with residents** a "B" grade or above?

1	New York				47%
1	San Antonio				47%
3	Washington D.C.			4	1%
4	Dallas			40)%
5	Seattle			36%	D
5	Boston			36%	D
5	Phoenix			36%	D
8	Denver			35%)
9	Philadelphia			34%	
10	Indianapolis			32%	
11	Chicago		3	31%	
12	Los Angeles		3	80%	
12	Houston		3	80%	
14	San Francisco		269	%	
15	Detroit		22%		
	Average: 35%	, 0			

07 What Residents Want

The results show a majority of residents want digital services to connect with their city governments, yet many are unaware or don't use currently available services, resulting in significant technology and awareness gaps. To close these gaps, cities need to improve the user experience of their digital services to increase adoption rates and better educate residents about the digital services available to them.

The report also found that residents want to actively participate in this local government technology revolution, as nearly half on average would be willing to share data related to their location to help make their cities safer, and more than half on average would be willing to share traffic data from their vehicles to help improve transportation systems in their cities. Perhaps more telling of all is that 60% of residents on average would be willing to share their own personal contact information to help improve their city's ability to communicate with them through digital technologies. "The results show a majority of residents want digital services to connect with their city governments, yet many are unaware or don't use currently available services..."



General City Services

Would you like your city to provide the **ability to file service requests** through the use of digital technologies?

Los Angeles	65%	
Washington DC	63%	
Dallas	60%	
Phoenix	55%	
New York	54%	
San Francisco	54%	
Chicago	52%	
Houston	52%	77
Denver	51%	•
San Antonio	51%	
Philadelphia	50%	
Seattle	49%	
Boston	49%	
Detroit	49%	
Indianapolis	48%	



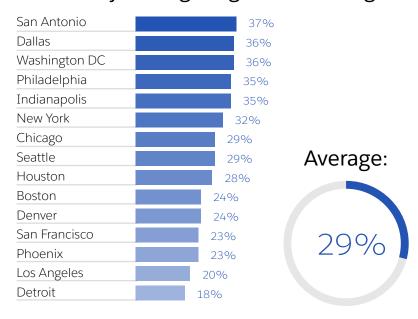
Would you like your city to provide the **ability to pay city bills, fees, or fines** through the use of digital technologies?

Los Angeles		59	%
Denver		579	%
Washington DC		54%	
San Francisco		53%	
Dallas		53%	
New York		51%	
Houston		51%	
Phoenix		50%	Average:
Boston	4	+9%	0
Seattle	46	%	
Detroit	45	%	
Philadelphia	449	%	49%
Indianapolis	449	%	1270
Chicago	439	6	
San Antonio	439	6	



General City Services

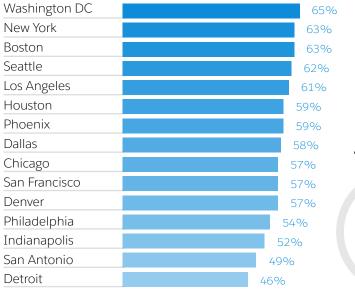
Would you be interested in your city providing parking prices based on space availability through digital technologies?





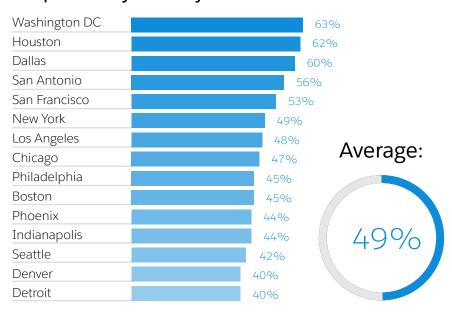
Public Safety

Would you like to have **public safety information available** through the use of digital technologies?





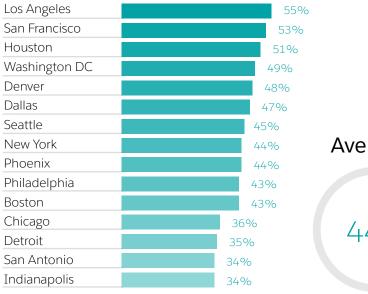
Would you be willing to **share data related to your real-time location** to help make your city safer?

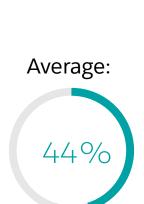




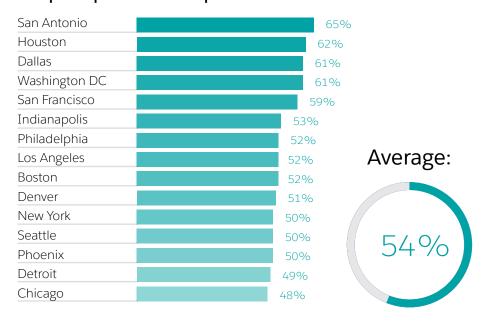
Transportation

Would you like to have **public transportation services available** through the use of digital technologies?





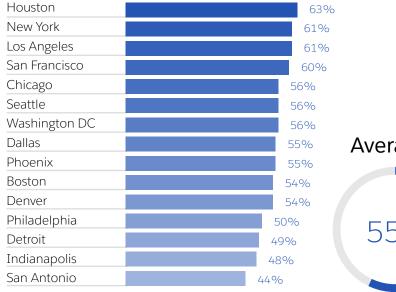
Would you be willing to **share traffic data from your personal vehicle** to help improve transportation?



07 What Residents Want

Civic Engagement

Would you like to have **general information about events (e.g. town halls)** available through the use of digital technologies?





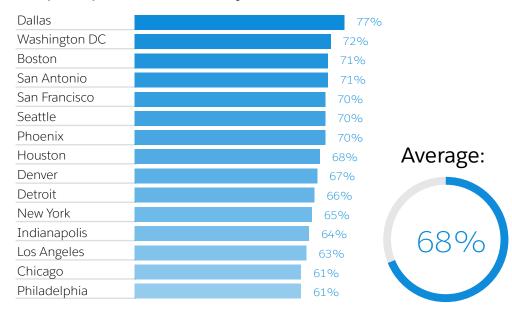
Would you be willing to **share your contact information** to help improve your city's ability to communicate with you?

Dallas			74%
Washington DC		69	9%
Denver		62%	
Seattle		61%	
Philadelphia		61%	
Boston		61%	
San Antonio		60%	
New York		59%	Average:
San Francisco		59%	
Detroit		59%	
Phoenix		58%	
Indianapolis	5	55%	600/
Chicago	5	4%	60%0
Houston	52	%	
Los Angeles	509	%	



Energy Use

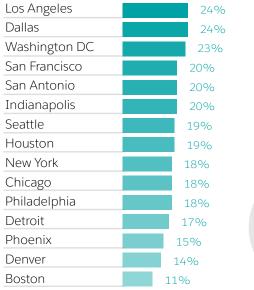
Would you be willing to **share water and energy use from your home/apartment** to help improve efficiency?





Future Vision

Do you wish your city would **offer autonomous cars** to help promote a safer driving experience?





Do you wish your city would **offer robots to automate city services** such as waste disposal?

San Francisco		20%
Washington DC		18%
Seattle		16%
Boston		15%
San Antonio		15%
Los Angeles		14%
Chicago		14%
Dallas		14%
Philadelphia	1	.2%
Denver	1	.2%
Indianapolis	1	.2%
Houston	1	1%
Detroit	1	1%
New York	10)%
Phoenix	8	%

Average:



08 Methodology

This online survey was conducted by Harris Poll on behalf of Salesforce among 3075 U.S. adults between May 4-13, 2015 across 15 of some of the largest U.S. markets by population and designated market area, including Boston (n=202), Chicago (n=205), Dallas (n=206), Denver (n=208), Detroit (n=202), Houston (n=202), Indianapolis (n=206), Los Angeles (n=205), New York (n=209), Philadelphia (n=209), Phoenix (n=206), San Antonio (n=207), San Francisco (n=202), Seattle (n=203) and Washington, D.C. (n=203). Analysis of the data, including rankings, was performed by Salesforce. This online survey is not based on a probability sample and therefore no estimate of theoretical sampling error can be calculated. For full results of this study, including weighting variables, please contact pr@salesforce.com.

