MASS TRANSIT
BEST PRACTICES FOR INTEGRATED MOBILITY

2020 Mobility Outlook

Where the transit industry is trending in 2020.

Staff report

One question nearly everyone wants answered regardless of the situation is "what is going to happen?"

Predicting business cycles is an imperfect art form, especially, when those cycles are subject to city, state and federal attitudes that can impact budgets year-over-year. However, understanding macro trends can help businesses plan and take advantage of potential opportunities.

Mass Transit queried our transit agency subscribers during the fall of 2019 with a survey asking everything from the size of the communities they serve to where their organizations are with the adoption of data-driven techniques.

Those who answered the survey represent a balanced cross section of transit professionals operating in large, medium, small and rural areas and across the U.S. and Canada (and one Columbian respondent).

We can't ask every question of every provider, but believe the data found within this survey offers valuable insight to mobility providers and the industry that supports these providers. For example, the survey's respondents in large urban areas indicated they would be acquiring battery-electric buses in 2020 while respondents in rural areas intend to acquire a higher rate of paratransit vehicles.

Returning to a version of the initial question, "What's ahead in 2020?" There is still a lot of year to go before anything is definitive, but thanks to the respondents of our survey, we all have more of an idea of what types of vehicles, equipment and technology transit providers are looking to acquire and explore.

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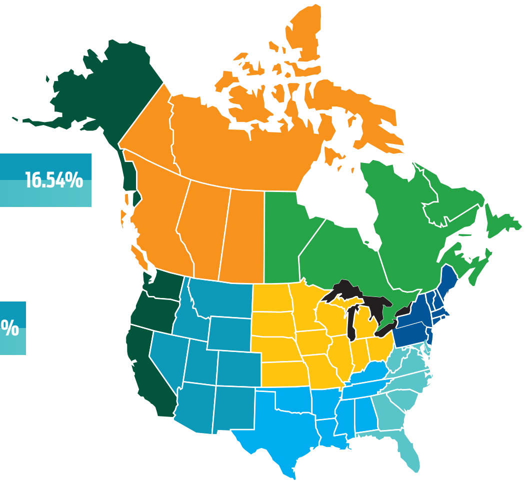
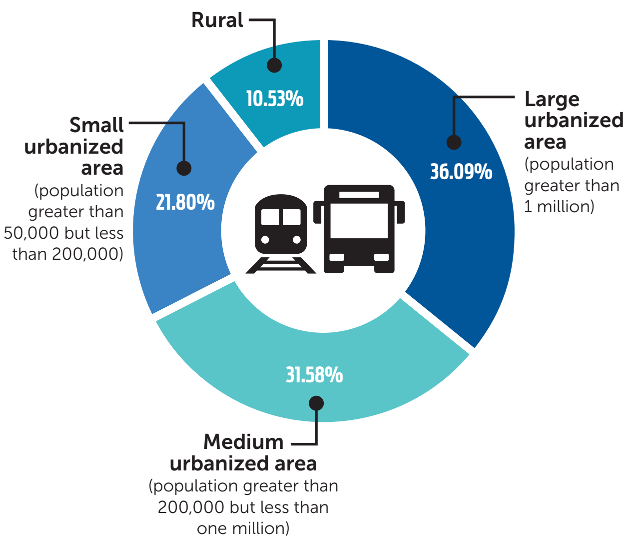
Where responding agencies are located



New England/Middle Atlantic (Maine, New Hampshire, Vermont, Connecticut, Rhode Island, Massachusetts, New York, New Jersey, Pennsylvania)	16.54%
South Atlantic (West Virginia, Maryland, Delaware, Virginia, North Carolina, South Carolina, Georgia, Florida)	11.28%
South (Texas, Oklahoma, Arkansas, Louisiana, Kentucky, Tennessee, Alabama, Mississippi)	14.29%
Midwest/Plains (Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas)	12.78%
Mountain (Montana, Colorado, Wyoming, Arizona, New Mexico, Utah, Idaho, Nevada)	9.02%
Pacific (Alaska, Oregon, Washington, California, Hawaii)	28.57%
Canada East and Middle (Newfoundland and Labrador, PEI, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba)	3.76%
Canada West and North (British Columbia, Alberta, Saskatchewan, Yukon, Northwest Territories, Nunavut)	3.01%
Other	0.75%

What is the population of your service area?



More than 31% of respondents who operate in a large urbanized area were located in the Pacific region.

What services does your agency provide?

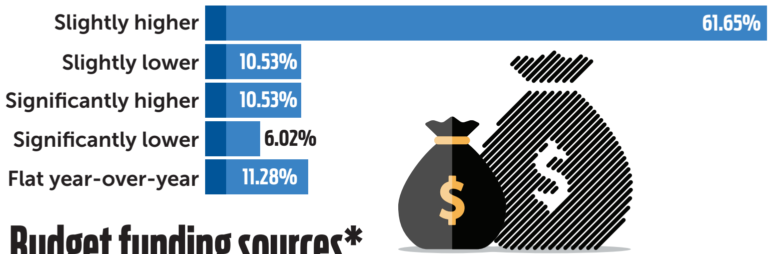
(select all that apply)

Fixed-Route Bus	28.95%
Bus Rapid Transit (BRT); BRT-lite	9.00%
On-Demand	15.57%
Paratransit	26.03%
Light Rail or Streetcar	7.30%
Heavy Rail	3.16%
Commuter Rail	5.11%
Vanpool	0.49%
Medical Transportation	0.73%
Non-transit mobility (bikes, scooters, etc.)	0.24%
Deviated Fixed Route	0.24%
Ferry	0.49%
Microtransit	0.49%
Shuttle	0.49%
Cable Propelled (Gondola; aerial tramway)	0.49%
Commuter Bus	0.49%
Incline Railway	0.24%
Other	0.49%

More than a quarter of survey respondents operate Fixed-Route Bus services or Paratransit services or both.

BUDGETS: 2020 BUDGETS COMPARED TO 2019

How does your anticipated 2020 budget, both operating and capital, compare to 2019?

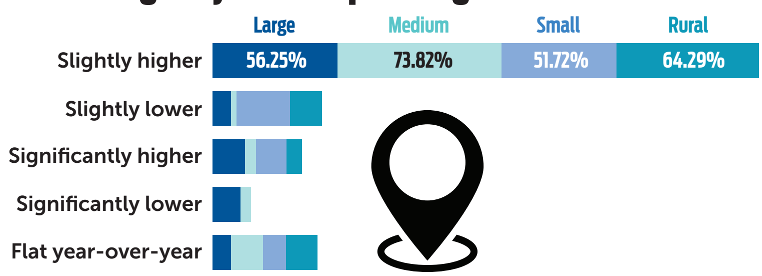


Budget funding sources*

	Federal	State or provincial	Municipal	Fare Revenue	Non-fare Revenue
Large urbanized area (population ≥ 1 million)	32%	37%	25%	27%	16%
Medium urbanized area (population ≥ 200,000 but ≤ 1 million)	33%	24%	30%	16%	18%
Small urbanized area (population ≥ 50,000 but ≤ 200,000)	33%	28%	24%	12%	25%
Rural	33%	20%	32%	6%	29%

*Value represents average of all respondents answers within a category; total will not add to 100

2020 budget by size of operating area



75% of respondents operating in a rural area located in the Midwest/Plains and Mountain regions said their budgets were slightly higher in 2020.

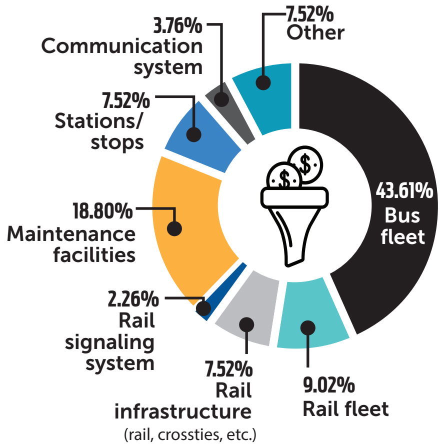
73% of respondents operating in a large urban area in the Pacific region said their budgets were either slightly higher or significantly higher in 2020.

More than 78% of respondents operating in a medium urban area report 2020 budgets that are slightly or significantly higher.

More than 16% of respondents operating in a large urban area report 2020 budgets that are slightly lower or flat year-over-year.

STATE OF GOOD REPAIR: WHERE IS INVESTMENT NEEDED?

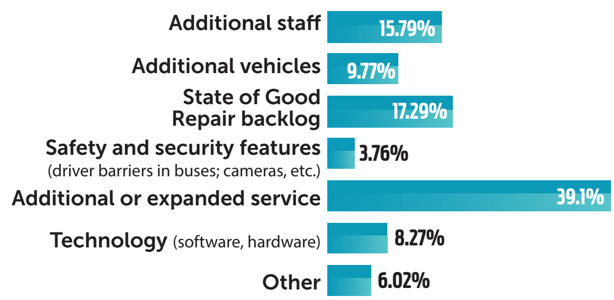
Regarding the State of Good Repair backlog, what area of your transit system requires the most immediate investment?



A selection of "other" responses to the State of Good Repair backlog question:

- *All of the above.*
- *More operational hours and a fleet to match.*
- *Dispatch Program*
- *Tunnels*
- *Technology*

If provided an unlimited budget, in which of the options below would your transit agency invest the most?



Half of the "other" responses to where unlimited investment would be applied involved integration of zero-emission vehicles, their supporting infrastructure and preparing facilities for the zero-emission fleets.

PROCUREMENT: WHAT VEHICLES WILL BE PROCURED? WHAT PURPOSE WILL THEY SERVE?

Does your agency anticipate awarding a contract(s) for new vehicles in 2020?

Commuter rail coaches	6.92%
Light-rail vehicles	6.92%
Streetcars	0.77%
Locomotives	3.08%
Diesel buses	31.54%
Hybrid buses	9.23%
CNG buses	14.62%
Hydrogen fuel cell buses	5.38%
Battery electric buses	37.69%
Paratransit vehicles	43.08%
Non-revenue vehicles	20.77%
No vehicles are anticipated to be procured in 2020	10.77%

***60% of respondents* operating in large urban areas have plans to award a contract for battery-electric buses in 2020.**

***43% of respondents* operating in rural areas have plans to award a contract for paratransit vehicles in 2020.**

What purpose will the new vehicles serve?

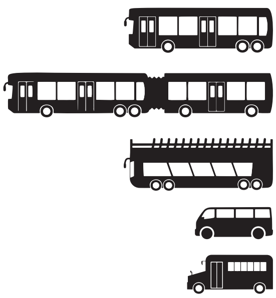
90.35% Replace aging vehicles

28.07% Add capacity to existing route(s)

28.95% Accommodate new service

1.75% Other

What size vehicle are you interested in procuring?



17.53% 20-foot

27.84% 35-foot

61.86% 40-foot

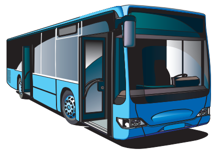
15.46% 60-foot

1.03% Double-decker

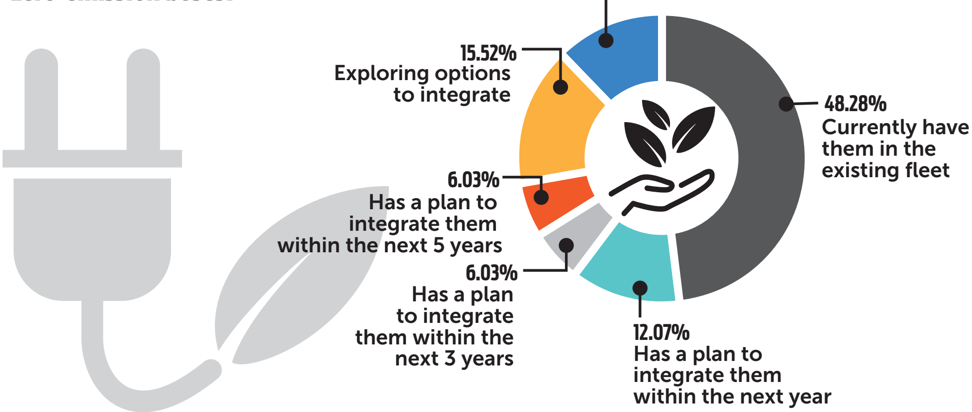
31.96% Vans

29.90% Minibus

84% of all respondents anticipate the buses they procure in 2020 will be low floor.



Regarding low-emission and zero-emission buses:



Which of the following factors contribute to respondents who selected "no interest/ no plans" to acquire zero-emission buses?

14.29% Price of the vehicles

14.29% Price associated with supporting infrastructure

14.29% Technology needs to develop further

57.14% It's not a good solution for our current system

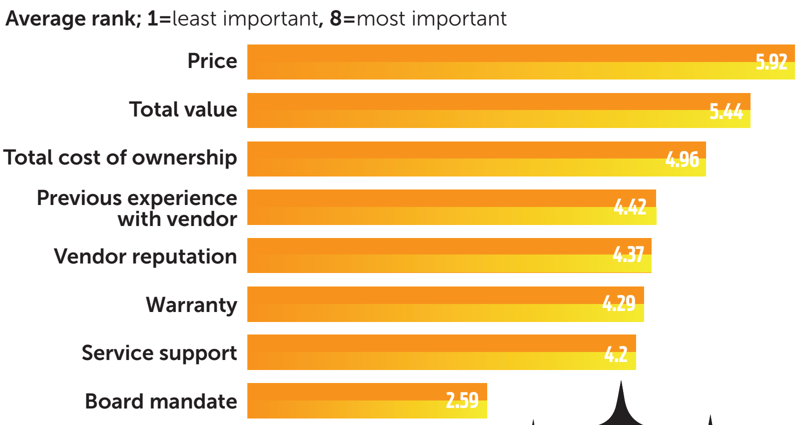
What is the main motivating factor for your agency's integration of low-emission and/or zero-emission buses?

Other factors driving zero-emission integration:

- *Overall concern with sustainability*
- *Community driven/Community requested*
- *Grant money specifically awarded for zero-emission vehicles*

PROCUREMENT: WHAT ARE THE DETERMINING FACTORS? (CONTINUED)

When evaluating a proposal to purchase new vehicles, in what order of importance would you place the following factors on the impact of the final selection?

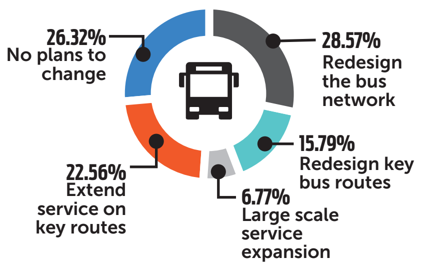


Respondents operating in medium-sized areas ranked **vendor reputation** and **previous experience with a vendor at the same level of importance as price.**

#2 **Vendor reputation** was second to price for respondents operating in small areas

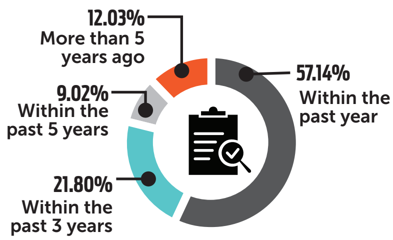
BUS NETWORK

Regarding bus network optimization, does your agency have plans to?

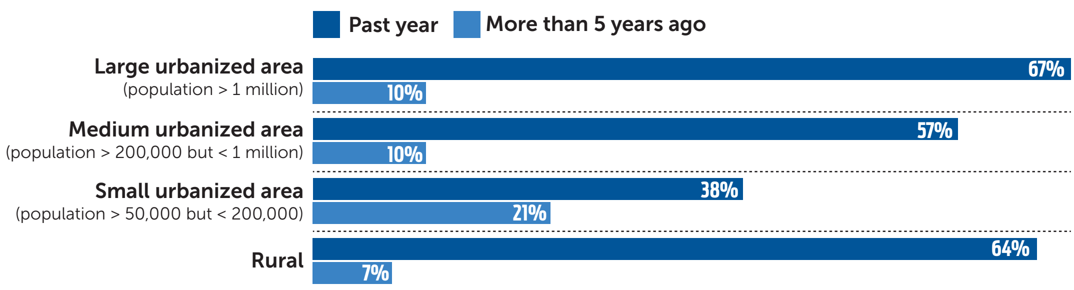


More than 44% of respondents operating in a small urbanized area have no plans to change their bus service

When was the last time your agency evaluated service routes/frequencies to ensure optimization?

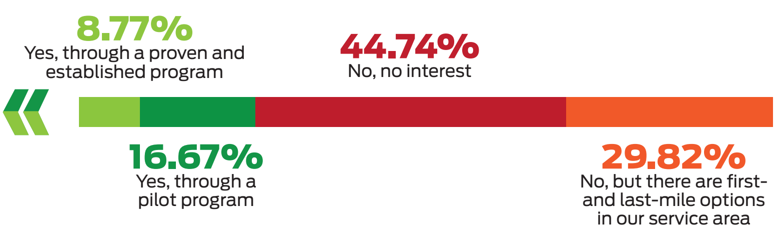


The last time agencies evaluated service routes/frequencies broken down by size of area served



Does your agency currently have any partnerships with Transportation Network Companies?

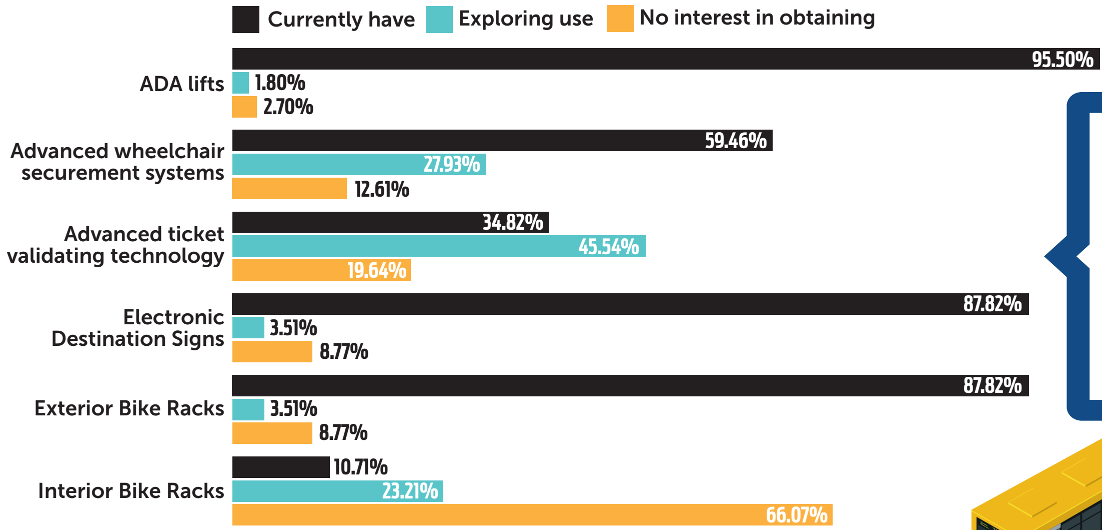
29% of respondents operating in large urban areas have a pilot program with TNCs while nearly 19% have a program that is proven and established.



More than 65% of respondents operating in rural and small urban areas and more than 40% of respondents operating in medium-sized areas indicated they had no interest in pursuing partnerships with TNCs.

EQUIPMENT

Where does your agency stand as far as integrating the following technology onto its fleet and network?



Respondents across all operating area sizes showed the least amount of interest in obtaining interior bike racks.

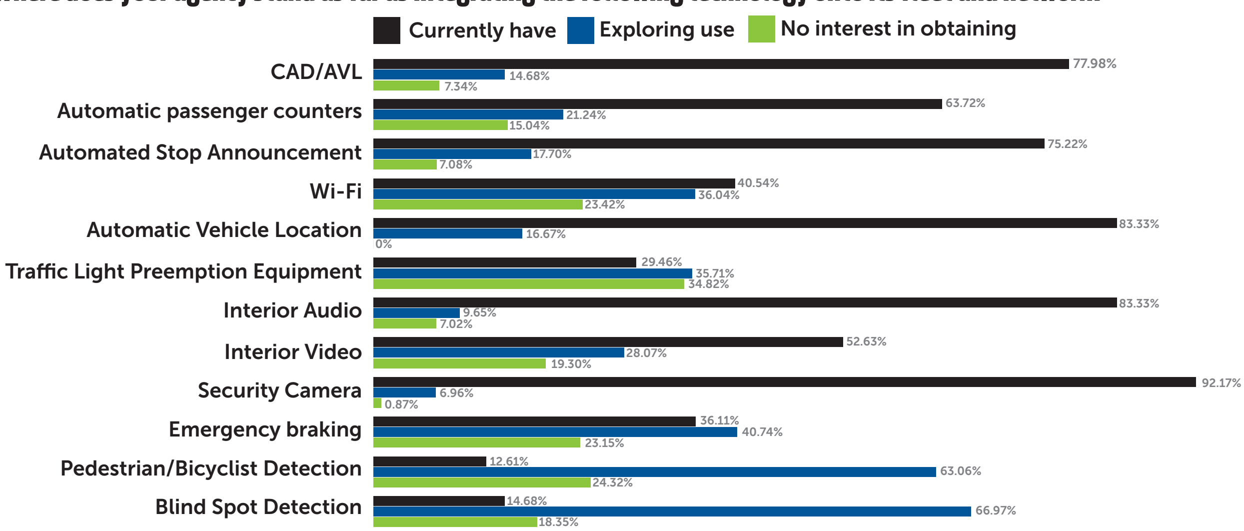
All respondents operating in a rural area reported already using ADA lifts, *the only equipment or technology a survey respondent segment had fully adopted. Respondents in Large, Medium and Small areas had adoption rates of ADA lifts of more than 95%.*

Where interest can be found

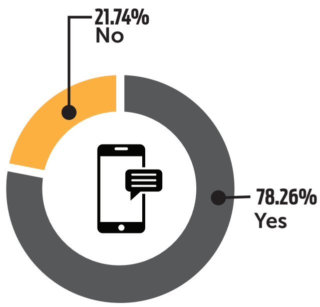
	Highest rate of exploring use in	Least interested in obtaining	Highest rate of adoption (excluding ADA lifts)
Large	Pedestrian/Bicyclist detection, Blind spot detection, Collision warning	Interior bike racks	Security cameras, Automatic vehicle location, Electronic destination signs
Medium	Blind spot detection, Traffic light preemption equipment, Collision warning	Interior bike racks, Traffic light preemption equipment, Pedestrian/Bicyclist detection	Exterior bike racks, Security cameras, Electronic destination signs
Small	Pedestrian/Bicyclist detection, Blind spot detection, Collision warning	Interior bike racks, Traffic light preemption equipment, Advanced ticket validating technology, Emergency braking	Security cameras, Exterior bike racks, Electronic destination signs
Rural	Collision warning, Blind spot detection, emergency braking	Interior bike racks, Traffic light preemption equipment	Security cameras, Exterior bike racks, Electronic destination signs, CAD/AVL

TECHNOLOGY

Where does your agency stand as far as integrating the following technology onto its fleet and network?



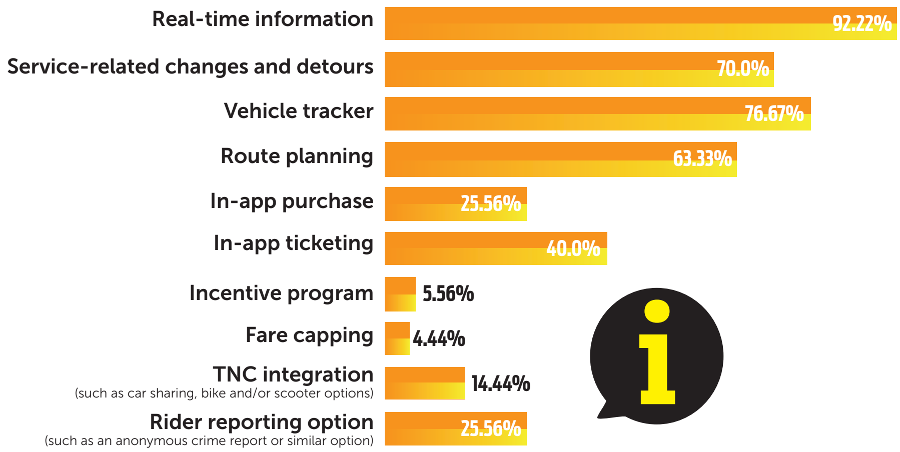
Does your agency use a mobile app to communicate with riders?



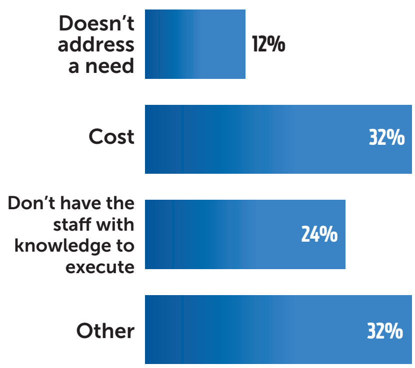
90% of respondents operating in a large urban area indicated their systems had an app.

31% of respondents operating in a rural area indicated their systems had an app and all feature vehicle tracking capabilities.

What information is provided to riders in your app, select all that apply?



What's preventing your system from adopting an app?



Agencies without apps indicated:

1. *It was not a high priority or fell outside the transit provider's realm of responsibility*
2. *An app was in the development stage or the provider supplied an API for the public to develop their own apps*
3. *Challenges with the compatibility of a provider's current software or dispatch system*

DATA

Advanced data-driven techniques have become much more prevalent and useful in recent years. Which statement best reflects your agency's capability to use them to achieve business goals?

25.45%
Basic: We are always trying to find incremental improvements, but haven't taken formal steps to adopt a data-driven approach

40.0%
Evolving: We are aware of data-driven technologies and are actively evaluating their applicability in our business

20.0%
Committed: We have implemented data driven technologies in pilot projects and achieved good results

13.64%
Strategic: We have implemented such techniques and supporting technologies, had great success and believe they have transformational potential in our business

0.91%
Transformative: Advanced data-driven techniques are part of our culture — all capabilities are adopted and used

13% of respondents operatining in small areas would classifiy their data-driven techniques as "strategic" compared to **23% of respondents** operating in large urban areas.

In your opinion, which statement best reflects your organization's current capability to share data within a digital data environment?

35.45%
Basic: We are always trying to find incremental improvements, but haven't taken formal steps to adopt a data-driven approach

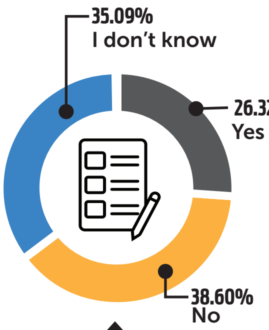
30.0%
Evolving: We are aware of data-driven technologies and are actively evaluating their applicability in our business

26.36%
Committed: We have implemented data driven technologies in pilot projects and achieved good results

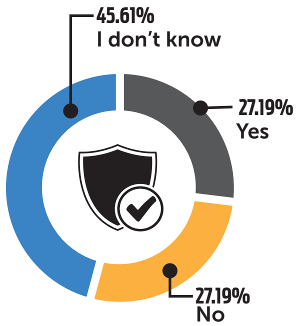
6.36%
Strategic: We have implemented such techniques and supporting technologies, had great success and believe they have transformational potential in our business

1.82%
Transformative: Advanced data-driven techniques are part of our culture — all capabilities are adopted and used

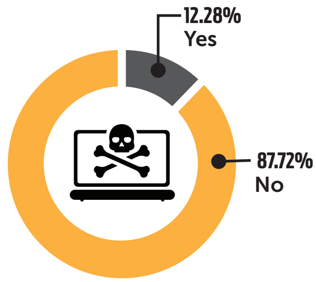
Has your agency implemented a Cybersecurity Incident Response Plan?



Has your agency acquired cybersecurity insurance?

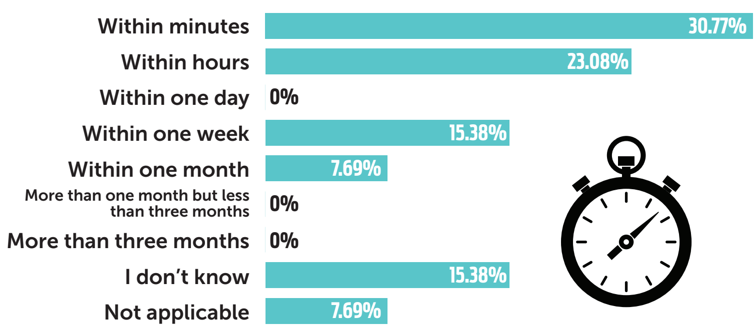


Has your organization been compromised by a cyberattack within the past 12 months?

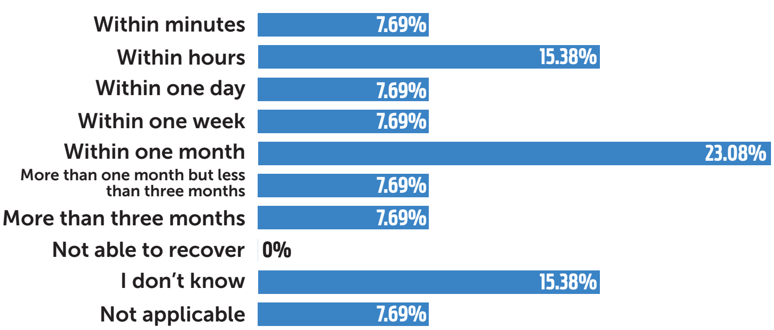


***Nearly two-thirds of respondents** knew whether or not their agency had a Cybersecurity Incident Response Plan but slightly more than half of those same respondents knew if their agency had acquired cybersecurity insurance.*

For those who indicated a cyberattack had occurred, it took the following amount of time to recognize an attack occurred:



For those who indicated a cyberattack had occurred, it took the following amount of time to recover from that cyberattack:



31% of respondents were able to recover from a cyberattack within a 24-hour period

15% of respondents said it took more than one month to recover from a cyberattack