

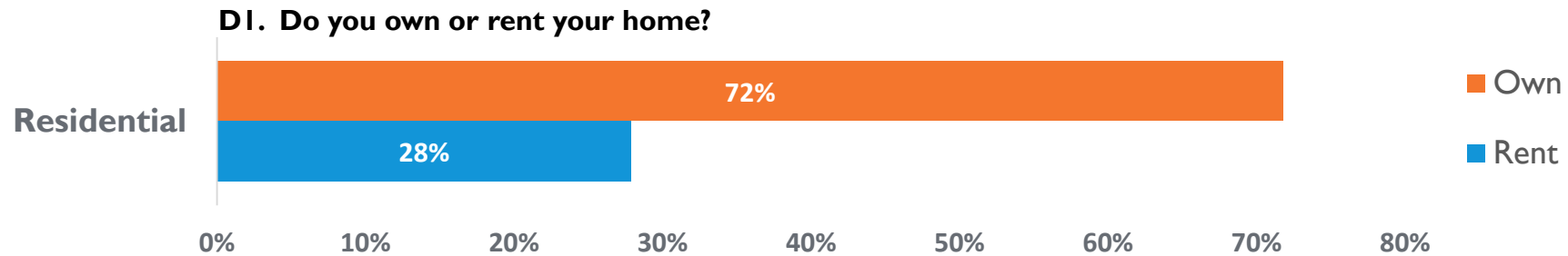
# About the Quantitative Study

- Conducted July-August 2020
- Utilized a mixed-modal methodology:
  - Surveys conducted both via telephone (26%) and online (74%).
  - Customer data provided by WSSC Water and participants selected randomly by MMS.
- Prince George's and Montgomery County Residential and Commercial Customers participated.

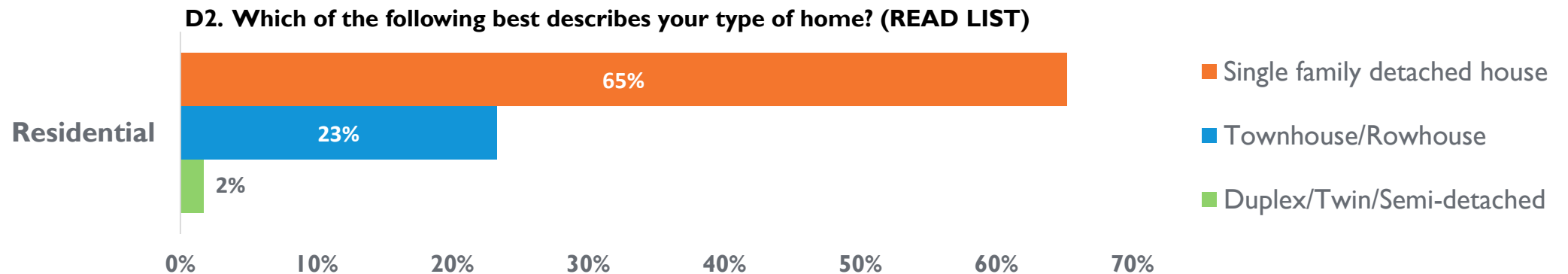
	Prince George's County	Montgomery County
Residential Customers	204	204
Commercial Customers	51	53
N =	512	

# Residential Demographics

- The majority of Residential customers own their home (72%).

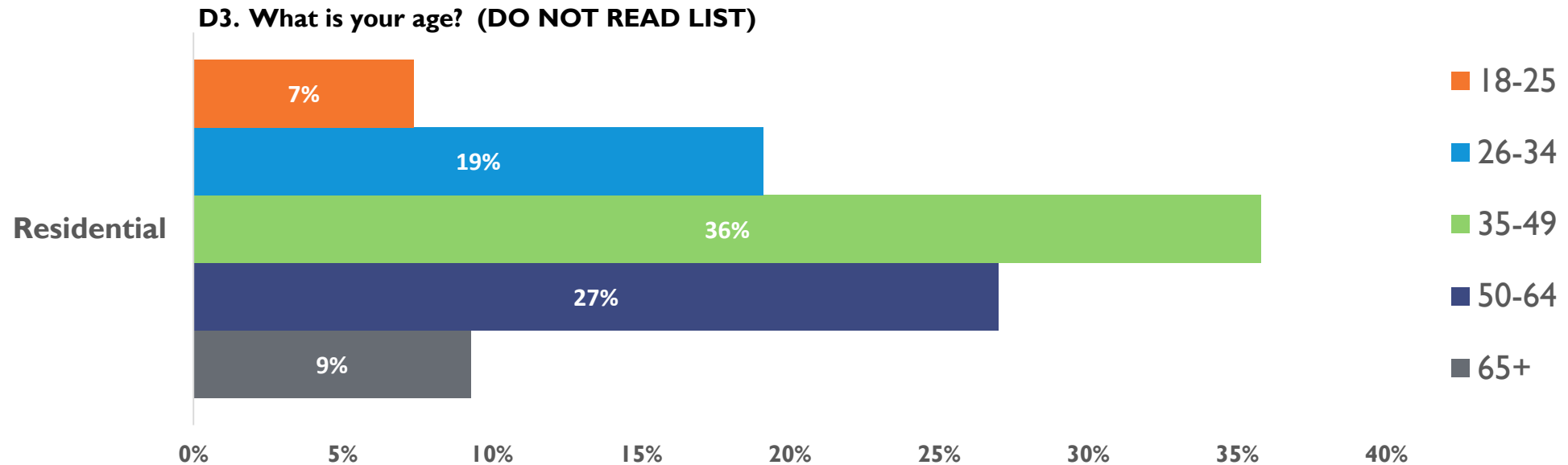


- Just under two thirds of Residential customers (65%) live in a single family detached house.



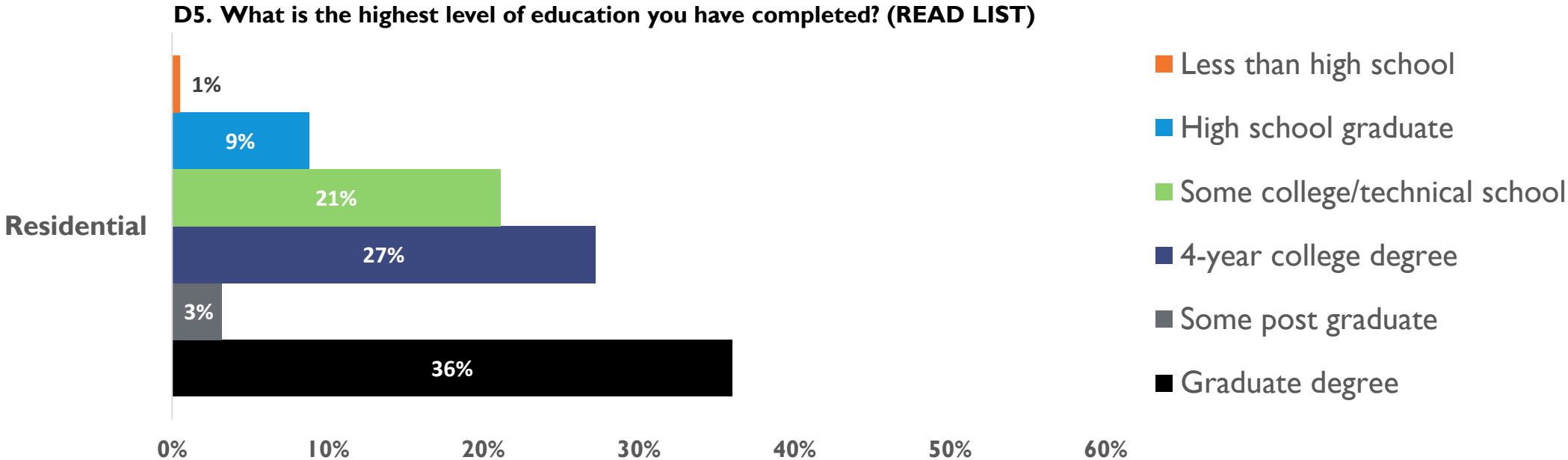
# Residential Demographics (cont.)

- Most of the Residential participants were 35-49 years old or 50-64 years old (36% and 27%, respectively).



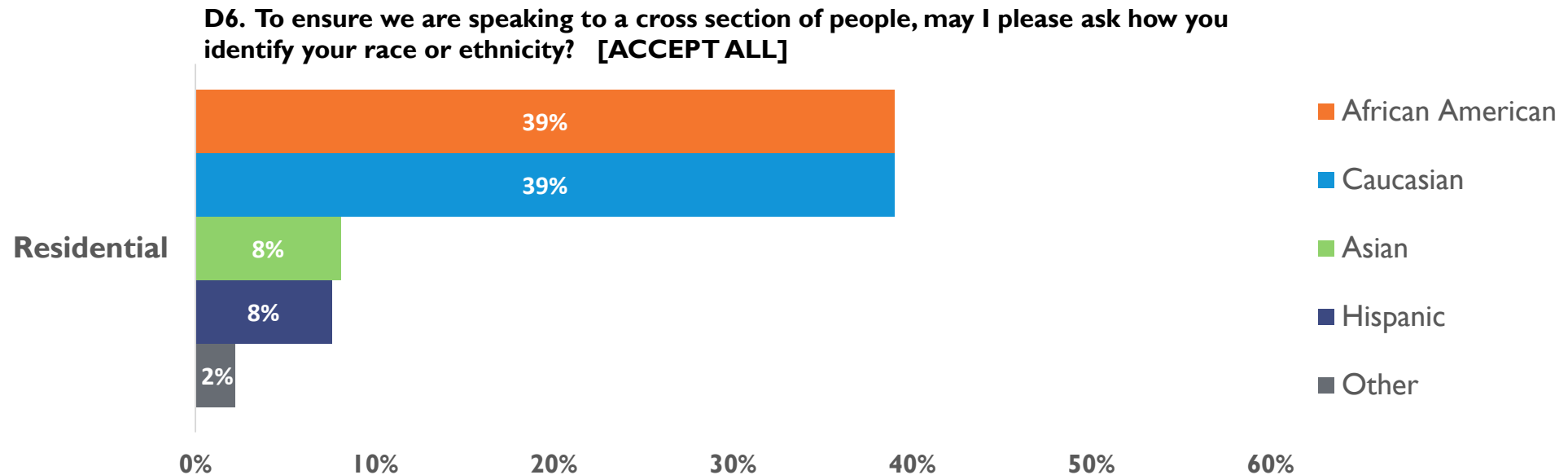
# Residential Demographics (cont.)

- The majority Residential customers report earning 4-year college degrees and graduate degrees.



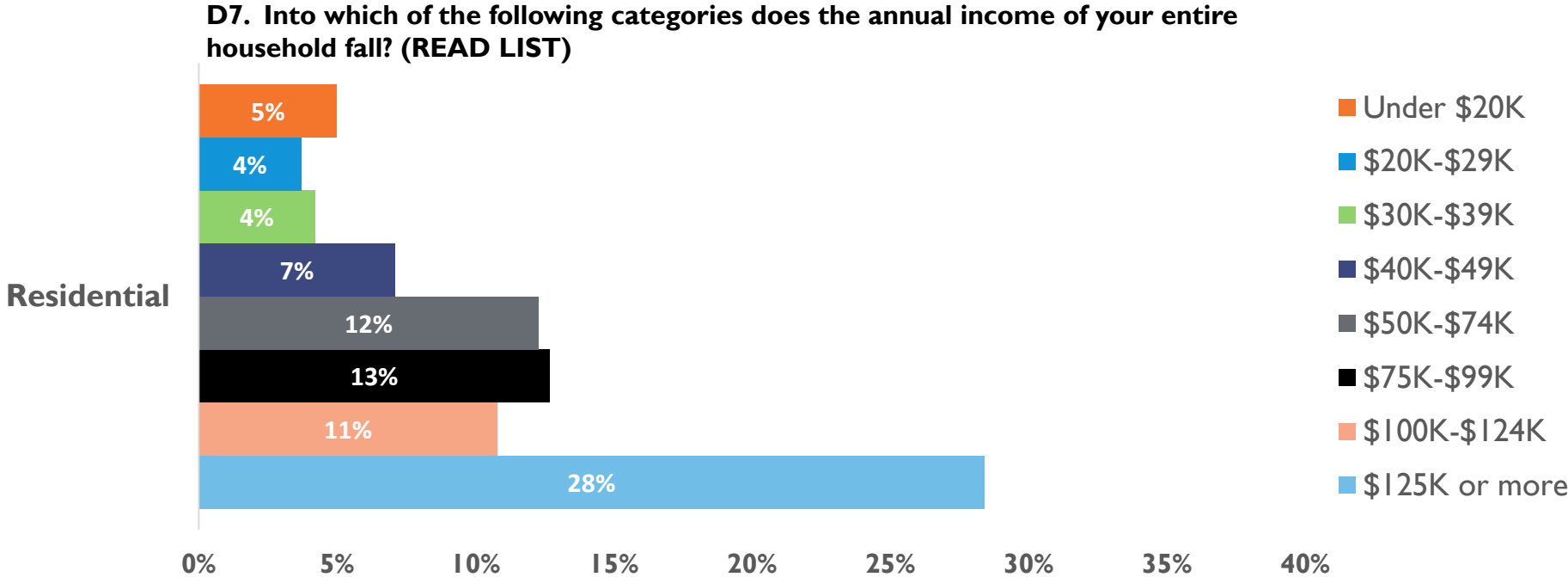
# Residential Demographics (cont.)

- WSSC Water Residential customers mostly identify themselves as African American and/or Caucasian.



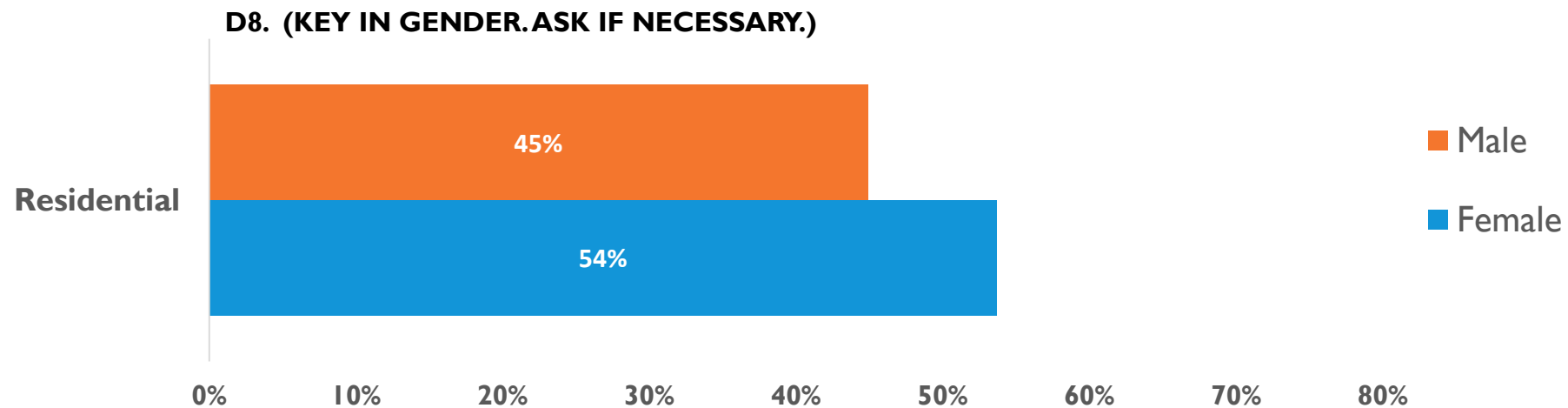
# Residential Demographics (cont.)

- The majority of study participants report earning higher household incomes.



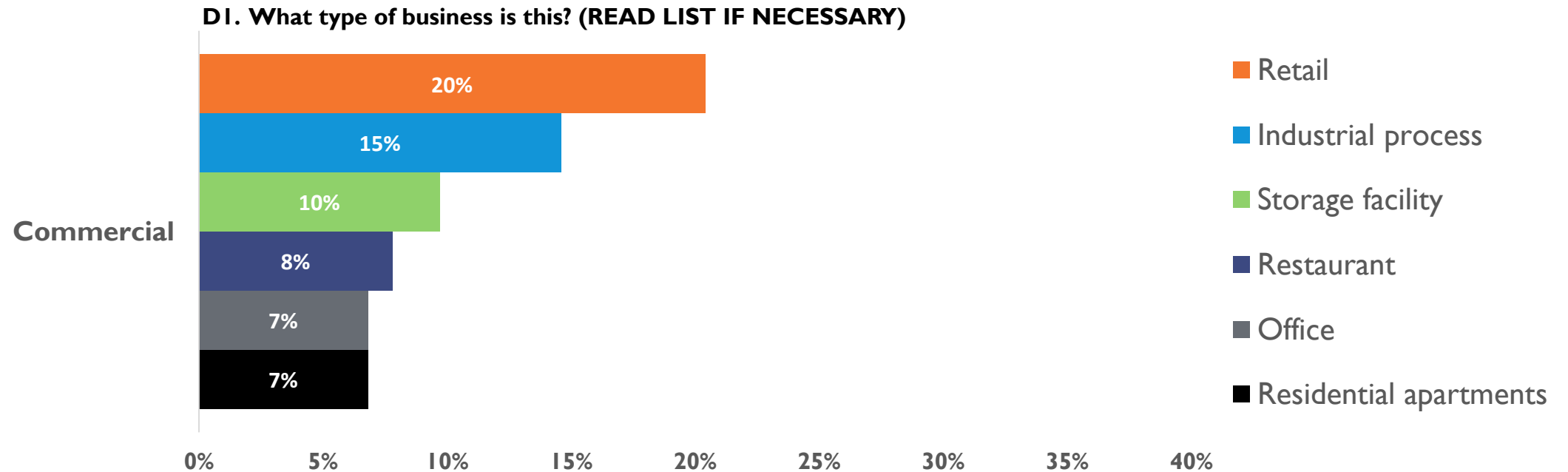
# Residential Demographics (cont.)

- The gender of participants skewed naturally.



# Commercial Demographics

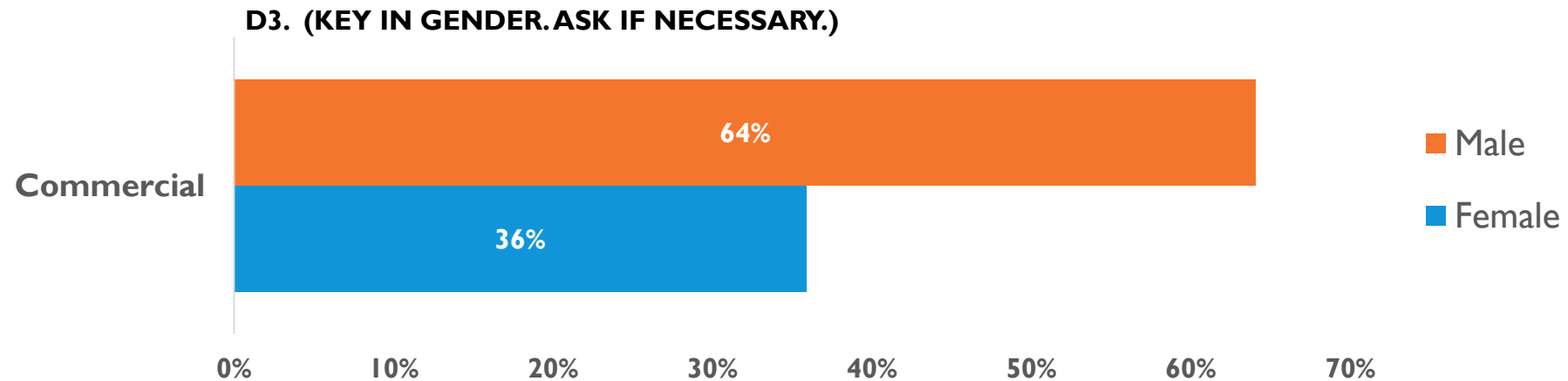
- The most commonly represented business types are below.
- Commercial customers represent businesses of all sizes.





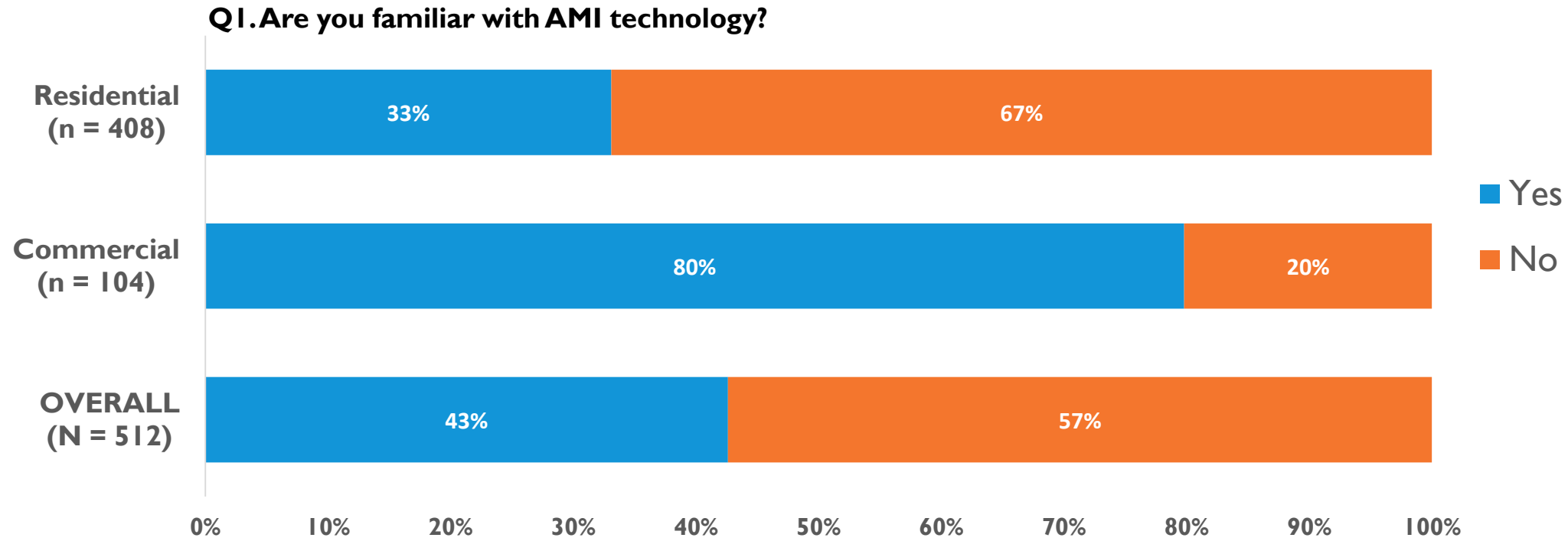
# Commercial Demographics (cont.)

- The gender of the Commercial participants is representative of the population.



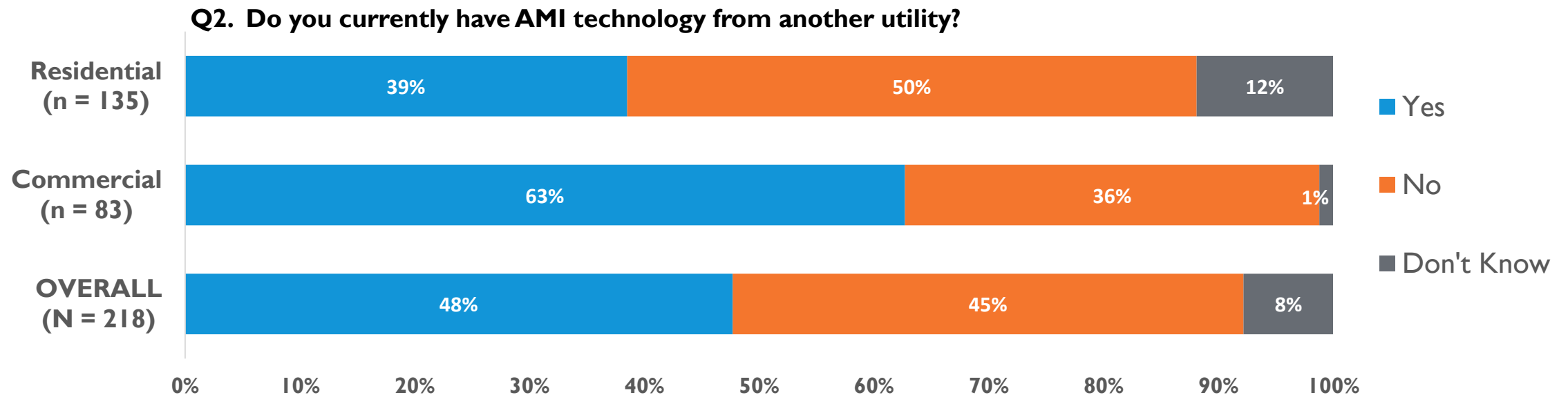
# Familiarity with Advanced Metering Infrastructure (AMI) Technology

- Fewer than half of the WSSC Water customers surveyed (43%) are familiar with AMI technology.



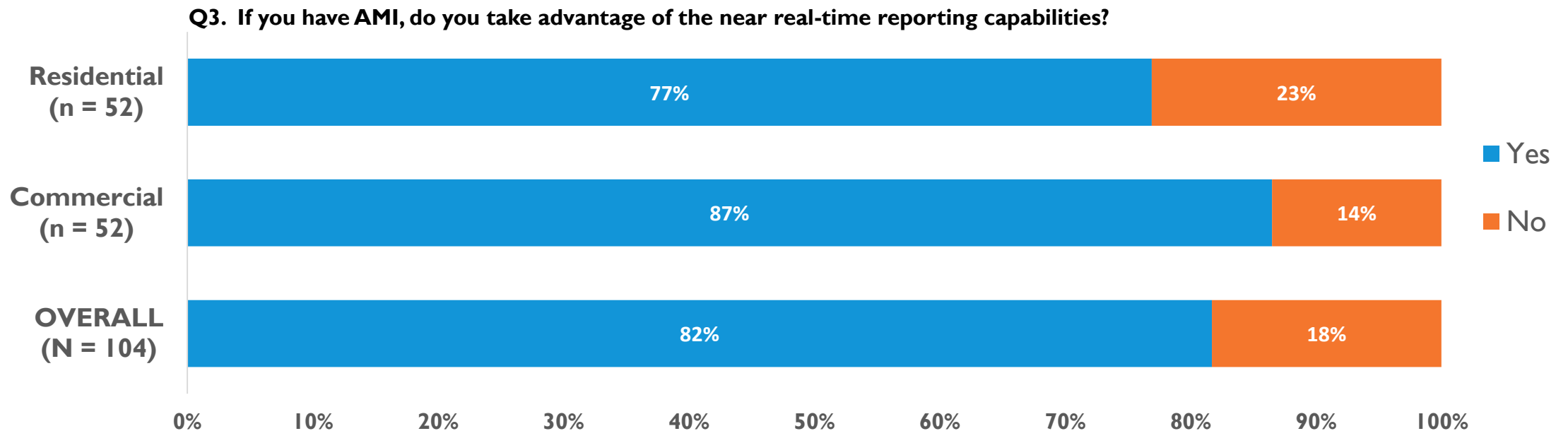
# Experience with AMI Technology

- 39% of Residential customers report having AMI tech through another utility.
- 63% of Commercial customers report having AMI tech through another utility.



# Real-Time Reporting Capabilities

- Among those \*few customers who currently report having AMI technology through another utility, the majority do take advantage of the near real-time reporting capabilities available to them.

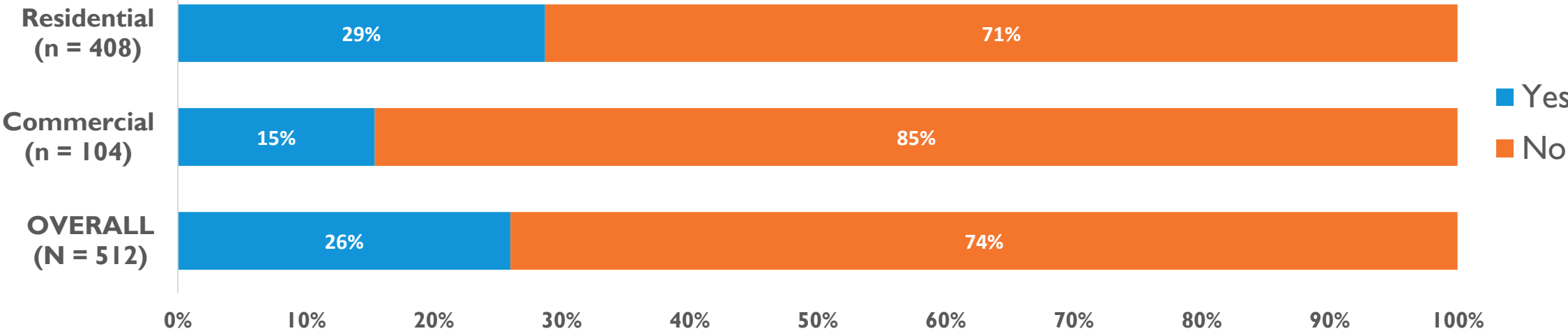


\* Please note the small base sizes when considering the responses to this question.

# Concerns about Privacy

- Overall, almost three quarters (74%) of WSSC Water customers expressed no concerns about the encrypted data that would be transmitted wirelessly.
- More Residential than Commercial customers expressed concerns.

**Q4.AMI technology wirelessly transmits encrypted data, including your account number and the number of gallons used per day in your household. Do you have concerns about these transmissions?\***



\*Question was incorrectly worded as only meter identification information and usage data is encrypted and sent to WSSC Water.



# Concerns about Wireless Transmissions (cont.)

- The few concerns expressed included...

“I do not want electronic monitoring to interfere with my other devices.”

“You might get hacked.”

“The bill will be inaccurate.”

“It is a violation of privacy.”

“That it will steal my information.”

“What is it going to cost me?”

“The purpose is to lay people off, I’m not down with that.”

“Not secured.”

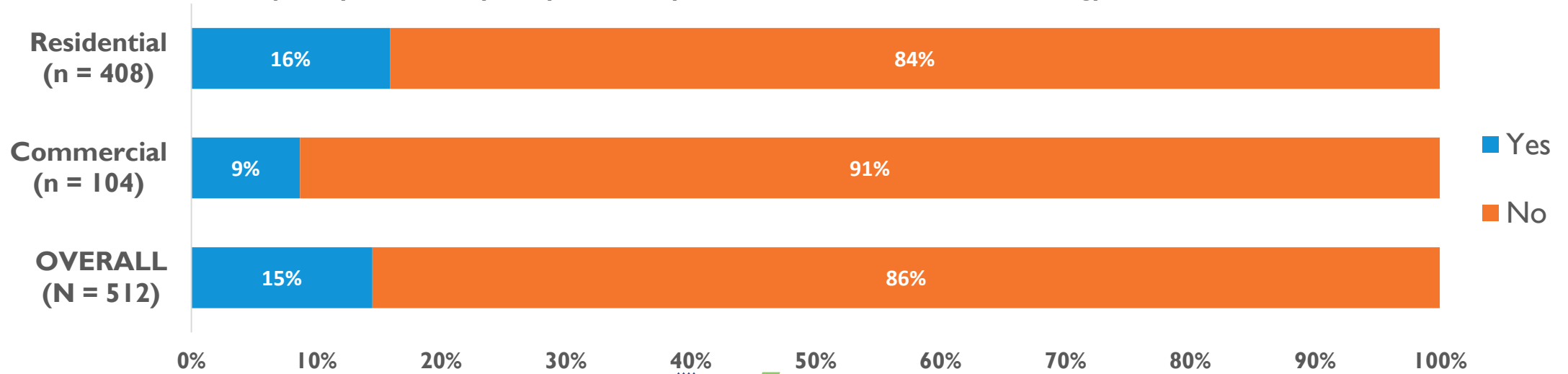
“That makes your data more vulnerable.”

“Monthly bills increased.”

# Health Concerns

- Few of the customers surveyed stated that they had any health concerns related to AMI technology (16% of Residential customers and 9% of Commercial customers).

**Q5. Similar to other household devices, such as Wi-Fi, computers, baby monitors, and cell phones, AMI emits radio frequencies at very low levels when transmitting data – far below U.S. and international exposure limits. The transmitter is located on the outside of your home/business. It sends water usage data in less than one second per day to the utility. Do you have any health concerns about AMI technology?**



# Health Concerns

- Those customers who expressed concerns regarding their health and AMI technology stated ....

“Yes, I have health concerns about smart meters due to the radiation.”

“Do all these radio waves affect the body/health.”

“You are adding another radio transmission in addition to all others that exist. Cumulatively, this could be a problem.”

“I have concerns about dizziness, ear pain, memory problems, heart palpitations, anxiety, and sleep problems.”

“The 5g radiation.”

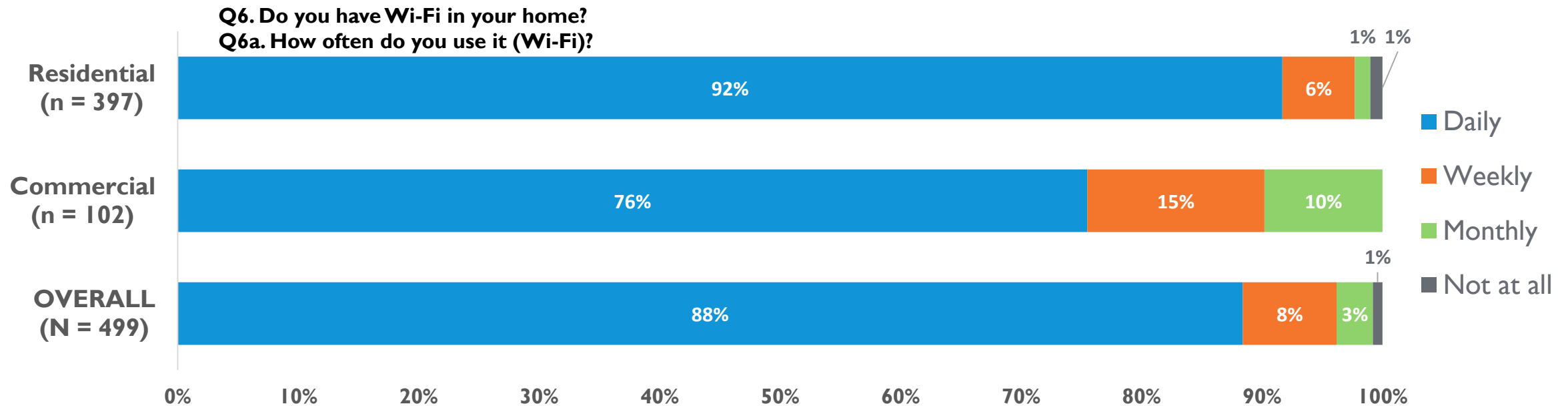
“It may harm the environment and hence leads to decrease in our reputation.”

“Well I’ve heard that radio frequencies can cause cancer over time. So, this AMI Technology could become a problem for me.”



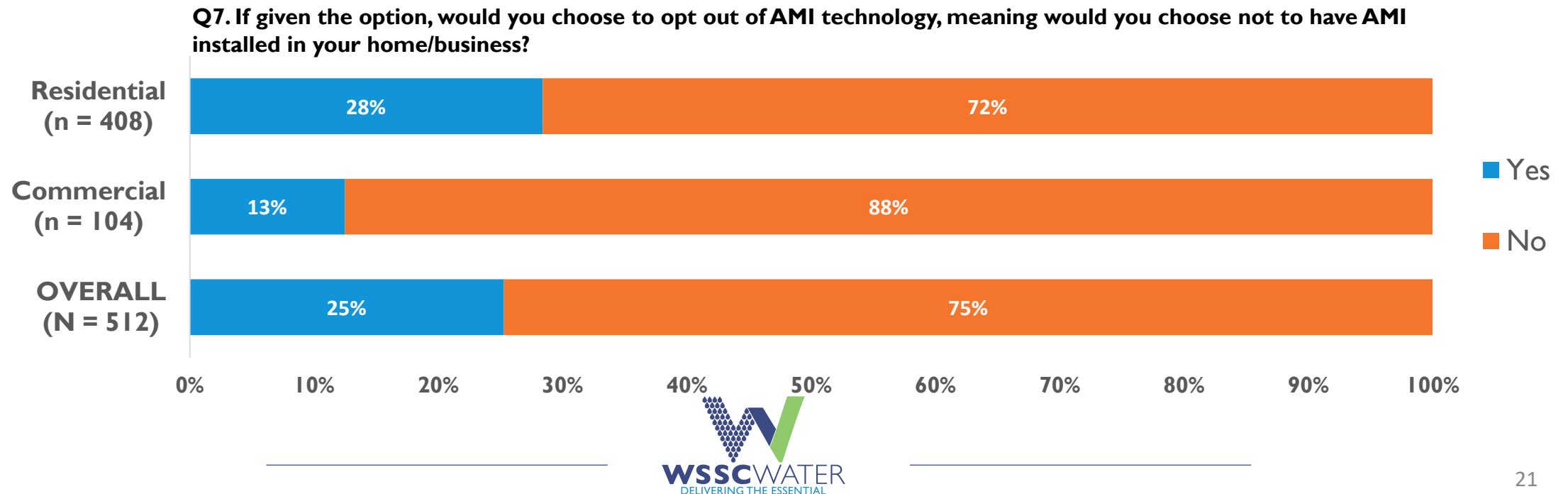
# Wi-Fi Usage

- Almost all of the respondents in this study have Wi-Fi in their home or place of business (97% of Residential customers and 98% of Commercial customers).
- Nine in ten Residential customers (92%) use Wi-Fi daily, as do three quarters of Commercial customers (76%). (Depicted in chart)



# Opting Out of AMI

- Overall, 75% of customers would not opt-out of having AMI technology.
  - More than one quarter of Residential customers, 28%, stated that they would choose to opt-out of having AMI technology in their homes.
  - Thirteen percent (13%) of Commercial customers reported the same for their businesses.



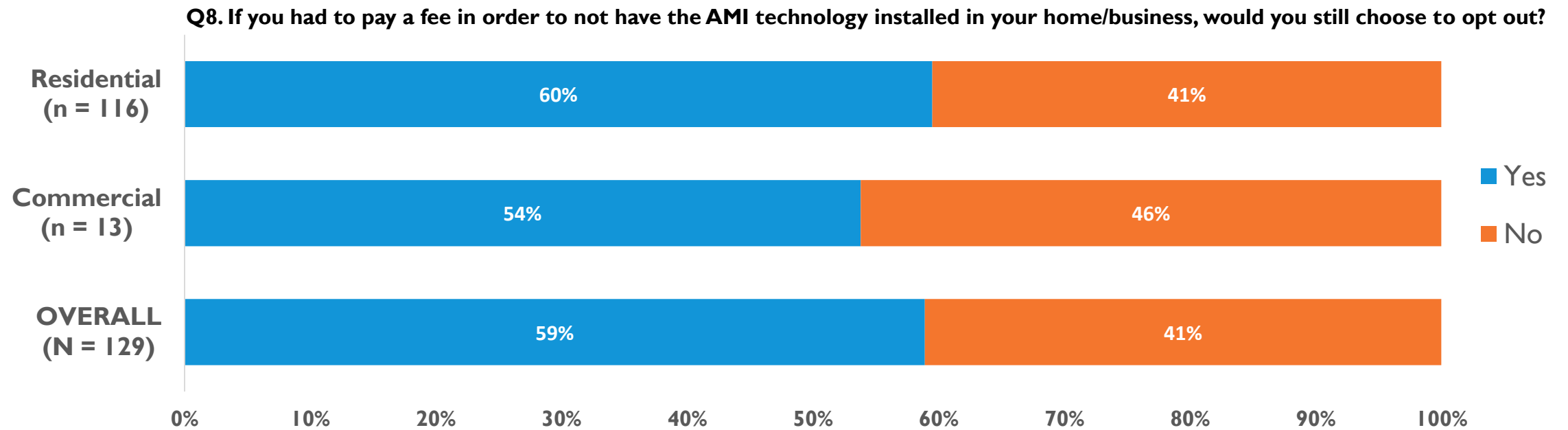
# Opting Out of AMI (cont.)

- Customers who consider opting-out stated the following reasons:



# Opt-Out Fee

- The majority of customers who would \*choose to opt-out of the AMI technology report that they would opt-out even if they had to pay a fee to do so (59%).



\* Please note the small base sizes when considering the responses to this question.

# Real-Time Water Usage Information

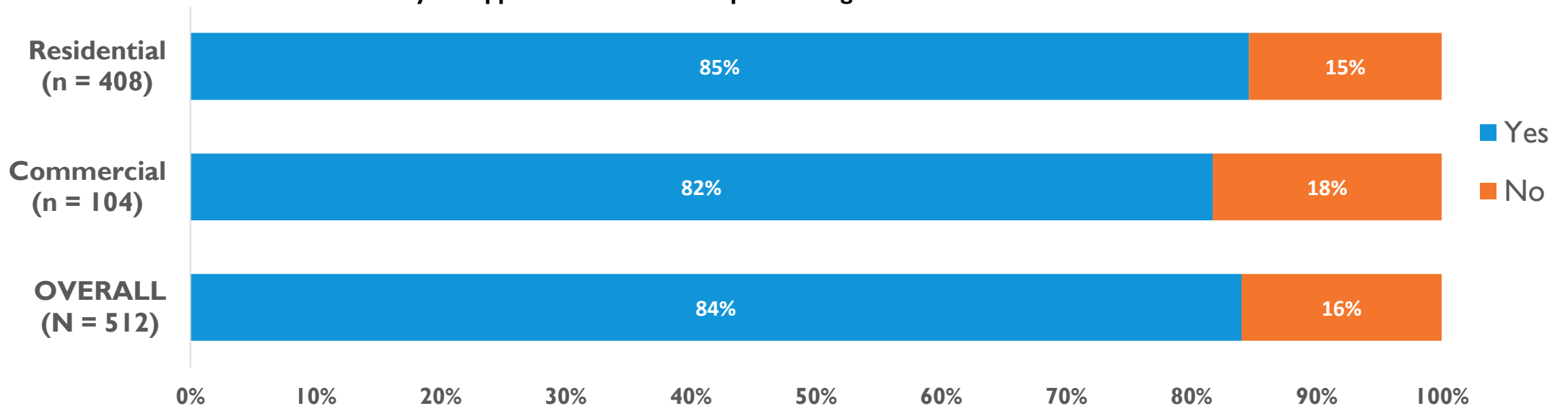
- WSSC Water customers see several benefits in being able to access near real-time water usage information.
- The ability to compare usage to previous bills seems to be of highest interest.

	Residential Customers	Commercial Customers
Compare my usage to previous bills	70%	63%
Check to see if I need to conserve	62%	51%
Figure out if I have a leak	58%	41%
Other	2%	2%
None of the above	11%	4%
<b>N =</b>	<b>408</b>	<b>104</b>

# Support for Implementing AMI Technology

- The majority of WSSC Water customers surveyed, both Residential (85%) and Commercial (82%), support the implementation of AMI technology.

**Q10. AMI technology would provide increased operational control to WSSC Water, allowing us to proactively identify leaks, improve meter reading accuracy, and lessen our carbon footprint by eliminating the need to drive to locations to read meters. Do you support WSSC Water implementing AMI?**



# Additional Information Requested

- Information that would aid customers in making their decision includes the following:

“Where on the outside of his house will it be located and what does it look like?”

“What security measures will be taken? Options and costs for service, opting out, etc.”

“What data is used from it?”

“Their environmental benefits.”

“Would I be able to opt out after the fact?”

“To know if there are any security issues with it. Any draw backs and how accurate it is.”

“What are the down sides of AMI?”

“Would there have to be a cost for this AMI technology?”

“More research needed. Would technology take human jobs?”

# Few Would Still Opt-Out

- Twenty percent (20%) of WSSC Water customers report that, despite learning of the many benefits of AMI technology, they would still choose to opt-out.
- Eight out of ten (80%) would accept the technology in their home or place of business.

