



OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE

Public Perception of Drone Delivery in the United States

RARC Report

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OFFICE OF INSPECTOR GENERAL

UNITED STATES POSTAL SERVICE

Executive Summary

The national conversation about drone delivery began in December 2013 when Jeff Bezos told the world that Amazon was experimenting with drones as an alternative to traditional delivery methods. In a 60 Minutes interview, Mr. Bezos predicted that, although the technology was still 4 to 5 years away, someday the skies would be filled with an army of flying machines zipping back and forth between warehouses and people's homes. The public reacted with astonishment, leaving some convinced that the idea represented the future of delivery, while others felt that the idea was simply a marketing stunt. Many were concerned about the implications of these airborne automatons.

Today, organizations in the United States and worldwide are bringing this once mind-bending prospect closer to reality by actively developing and testing drone delivery systems. Drones have the potential to offer substantial cost savings to deliverers while also drastically improving consumers' ecommerce experience by offering extraordinarily fast delivery at any time of day to wherever a person is physically located — not just their home address. At the same time, filling the sky with merchandise-laden robots is a proposition that raises alarm for many citizens, including those who anticipate never benefitting from the service firsthand.

If the U.S. Postal Service intends to consider the option of incorporating drones into its operations, tracking the public's rapidly evolving perception of this new mode of delivery will be essential to shaping the groundwork of the Postal Service's strategy. Though it will still take a few years for the technology to mature and the regulatory framework to emerge, proactively examining the concept could allow the Postal Service to better assess its operational feasibility, fundamental economics, regulatory compliance, and social implications.

In order to understand the current state of public opinion on drone delivery, the U.S. Postal Service Office of Inspector General (OIG) administered an online survey targeting a nationally representative sample of 18-75 year-old residents in all 50 states and the District of Columbia in June 2016. Topics covered by the survey included the overall appeal of drone technology, its most and least interesting applications, the believability of claims about its potential benefits, the public's expected timeframe for implementation, potential concerns, and how the public would view drone delivery if it were offered by five prominent players in the logistics and technology fields.¹ The survey methodology and results were developed and executed internally by OIG. External review was then provided by an expert on survey research methodologies.²

¹ Five organizations were tested for this research: The U.S. Postal Service, Federal Express, United Parcel Service, Amazon, and Google.

² External review provided by Chase H. Harrison, Associate Director of the Program on Survey Research and Preceptor in Survey Research Methods at Harvard University. *Institutional affiliation provided for identification purposes only.*

Analysis of the survey results yielded several key findings, including

- **Drones are on the horizon:** The American public anticipates that drone delivery will be offered within the next 5 to 10 years.
- **An ambiguous reception:** More Americans like the concept of drone delivery than dislike it, but a large number have yet to decide.
- **Americans do not yet trust drone technology:** Drone malfunction is the public's primary concern — far more than fears about intentional misuse.
- **Different groups have notably different perspectives:** Different age groups, genders, important postal customer groups, geographic regions, and residents of urban, suburban, and rural areas all display differing levels of interest in drone delivery.
- **Knowledge drives enthusiasm:** Exposure to information about drone delivery correlates with greater interest in the idea.
- **Speedy delivery piques the public's interest:** 1-hour delivery is the public's most interesting application, and delivery speed is the technology's most believable benefit. Emergency delivery also garners interest.

- **Too soon to launch:** It may be too soon for any organization to offer drone delivery, as offering the service now leads to a drag on overall brand positivity.
- **Drone Delivery could improve the Postal Service's ratings as an innovative company:** Despite its drag on overall brand positivity, association with drone delivery makes the Postal Service look more innovative.

This paper, which employs an approach that is common in survey and market research, begins with an overview of the survey's methodology, as well as a summary of key findings and detailed data for the national sample. Next, five separate sections will focus on the differences in opinion that emerged among several key subgroups, like gaps between the residents of urban, suburban, and rural areas, or differences between how men and women feel about the concept of drone delivery. The report then concludes with appendices that provide additional details about the survey methodology and the full text of the survey's questionnaire.

Table of Contents

- Cover
- Executive Summary..... 1
- Background4
 - How to Read This Report.....4
 - Methodology5
- Findings6
 - National Sample Findings.....6
 - Findings by Segment: Urban/Surburban/Rural24
 - Findings by Segment: Millenials/Generation X/Baby Boomers.....36
 - Findings by Segment: Gender48
 - Findings by Segment: Postal Regulars/Ecommerce Frequents60
 - Findings by Segment: Geographic Regions72
- Appendices.....84
 - Appendix A: Guide to Interpreting the Detailed Data Visualizations in this Report.....85
 - Appendix B: Methodology: Detailed Notes, Limitations, and Points of Contact.....92
 - Appendix C: Public Perception of Drone Delivery Questionnaire96
 - Appendix D: External Review Certification 110
 - Appendix E: Management’s Comments..... 112
- Contact Information 113

HOW TO READ THIS REPORT

This paper is different from other OIG products in that it is designed to be useful to a general audience while also meeting the reporting standards required by the field of survey research.

Each section of this paper is presented in a way that allows it to be read as a stand-alone report. For those with topline interest in drone delivery, reporting for the National Sample will hold the most interest, while those with a greater interest in the topic will find additional interest in each of the “Findings by Segment” sections.

Most of the slides in the report are designed so that they can be consumed on their own. This way, if someone takes out one slide and shares it, they can understand the findings presented without needing to see the entire report. For that reason, the footnotes

found on each slide include important details that might be different from what a general audience is used to seeing, such as notes about any statistical testing that was performed, or the full text of any question whose results are reported on the slide.

General audience members will be most interested in the findings presented at the top of each page of the report. As you move down any given slide, the information presented gets more detailed and technical.

Please see Appendix A for additional guidance on interpreting the detailed data visualizations that are presented throughout this report.

METHODOLOGY

The U.S. Postal Service Office of Inspector General (OIG) fielded a confidential online survey targeting a nationally representative sample of 18-75 year-old residents of the 50 United States and the District of Columbia. Respondents were selected from an opt-in internet panel, solicited by email, and incentivized to complete the survey on the OIG's online survey platform by Survey Sampling International (SSI), per their standard sampling procedures. The survey was conducted in English.

Quota sampling procedures were employed during the survey field period in order to improve the representativeness of the data collected. Quotas were employed on age, gender, nativity within ethnicity, race, and geographic region.

Prior to analysis, data were weighted to U.S. Bureau of the Census population estimates on all quota variables, as well as on education and employment status. Data were also weighted to reflect current market estimates of the proportion of Americans that had purchased something online in the past month. All data and base sizes in this report are weighted.

Please see Appendix B of this document for more information about the survey methodology employed for this research.

Field Dates: June 9 – June 19, 2016

Total Respondents: 1465

- National Sample: 1207
- Oversample of residents from Rural or Remote areas: 258
 - *Note:* This oversample was excluded from all analyses except those comparing Urban, "Suburban or Small Town," and "Rural or Remote" groups

Median Interview Length: 9 minutes 59 seconds

95% confidence interval (National Sample): +/- 2.8%*

*This interval is being provided as a benchmark. +/- 2.8% is the size of the confidence interval that would be calculated from a probability sample of n=1207. Like most online research, this study uses a non-probability sample. The actual interval is likely to be somewhat larger, as other sources of error may also impact findings.



National Sample Findings

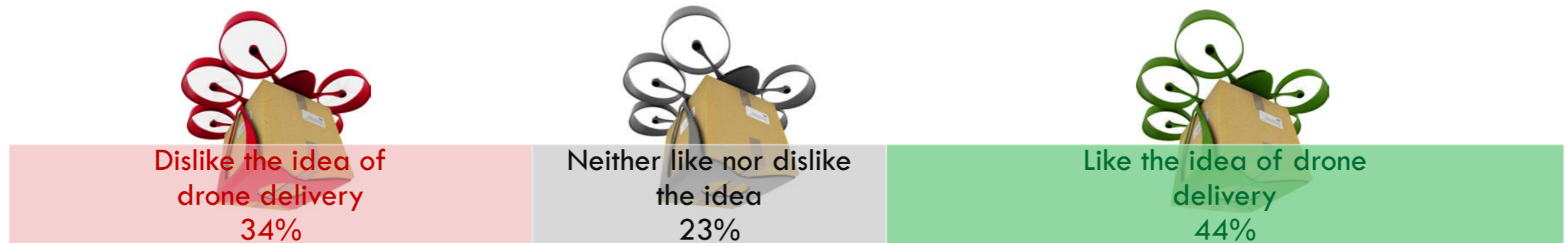


NATIONAL SAMPLE FINDINGS

- **Drones are on the horizon:** The American public anticipates that drone delivery will be offered within the next 5 to 10 years.

Expect drone delivery by 2021 (5 years)	2026 (10 Years)	2027 (11+ Years) or Never
75%	9%	16%

- **An ambiguous reception:** More Americans like the concept of drone delivery than dislike it, but a large number have yet to decide.

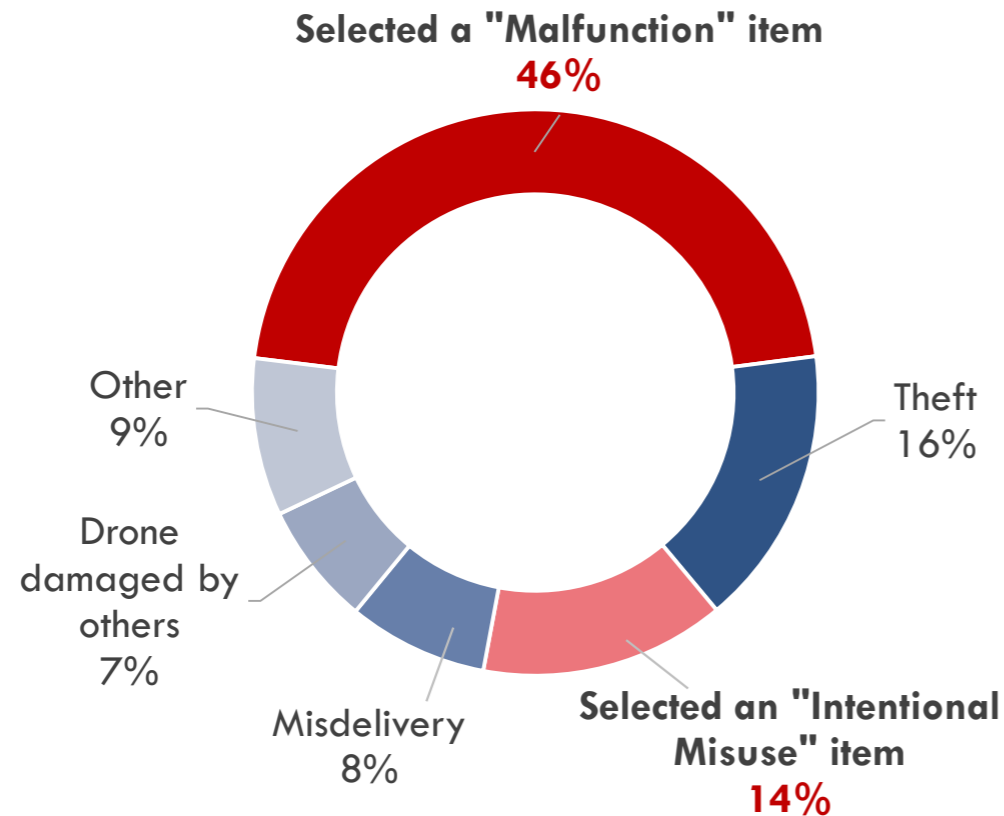


Findings presented here are based on the National Sample (n=1207). 95% confidence interval (National Sample): +/- 2.8%. The data shown combines scale points for clarity of presentation. Please find detailed data and full question text in subsequent sections of this report.

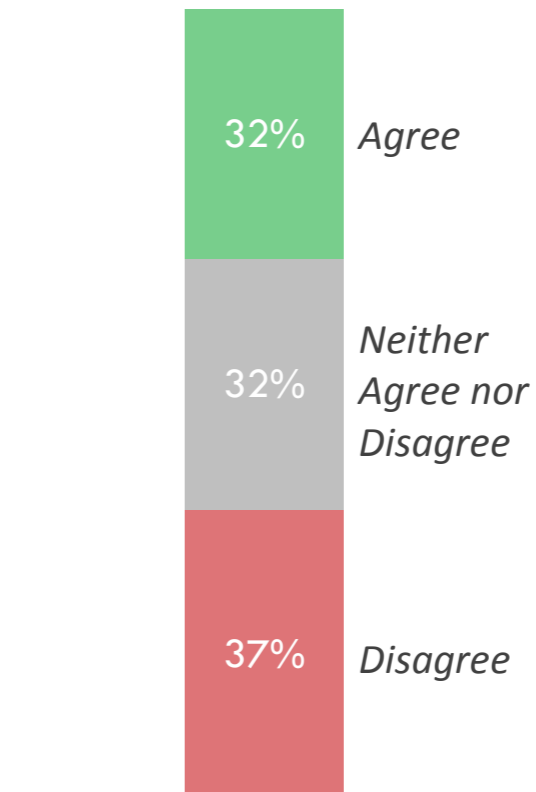
NATIONAL SAMPLE FINDINGS

- Americans do not yet trust drone technology:** Drone malfunction is the public’s primary concern — far more than fears about intentional misuse.

Primary Drone Delivery Concern*



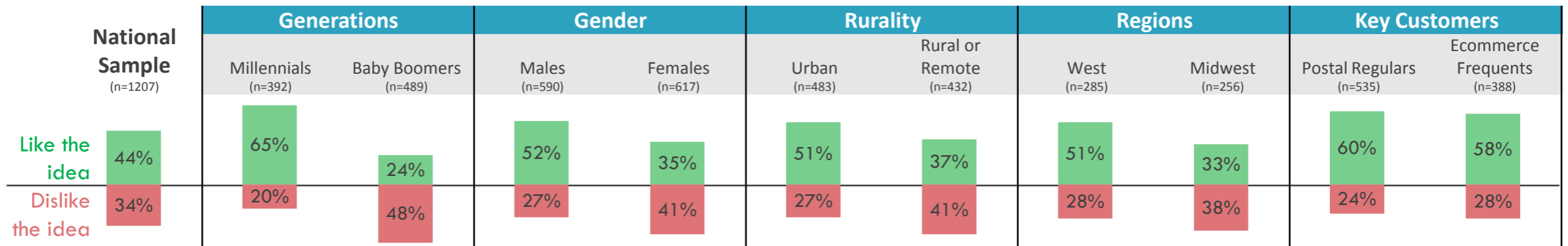
Drone Delivery Would Be Safe



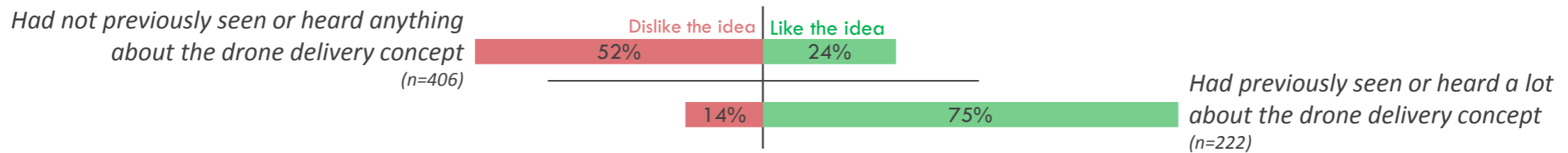
*Findings presented based on the 89% of National Sample that reported having at least one concern with drone delivery (n=1080). "Malfunction" items include "might malfunction and damage the package it's carrying," "might malfunction and damage property," "might malfunction and injure someone." "Intentional Misuse" items include "might be used to transport illicit goods," "might not be used in a way that respects my privacy," and "might be intentionally used to injure people or property." | **Findings presented based on the National Sample (n=1207). 95% confidence interval (National Sample): +/- 2.8%. | Data shown here combines data points for clarity of presentation. Please find detailed data and full question text in subsequent sections of this report.

NATIONAL SAMPLE FINDINGS

- **Different groups have notably different perspectives on the concept of drone delivery.**



- **Knowledge drives enthusiasm:** Exposure to information about drone delivery correlates with greater interest in the idea.



Data shown here combines data points for clarity of presentation. Please find detailed data, definitions of subgroups, and full question text in subsequent sections of this report.

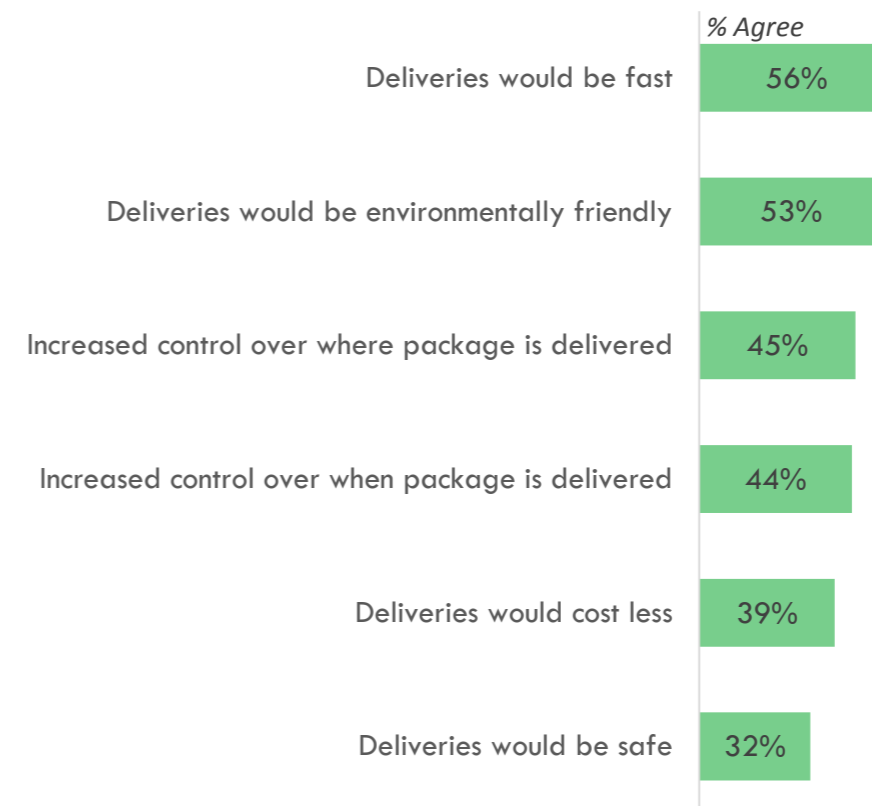
NATIONAL SAMPLE FINDINGS

- ***Speedy delivery piques the public’s interest:*** One-hour delivery is the public’s most interesting application, and delivery speed is the technology’s most believable benefit. Emergency delivery also garners interest.

Ranked Interest in Drone Delivery Applications

1. One-hour delivery – Top Ranked
2. Delivery in cases of emergency
3. Delivery to hard to reach locations (mountains, islands, etc)
4. Delivery to wherever I am, not just my home
5. Delivery to remote locations where few people live
6. Sunday delivery
7. Evening delivery – Bottom Ranked

Believability of Drone Delivery Benefits

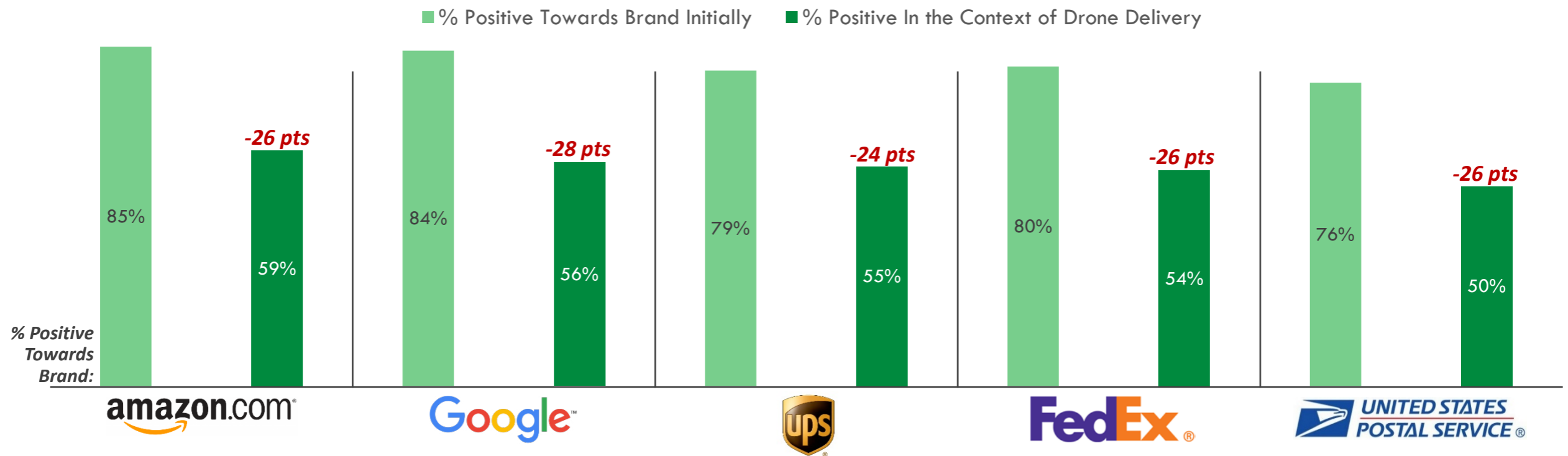


Findings presented here are based on the National Sample (n=1207). 95% confidence interval (National Sample): +/- 2.8%. “Believability” data combines scale points for clarity of presentation. Please find detailed data and full question text in subsequent sections of this report.

NATIONAL SAMPLE FINDINGS

- Too soon to launch:** It may be too soon for any organization to offer drone delivery — the public would view each company included in the survey less positively if they were to offer the service today.

Effect of Drone Delivery on Brand Positivity

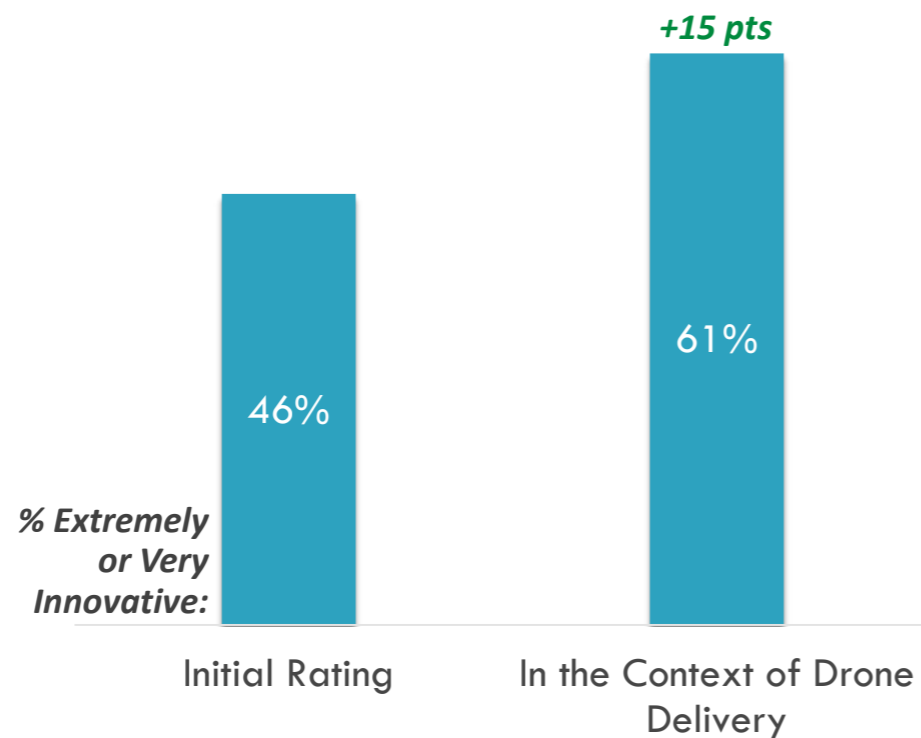


Findings presented here are based on respondents slightly familiar or more with all brands (n=1126). Data shown combines data points for clarity of presentation. Please find detailed data and full question text in subsequent sections of this report.

NATIONAL SAMPLE FINDINGS

- Drone Delivery could improve the Postal Service’s rating as an innovative company:** Despite its drag on brand positivity, association with drone delivery makes the Postal Service look more innovative.

Effect of Drone Delivery on “Innovative Company”



Findings presented here are based on respondents slightly familiar or more with all brands (n=1126). Data shown combines data points for clarity of presentation. Please find detailed data and full question text in subsequent sections of this report.

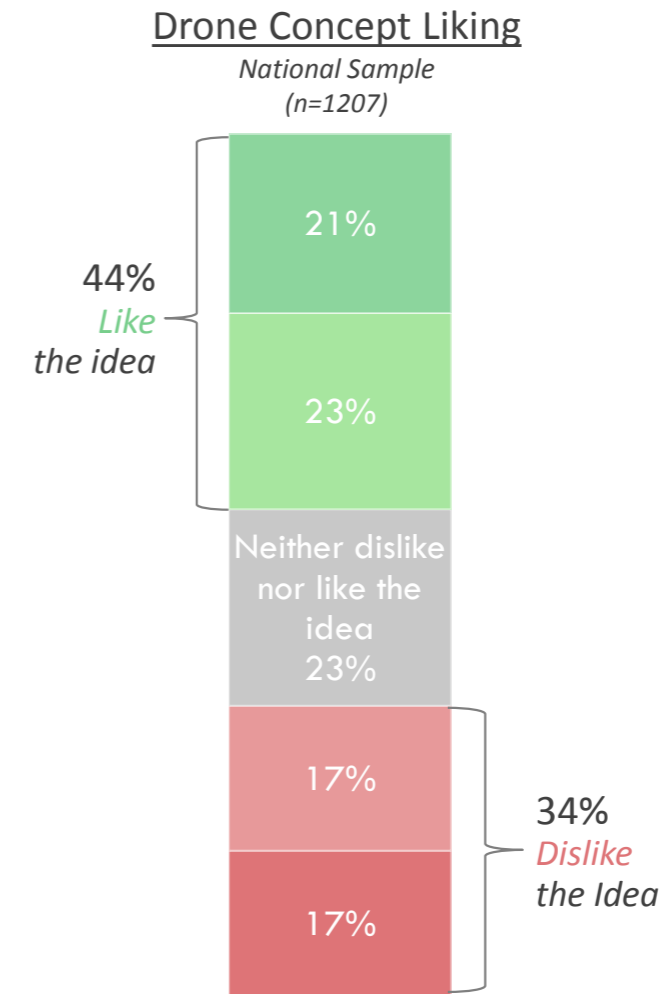
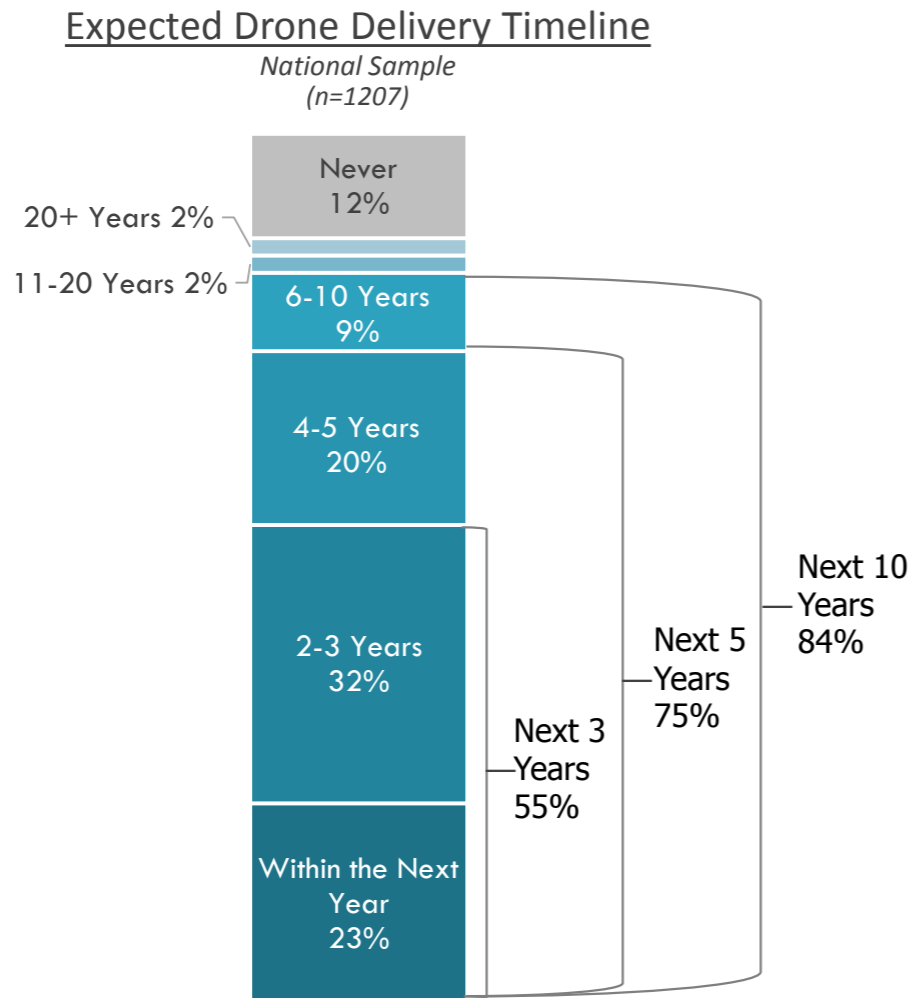


Detailed Report

National Sample

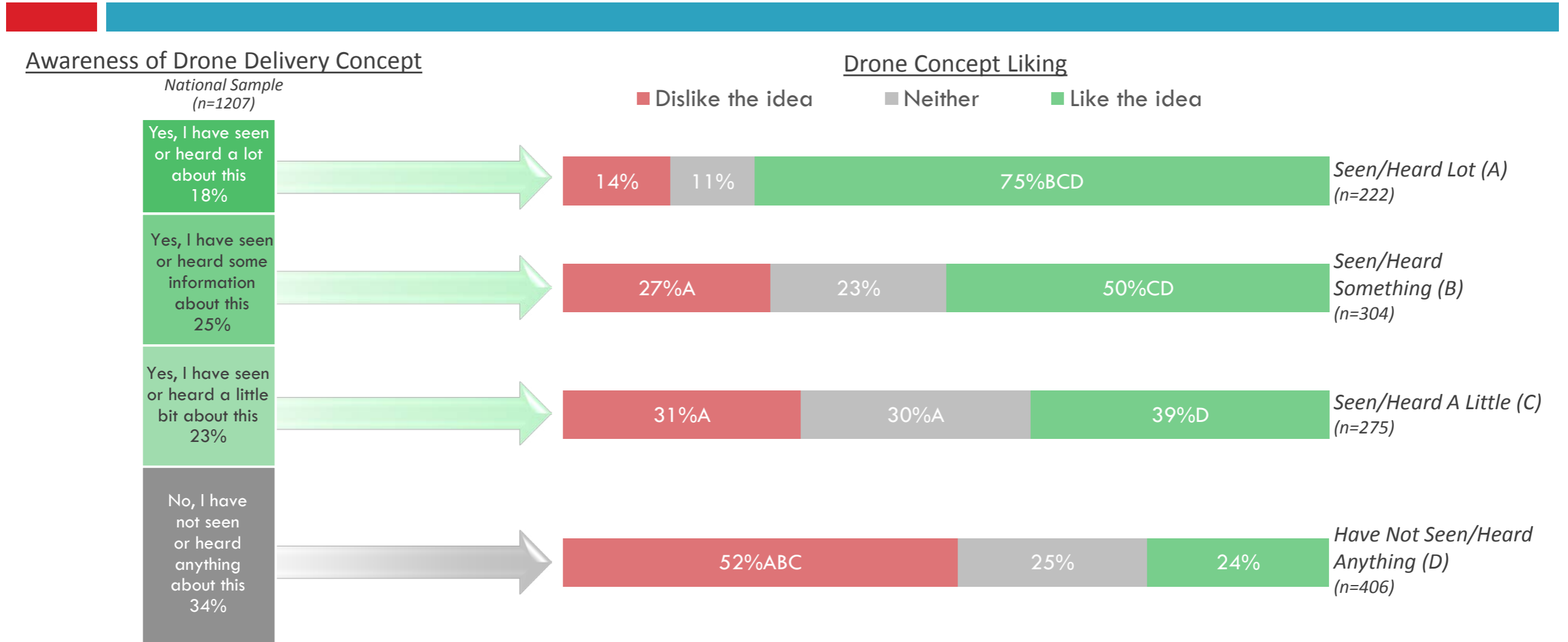


While more than eight in 10 feel that drone delivery is coming in the next decade, the public has mixed feelings about the concept.



[Following Concept Exposure] Q15. When, if ever, do you expect that companies might start to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? (Scale: Within the next year; Within the next 3 years, but not the next year; Within the next 5 years, but not the next 3 years; Within the next 10 years, but not the next 5 years; Within the next 20 years, but not the next 10 years; More than 20 years; Never) | Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | 95% confidence interval (National Sample): +/- 2.8%.

The more that members of the public have heard about drone delivery, the more they report liking the idea.

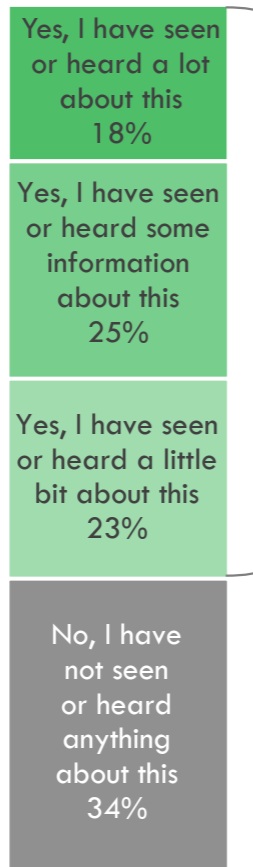


[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | [Following Concept Exposure] Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | A,B,C,D : Significantly higher than corresponding group at 95% confidence interval (c.i.) | 95% c.i. (National Sample): +/- 2.8%.

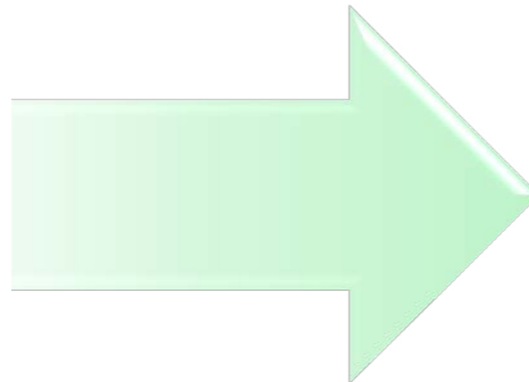
Amazon is overwhelmingly associated with drone delivery by the two in three that had previously seen or heard something about the concept.

Awareness of Drone Delivery Concept

National Sample
(n=1207)

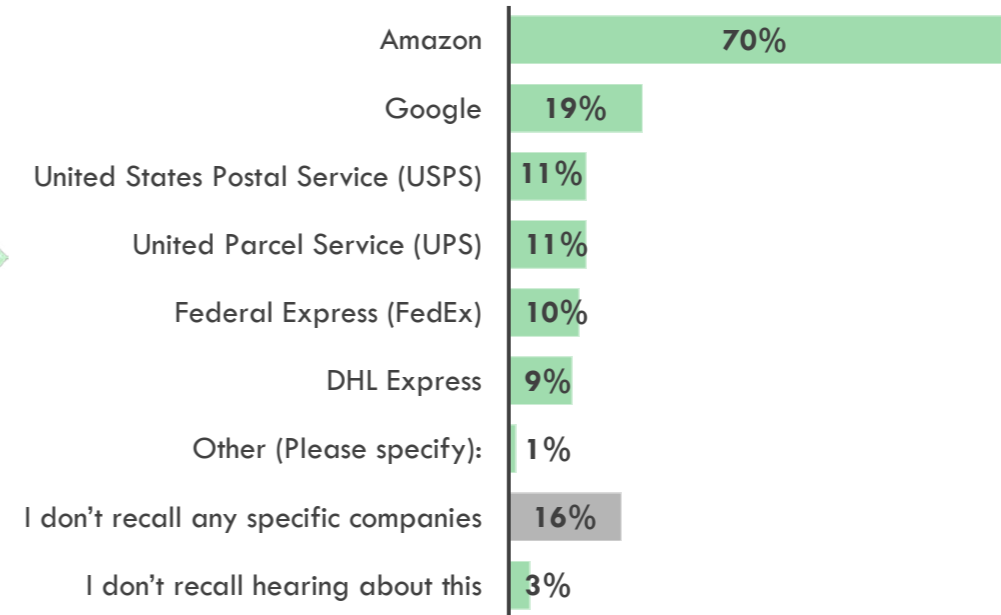


Previously Aware:
66%



Among Previously Aware: Brand Association with Drone Delivery

Aware of Concept
(n=801)



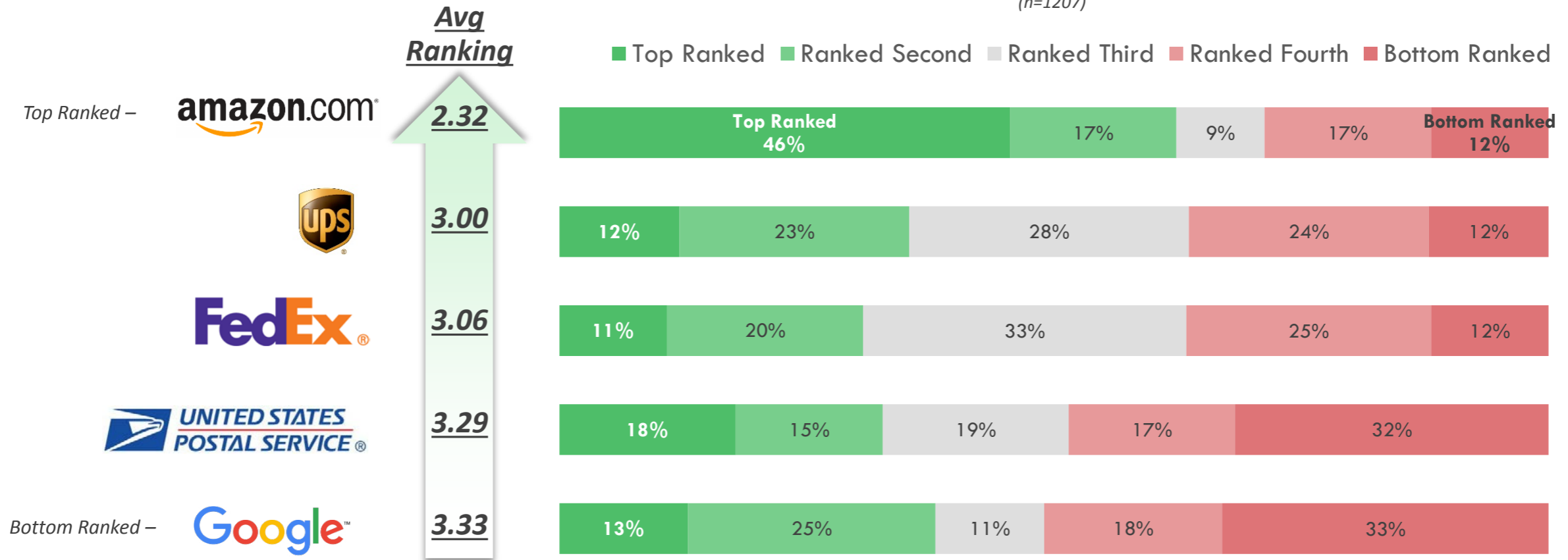
[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | Q10. According to what you have seen or heard, which, if any, of the following organizations are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? Please select all that apply. | 95% confidence interval (National Sample): +/- 2.8%.

Amazon is by far the most trusted brand for drone delivery, likely due to their strong association with the concept.



Ranking as Trusted Brand for Making Drone Deliveries

National Sample
(n=1207)

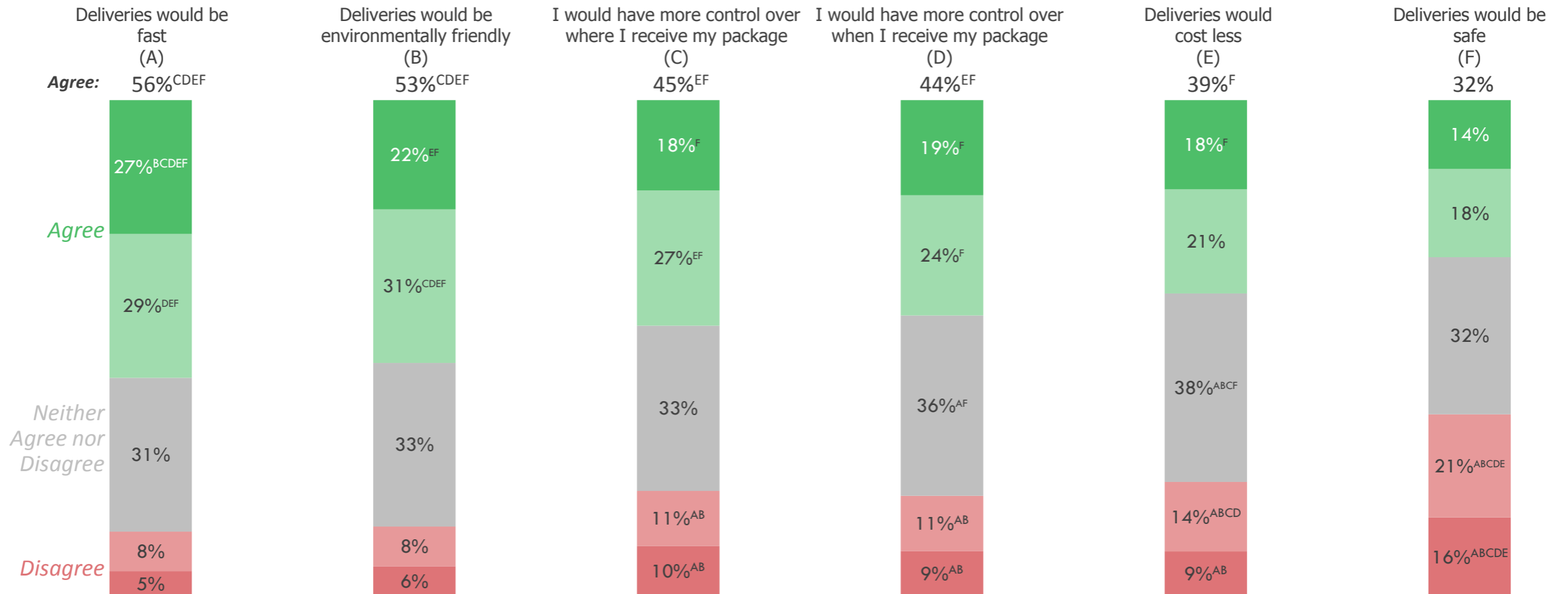


[Following Concept Exposure] Q16. Please rank the following organizations from 1 to 5, where 1 is the organization you would most trust to make deliveries using Unmanned Aerial Vehicles, and 5 is the organization you would least trust to make deliveries using Unmanned Aerial Vehicles, also known as UAVs or Drones. | 95% confidence interval (National Sample): +/- 2.8%.

While more than half of respondents agree that drone delivery would be both fast and environmentally friendly, just 32 percent agree that the service would be safe. Strikingly, 31 percent or more neither agree nor disagree that each of the proposed benefits would be true, most likely due to the novelty of the concept.

Believability of Drone Delivery Benefits

National Sample
(n=1207)

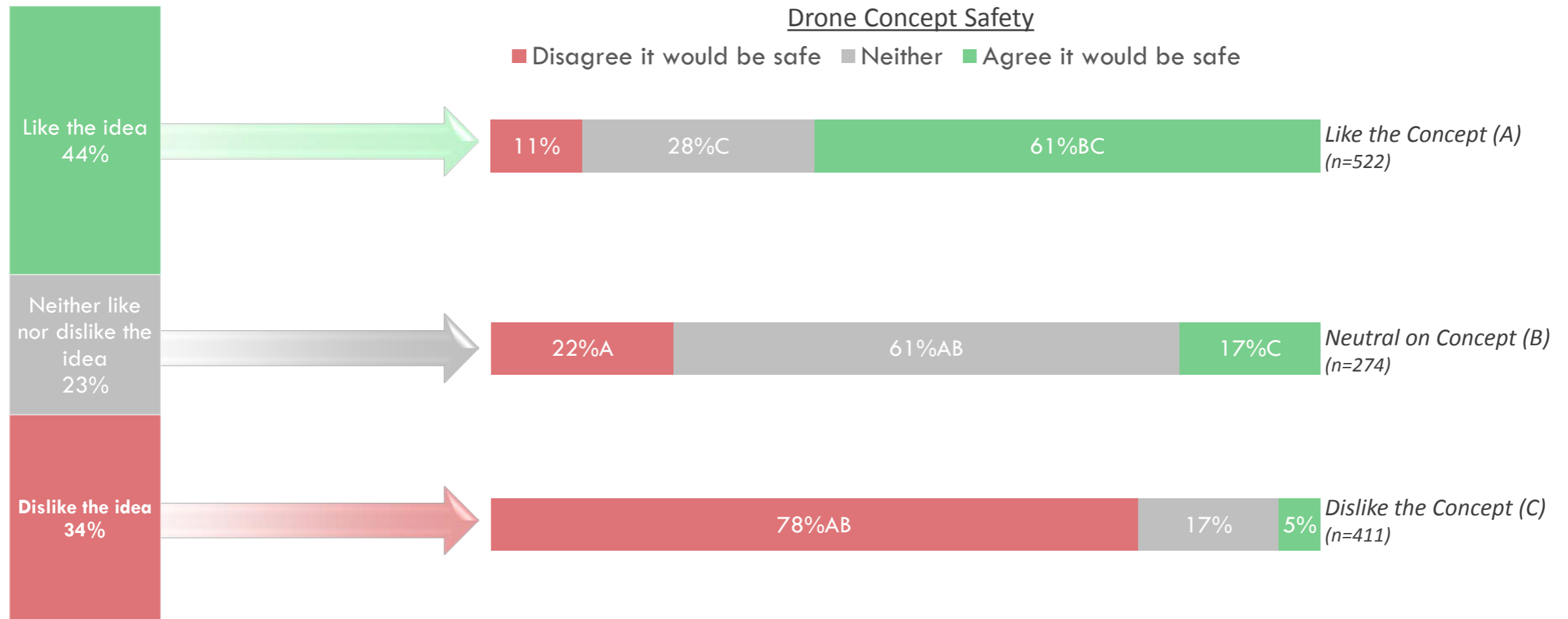


[Following Concept Exposure] Q15. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Strongly disagree). | A,B,C,D,E,F : Significantly higher than corresponding group at 95% c.i. | 95% confidence interval (National Sample): +/- 2.8%.

Liking drone delivery is strongly tied to perceptions of safety. However, even among those who like the concept, just six in 10 believe that it would be safe.

Drone Concept Liking

National Sample
(n=1207)

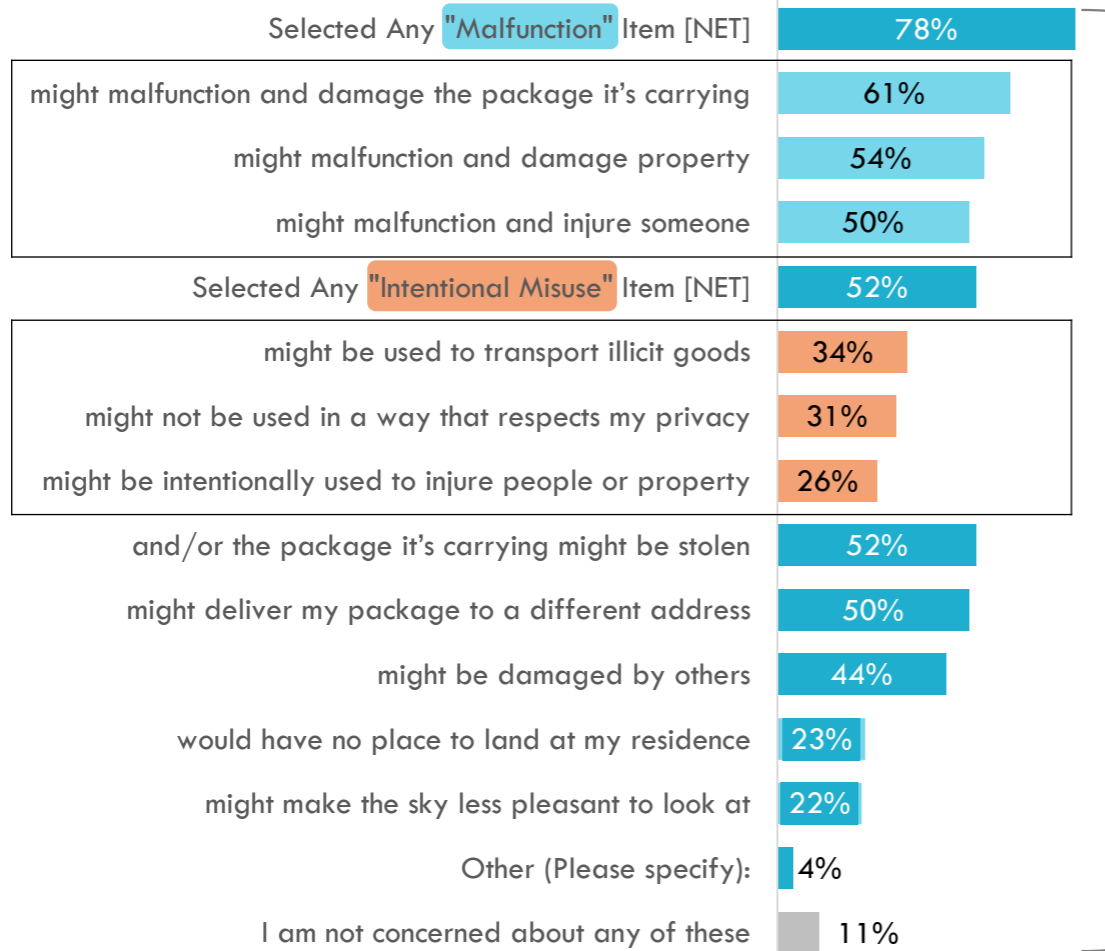


[Following Concept Exposure] Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | Q15. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Strongly disagree). | A,B,C : Significantly higher than corresponding group at 95% c.i. | 95% confidence interval (National Sample): +/- 2.8%.

The public does not yet trust drone technology: about three in four respondents selected some form of malfunction as one of their concerns, and nearly half cited malfunction as their *primary* concern.

All Drone Delivery Concerns

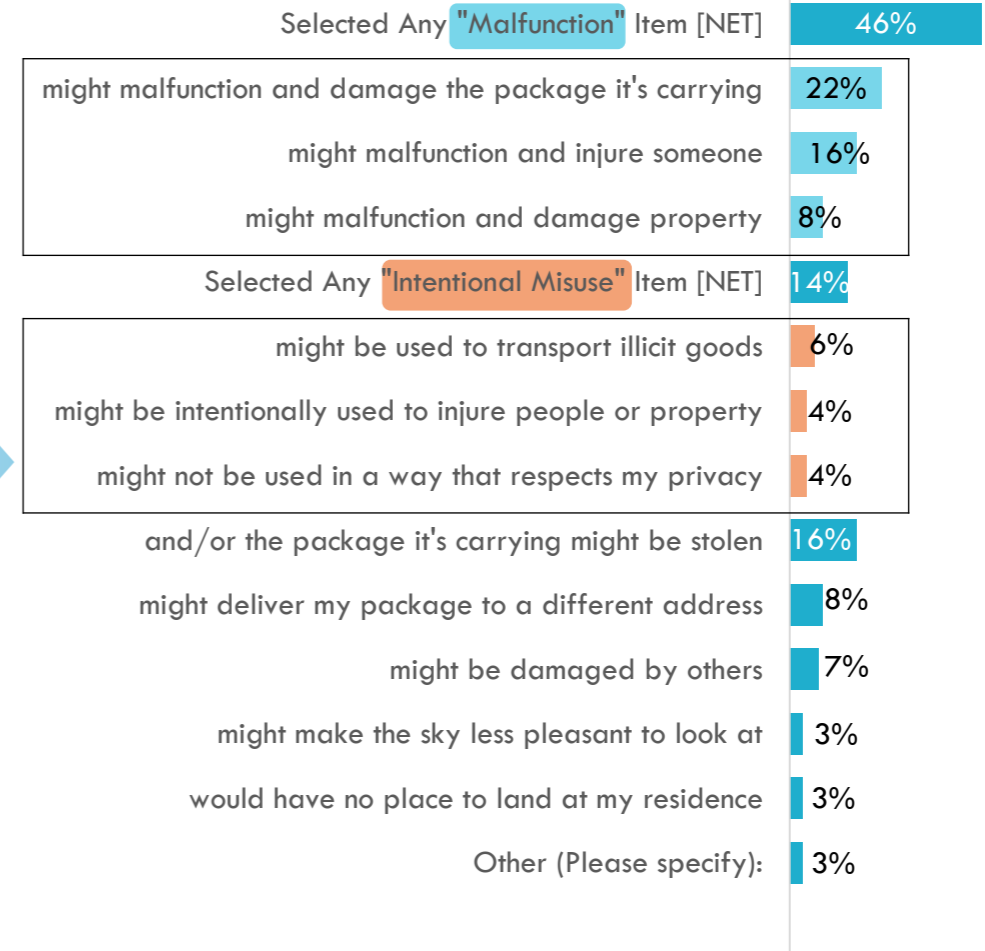
National Sample (Select All That Apply)
(n=1207)



Selected Any
Concern
89%

Primary Drone Delivery Concerns

Among Respondents Who Reported At Least One Concern
(n=1080)

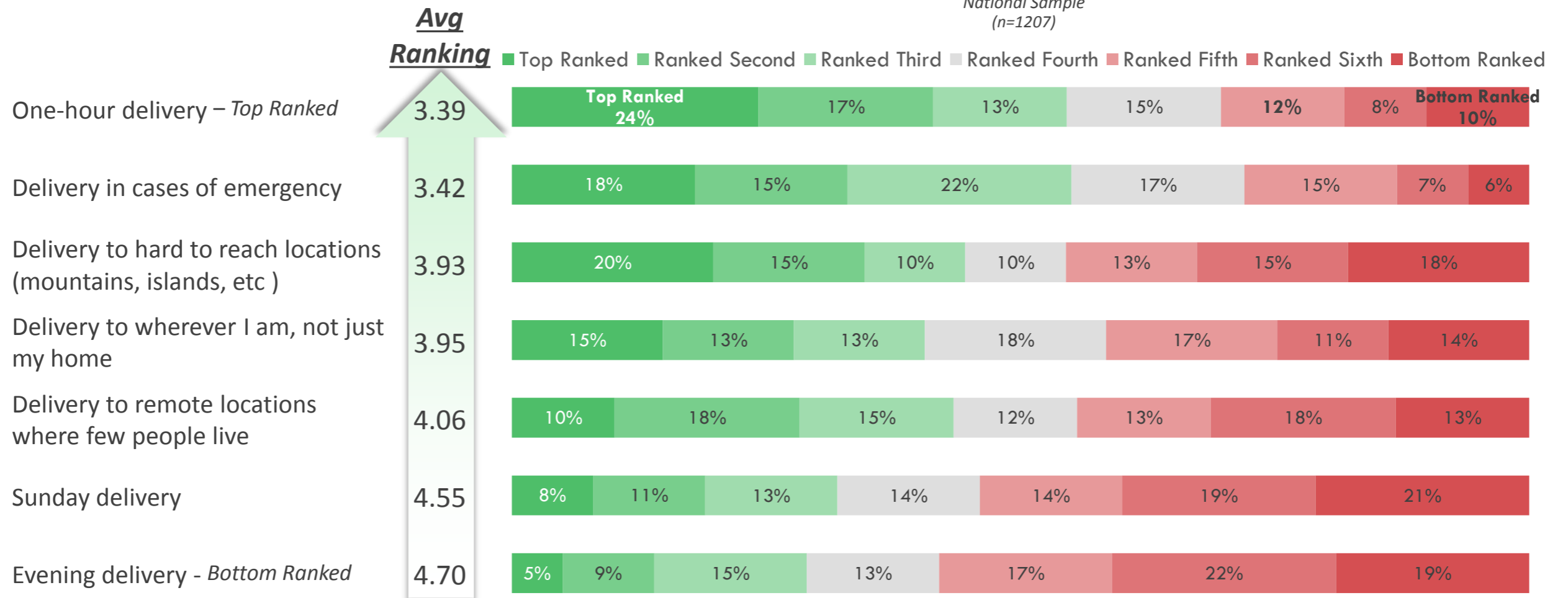


[Following Concept Exposure] Q20. Which, if any, of the following would you be concerned about if companies were to deliver mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? Are you concerned the Unmanned Aerial Vehicle...Please select all that apply. | Q21. And which of the following would you be most concerned about if a company were to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? Please select the one item below that you would be the most concerned about. | 95% confidence interval (National Sample): +/- 2.8%.

Americans find one-hour delivery and delivery in cases of emergency to be the most interesting applications of drone technology. There is least interest in Sunday and evening delivery.

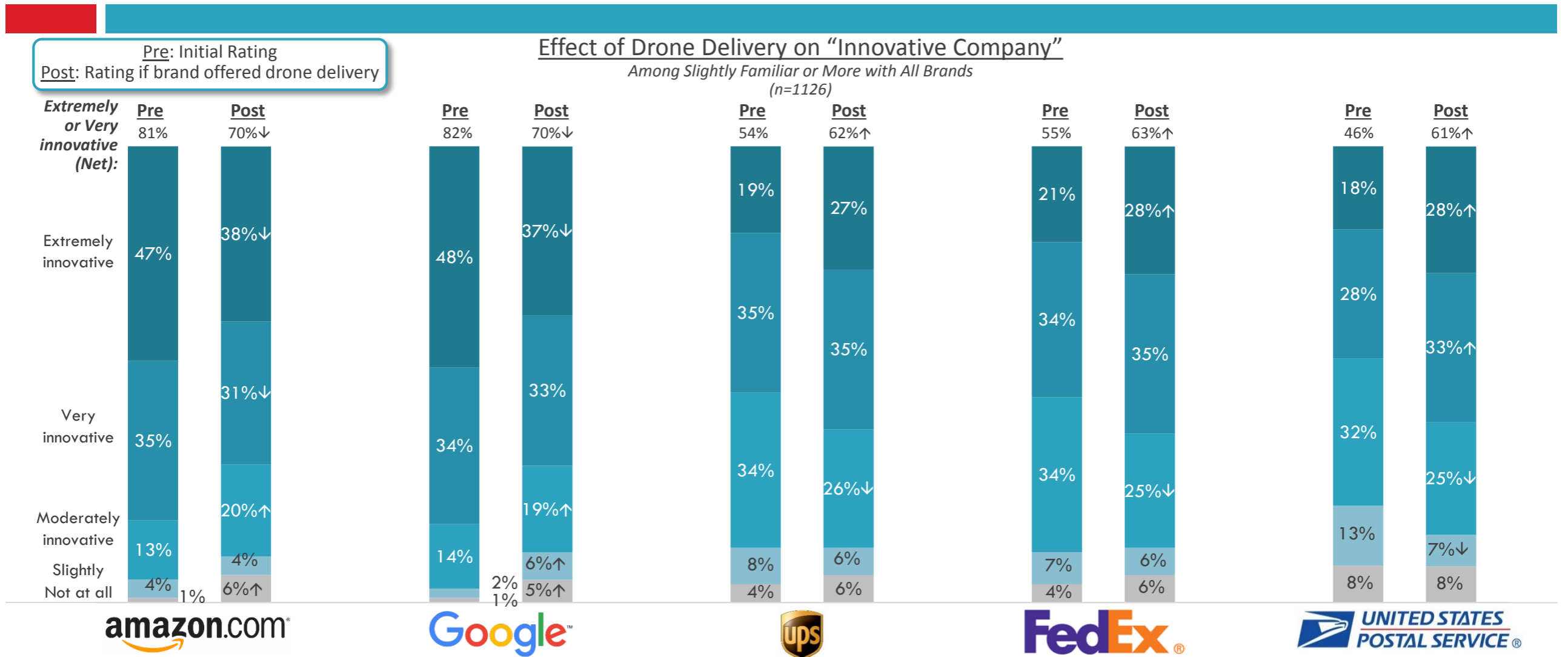
Ranking of Most Interesting Applications for Drone Delivery

National Sample
(n=1207)



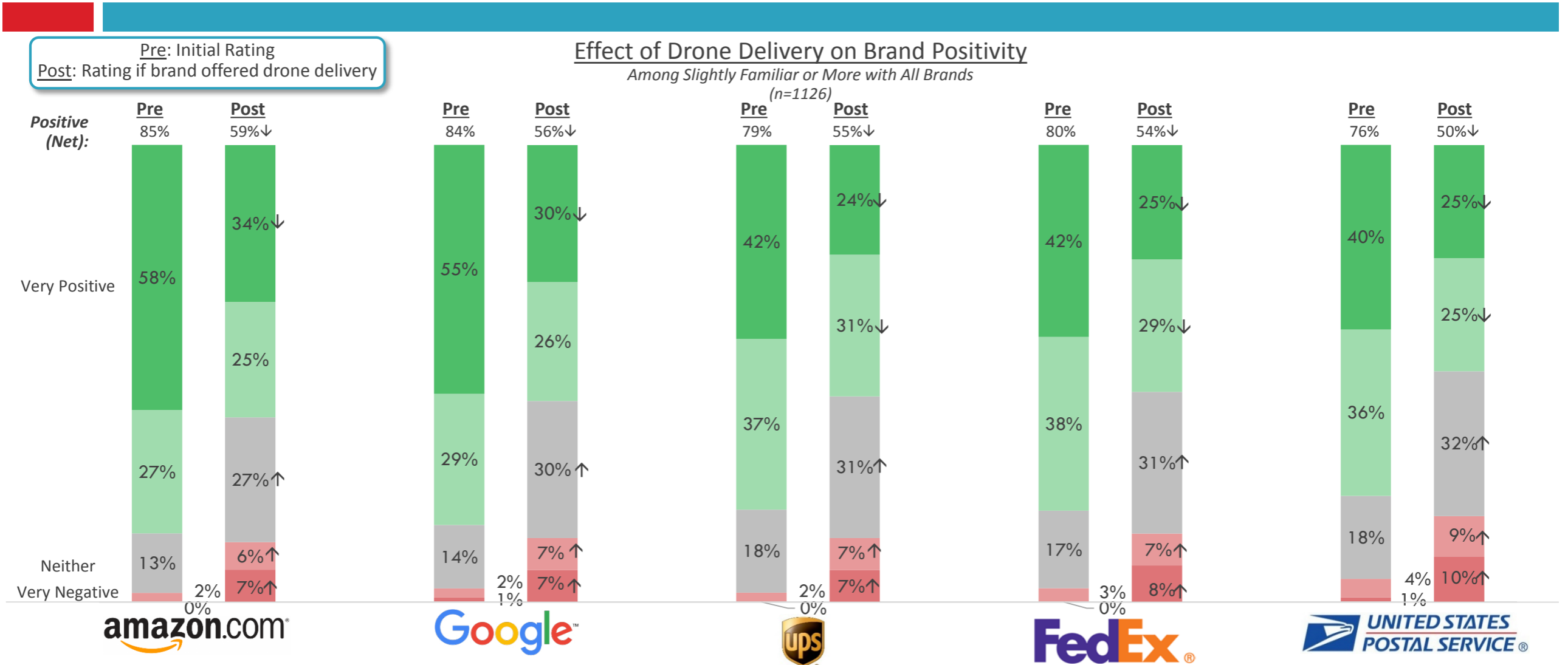
[Following Concept Exposure] Q19. Please rank the following services from 1 to 7, where 1 is the most interesting use of Unmanned Aerial Vehicles for the delivery of mail or packages, and 7 is the least interesting use of Unmanned Aerial Vehicles, also known as UAVs or Drones, for the delivery of mail or packages. | 95% confidence interval (National Sample): +/- 2.8%.

Logistics organizations enjoy boosts to their “innovative company” ratings when linked to drone delivery. Amazon and Google’s extremely high initial ratings decline — possibly due to the public’s general resistance to a concept that they do not yet trust, or perhaps because the public is hesitant about these companies offering a service that is quite different from their traditional products.



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For innovative company) Q3. Overall, how innovative do you feel the following organizations are? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | [Following Concept Exposure] (For innovative company) Q18. Overall, how innovative would you feel that the following organizations were if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.

It may be too soon to offer this unproven technology: offering drone delivery today acts as a drag on brand positivity for all five organizations tested.



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For brand positivity) Q2. How positive or negative is your overall impression of the following organizations? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | [Following Concept Exposure] (For brand positivity) Q17. How positive or negative would your overall impression of the following organizations be if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.



Findings by Segment

Urban  / *Suburban*  / *Rural* 

Groups in this section were defined based on responses to the question S3. Which of the following best describes the area where you live? Respondents classified as Urban answered “A city or urban area.” Respondents classified as Suburban answered “A town or suburban area” or “A small town.” Respondents classified as Rural answered “A rural area” or “A remote area with few other nearby residents.”



SUMMARY OF FINDINGS

Urban — Suburban/Small Town — Rural/Remote

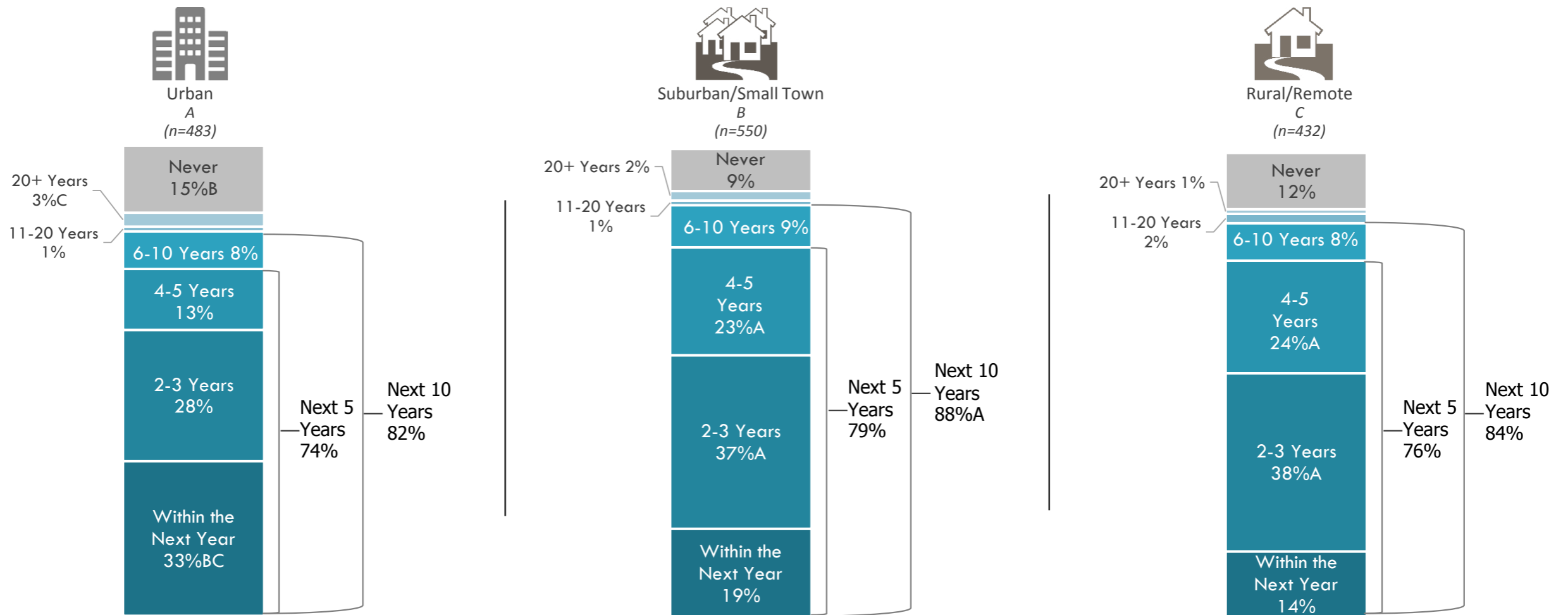
- Urbanites are more informed and open to drone delivery than Suburban/Small Town or Rural/Remote respondents, both of whom are wary of the concept.
- Although there might be a strong case for delivery by drone to improve customer experience in Rural/Remote areas, the respondents residing in these areas are skeptical that drone delivery would give them more control over their delivery experience.
- Fear of theft and fear of delivery to an incorrect address are particularly strong among both the Suburban/Small Town and Rural/Remote groups.
- Offering drone delivery improves the Postal Service’s reputation as an innovative company, but resistance to the concept still leads to a drag on brand positivity among all three groups.



Groups in this section were defined based on responses to the question S3. Which of the following best describes the area where you live? Respondents classified as Urban answered “A city or urban area.” Respondents classified as Suburban answered “A town or suburban area” or “A small town.” Respondents classified as Rural answered “A rural area” or “A remote area with few other nearby residents.”

The public's expected timeline for drone delivery is consistent among residents of Suburban/Small Town and Rural/Remote areas. Urban residents are divided; however, they are the most likely to believe that delivery will never occur and also that it will begin to be offered within the next year.

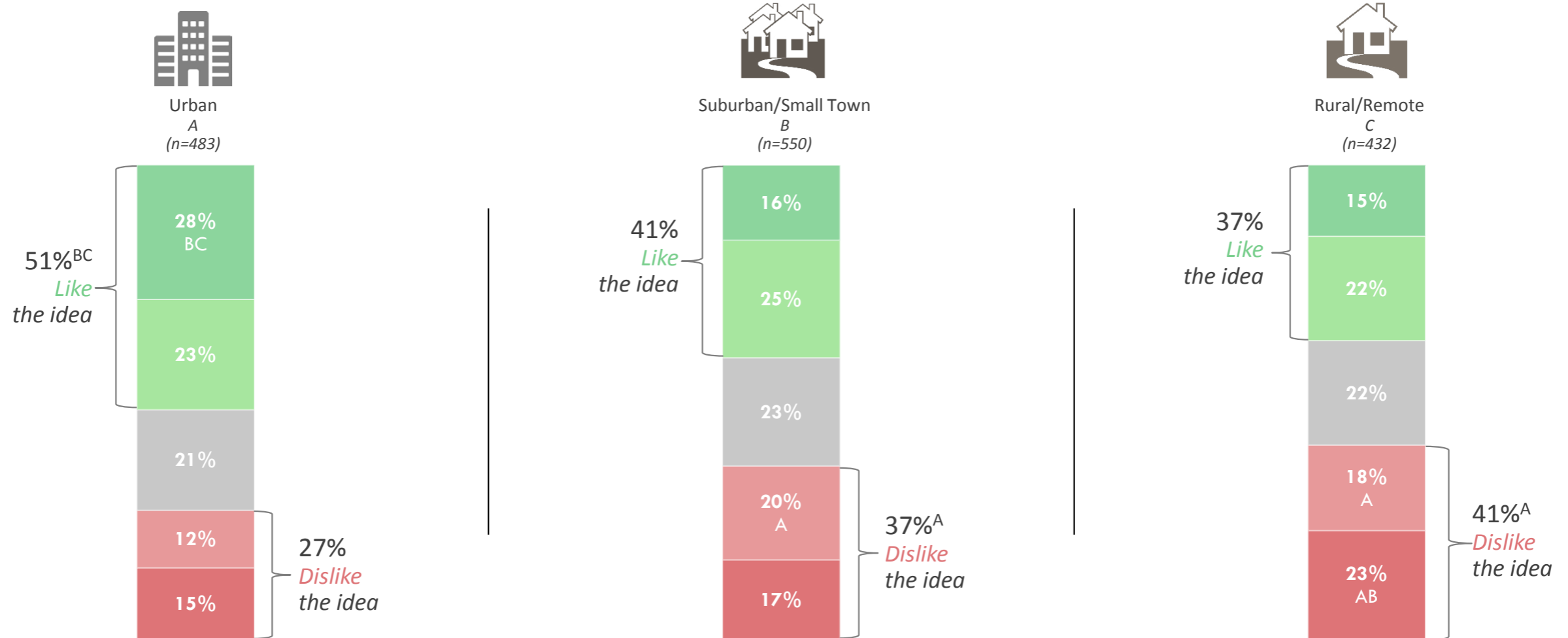
Expected Drone Delivery Timeline



Q15. When, if ever, do you expect that companies might start to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? (Scale: Within the next year; Within the next 3 years, but not the next year; Within the next 5 years, but not the next 3 years; Within the next 10 years, but not the next 5 years; Within the next 20 years, but not the next 10 years; More than 20 years; Never) | Data includes oversample of Rural/Remote Respondents | A,B,C : Significantly higher than corresponding group at 95% c.i.

Urban residents like the drone delivery concept significantly more than their counterparts in the Suburban/Small Town or Rural/Remote areas. The idea is most unpopular in Rural or Remote areas, where one in four dislike the idea very much.

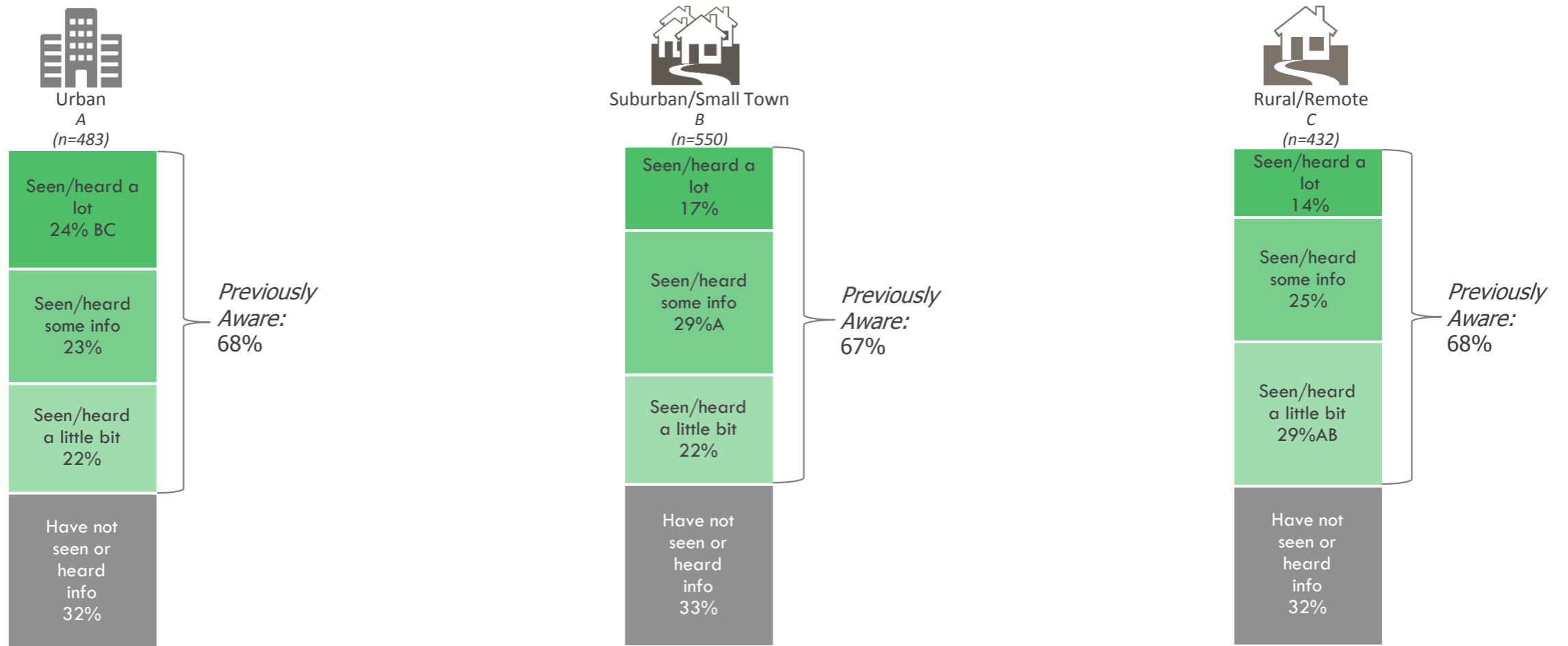
Drone Delivery Concept Liking



Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | Data includes oversample of Rural/Remote Respondents | A,B,C : Significantly higher than corresponding group at 95% c.i.

About two-in-three cite some form of prior awareness of the drone delivery concept in all three groups. Urban residents report having heard “a lot” about the concept more often than Suburban/Small Town or Rural/Remote respondents.

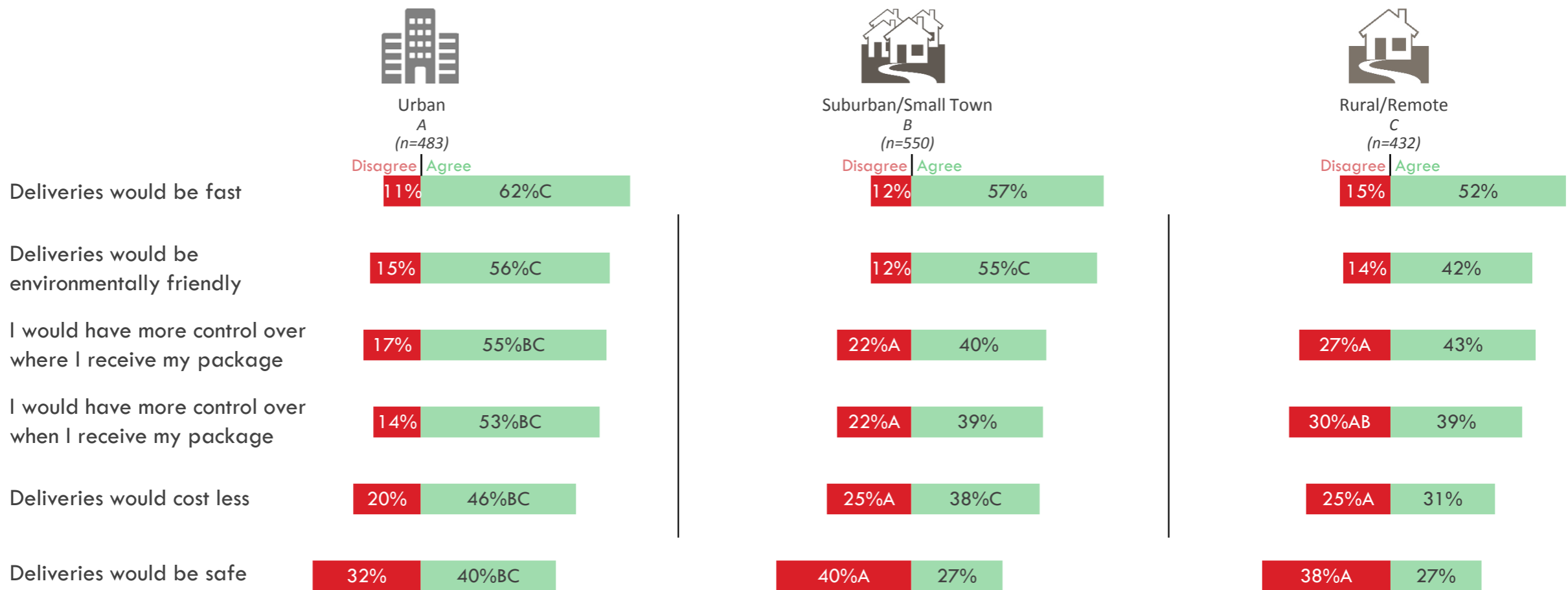
Awareness of Drone Delivery Concept



[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | Data includes oversample of Rural/Remote Respondents | A,B,C : Significantly higher than corresponding group at 95% c.l.

Both Suburban/Small Town and Rural/Remote residents are more skeptical about the safety and customer experience benefits of drone delivery than their Urban counterparts.

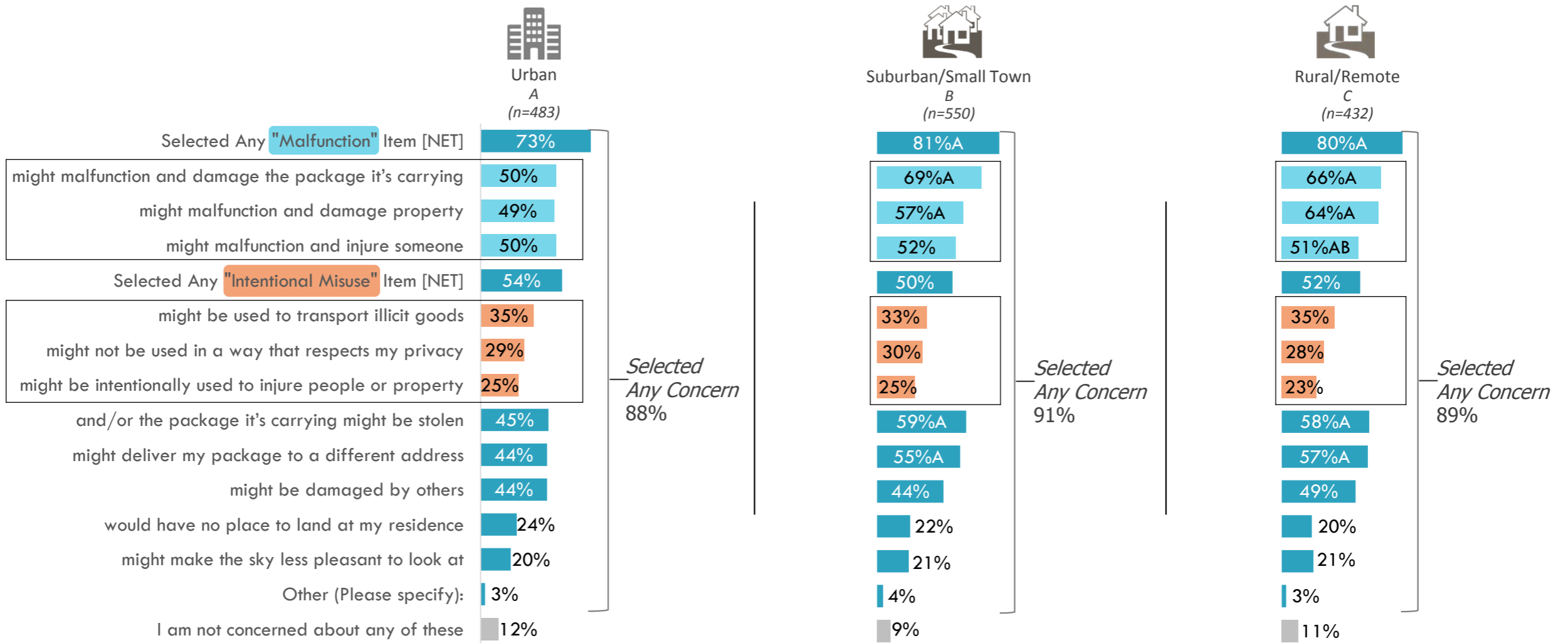
Believability of Drone Delivery Benefits



[Following Concept Exposure] Q15. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Strongly agree, Somewhat agree, Neither agree nor disagree [Omitted from data shown here], Somewhat disagree, Strongly disagree). | Data includes oversample of Rural/Remote Respondents | A,B,C : Significantly higher than corresponding group at 95% c.i.

Urban residents trust drone technology more than Suburban/Small Town or Rural/Remote residents, who cite all forms of malfunction as a significantly greater concern. Suburban/Small Town and Rural/Remote residents are also more worried that their package might be either stolen or delivered to the wrong address.

All Drone Delivery Concerns

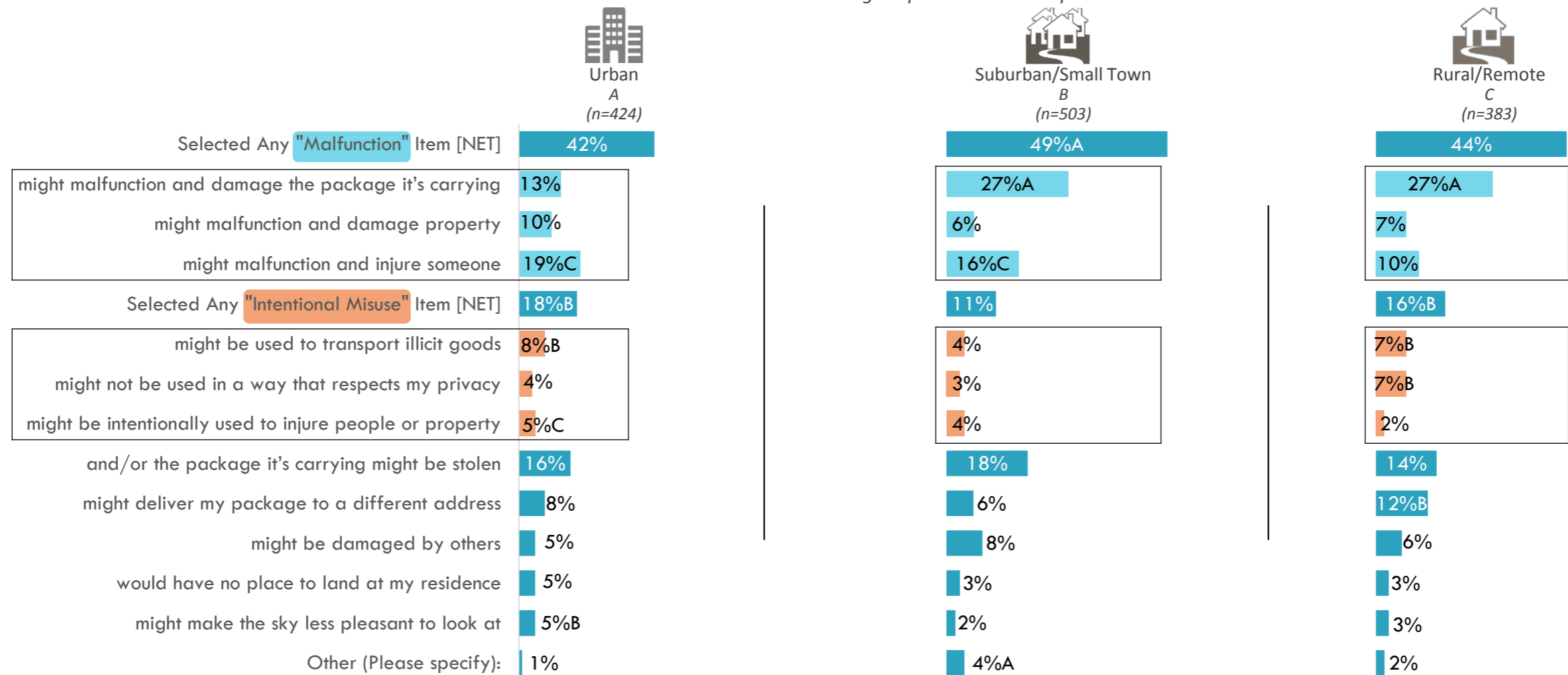


[Following Concept Exposure] Q20. Which, if any, of the following would you be concerned about if companies were to deliver mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? Are you concerned the Unmanned Aerial Vehicle...Please select all that apply. | Data includes oversample of Rural/Remote Respondents | A,B,C : Significantly higher than corresponding group at 95% c.l.

Suburban residents are more concerned with malfunction, and less concerned with intentional misuse, than their Urban or Rural/Remote counterparts.

Primary Drone Delivery Concern

Among Respondents Who Reported At Least One Concern



[Following Concept Exposure] Q21. And which of the following would you be most concerned about if a company were to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? Please select the one item below that you would be the most concerned about. | Data includes oversample of Rural/Remote Respondents | A,B,C : Significantly higher than corresponding group at 95% c.i.

One-hour delivery is the most interesting application for Urban and Suburban/Small Town residents, while emergency delivery is most interesting to those living in Rural/Remote areas.

Ranking of Interest in Different Applications for Drone Delivery

Rank Within Group (Average Rank)



Urban
A
(n=483)



Suburban/Small Town
B
(n=550)



Rural/Remote
C
(n=432)

One-hour delivery – *Top Ranked Among National Sample*

1 (3.38)

1 (3.27)

2 (3.57)

Delivery in cases of emergency

2 (3.47)

2 (3.39)

1 (3.35)

Delivery to hard to reach locations (mountains, islands, etc)

3 (3.88)

3 (3.95)

3 (3.75)

Delivery to wherever I am, not just my home

3 (3.88)

4 (3.98)

5 (4.19)

Delivery to remote locations where few people live

5 (3.98)

5 (4.18)

4 (3.85)

Sunday delivery

7 (4.73)

6 (4.53)

6 (4.45)

Evening delivery - *Bottom Ranked Among National Sample*

6 (4.67)

7 (4.72)

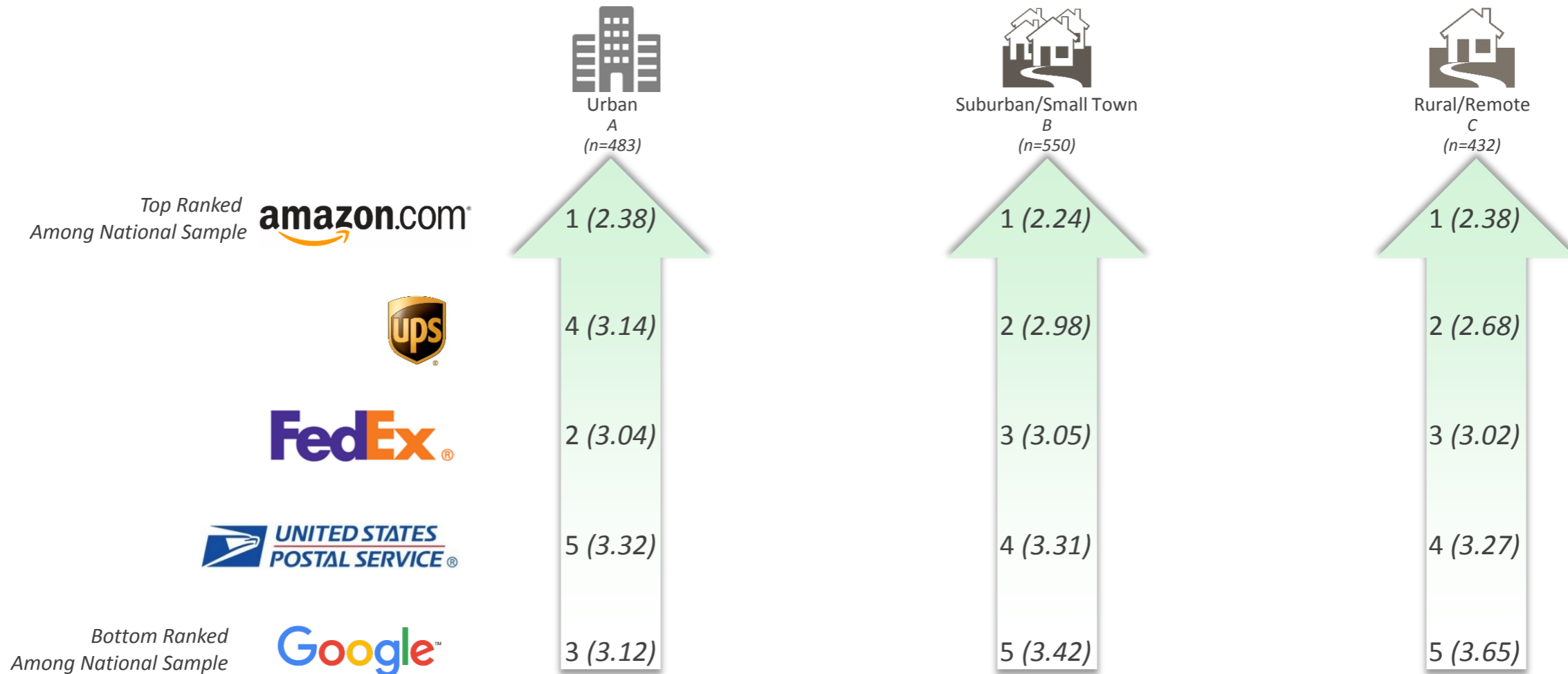
7 (4.85)

[Following Concept Exposure] Q19. Please rank the following services from 1 to 7, where 1 is the most interesting use of Unmanned Aerial Vehicles for the delivery of mail or packages, and 7 is the least interesting use of Unmanned Aerial Vehicles, also known as UAVs or Drones, for the delivery of mail or packages. | Data includes oversample of Rural/Remote Respondents

Amazon is the most trusted brand for drone delivery, while Google is the least trusted brand in all but urban areas.

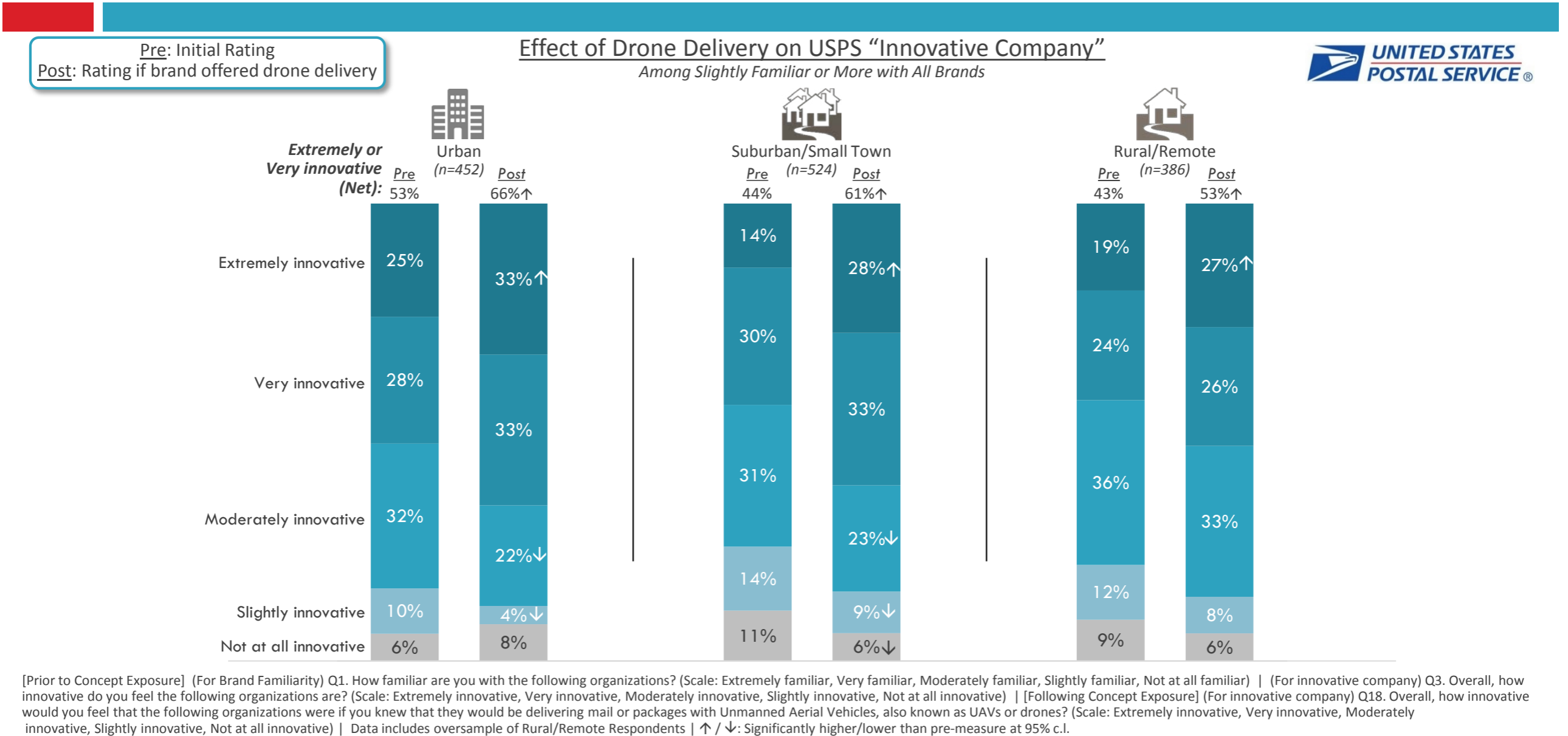
Rankings: Trusted Brand for Drone Delivery

Rank Within Group (Average Rank)



[Following Concept Exposure] Q16. Please rank the following organizations from 1 to 5, where 1 is the organization you would most trust to make deliveries using Unmanned Aerial Vehicles, and 5 is the organization you would least trust to make deliveries using Unmanned Aerial Vehicles, also known as UAVs or Drones. | Data includes oversample of Rural/Remote Respondents

Association with drone delivery leads to similar improvements in each group’s perception of the USPS as an innovative company.



Improved ratings as an innovative company do not overcome general hesitance about drone delivery, as brand positivity would decrease — most dramatically among Suburban/Small Town residents — if USPS offered the service today.

Pre: Initial Rating
Post: Rating if brand offered drone delivery

Effect of Drone Delivery on USPS Brand Positivity
Among Slightly Familiar or More with All Brands



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For brand positivity) Q2. How positive or negative is your overall impression of the following organizations? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | [Following Concept Exposure] (For brand positivity) Q17. How positive or negative would your overall impression of the following organizations be if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | Data includes oversample of Rural/Remote Respondents | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.l.

Findings by Segment

Millennials, Generation X, Baby Boomers



Groups in this section were defined based on responses to the question S8. What is your age in years? Millennials were defined as being aged 18-34, Generation X as being aged 35-49, Baby Boomers as being aged 50-75.

SUMMARY OF FINDINGS

Millennials, Generation X, Baby Boomers

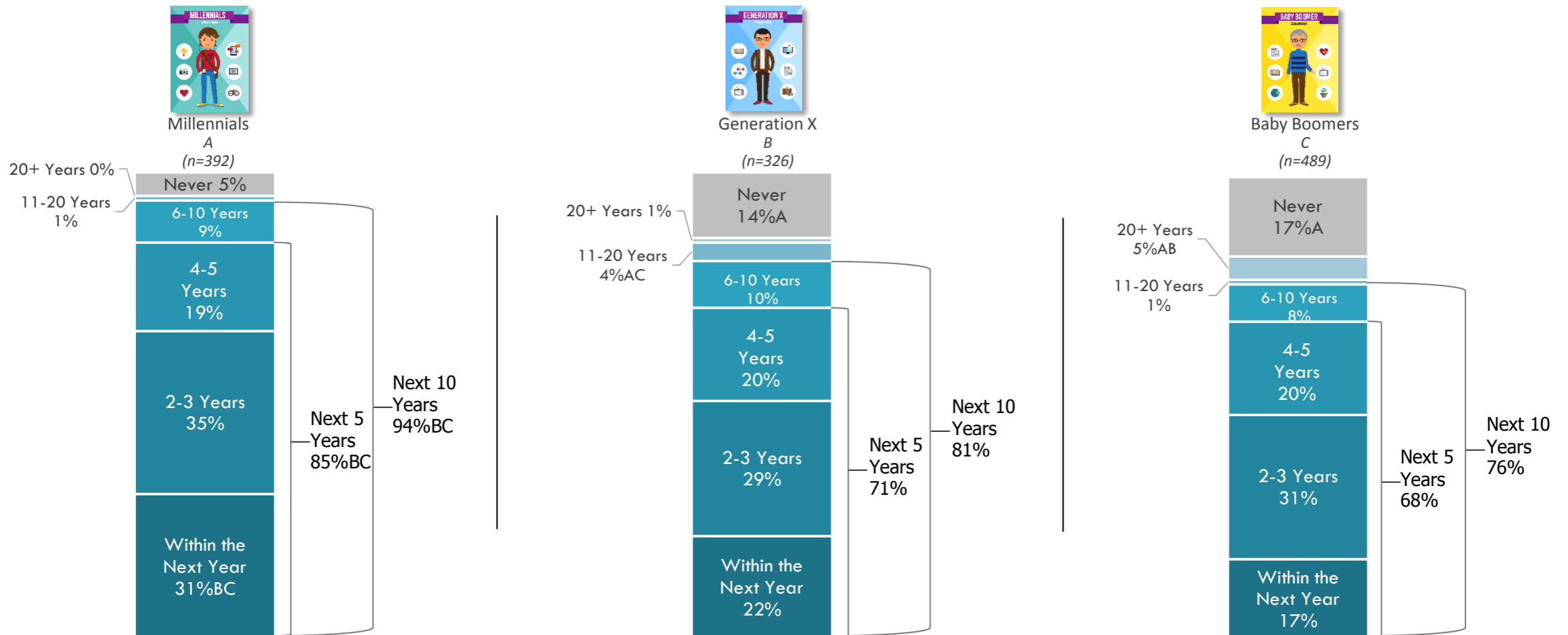
- Millennials are significantly more knowledgeable, open, and positive towards the idea of drone delivery than older generations.
- Baby Boomers and members of Generation X tend to feel that drone delivery is coming in the next decade, while Millennials more often believe that the service will be offered within the next 5 years.
- 48 percent of Millennials believe that drone delivery would be safe – and 47 percent of Baby Boomers think that it would not.
- While Amazon is most trusted for drone delivery by all three groups, Millennials rank Google as their second most trusted brand, which is much higher than older generations.
- It may be too soon for drone delivery, even among Millennials: brand positivity drops for all three groups when presented in the context of the concept.



Groups in this section were defined based on responses to the question S8. What is your age in years? Millennials were defined as being aged 18-34, Generation X as being aged 35-49, Baby Boomers as being aged 50-75.

Millennials expect to start seeing drone delivery sooner than Generation X, who expect the service sooner than Boomers.

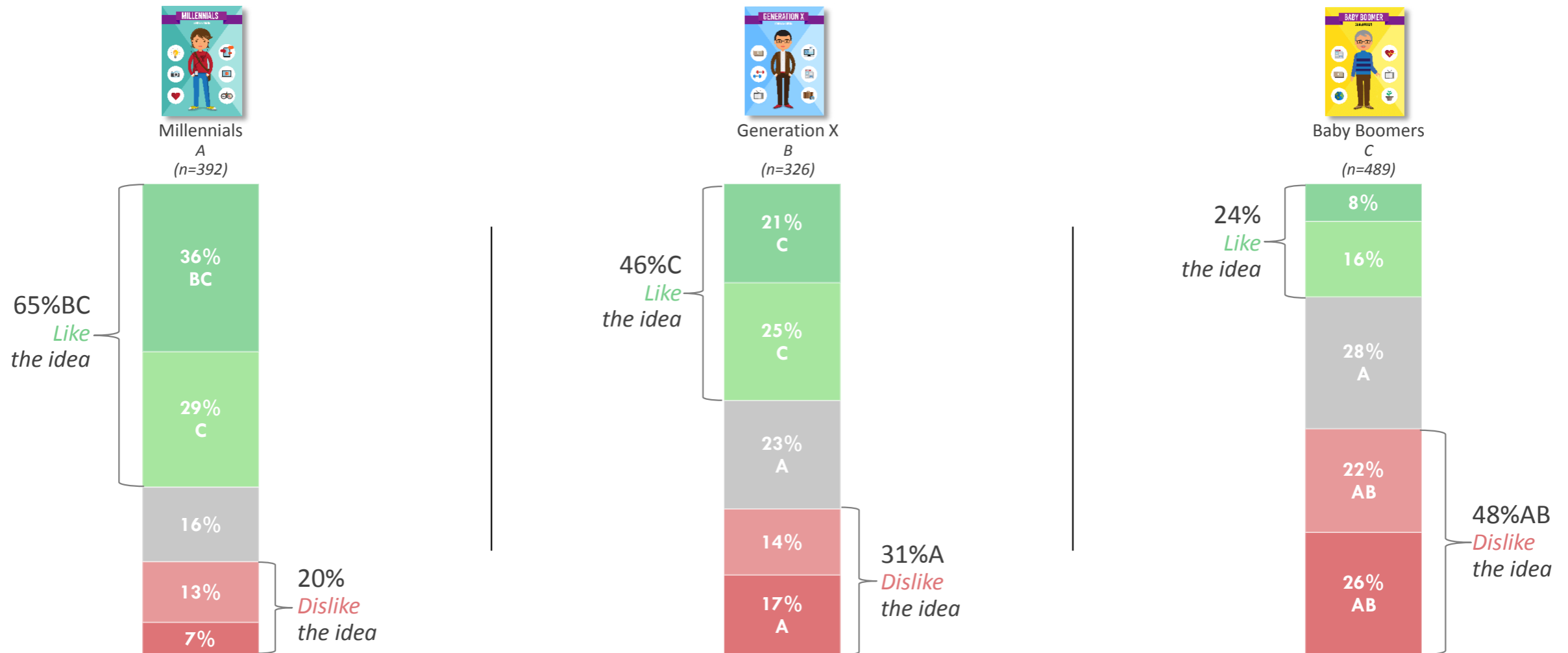
Expected Drone Delivery Timeline



Q15. When, if ever, do you expect that companies might start to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? (Scale: Within the next year; Within the next 3 years, but not the next year; Within the next 5 years, but not the next 3 years; Within the next 10 years, but not the next 5 years; Within the next 20 years, but not the next 10 years; More than 20 years; Never) | A,B,C : Significantly higher than corresponding group at 95% c.i.

Millennials tend to like the idea of drone delivery, while Generation X has mixed feelings; and Boomers strongly dislike the concept.

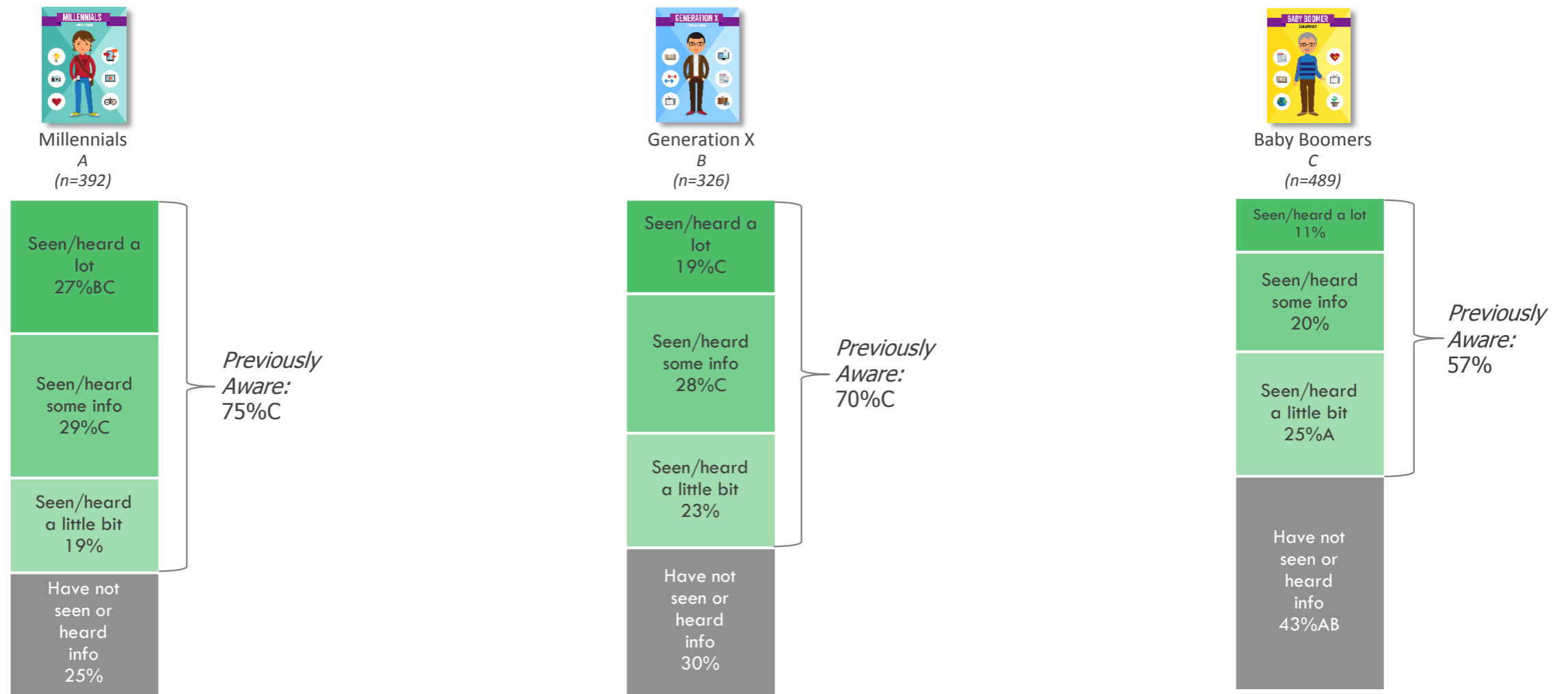
Drone Delivery Concept Liking



Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | A,B,C : Significantly higher than corresponding group at 95% c.l.

Boomers have seen and heard much less about drone delivery than Millennials.

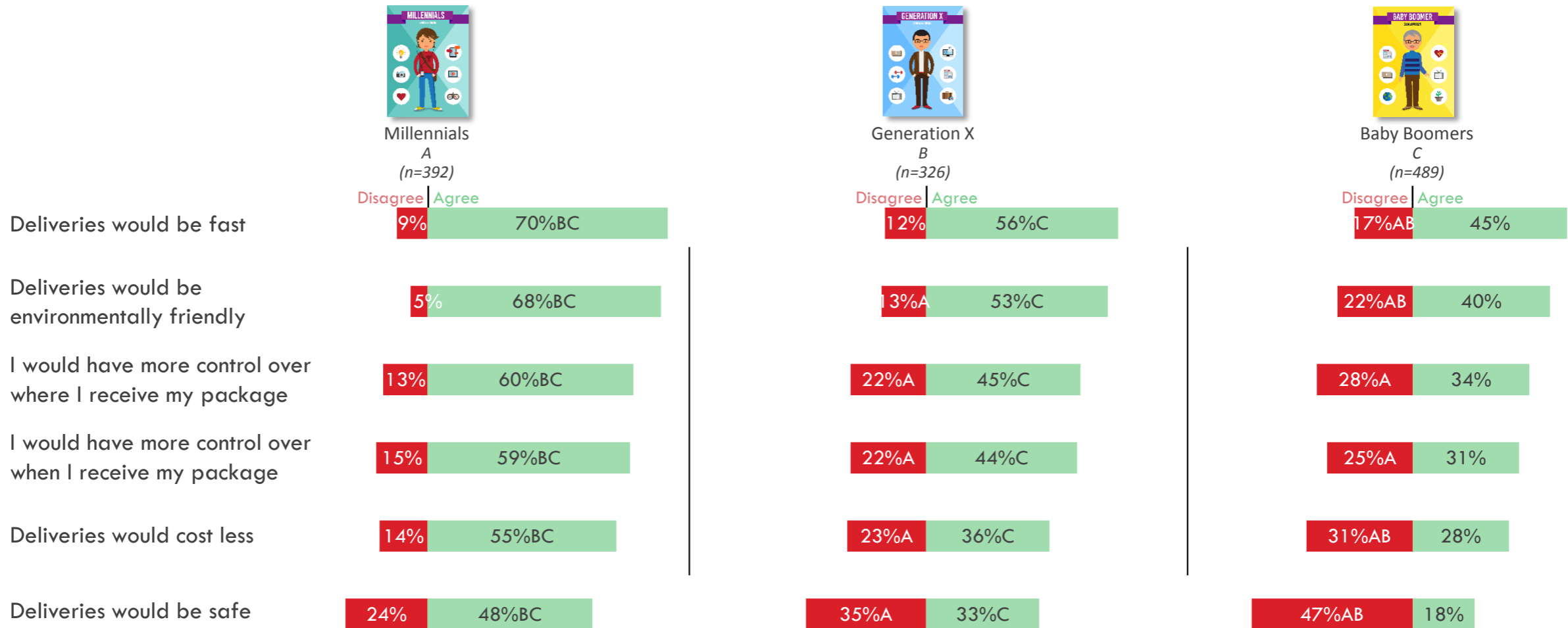
Awareness of Drone Delivery Concept



[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | A,B,C : Significantly higher than corresponding group at 95% c.l.

All of the benefits of drone delivery are more believable for Millennials than their older counterparts. Interestingly, there are about as many Millennials who believe that drone delivery would be safe (48 percent) as there are Boomers who believe it would not be safe (47 percent).

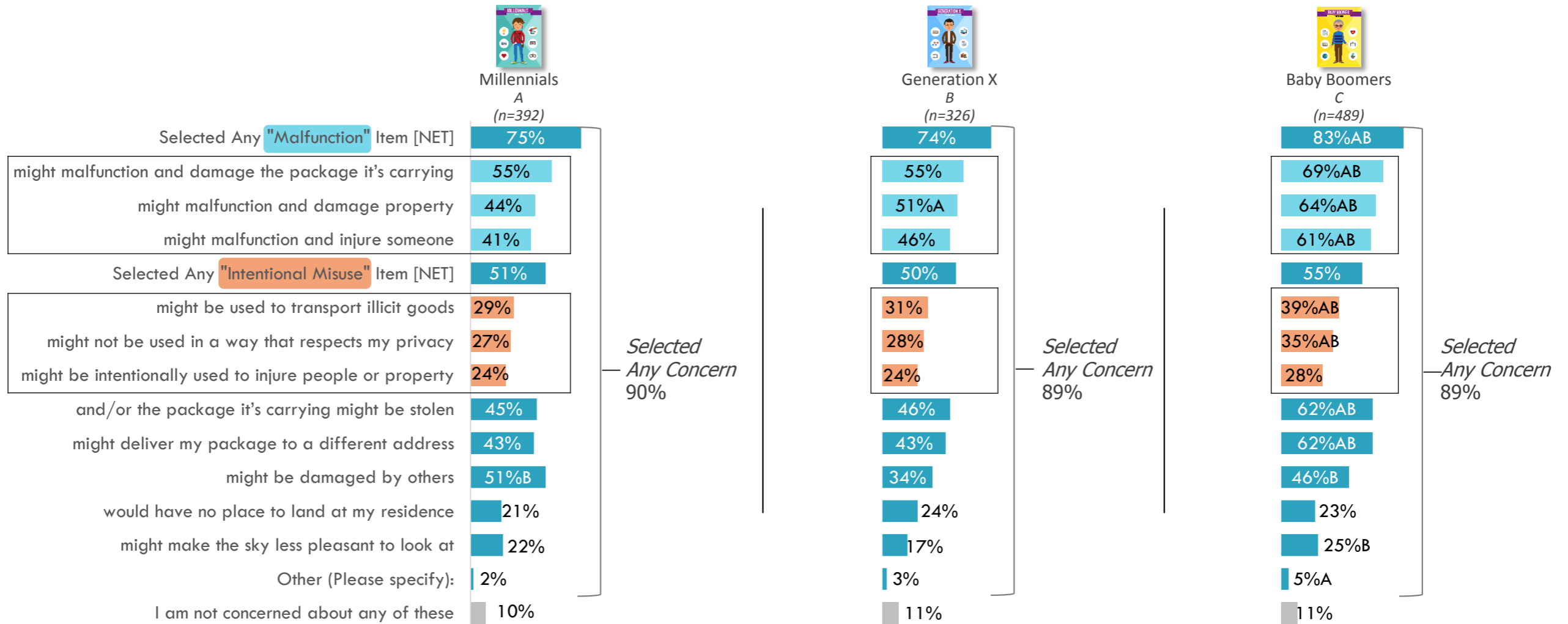
Believability of Drone Delivery Benefits



[Following Concept Exposure] Q15. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Strongly agree, Somewhat agree, Neither agree nor disagree [Omitted from data shown here], Somewhat disagree, Strongly disagree). | A,B,C : Significantly higher than corresponding group at 95% c.i.

All three generations express concerns about malfunction, but Boomers are more concerned than younger respondents.

All Drone Delivery Concerns

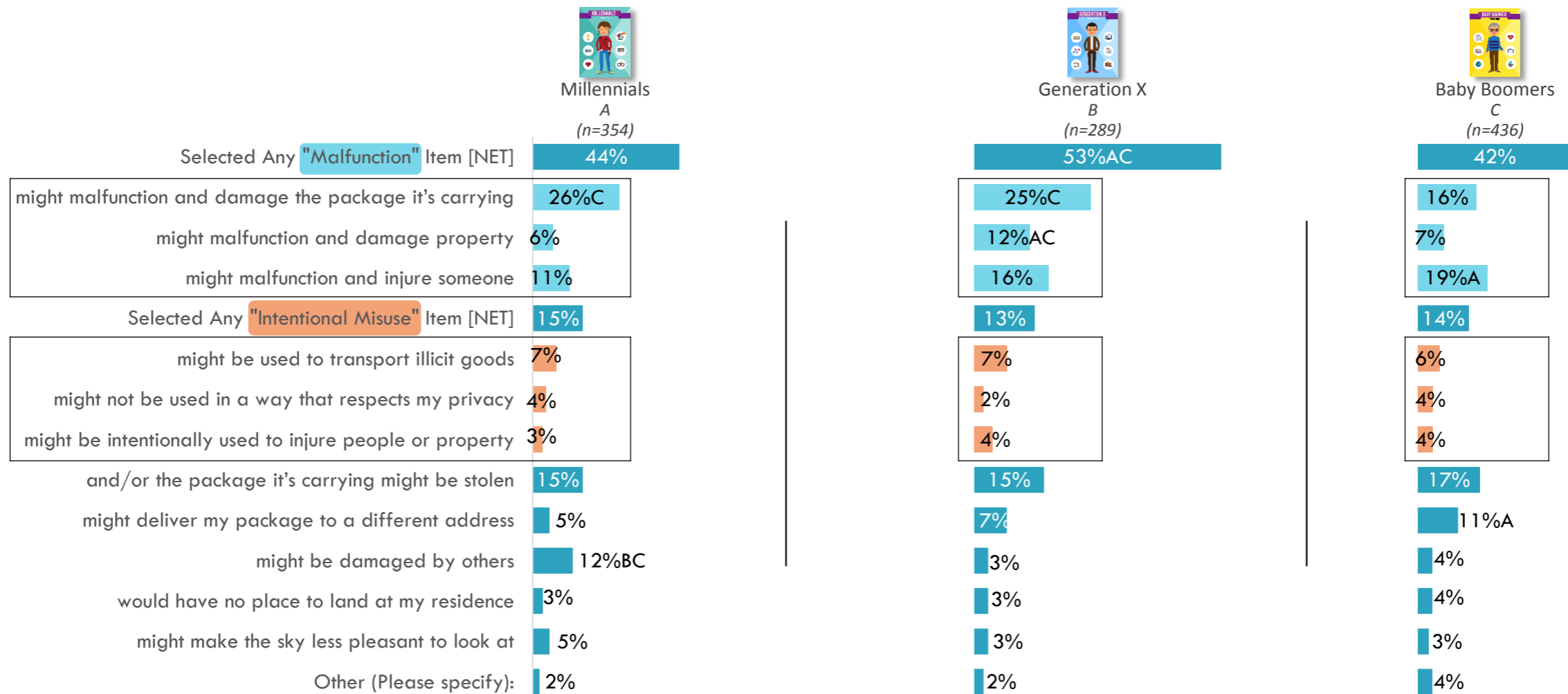


[Following Concept Exposure] Q20. Which, if any, of the following would you be concerned about if companies were to deliver mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? Are you concerned the Unmanned Aerial Vehicle...Please select all that apply. | A,B,C : Significantly higher than corresponding group at 95% c.i.

Malfunction is the primary concern for respondents of every age. Millennials are more concerned than older generations about the drone being damaged by others.

Primary Drone Delivery Concern

Among Respondents Who Reported At Least One Concern



[Following Concept Exposure] Q21. And which of the following would you be most concerned about if a company were to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? Please select the one item below that you would be the most concerned about. | A,B,C : Significantly higher than corresponding group at 95% c.i.

With minor exceptions, the three generational groups rank the proposed drone applications similarly, with one-hour delivery and delivery in cases of emergency garnering the most interest.

Ranking of Interest in Different Applications for Drone Delivery

Rank Within Group (Average Rank)

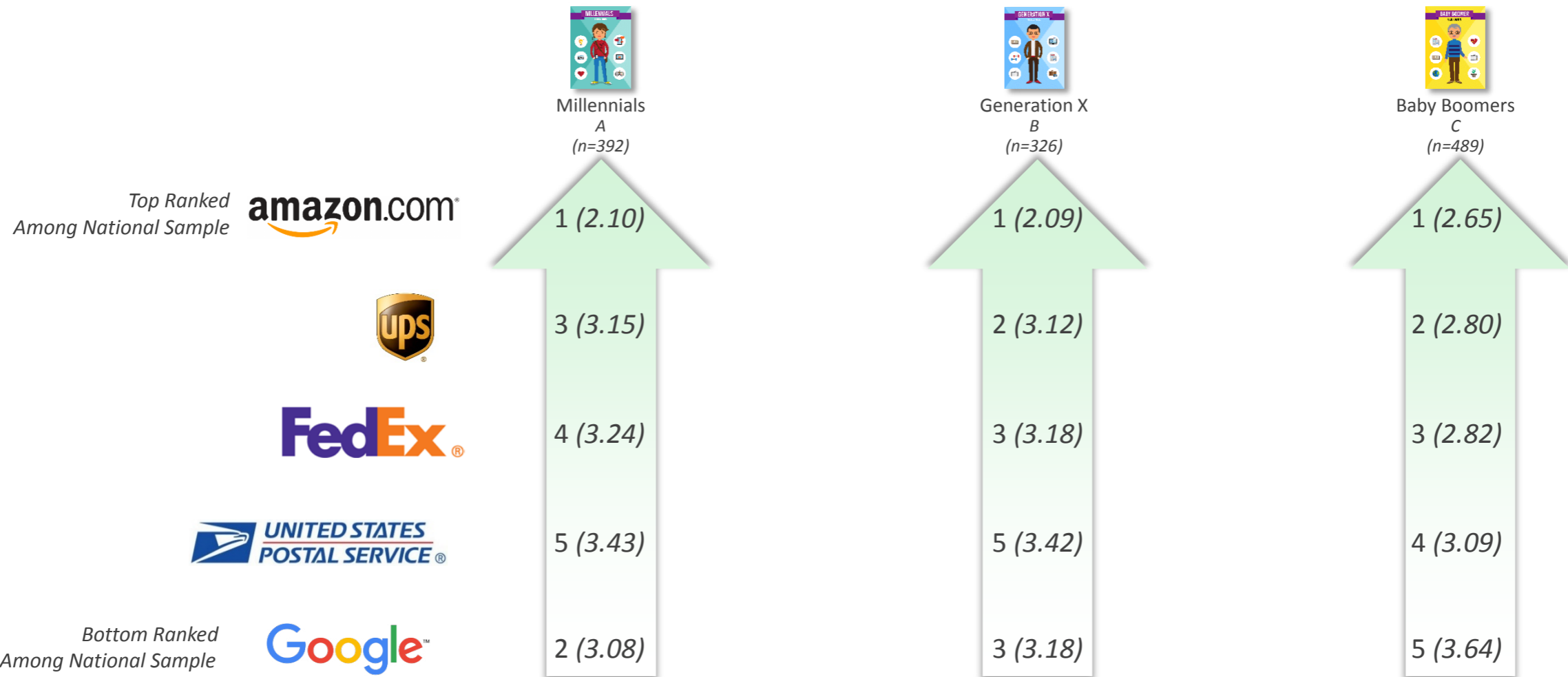


[Following Concept Exposure] Q19. Please rank the following services from 1 to 7, where 1 is the most interesting use of Unmanned Aerial Vehicles for the delivery of mail or packages, and 7 is the least interesting use of Unmanned Aerial Vehicles, also known as UAVs or Drones, for the delivery of mail or packages.

Amazon is the most trusted brand for all three groups, but Google ranks second with Millennials, which is unique among the groups investigated. USPS is once again ranked 4th or 5th by all three groups.

Rankings: Trusted Brand for Drone Delivery

Rank Within Group (Average Rank)



[Following Concept Exposure] Q16. Please rank the following organizations from 1 to 5, where 1 is the organization you would most trust to make deliveries using Unmanned Aerial Vehicles, and 5 is the organization you would least trust to make deliveries using Unmanned Aerial Vehicles, also known as UAVs or Drones.

The Postal Service’s ratings as an “Extremely” or “Very” innovative company improves among all three generations when asked in the context of drone delivery.

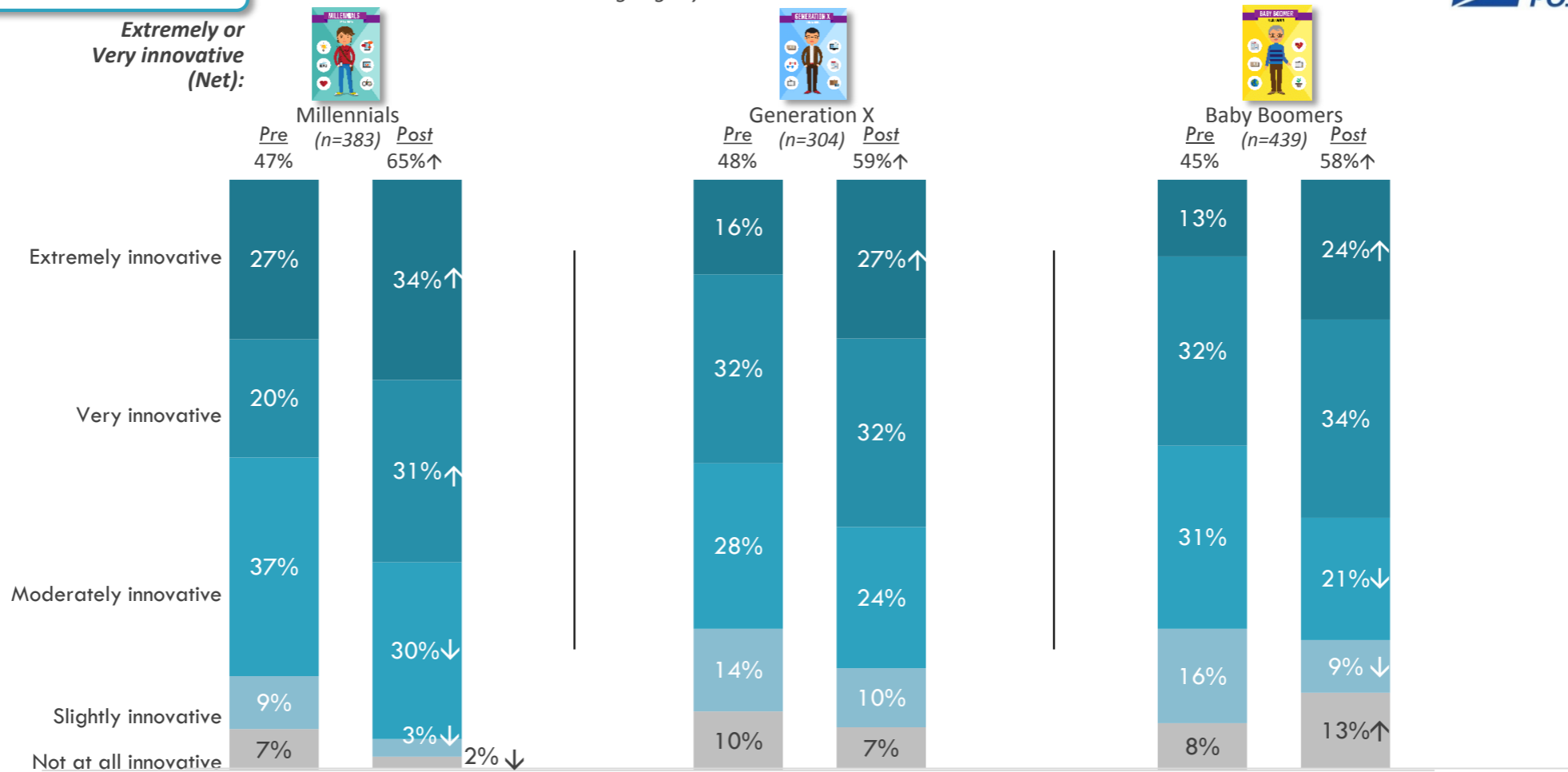
Pre: Initial Rating
Post: Rating if brand offered drone delivery

Effect of Drone Delivery on USPS “Innovative Company”

Among Slightly Familiar or More with All Brands

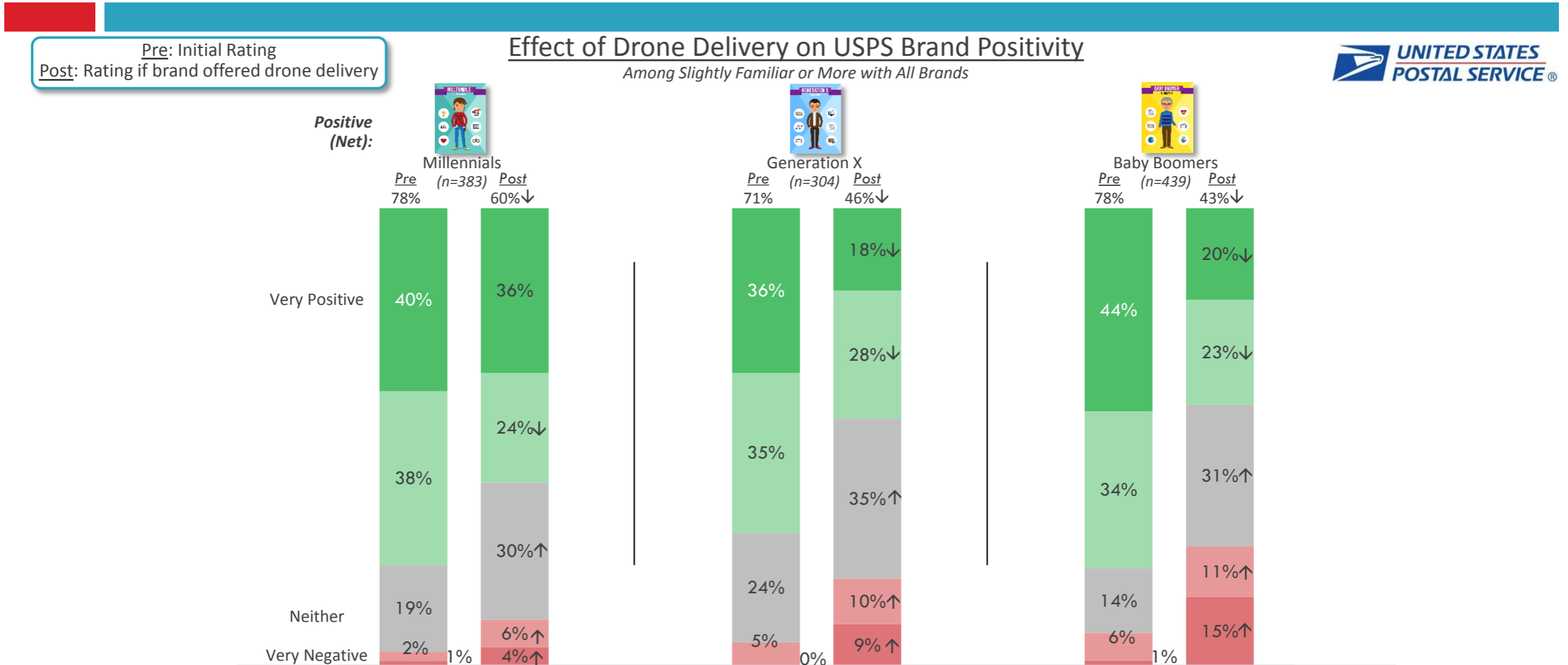


Extremely or Very innovative (Net):



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For innovative company) Q3. Overall, how innovative do you feel the following organizations are? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | [Following Concept Exposure] (For innovative company) Q18. Overall, how innovative would you feel that the following organizations were if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.

It may be too soon for drone delivery, even among Millennials: at the present time, brand positivity drops for all three groups when presented in the context of the concept.

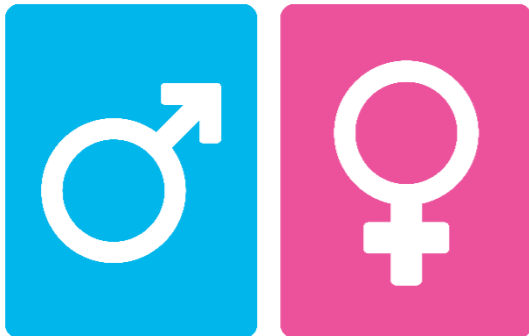


[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For brand positivity) Q2. How positive or negative is your overall impression of the following organizations? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | [Following Concept Exposure] (For brand positivity) Q17. How positive or negative would your overall impression of the following organizations be if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | Data includes oversample of Rural/Remote Respondents | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.



Findings by Segment

Gender



Groups in this section were defined based on responses to the question S7. Are you... [Answer Choices: Male, Female]



SUMMARY OF FINDINGS

Gender

- Men and women view the prospect of drone delivery differently.
- Women report having seen or heard less about drone delivery than men.
- Similar to other groups that had less prior exposure to the idea of drone delivery, women tend to:
 - Like the concept less.
 - Be more skeptical about all of the concept's potential benefits.
 - Have more reservations about the concept, as evidenced by their being less likely to believe that the service would be safe, and more likely to cite concerns with the concept.



MEN

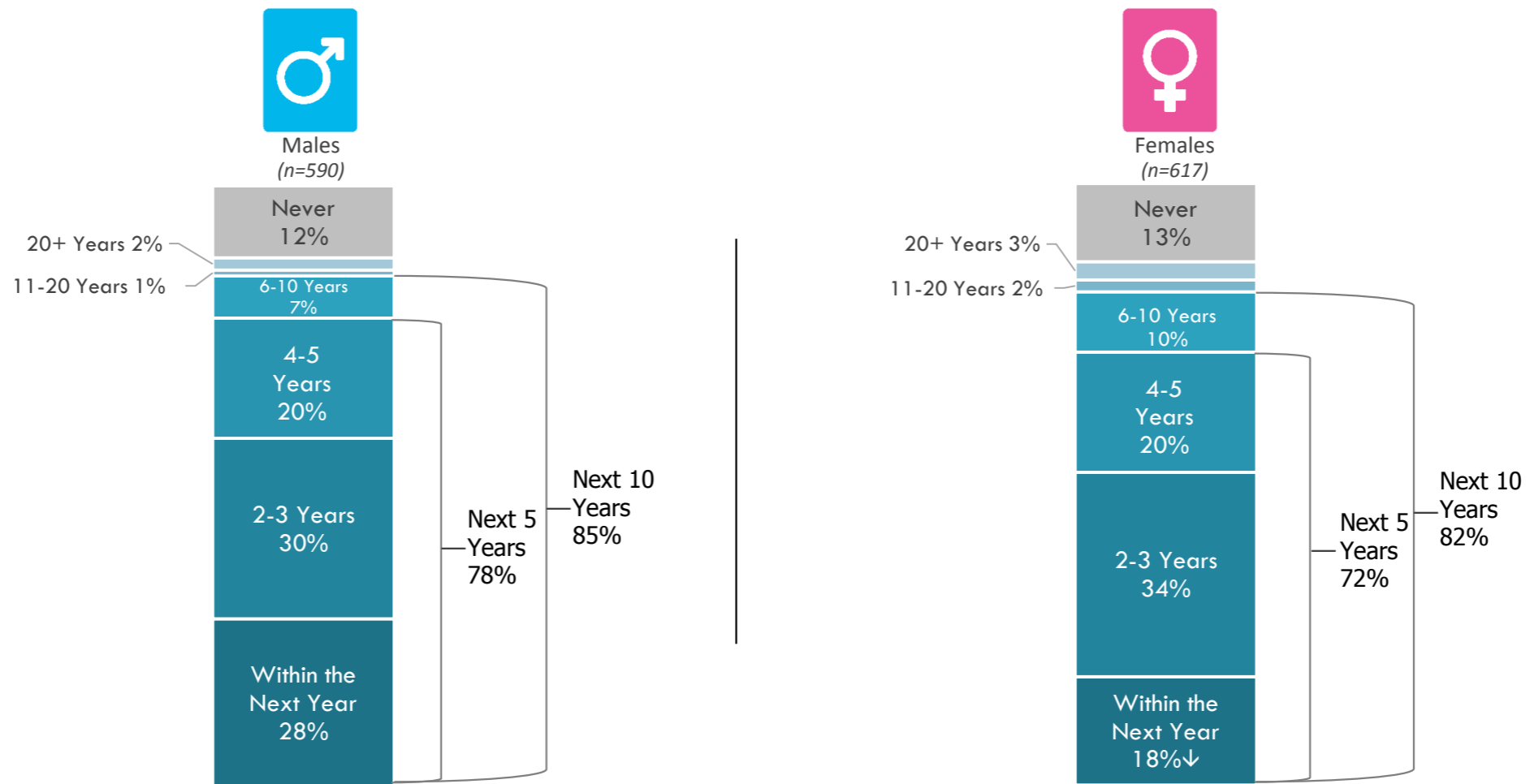


WOMEN

Groups in this section were defined based on responses to the question S7. Are you... [Answer Choices: Male, Female]

Men and women report similar expectations about the long-term timing of the drone delivery concept, though men are more likely than women to believe that the service will be offered within the next year.

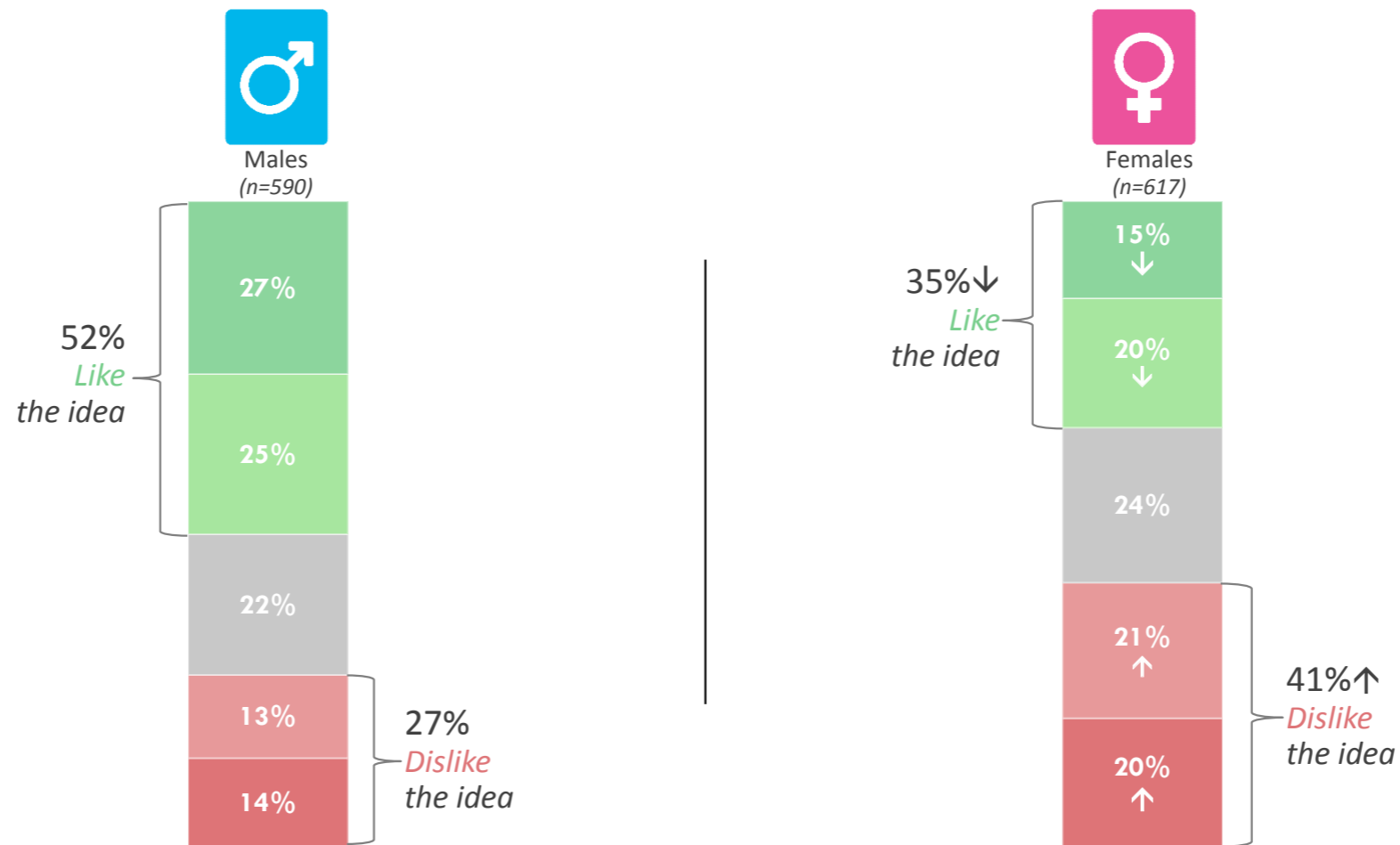
Expected Drone Delivery Timeline



Q15. When, if ever, do you expect that companies might start to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? (Scale: Within the next year; Within the next 3 years, but not the next year; Within the next 5 years, but not the next 3 years; Within the next 10 years, but not the next 5 years; Within the next 20 years, but not the next 10 years; More than 20 years; Never) | ↑ / ↓: Females significantly higher/lower than Males at 95% c.l.

Women are far less likely to embrace the drone delivery concept than men, and dislike the idea more often than they like it.

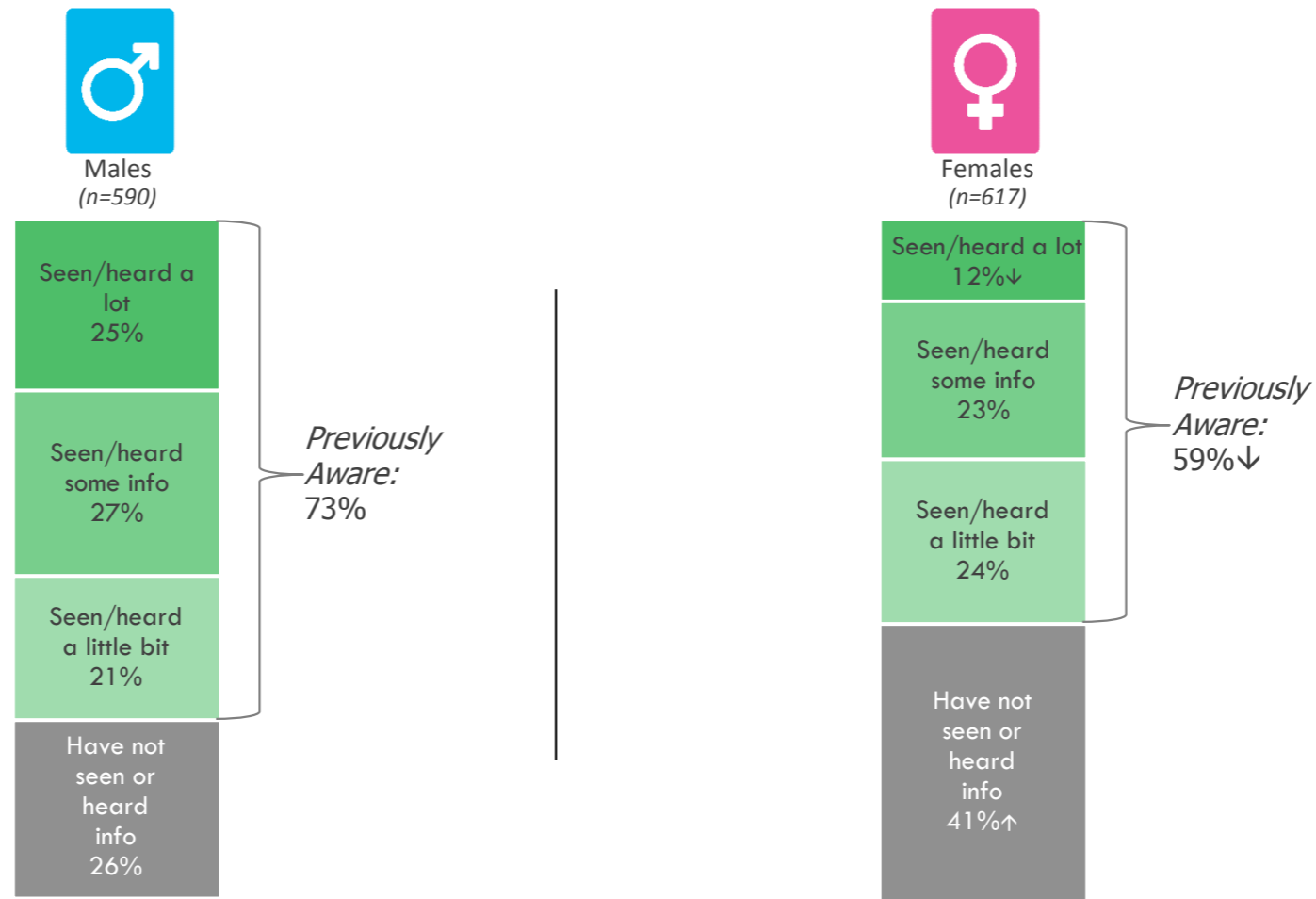
Drone Delivery Concept Liking



Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | ↑ / ↓: Females significantly higher/lower than Males at 95% c.i.

Men are more likely than women to report having previously seen or heard information about the drone delivery concept.

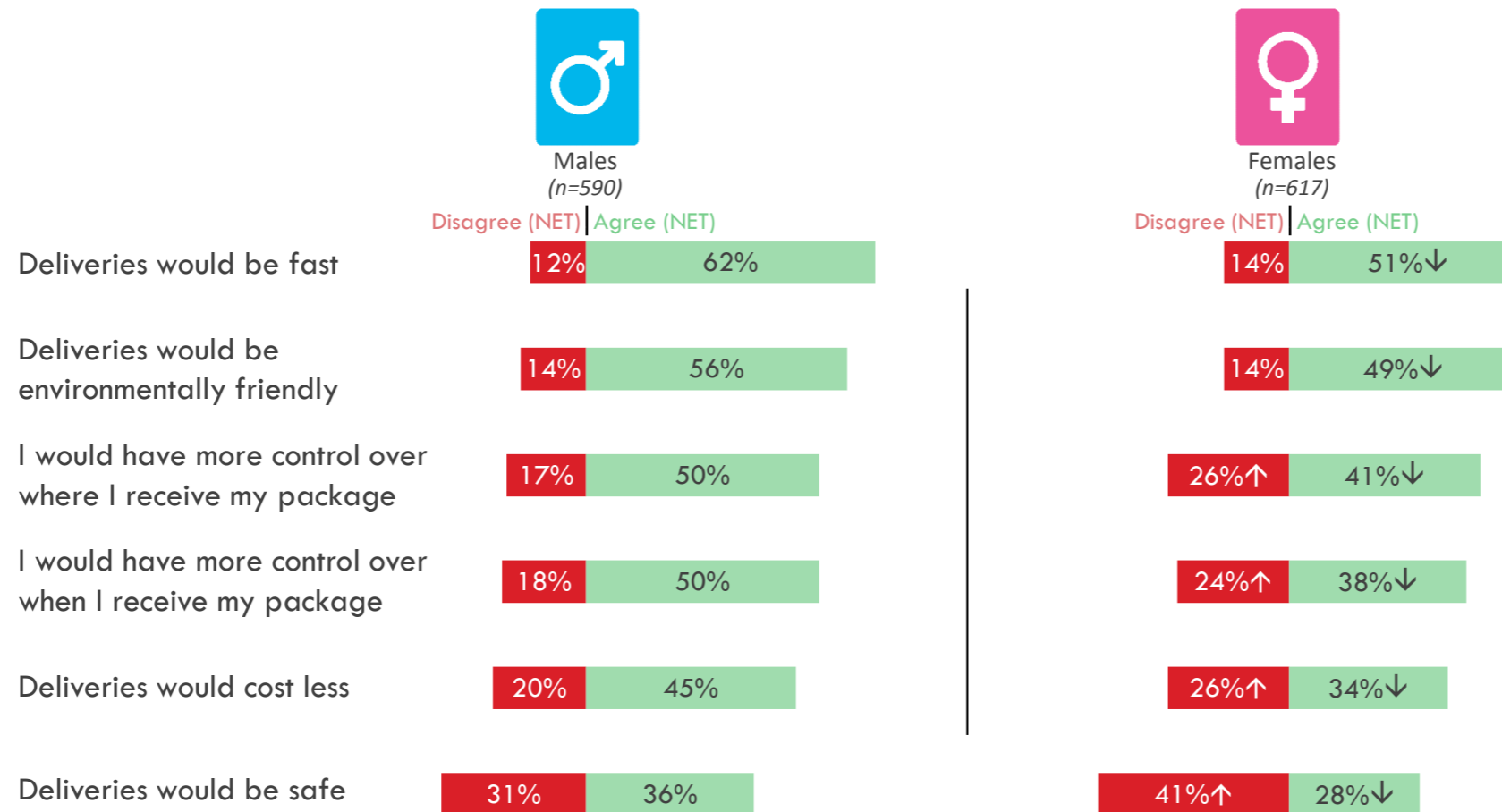
Awareness of Drone Delivery Concept



[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | ↑ / ↓: Females significantly higher/lower than Males at 95% c.l.

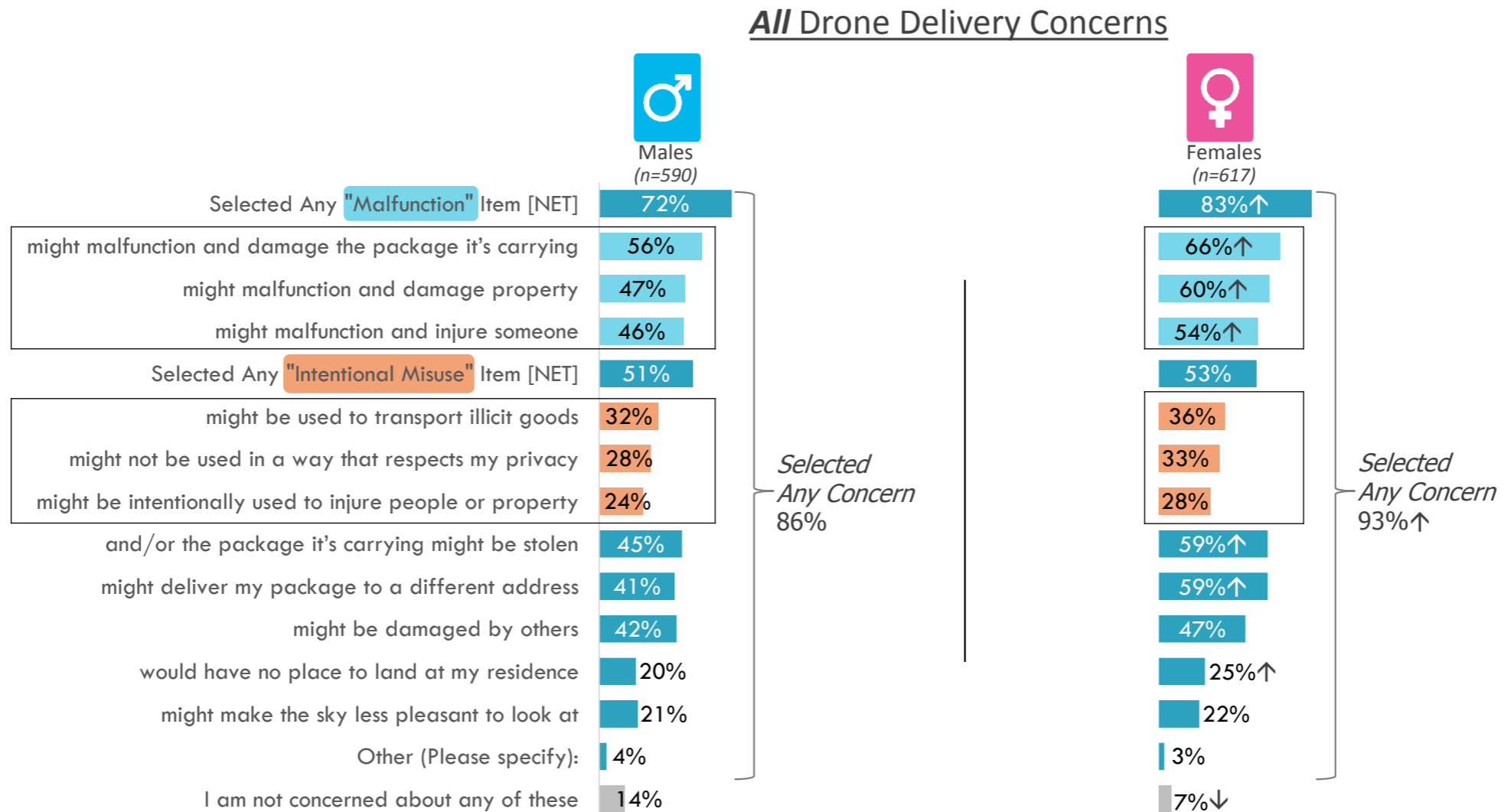
Women are significantly less convinced of *all* of the benefits of drone delivery tested — and are particularly skeptical of claims about safety, cost savings, and control over the delivery experience.

Believability of Drone Delivery Benefits



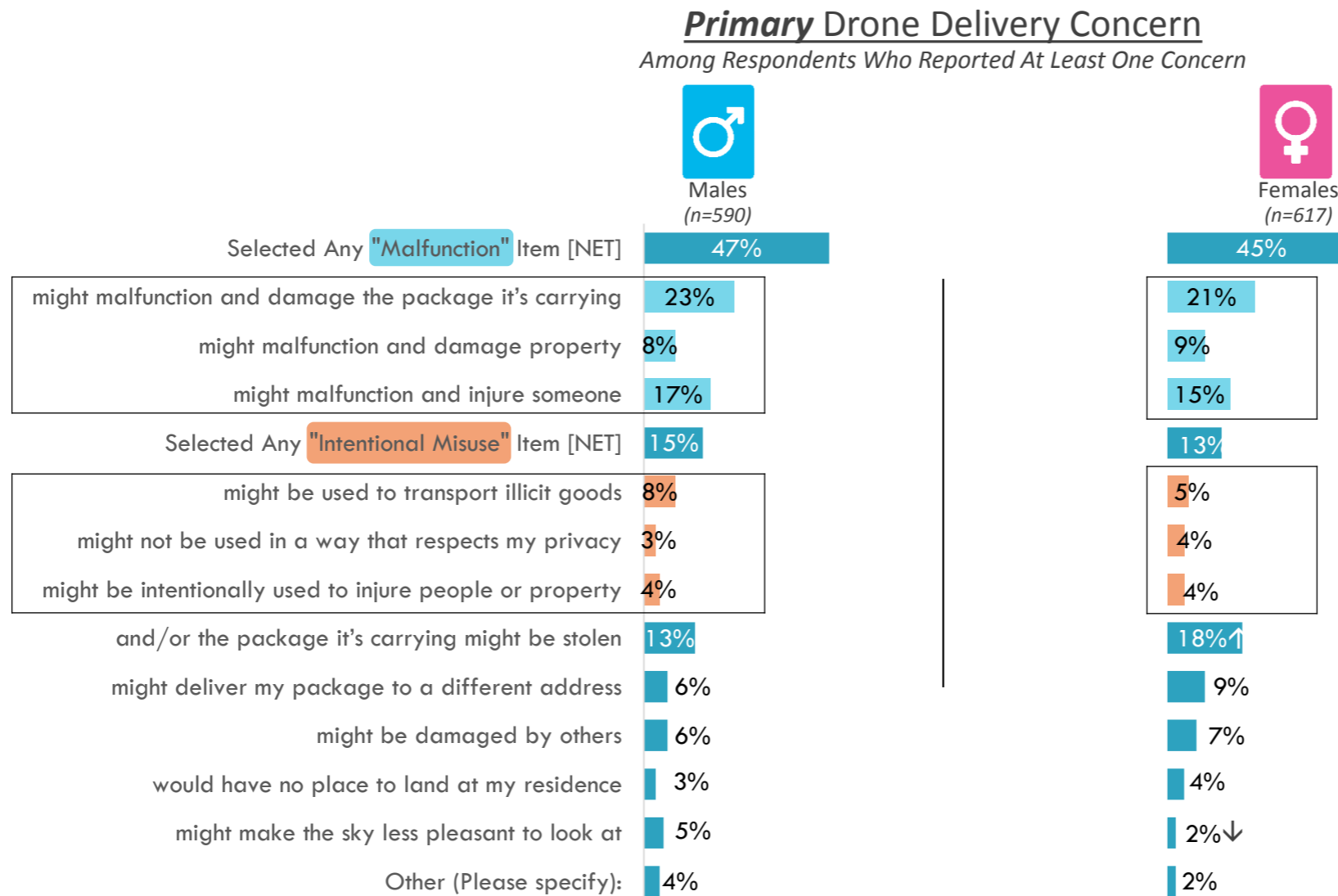
[Following Concept Exposure] Q15. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Strongly agree, Somewhat agree, Neither agree nor disagree [Omitted from data shown here], Somewhat disagree, Strongly disagree). | ↑ / ↓: Females significantly higher/lower than Males at 95% c.i.

Women are more likely than men to cite any concern with drone delivery, and are particularly apprehensive about malfunction, theft and mis-delivery.



[Following Concept Exposure] Q20. Which, if any, of the following would you be concerned about if companies were to deliver mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? Are you concerned the Unmanned Aerial Vehicle...Please select all that apply. | ↑ / ↓: Females significantly higher/lower than Males at 95% c.i.

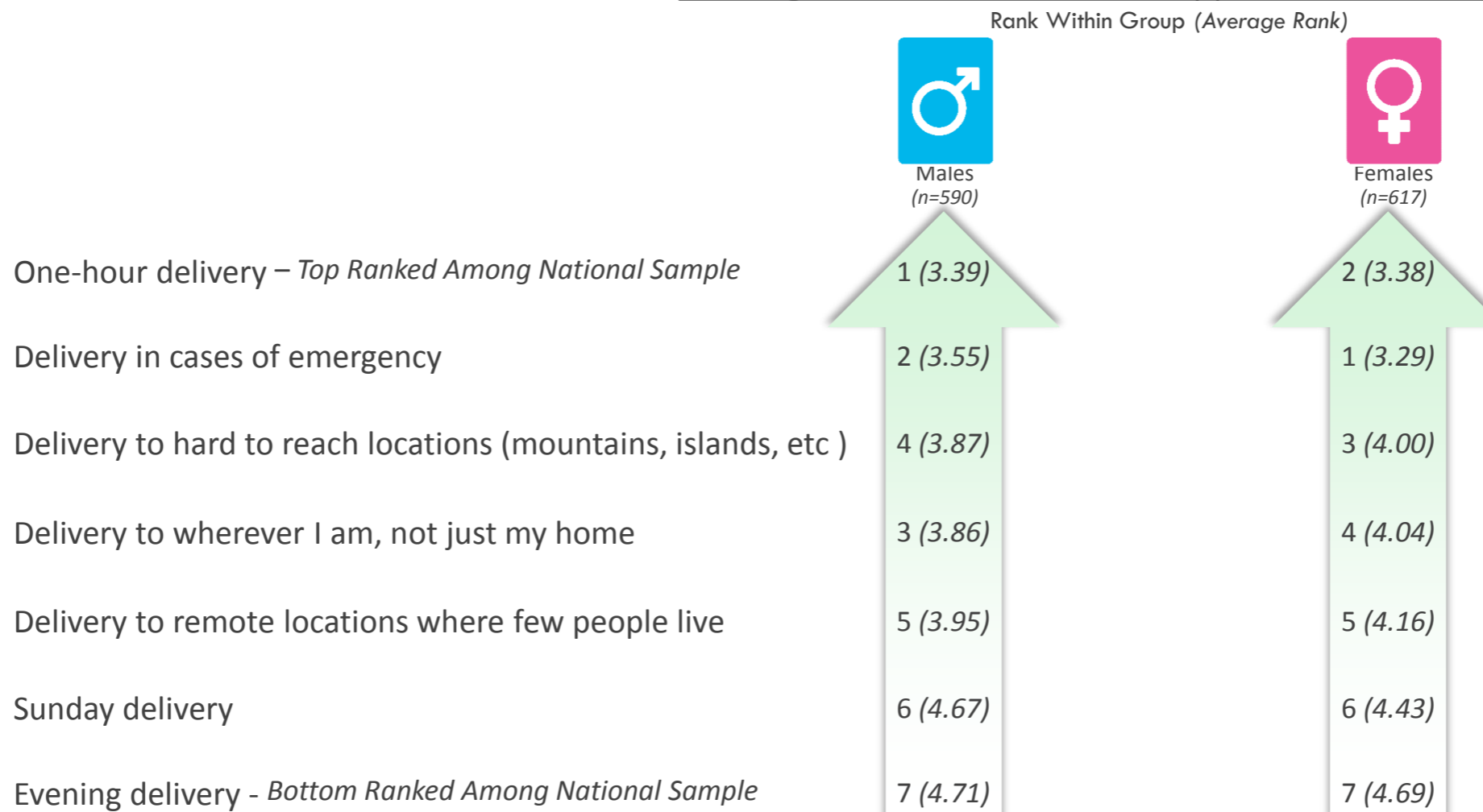
Though women are more likely than men to cite any concern, the primary concerns that men and women have with drone delivery are very similar.



[Following Concept Exposure] Q21. And which of the following would you be most concerned about if a company were to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? Please select the one item below that you would be the most concerned about. | ↑ / ↓: Females significantly higher/lower than Males at 95% c.i.

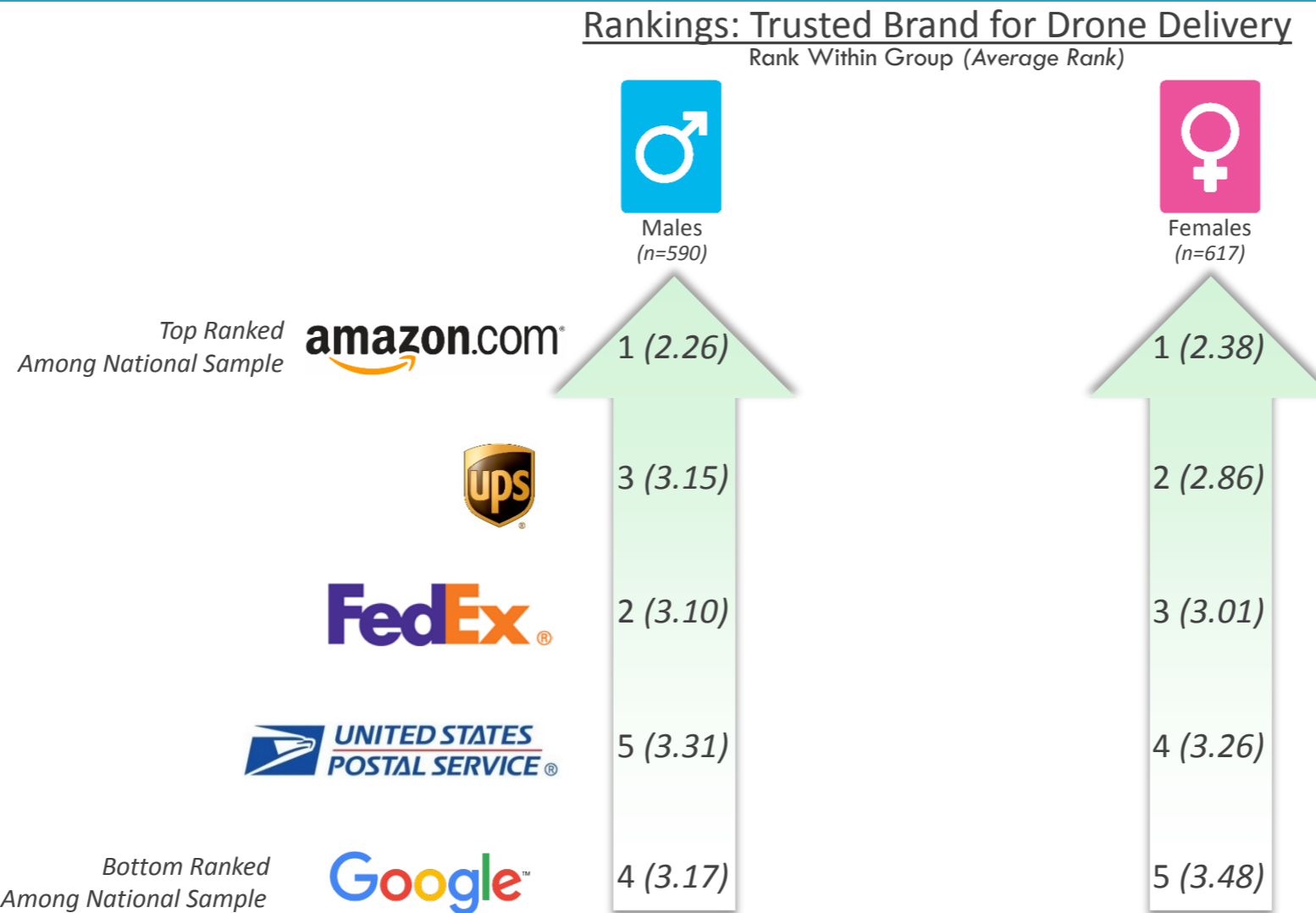
Women express slightly higher interest in delivery in cases of emergency than men, while men are slightly more interested in having additional control over their delivery experience than women.

Ranking of Interest in Different Applications for Drone Delivery



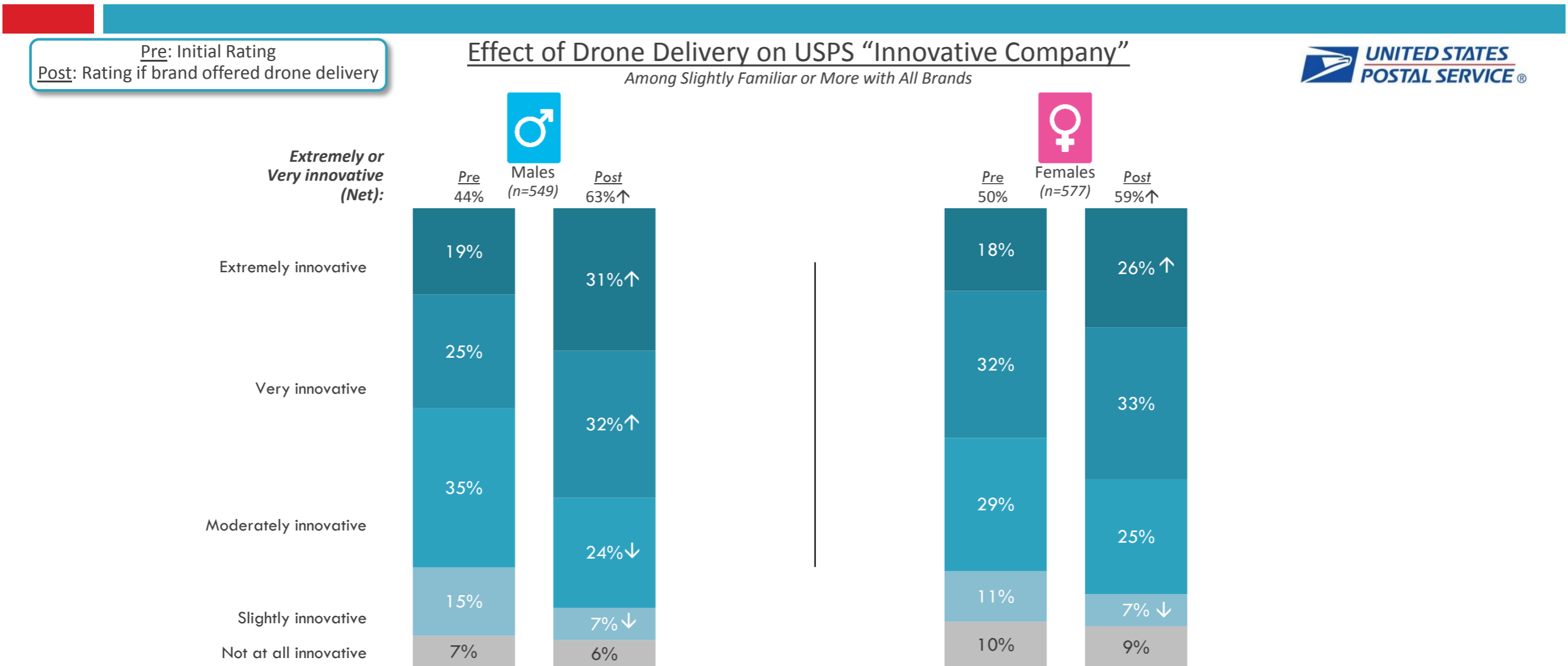
[Following Concept Exposure] Q19. Please rank the following services from 1 to 7, where 1 is the most interesting use of Unmanned Aerial Vehicles for the delivery of mail or packages, and 7 is the least interesting use of Unmanned Aerial Vehicles, also known as UAVs or Drones, for the delivery of mail or packages.

Google and Amazon are more trusted by males than females, who also trust UPS and FedEx more than males.



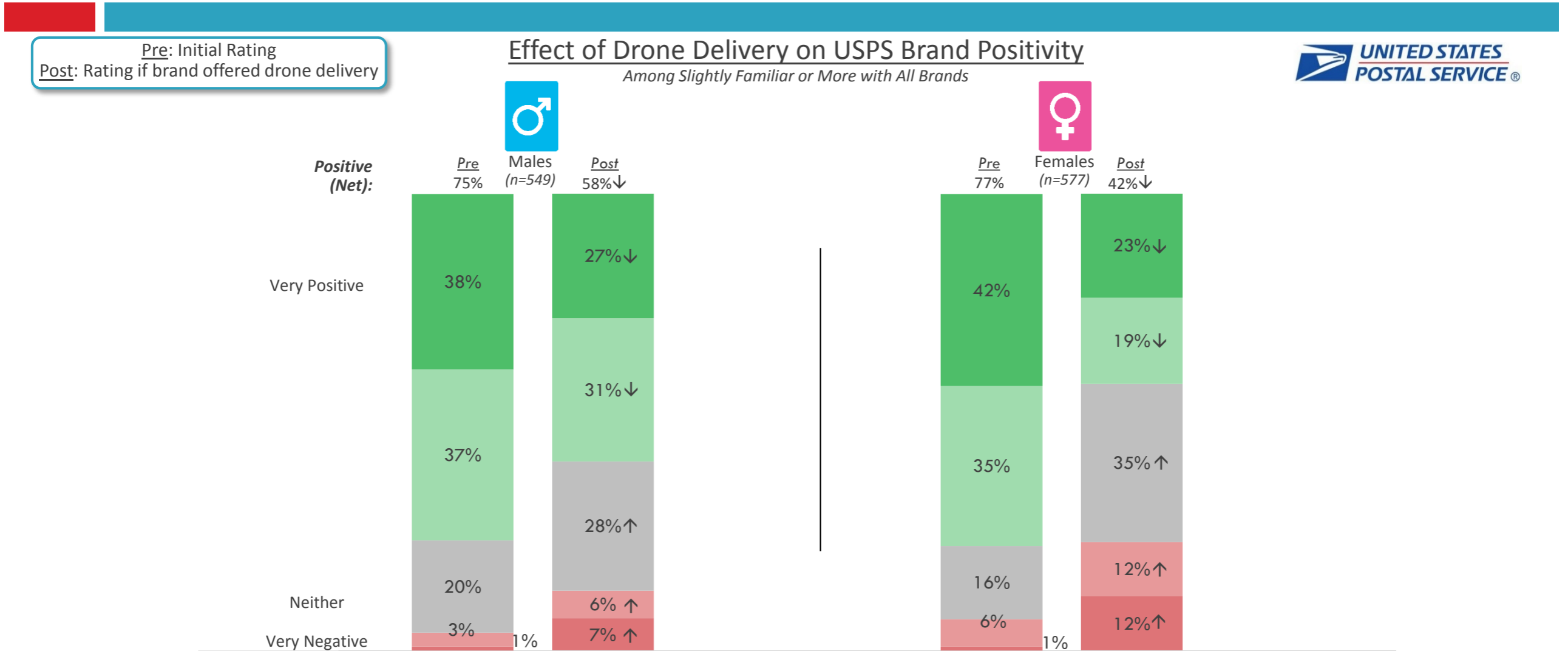
[Following Concept Exposure] Q16. Please rank the following organizations from 1 to 5, where 1 is the organization you would most trust to make deliveries using Unmanned Aerial Vehicles, and 5 is the organization you would least trust to make deliveries using Unmanned Aerial Vehicles, also known as UAVs or Drones.

Both men and women give the Postal Service higher ratings as an innovative company when asked in the context of drone delivery. The increase is larger among men, however, who like the idea more than women.



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For innovative company) Q3. Overall, how innovative do you feel the following organizations are? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | [Following Concept Exposure] (For innovative company) Q18. Overall, how innovative would you feel that the following organizations were if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.

Positivity towards the USPS declines more dramatically among women than men when asked in the context of drone delivery, which may reflect women’s hesitance about the concept.



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For brand positivity) Q2. How positive or negative is your overall impression of the following organizations? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | [Following Concept Exposure] (For brand positivity) Q17. How positive or negative would your overall impression of the following organizations be if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | Data includes oversample of Rural/Remote Respondents | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.



Findings by Segment

Postal Regulars and Ecommerce Frequents



“Postal Regulars” as defined in this section are monthly+ visitors to a post office, the USPS website, or the USPS mobile app per respondents’ answers to Q4c. In general, how often do you visit the following organizations’ retail locations?, Q4b. In general, how often do you visit the following organizations’ websites?, and Q4a. In general, how often do you use the following organizations’ mobile apps?

“Ecommerce Frequents” as defined in this section had made 3+ purchases online in the past month, per respondents’ answer to Q6. In the past month, how many times did you or someone in your household order a product online and have it delivered to your home?



SUMMARY OF FINDINGS

Postal Regulars and Ecommerce Frequents

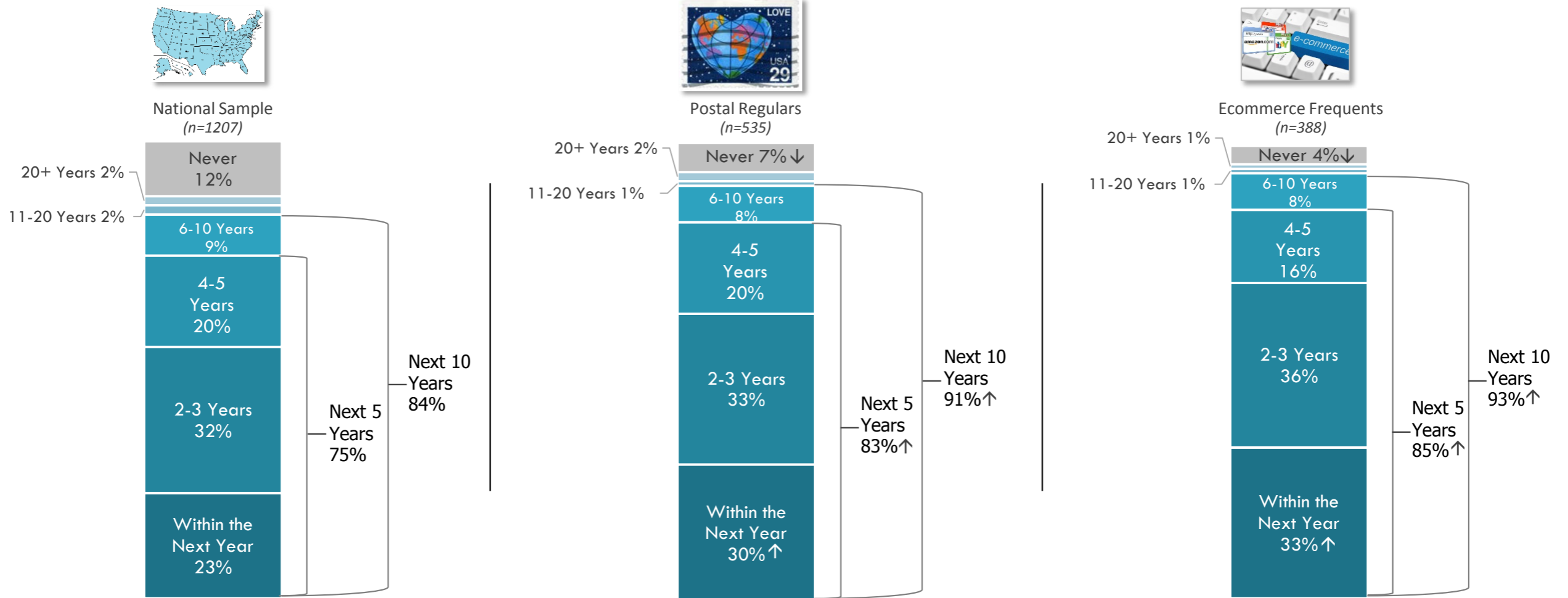
- Postal Regulars and Ecommerce Frequents are more aware of the drone delivery concept – and also expect to see the concept come to fruition sooner – than the general population.
- 60 percent of Postal Regulars and 58 percent of Ecommerce Frequents like the drone delivery concept, compared to 44 percent nationally.
- Both Postal Regulars and Ecommerce Frequents find the potential benefits of drone delivery to be more believable than the National Sample, but they also exhibit similar levels of skepticism as the National Sample that drone delivery would be safe.



“Postal Regulars” are monthly+ visitors to a post office (Q4c. In general, how often do you visit the following organizations’ retail locations?), the USPS website (Q4b. In general, how often do you visit the following organizations’ websites?), or the USPS mobile app (Q4a. In general, how often do you use the following organizations’ mobile apps?). “Ecommerce Frequents” had made 3+ purchases online in the past month (Q6. In the past month, how many times did you or someone in your household order a product online and have it delivered to your home?, only asked if an ecommerce purchase had been made in the past month at Q5. When was the last time you or someone in your household ordered a product online and had it delivered to your home?)

As is the case with other high-awareness groups, Postal Regulars and Ecommerce Frequents believe the drone delivery concept will come to fruition sooner than the general population.

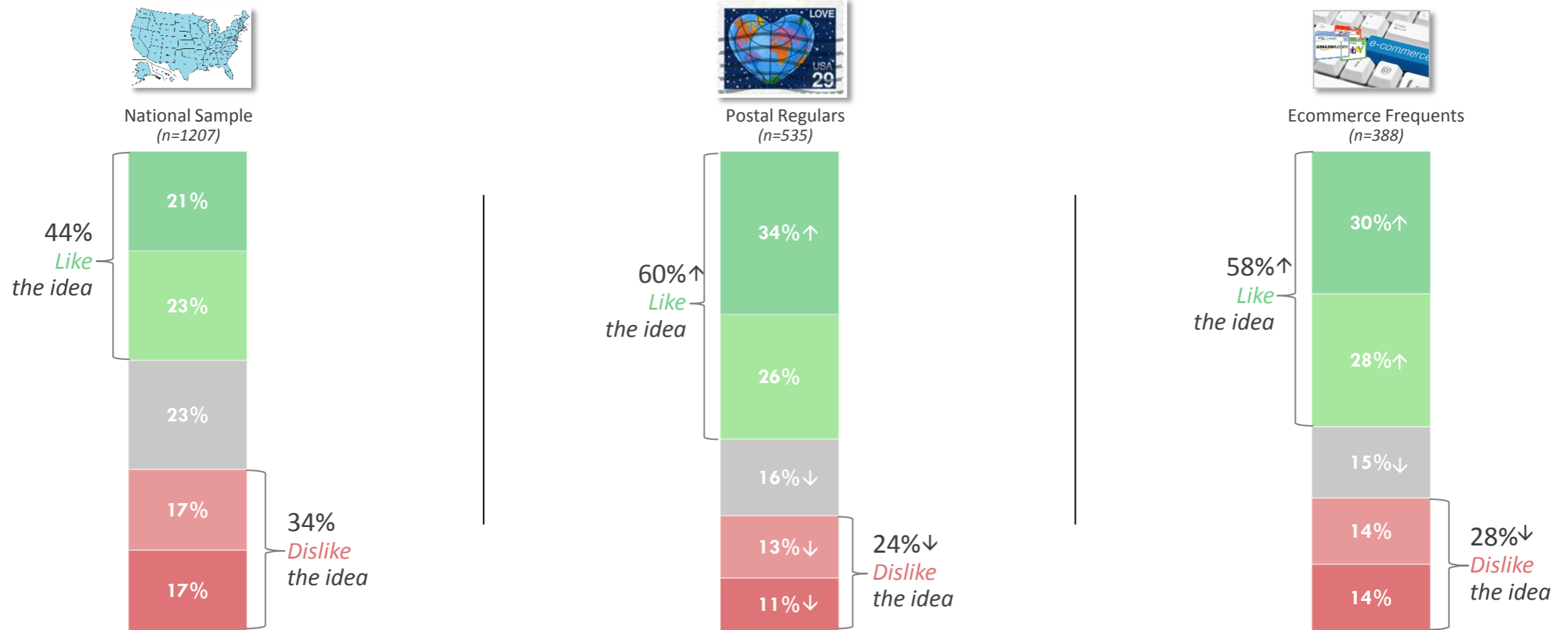
Expected Drone Delivery Timeline



Q15. When, if ever, do you expect that companies might start to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? (Scale: Within the next year; Within the next 3 years, but not the next year; Within the next 5 years, but not the next 3 years; Within the next 10 years, but not the next 5 years; Within the next 20 years, but not the next 10 years; More than 20 years; Never) | ↑ / ↓: Significantly higher/lower than National Sample at 95% c.l.

Postal Regulars and Ecommerce Frequents both like the drone delivery concept much more than the general population.

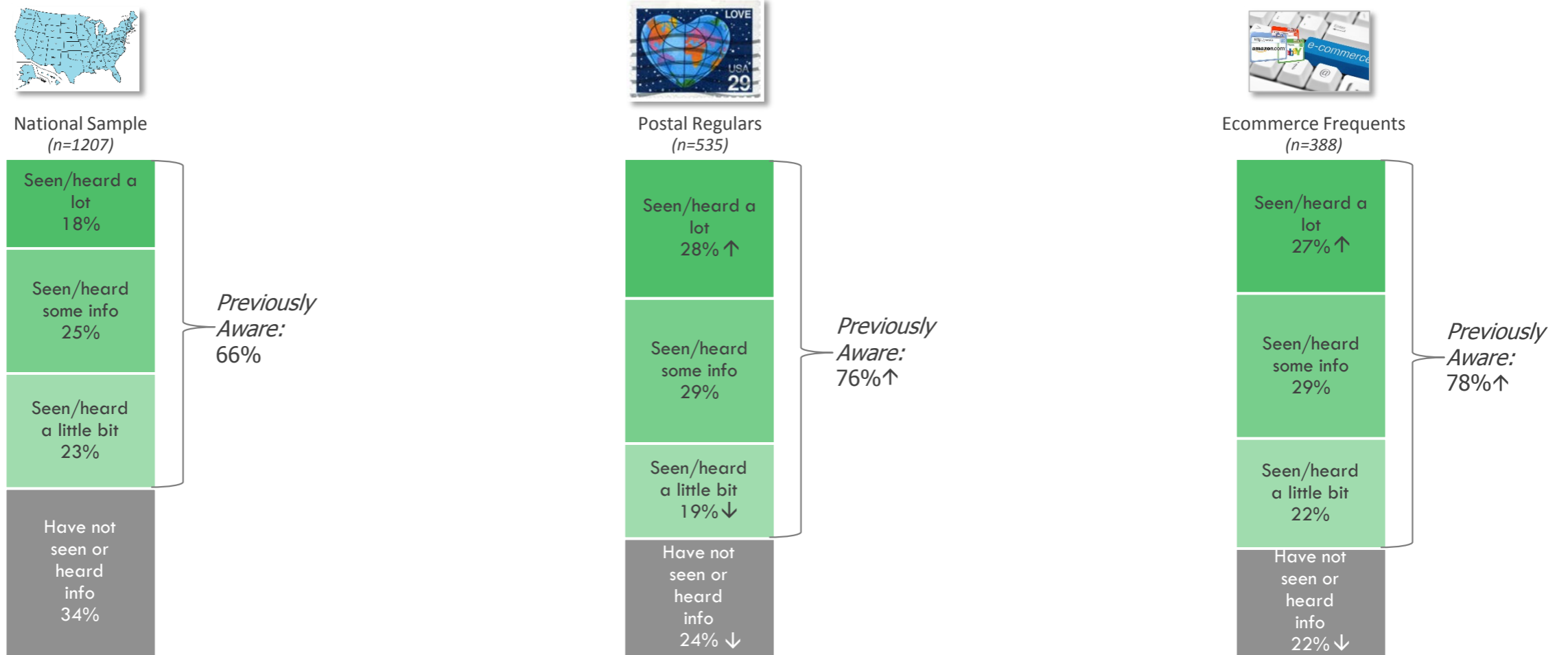
Drone Delivery Concept Liking



Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | ↑ / ↓: Significantly higher/lower than National Sample at 95% c.l.

Postal Regulars and Ecommerce Frequents have seen or heard more about drone delivery than the general population.

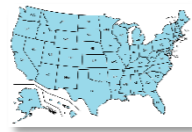
Awareness of Drone Delivery Concept



[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | ↑ / ↓: Significantly higher/lower than National Sample at 95% c.i.

Both Postal Regulars and Ecommerce Frequents find the potential benefits of drone delivery to be more believable than the National Sample, but they also show similar levels of skepticism than the National Sample that drone delivery will be safe.

Believability of Drone Delivery Benefits



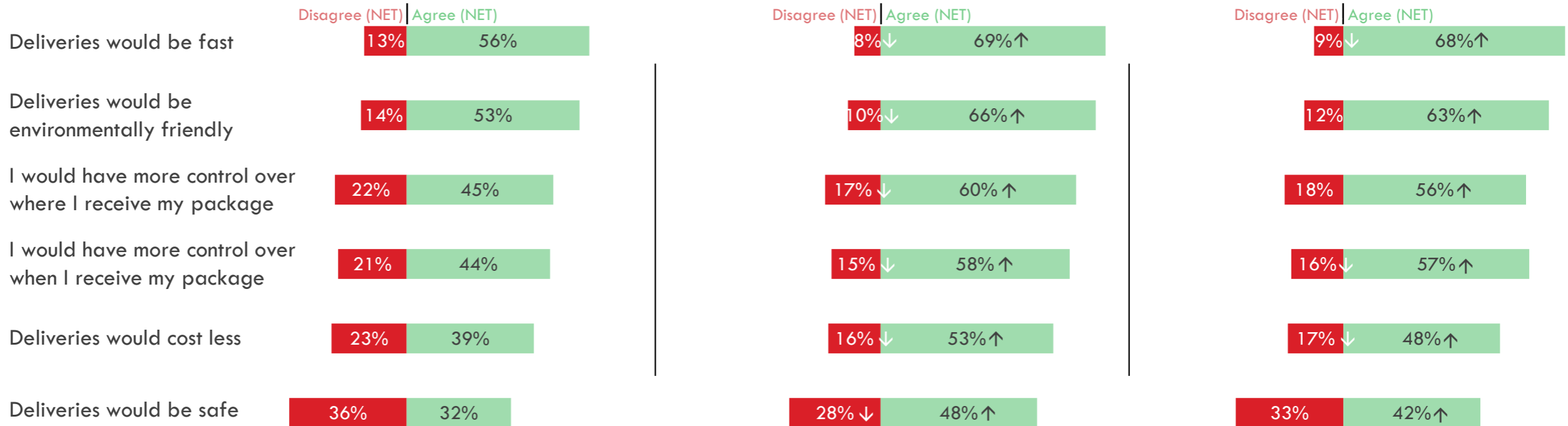
National Sample
(n=1207)



Postal Regulars
(n=535)



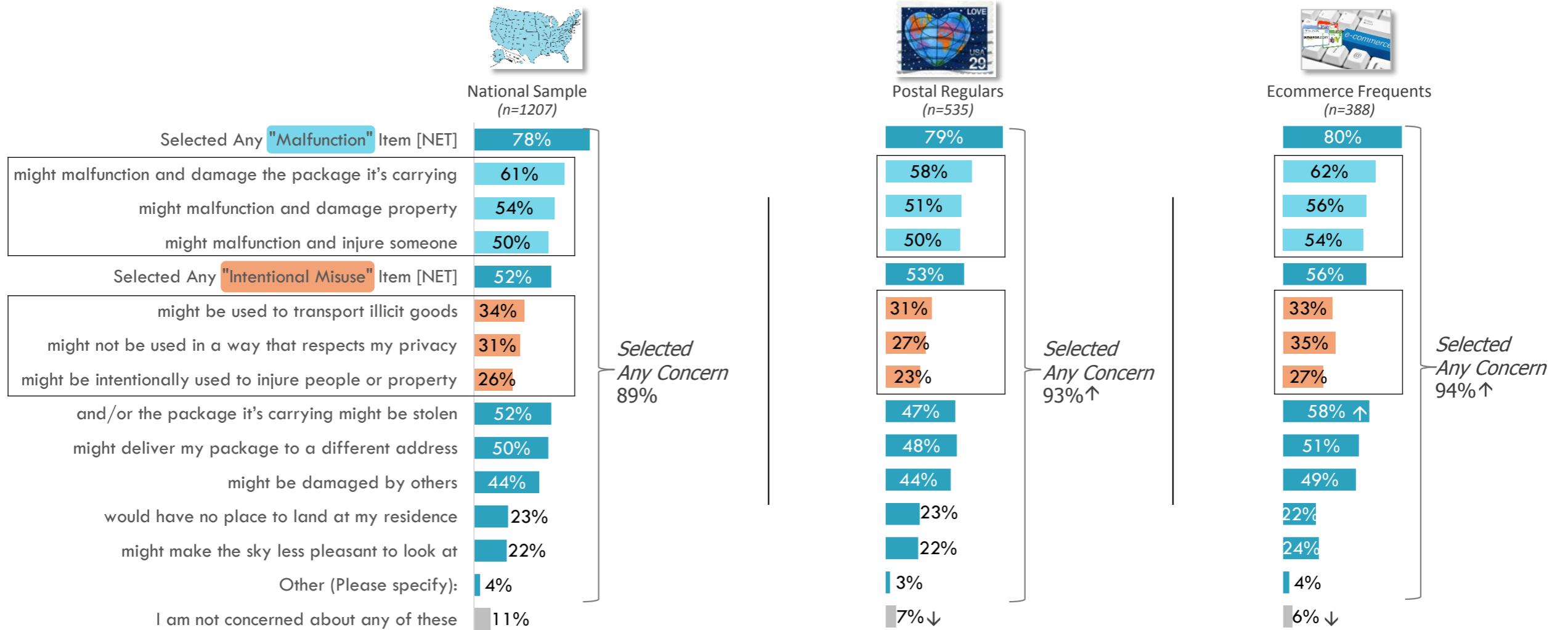
Ecommerce Frequents
(n=388)



[Following Concept Exposure] Q15. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Strongly agree, Somewhat agree, Neither agree nor disagree [Omitted from data shown here], Somewhat disagree, Strongly disagree). | ↑ / ↓: Significantly higher/lower than National Sample at 95% c.l.

Though the groups' concerns are similar to the general population, Ecommerce Frequents are slightly more concerned with privacy and theft than are Postal Regulars.

All Drone Delivery Concerns



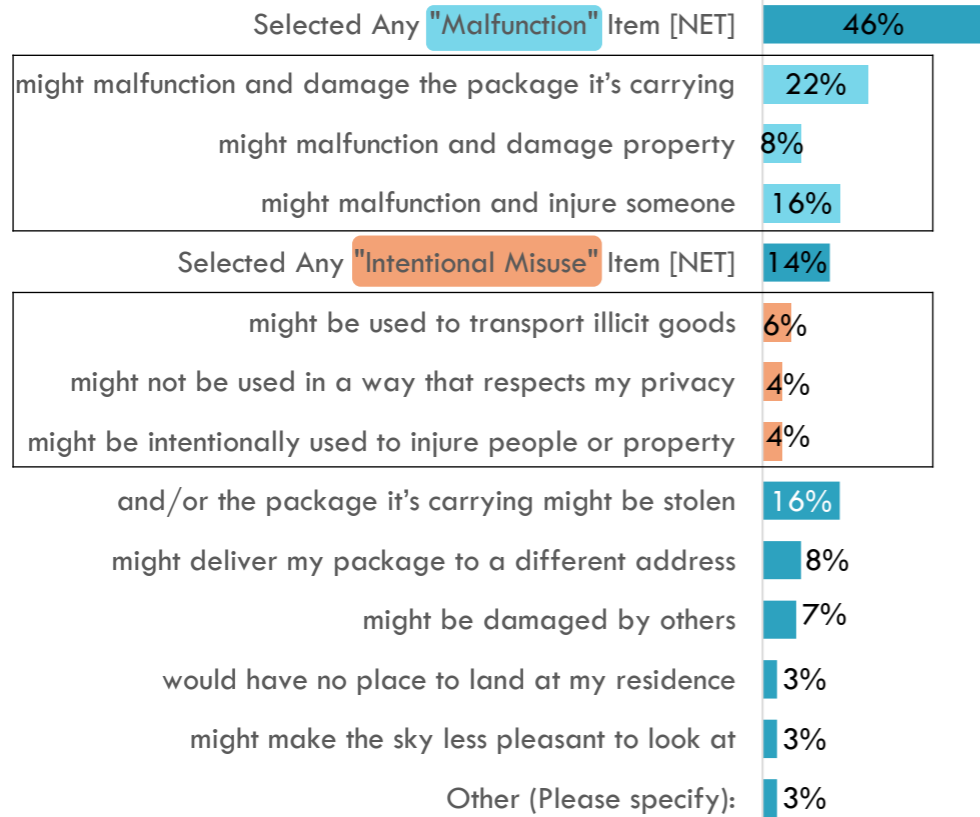
[Following Concept Exposure] Q20. Which, if any, of the following would you be concerned about if companies were to deliver mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? Are you concerned the Unmanned Aerial Vehicle...Please select all that apply. | ↑ / ↓: Significantly higher/lower than National Sample at 95% c.i.

Both Postal Regulars and Ecommerce Frequents' primary concerns about malfunction with drone delivery are on par with the general population.

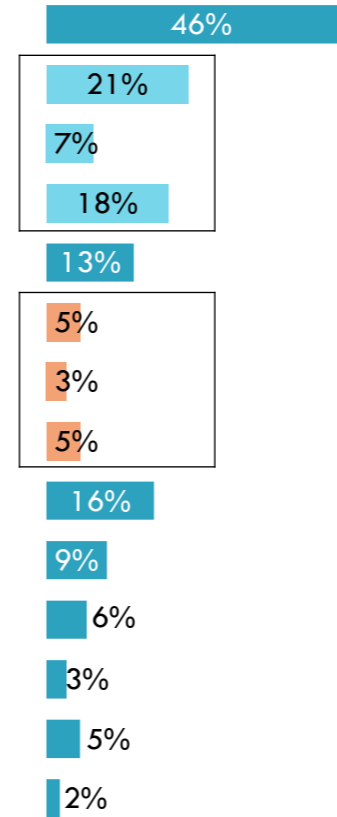
Primary Drone Delivery Concern
Among Respondents Who Reported At Least One Concern



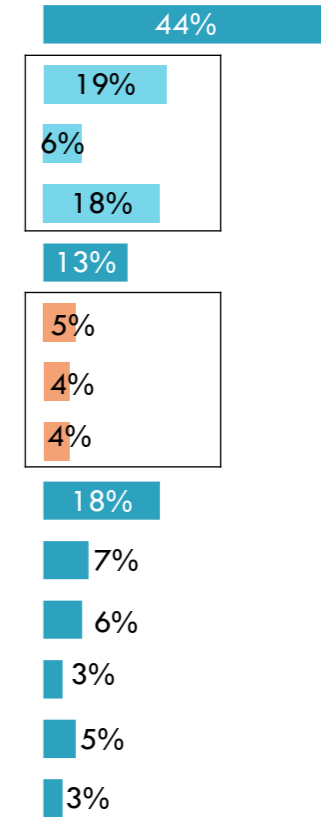
National Sample
(n=1080)



Postal Regulars
(n=496)



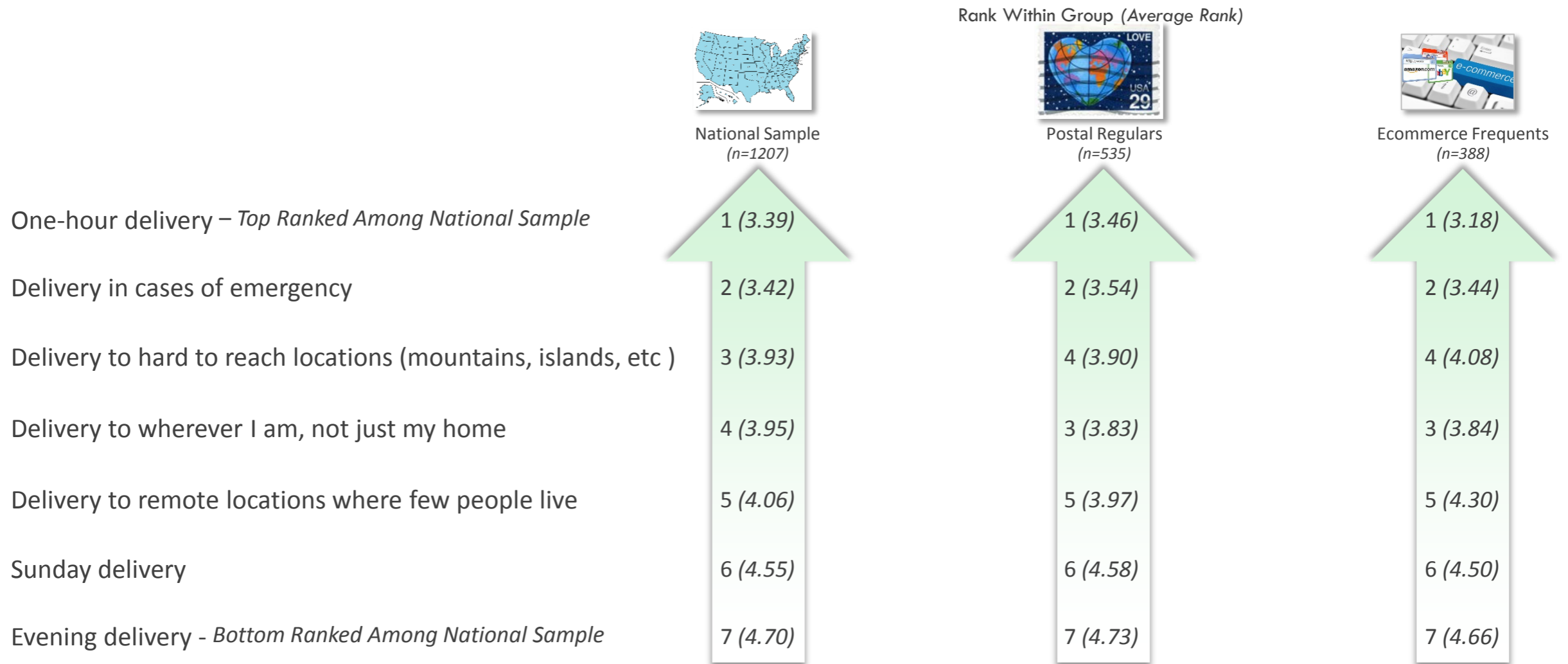
Ecommerce Frequents
(n=366)



[Following Concept Exposure] Q21. And which of the following would you be most concerned about if a company were to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? Please select the one item below that you would be the most concerned about. | ↑ / ↓: Significantly higher/lower than National Sample at 95% c.i.

Postal Regulars and Ecommerce Frequents have similar interests for drone delivery applications as the National Sample.

Ranking of Interest in Different Applications for Drone Delivery

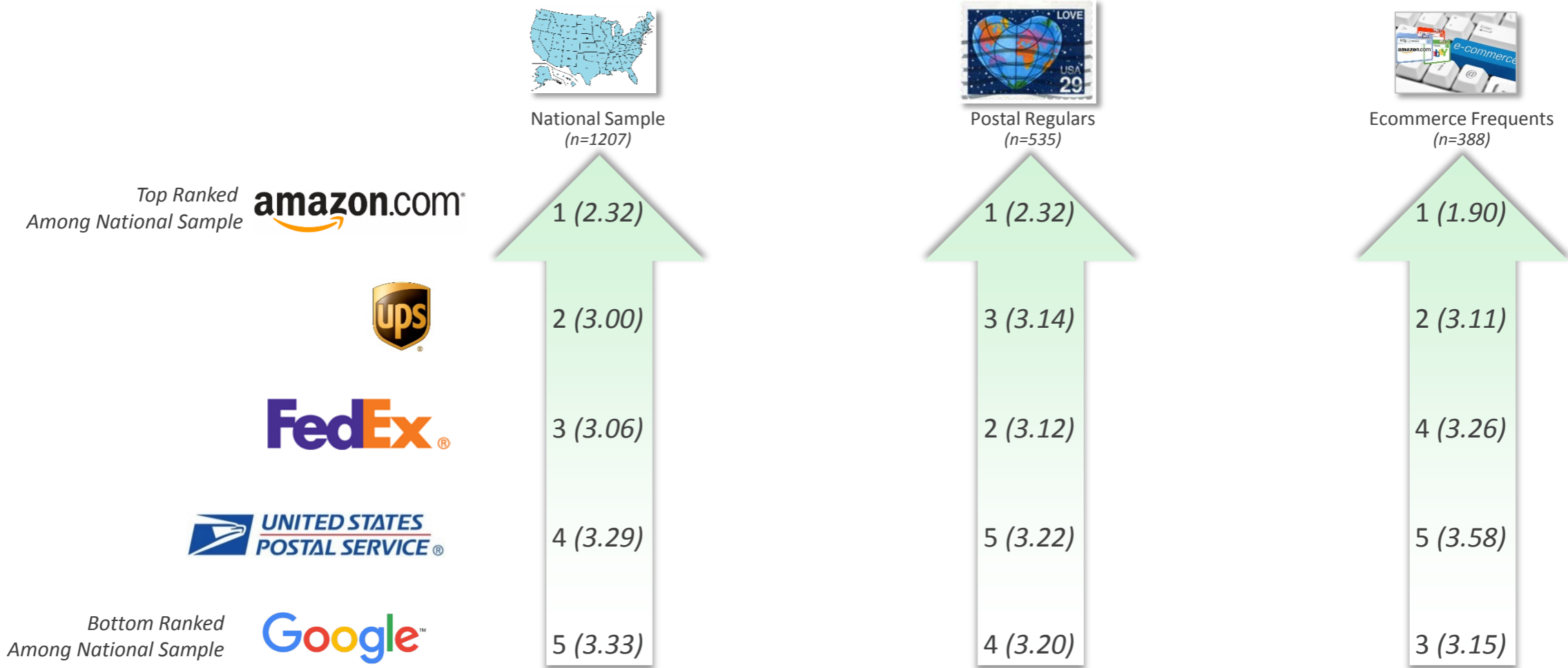


[Following Concept Exposure] Q19. Please rank the following services from 1 to 7, where 1 is the most interesting use of Unmanned Aerial Vehicles for the delivery of mail or packages, and 7 is the least interesting use of Unmanned Aerial Vehicles, also known as UAVs or Drones, for the delivery of mail or packages.

If offered today, both Postal Regulars and Ecommerce Frequents trust the USPS the least to execute the concept.

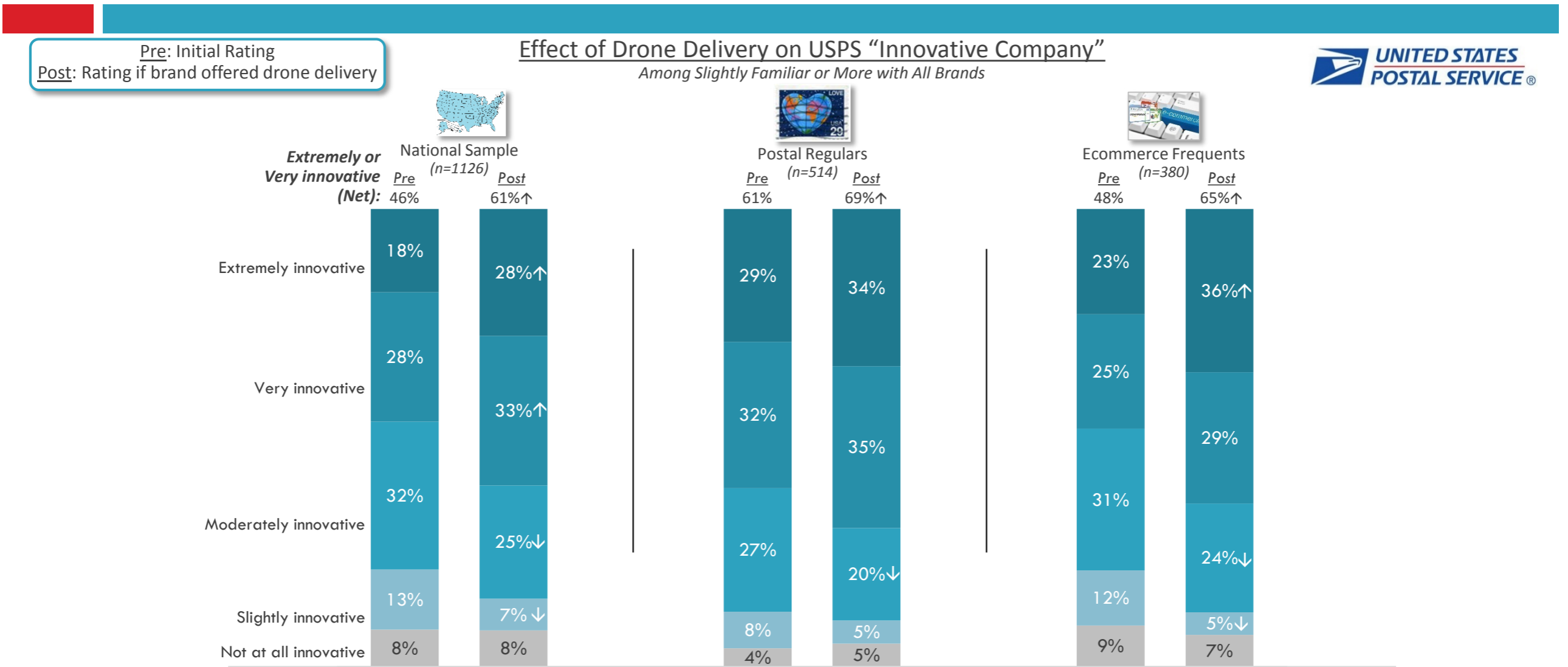
Rankings: Trusted Brand for Drone Delivery

Rank Within Group (Average Rank)



[Following Concept Exposure] Q16. Please rank the following organizations from 1 to 5, where 1 is the organization you would most trust to make deliveries using Unmanned Aerial Vehicles, and 5 is the organization you would least trust to make deliveries using Unmanned Aerial Vehicles, also known as UAVs or Drones.

Offering drone delivery improves Postal Regulars' and Ecommerce Frequents' perception of the USPS as an innovative company.



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For innovative company) Q3. Overall, how innovative do you feel the following organizations are? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | [Following Concept Exposure] (For innovative company) Q18. Overall, how innovative would you feel that the following organizations were if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.

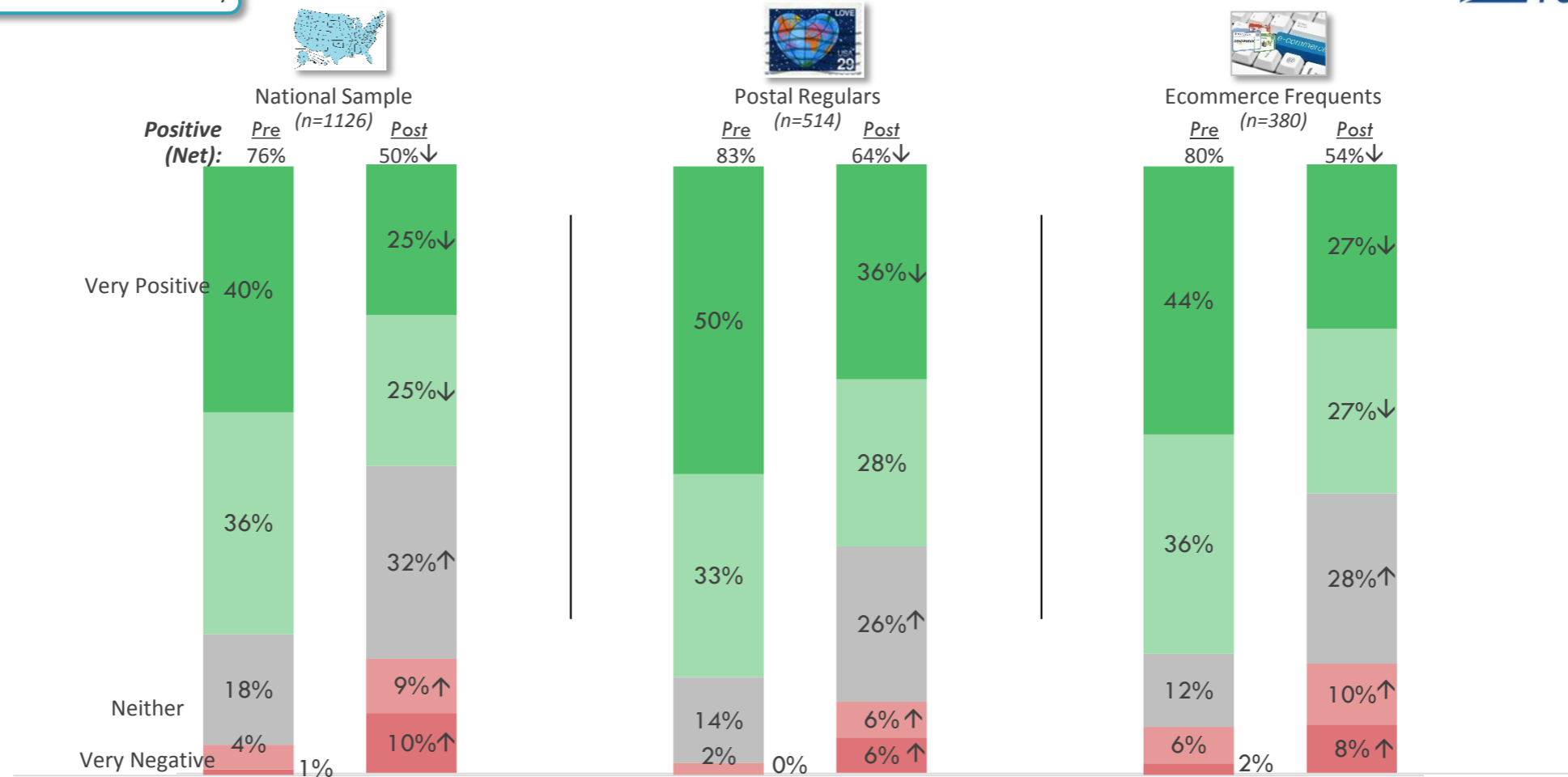
Both groups' current hesitation about the drone delivery concept leads them to report that they would feel less positive towards the USPS if it offered the service today.

Effect of Drone Delivery on USPS Brand Positivity

Among Slightly Familiar or More with All Brands



Pre: Initial Rating
Post: Rating if brand offered drone delivery



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For brand positivity) Q2. How positive or negative is your overall impression of the following organizations? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | [Following Concept Exposure] (For brand positivity) Q17. How positive or negative would your overall impression of the following organizations be if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.



Findings by Segment

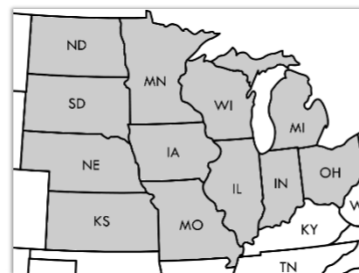
Geographic Regions



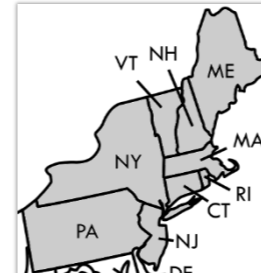
West



South



Midwest



Northeast

Groups in this section were defined based on responses to the question S2. Which state do you live in? Respondents were classified based on Census' regional definitions.



SUMMARY OF FINDINGS

Geographic Regions

- Awareness of the drone delivery concept is consistent across regions, though more respondents in the West report having seen or heard “a lot” about the idea.
- The Midwest is much more skeptical than other regions that drone delivery is coming: one in five say that the concept will never become reality.
- The drone delivery concept is most liked by the residents of Western states, while the residents of Midwestern states are the least likely to report liking the idea.
- Residents of the Midwest are the least likely to agree that drone delivery would be safe, and are also the most skeptical of the benefits of drone delivery.
- Interestingly, despite their hesitance about the concept, Midwestern respondents were the least likely to cite any specific concern with drone delivery.



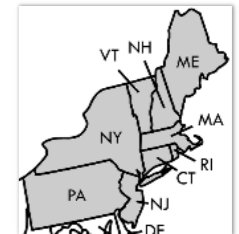
West



South



Midwest

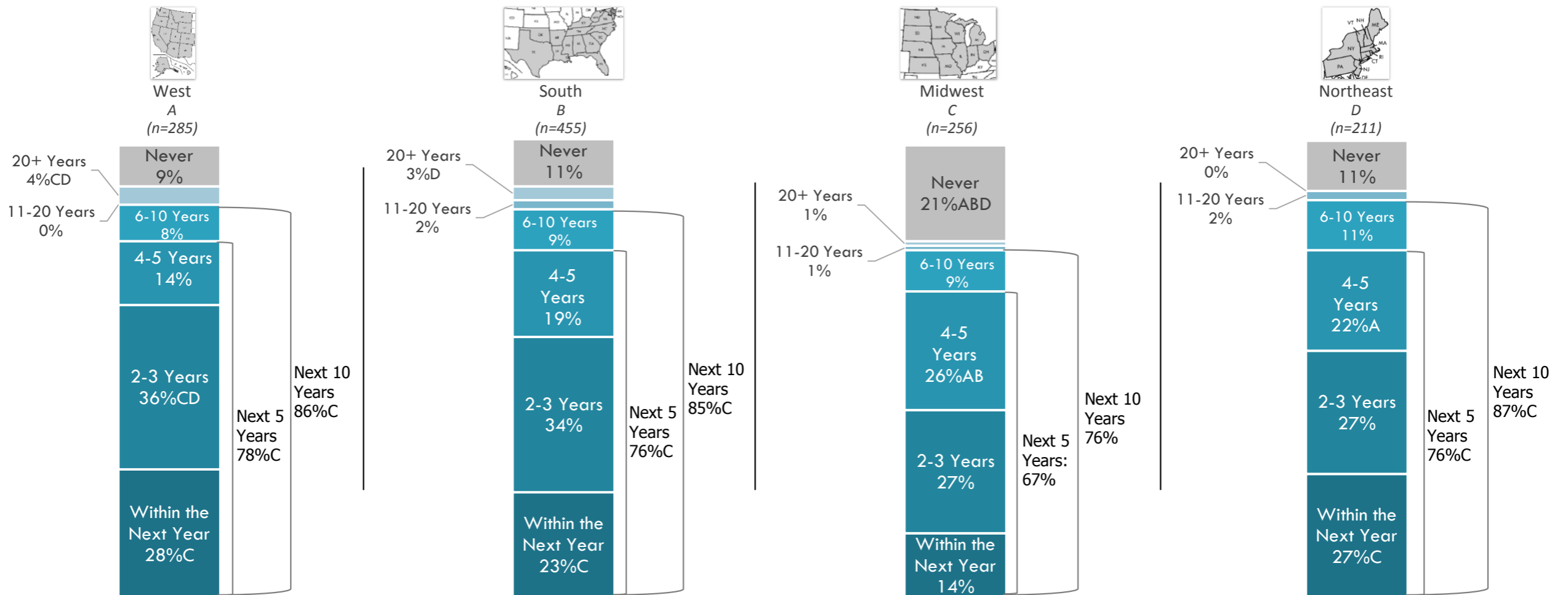


Northeast

Groups in this section were defined based on responses to the question S2. Which state do you live in? Respondents were classified based on Census’ regional definitions.

The Midwest is much more skeptical than other regions that drone delivery is coming: one in five say that the concept will never become reality.

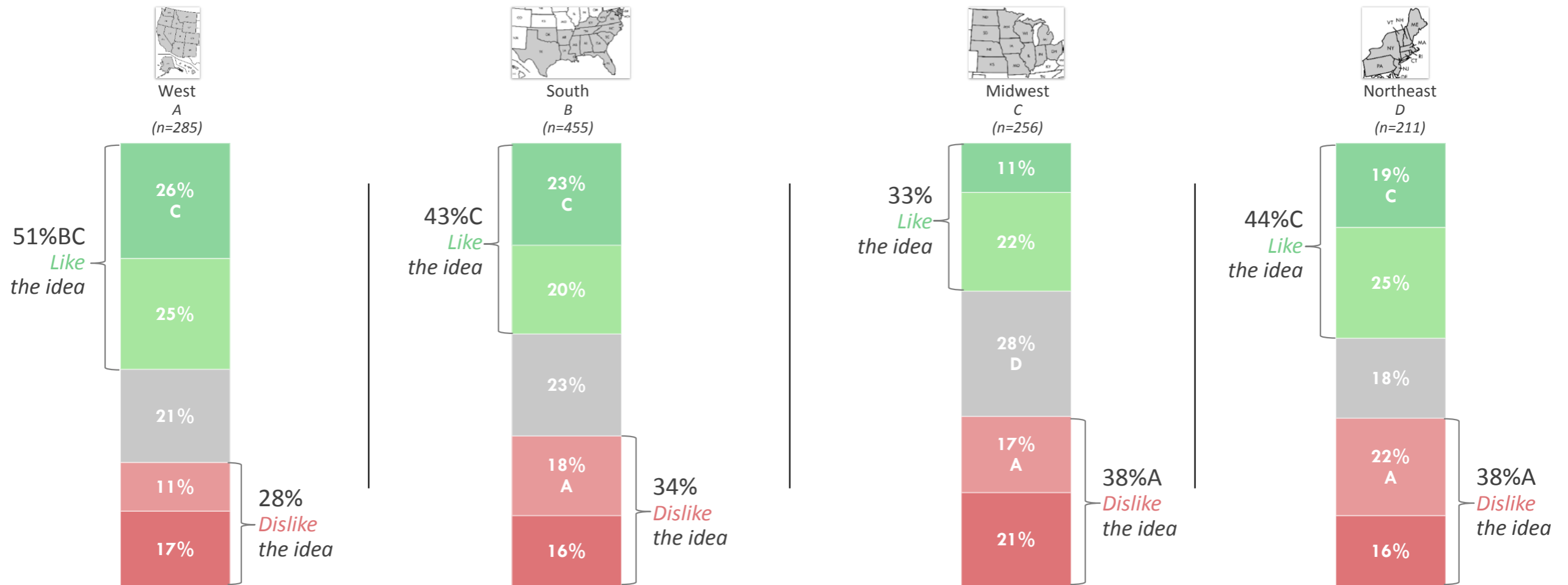
Expected Drone Delivery Timeline



Q15. When, if ever, do you expect that companies might start to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? (Scale: Within the next year; Within the next 3 years, but not the next year; Within the next 5 years, but not the next 3 years; Within the next 10 years, but not the next 5 years; Within the next 20 years, but not the next 10 years; More than 20 years; Never) | A,B,C,D : Significantly higher than corresponding group at 95% c.l.

The drone delivery concept is most liked by the residents of Western states, while the residents of Midwestern states are the least likely to report liking the idea.

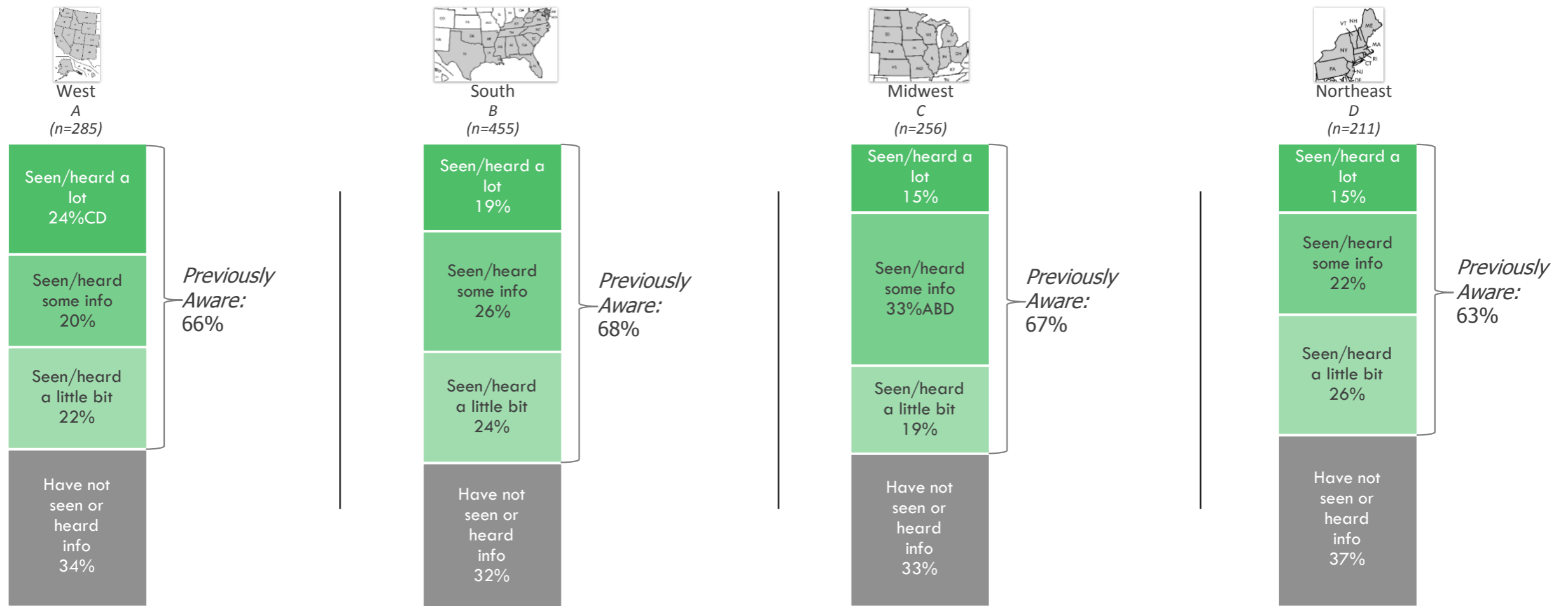
Drone Delivery Concept Liking



Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: I like the idea very much, I like the idea somewhat, I neither dislike nor like the idea, I dislike the idea somewhat, I dislike the idea very much) | A,B,C,D : Significantly higher than corresponding group at 95% c.l.

Awareness of the drone delivery concept is consistent across regions, though more in the West report having seen or heard “a lot” about the idea.

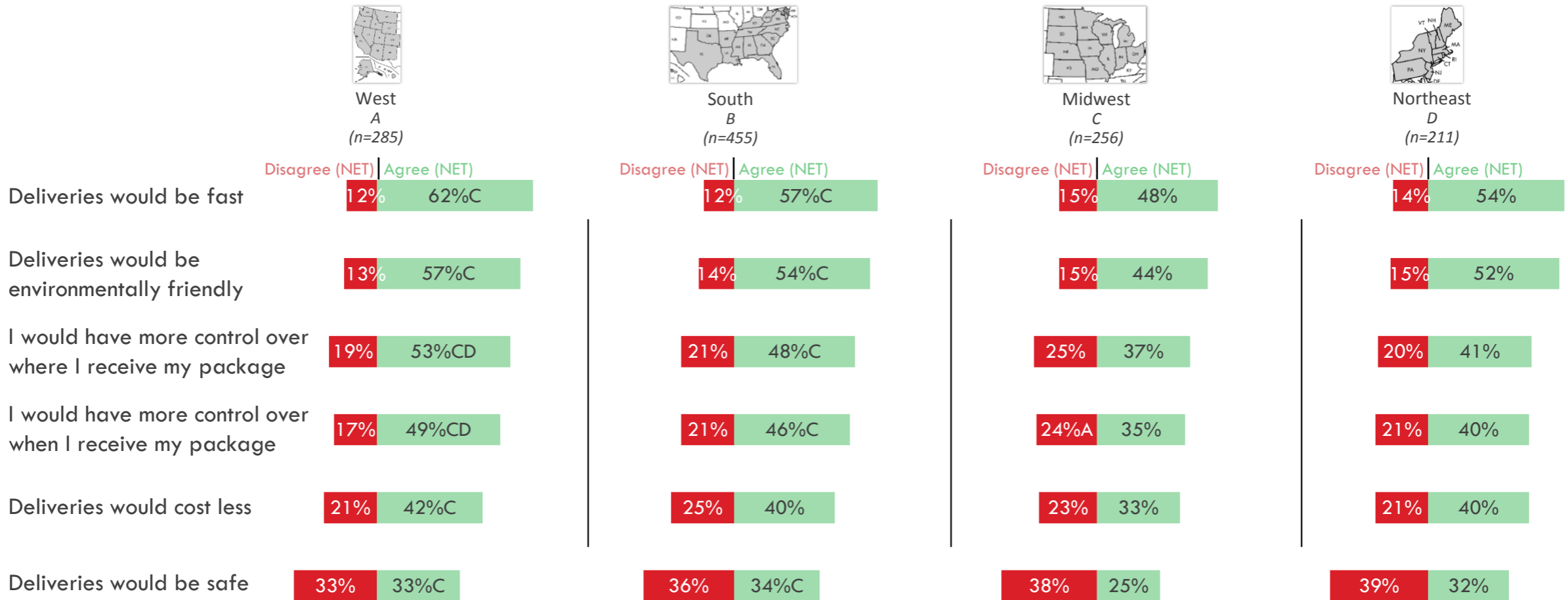
Awareness of Drone Delivery Concept



[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | A,B,C,D: Significantly higher than corresponding group at 95% c.I.

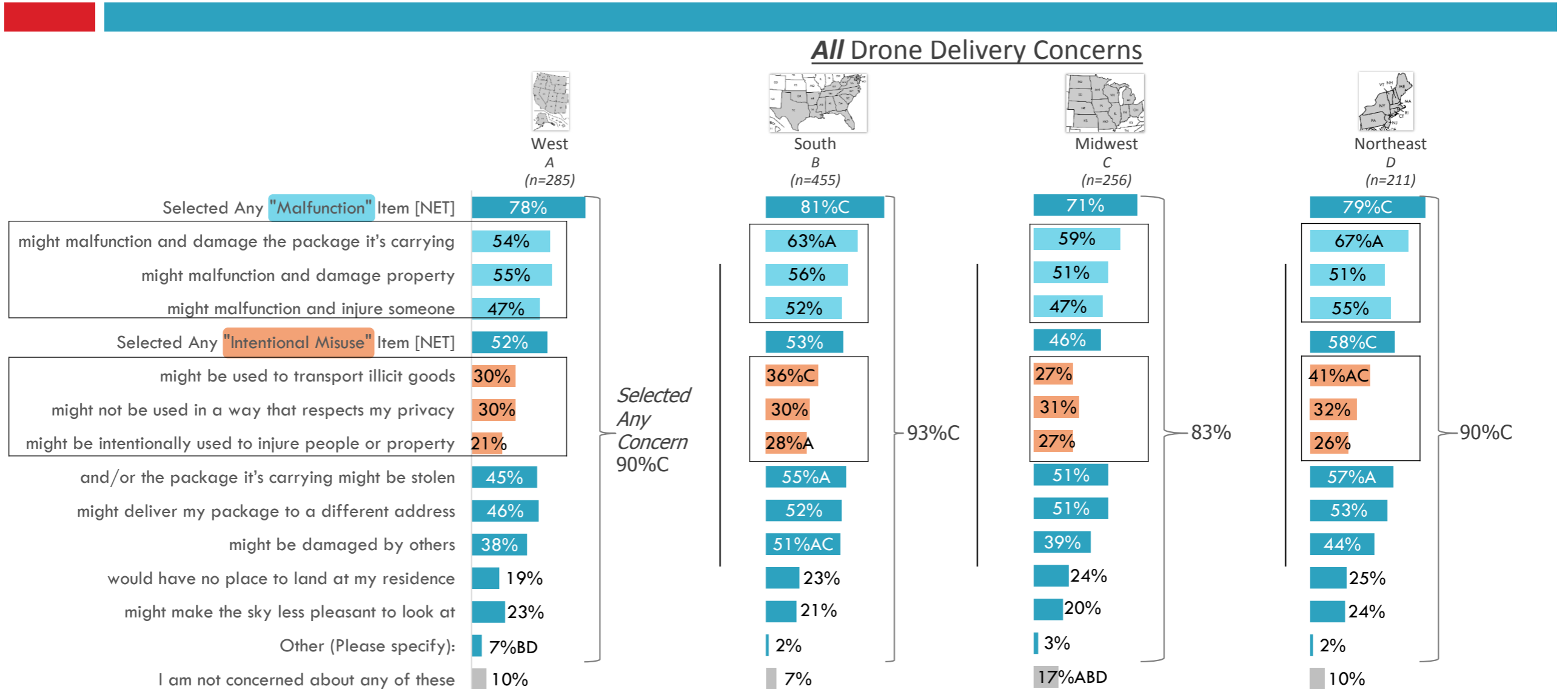
Residents of the Midwest are the most skeptical of the claimed benefits of drone delivery, and the least likely to agree that drone delivery would be safe (25 percent).

Believability of Drone Delivery Benefits



[Following Concept Exposure] Q15. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Strongly agree, Somewhat agree, Neither agree nor disagree [Omitted from data shown here], Somewhat disagree, Strongly disagree). | A,B,C,D : Significantly higher than corresponding group at 95% c.i.

Interestingly, despite their hesitance about the concept, Midwestern respondents were the least likely to cite any specific concern with drone delivery.

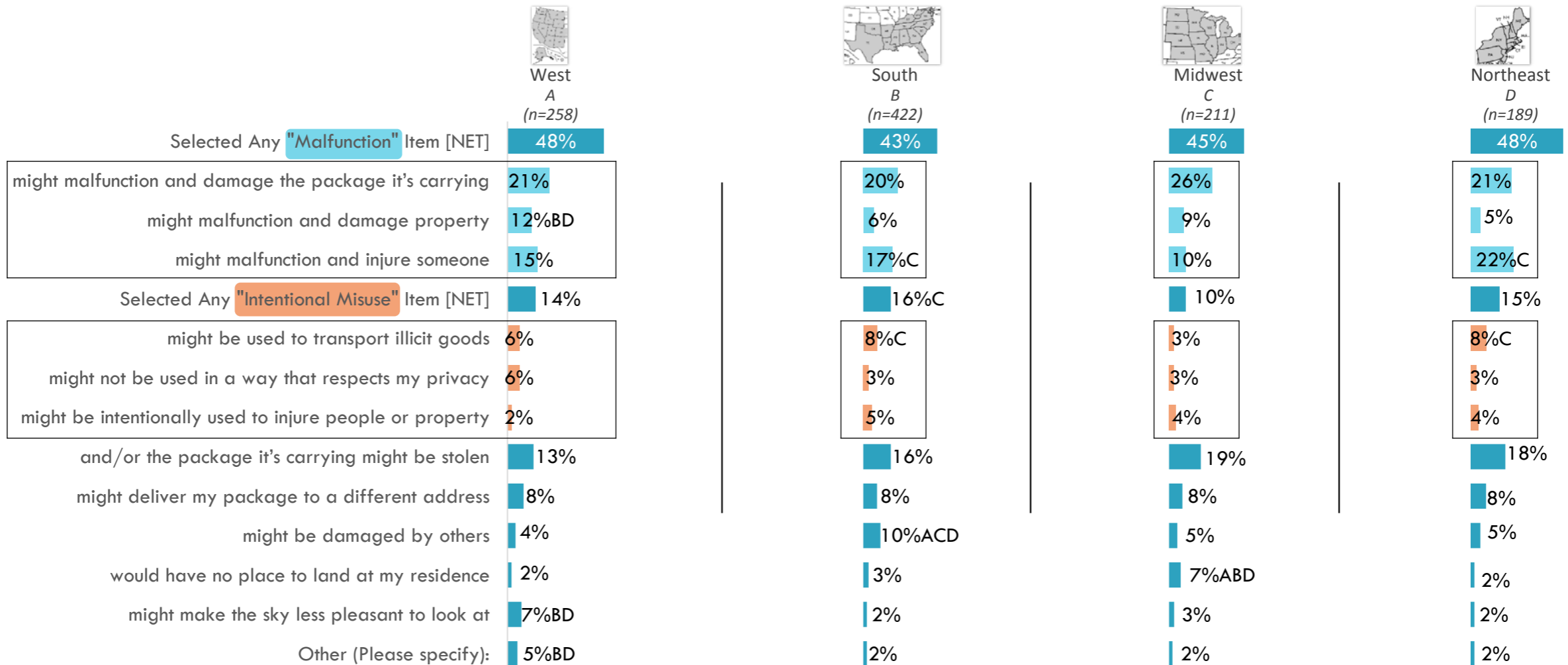


[Following Concept Exposure] Q20. Which, if any, of the following would you be concerned about if companies were to deliver mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? Are you concerned the Unmanned Aerial Vehicle...Please select all that apply. | A,B,C,D : Significantly higher than corresponding group at 95% c.l.

Respondents' primary concerns with drone delivery are fairly consistent across regions.

Primary Drone Delivery Concern

Among Respondents Who Reported At Least One Concern



[Following Concept Exposure] Q21. And which of the following would you be most concerned about if a company were to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone? Please select the one item below that you would be the most concerned about. | A,B,C,D : Significantly higher than corresponding group at 95% c.i.

Interest in various drone delivery applications are fairly consistent across the geographic regions, though interest in delivery to remote locations is ranked higher in the West than in other regions.

Ranking of Interest in Different Applications for Drone Delivery



[Following Concept Exposure] Q19. Please rank the following services from 1 to 7, where 1 is the most interesting use of Unmanned Aerial Vehicles for the delivery of mail or packages, and 7 is the least interesting use of Unmanned Aerial Vehicles, also known as UAVs or Drones, for the delivery of mail or packages. | Data includes oversample of Rural/Remote Respondents

USPS finds its best ranking as a trusted brand for drone delivery in the Northeast, where it was ranked third by respondents. In contrast, USPS was ranked 5th in both the West and Midwest.

Rankings: Trusted Brand for Drone Delivery
 Rank Within Group (Average Rank)

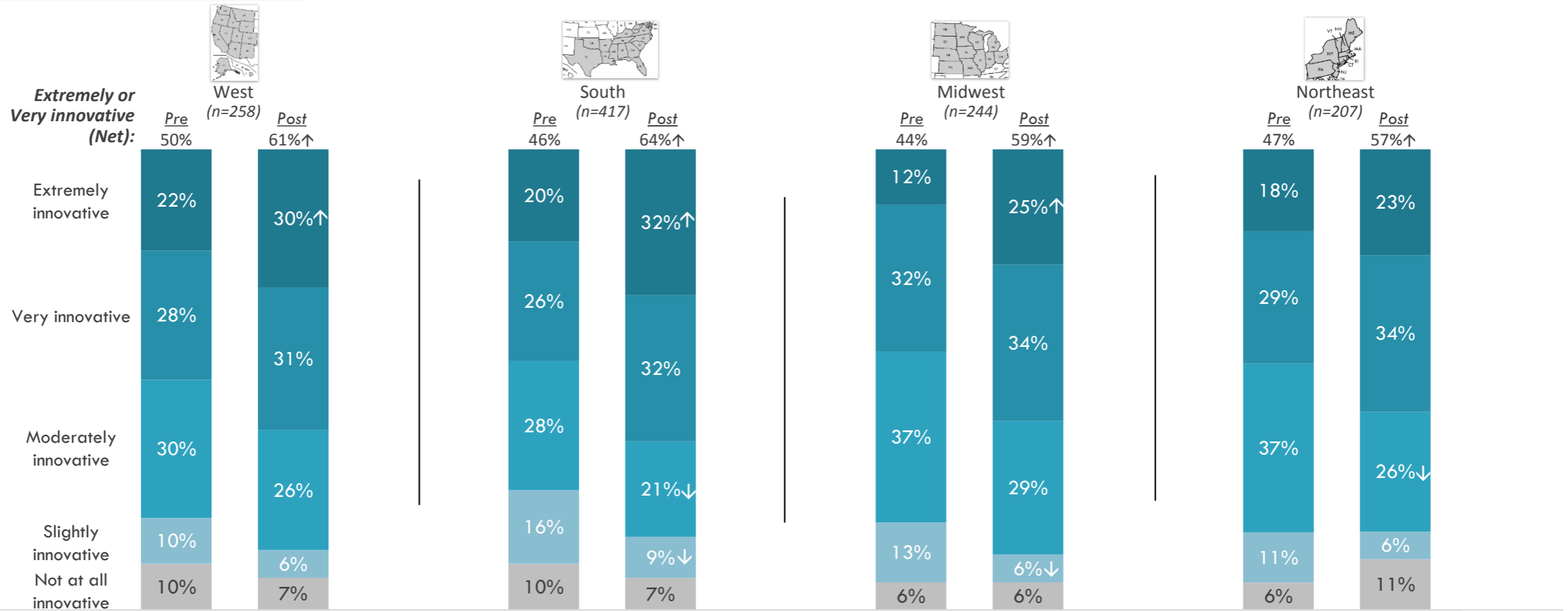


[Following Concept Exposure] Q16. Please rank the following organizations from 1 to 5, where 1 is the organization you would most trust to make deliveries using Unmanned Aerial Vehicles, and 5 is the organization you would least trust to make deliveries using Unmanned Aerial Vehicles, also known as UAVs or Drones.

Consistent with other findings, offering drone delivery improves residents of each region’s perceptions of the USPS as an “Extremely” or “Very” innovative company.

Pre: Initial Rating
 Post: Rating if brand offered drone delivery

Effect of Drone Delivery on USPS “Innovative Company”
Among Slightly Familiar or More with All Brands

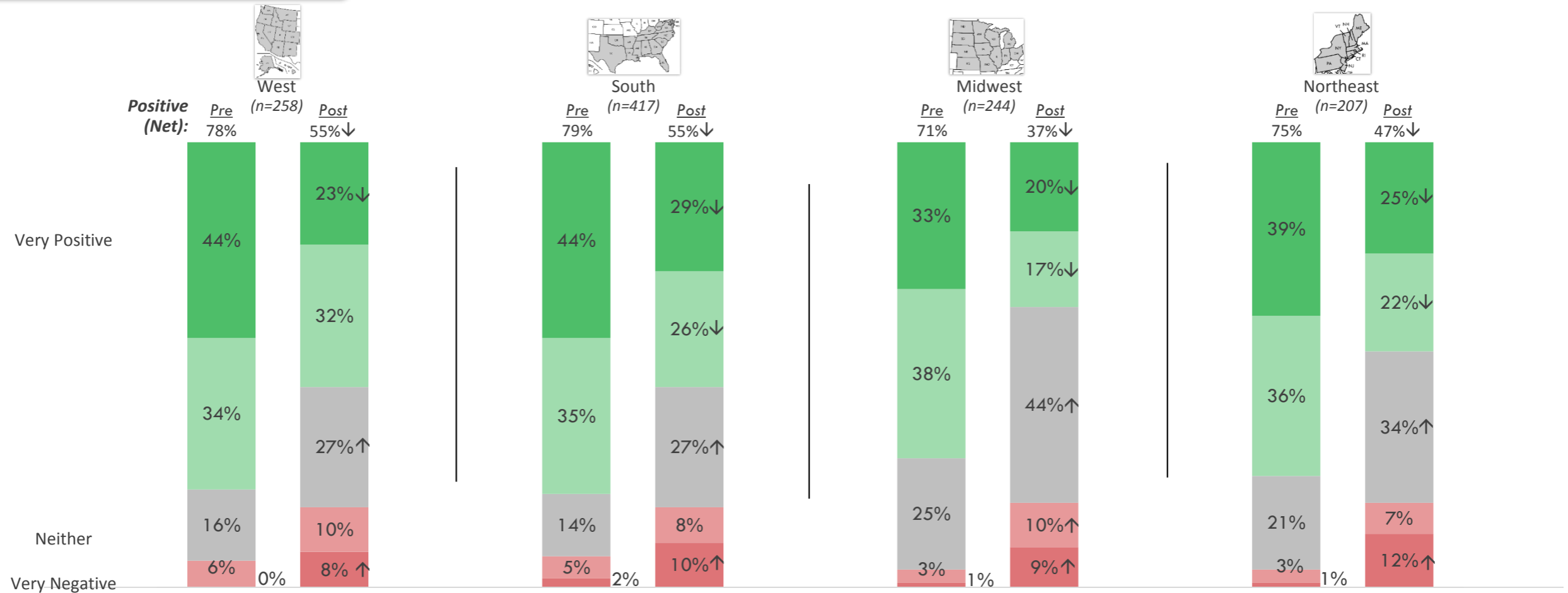


[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For innovative company) Q3. Overall, how innovative do you feel the following organizations are? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | [Following Concept Exposure] (For innovative company) Q18. Overall, how innovative would you feel that the following organizations were if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.

Reflecting the public's current hesitance towards the concept, an association with drone delivery today leads to a drop in brand positivity among the residents of all four regions.

Pre: Initial Rating
Post: Rating if brand offered drone delivery

Effect of Drone Delivery on USPS Brand Positivity
Among Slightly Familiar or More with All Brands



[Prior to Concept Exposure] (For Brand Familiarity) Q1. How familiar are you with the following organizations? (Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar) | (For brand positivity) Q2. How positive or negative is your overall impression of the following organizations? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | [Following Concept Exposure] (For brand positivity) Q17. How positive or negative would your overall impression of the following organizations be if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones? (Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative) | ↑ / ↓: Significantly higher/lower than pre-measure at 95% c.i.

Appendices

*Click on the appendix title
to the right to navigate
to the section content.*

Appendix A: Guide to Interpreting the Detailed Data Visualizations in this Report.....	85
Appendix B: Methodology: Detailed Notes, Limitations, and Points of Contact.....	92
Appendix C: Public Perception of Drone Delivery Questionnaire	96
Appendix D: External Review Certification	110
Appendix E: Management’s Comments.....	112



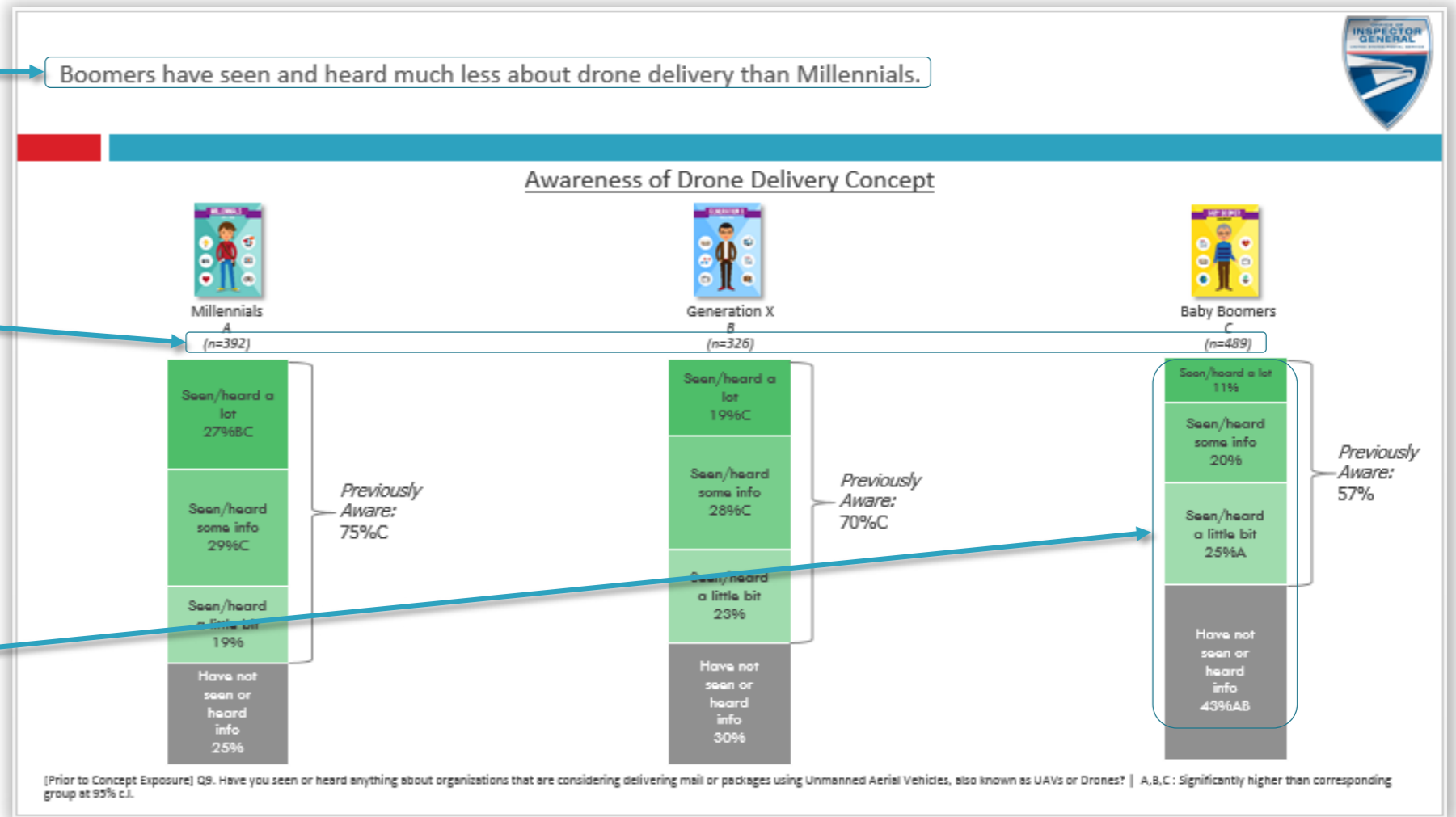
Appendix A

Guide to Interpreting the Detailed Data Visualizations in this Report



VISUAL ELEMENTS INCLUDED WHEN PRESENTING DETAILED DATA

- Findings are presented at the top of each slide, and are written in a way that should be understandable for non-technical audiences.
- The number of respondents — shown as “(n=)” — is included for all groups.
- The numbers shown in certain charts may not add up to 100%, which is due to rounding.
 - For example, the numbers presented for Baby Boomers here sum to 99% (11% + 20% + 25% + 43%).

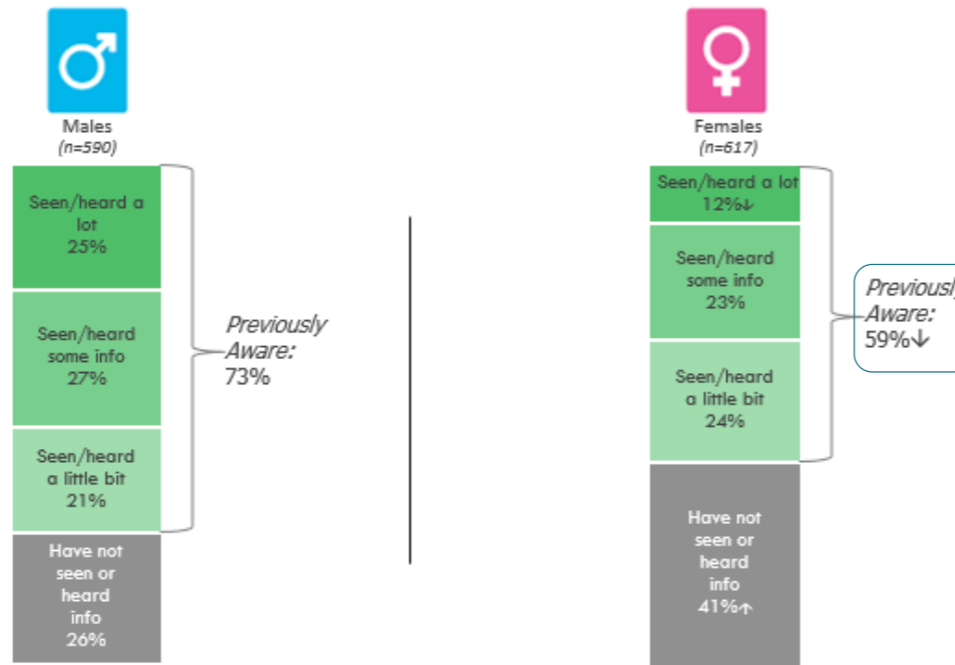


UNDERSTANDING “NETTED” DATA

Men are more likely than women to report having previously seen or heard information about the drone delivery concept.



Awareness of Drone Delivery Concept



[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | ↑ / ↓: Females significantly higher/lower than Males at 95% c.l.

- On many slides, data are presented in “nets,” where respondents’ selection of any combination of response items within an overarching category is counted as one selection when calculating the percentage of people who selected the “netted” category.
 - For example, respondents that reported that they had previously “seen or heard a lot,” “seen or heard some information,” or “seen or heard a little bit” about drone delivery were combined here to show that 59% of females were “previously aware” of the concept of drone delivery.
- Note: Netted data is presented in several ways. It might be shown next to a bracket, as in this example slide, or the netted items might be boxed within a graph, or a net might be included on its own row at the top of a graph.

AN OVERVIEW OF INTERPRETING STATISTICAL SIGNIFICANCE

Numbers, such as percentages, that are derived from a sample can only provide estimates of the true number that exists in a population. Differences in opinion between two reported groups might be due to random variation, or might be due to a true difference of opinion between the groups.

In order to help interpret the numbers reported from a sample, it is common to perform “statistical significance testing” to determine the probability that the difference between two percentages observed in the sample would have occurred by chance if the population proportions were equal.

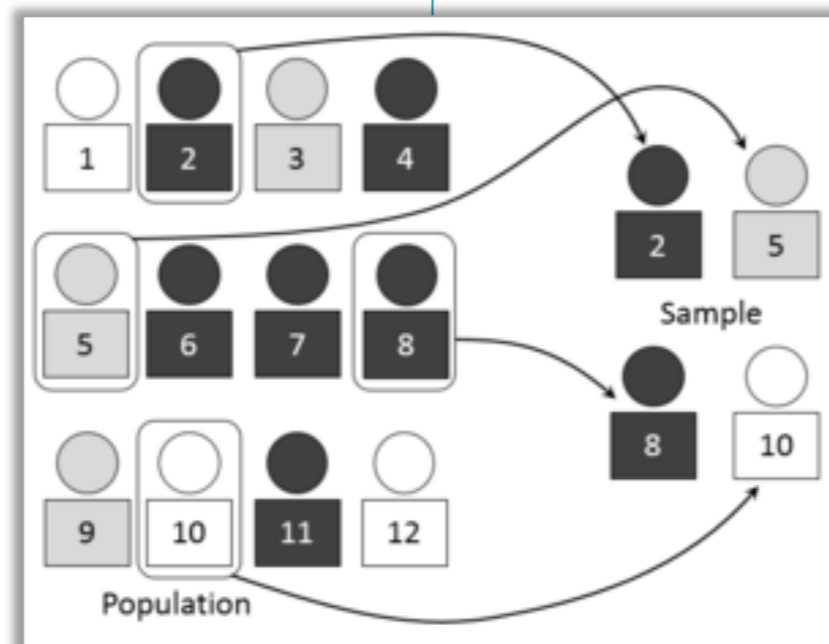
Statistical significance is calculated using “confidence levels,” referred to as “c.l.” throughout this report. Higher

confidence levels provide analysts with greater certainty about the conclusions drawn from data. Data in this report use a 95 percent confidence level, which is standard for academic and government survey research.

When two numbers are different at the confidence threshold that was used, they are said to be “significantly different.”

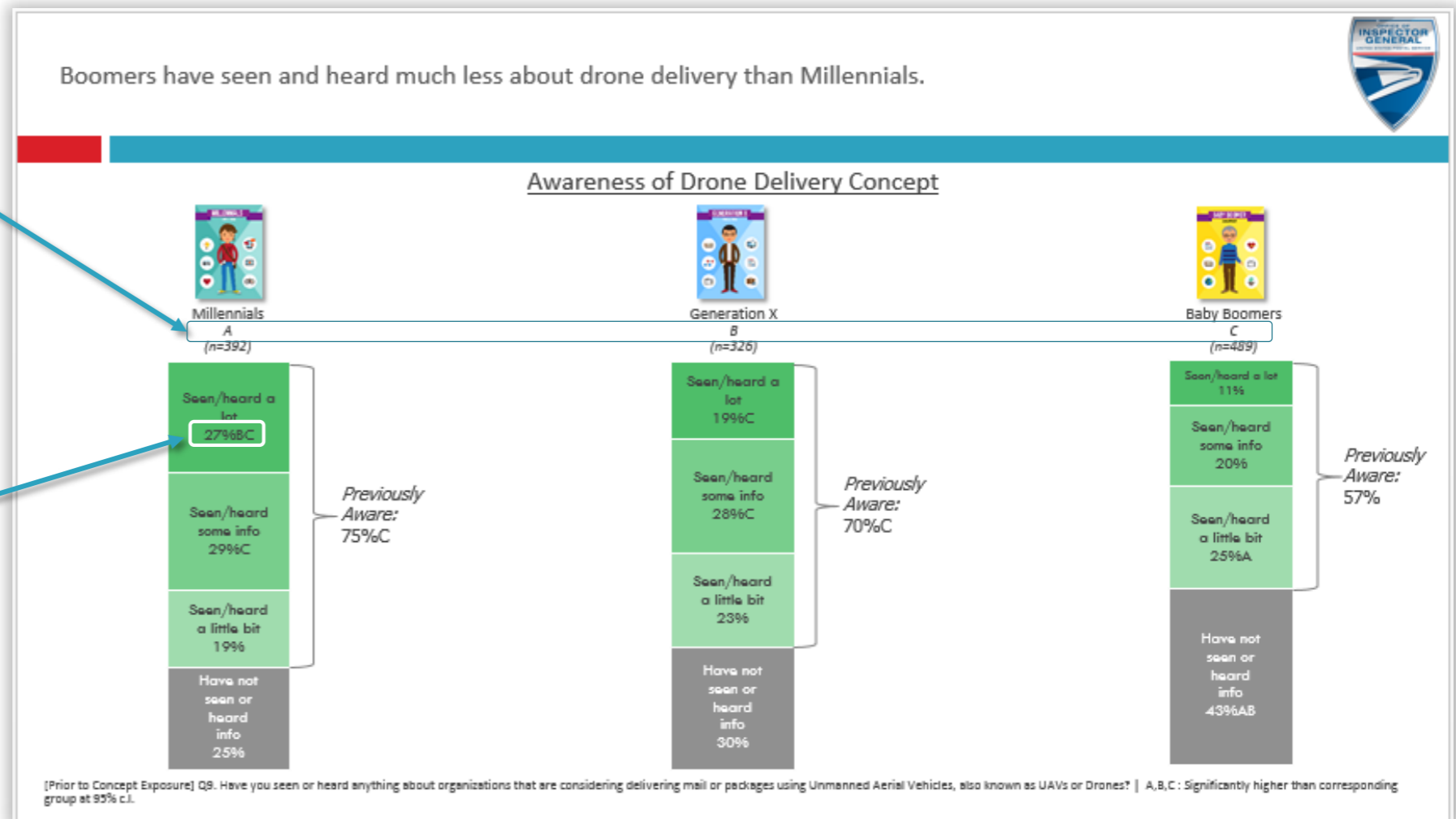
While it is still possible that the differences between two tested numbers could be due to chance, or due to the other issues that are

discussed in Appendix B of this report, differences of opinion between groups whose results are “significantly different” meet a higher, more credible standard than differences that do not pass significance testing.



UNDERSTANDING STATISTICAL SIGNIFICANCE AS REPORTED WITH LETTER NOTATION

- When tests were employed in order to determine whether the difference between two numbers was statistically significant, visual elements, such as the letter notations (A,B,C) shown in this example slide, are assigned to the groups whose results were being reported.
- These letter notations are then displayed along with reported percentages in order to indicate where one number is *statistically significantly higher* than the number reported for another group.
 - For example, the “BC” shown here indicates that the 27% of Millennials who have seen or heard a lot about drone delivery is “significantly higher” than both the 19% reported for Generation X, and the 11% reported for Baby Boomers.

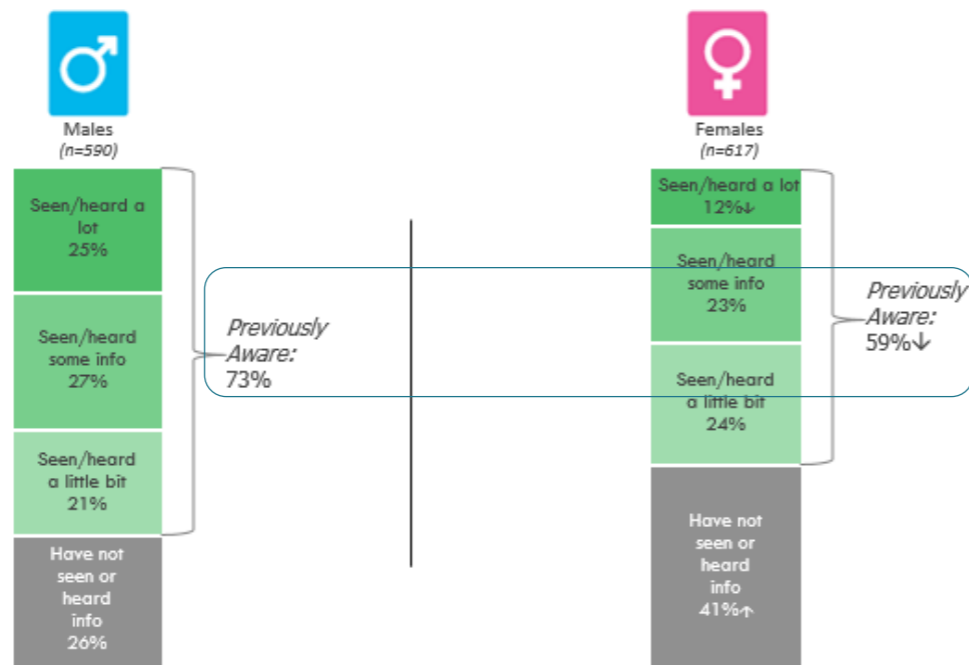


UNDERSTANDING STATISTICAL SIGNIFICANCE AS REPORTED WITH ARROWS

Men are more likely than women to report having previously seen or heard information about the drone delivery concept.



Awareness of Drone Delivery Concept



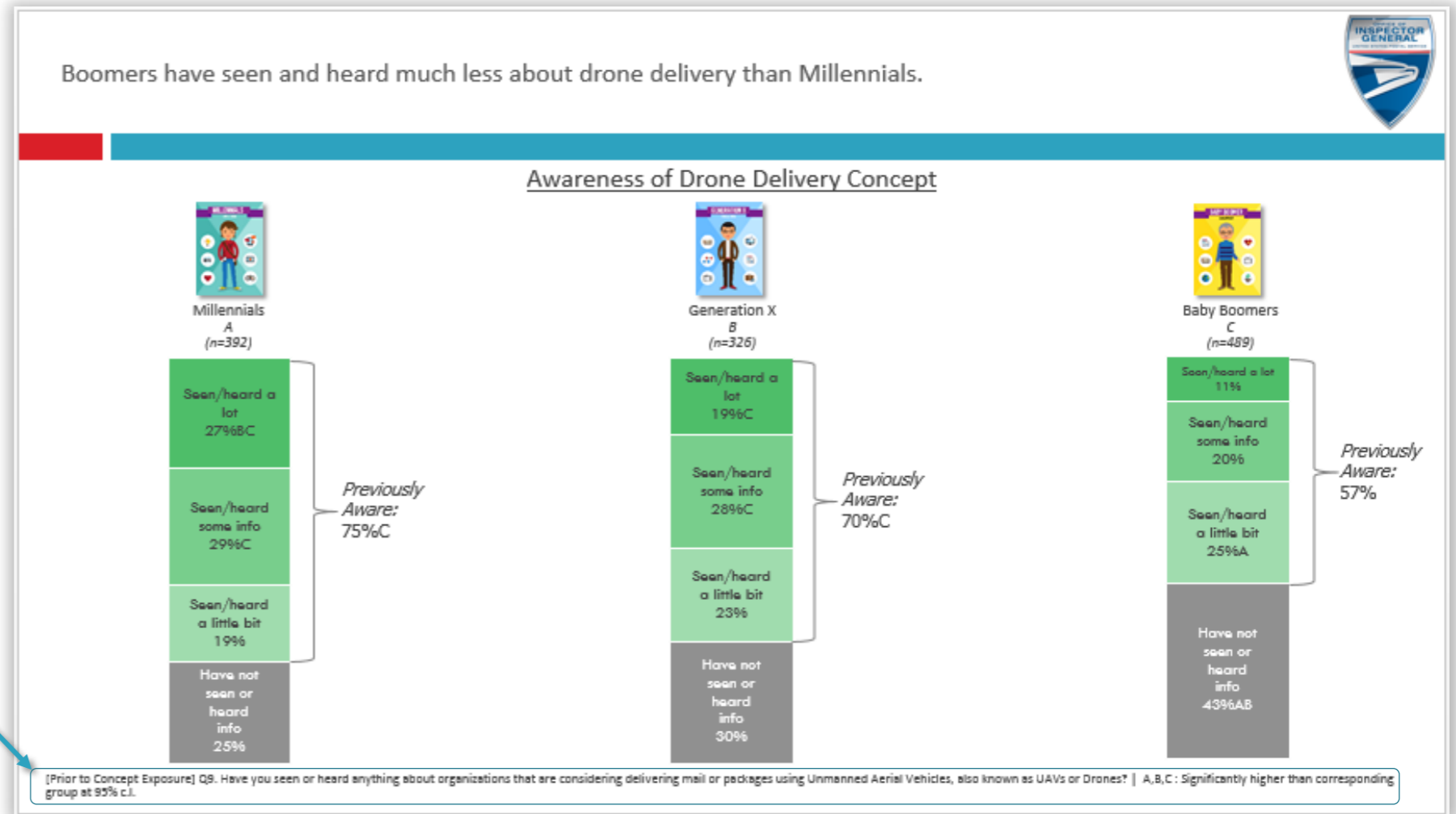
[Prior to Concept Exposure] Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones? | ↑ / ↓: Females significantly higher/lower than Males at 95% c.i.

- On other slides, arrows (↑↓) are used to indicate statistically significant differences.
- In these cases, the direction of the arrow indicates whether the number shown is significantly higher or lower than the group against which the presented number is being tested.
 - For example, the 59% of females who were previously aware of drone delivery reported here is “significantly lower” than the 73% reported for males.

REPORT FOOTNOTES

- Footnotes are included on all data slides throughout the report. These include important details for both technical and non-technical audiences, such as complete question text, and specifications for any statistical testing performed.

- Footnotes are the first place to look for most of the questions that readers might have about each individual slide.*





Appendix B

Methodology: Detailed Notes, Limitations, and Points of Contact



METHODOLOGY

DETAILED NOTES AND LIMITATIONS

Overview

The OIG researchers employed best practices in designing and implementing the methodology employed here. Nevertheless, the findings of survey research projects can be affected by varying factors, including the wording of questions, answer choices, and the order of questions asked to respondents.

Research in the public opinion field also demonstrates that point estimates can vary across survey modes (online, in person, by phone, etc.) based on both how respondents interact with those modes, and on the degree to which each mode is able to achieve a representative sample of data for analysis.

Note on Subject Matter

It is notable that the subject matter of this research is extremely new, and so respondents were asked to judge a concept that few — if any — would have actually encountered firsthand. Responses provided here, then, might vary from respondents' perceptions if they were to gain experience with the actual service.

Data Quality

Prior to analysis, steps were taken to improve the quality of all of the data analyzed for this report. While collecting responses, the survey employed two “attention check” questions that respondents had to answer correctly in order to finish the survey. Then, prior to analysis the data was cleaned to remove partial responses, all responses by “straight liners” who did not provide high quality data, all “speeders” who completed the survey unrealistically quickly,

all unqualified respondents, all terminated respondents, and all partial responses.

Sampling Approach: Detail and Limitations

The OIG completed this research using a non-probability online survey panel, Survey Sampling International (SSI), who solicited and compensated respondents using their standard procedures.

Online surveys completed with non-probability panels are limited in that not all members of the population being studied — in this case, residents of the United States — are eligible for selection. For example, not all residents of the United States are online, nor are they all members of the panel used for the research. In addition, this study was only offered in English, and so it could not reach those who were not able to take the survey in the English language. The extent to which population members can not be reached through the sample frame used for the study leads to a phenomenon known as coverage error.

Additionally, for all survey research there exists the possibility that those who fail to respond to a survey solicitation might be different than those who do respond, which, if present, leads to an effect known as nonresponse bias.

Finally, respondents acquired through online panels “opt-in” to research. If those who choose to participate in online surveys are different than those who do not choose to participate in online surveys, then the opinions collected might not reflect those of the population of interest — a phenomenon known as self-selection bias.

METHODOLOGY

DETAILED NOTES AND LIMITATIONS

Quota Sampling and Weighting

This research attempts to adjust for the effects of coverage error, nonresponse bias, and self-selection bias through employing (1) quota sampling, where responses from different demographic groups are collected until their proportionate representation in the sample matches the population, and (2) the application of weights that take into account each respondent's demographic characteristics in proportion to the population of interest when calculating statistics for analysis and reporting.

For this study, quotas were employed on age, gender, nativity within ethnicity, race, and geographic region, and prior to analysis the data were weighted to census estimates on all quota variables, as well as on education and employment status. Data were also weighted to reflect current market estimates the proportion of Americans that purchased something online in the past month. Respondents that were a part of the oversample were weighted to the demographic proportions of members of the same group who had responded through the National Sample. Weighting was performed through iterative proportion fitting, also known as "rim weighting."

This "model-based" approach requires that the underlying data is representative enough of the population to be effectively responsive to the adjustments completed. Further, this approach requires that sound assumptions be made regarding the relationship between the variables chosen for setting quotas or weights and respondents' attitudes towards the subject being investigated. Consequently, point estimates reported here may

or may not vary from those collected using alternate methods of survey design and implementation.

Statistical Testing

There is some controversy regarding the statistical testing of data derived from online "opt-in" panel research, and the literature on the topic is rapidly evolving.

The statistical testing included in this report was performed per standard industry approach. Through this approach, traditional statistical tests were used to determine the probability that a difference between two percentages observed in the sample would have occurred by chance if the population proportions were equal.

It is also notable that reporting a "margin of error" for non-probability samples is increasingly controversial in the field of survey research. For this study, a simple random sample the size of the National Sample (1,207) would have a 95 percent confidence interval of +/- 2.8 percent. Given that this is a non-probability sample, estimates cannot be exactly calculated, and would likely be somewhat higher. Other sources of error may also impact findings. This report avoids specifying with terms such as "margin of error" or "margin of sampling error," and instead reports using the more generic term "confidence interval."

POINTS OF CONTACT

Research Methodology Point of Contact

For any additional information regarding this project's methodology, please contact:

Email: SurveyResearch@uspsoig.gov

Phone: 703-248-7833

Mail:

United States Postal Service Office of Inspector General (OIG)
Risk Analysis Research Center
1735 N. Lynn St.
Arlington, VA 22209

Media or General Inquiries Point of Contact

For any other inquiries regarding this project, please contact Agapi Doulaveris:

Email: adoulaveris@uspsoig.gov

Phone: 703-248-2286



Appendix C

Public Perception of Drone Delivery Questionnaire



Public Perception of Drone Delivery in the United States Questionnaire

Preface

The full text of the Public Perception of Drone Delivery survey is presented below. When reviewing the survey text, it is important to note that text that is **[Bracketed and in bold]** denotes instructions for the programmer preparing the survey for respondents online and were not shown to respondents. It should also be noted that respondents were compelled to answer all questions in the survey, that no “back” button or question numbers were presented to respondents, and that just one question was presented on each screen that respondents saw online. Finally, all answers by respondents who were “terminated” for answering in ways that disqualified them from the survey were redirected back to the sample provider’s website and their answers were not included in the data collected.

Section I: Screener

[Text Box - Introduction]:

Thank you for clicking through to this survey!

Your thoughtful participation in this survey will help improve the products and processes that people like you interact with every day by helping business and government leaders understand your needs and interests.

Your individual feedback is confidential, so you should feel comfortable expressing your honest opinions. This survey should take about 10 minutes to complete.

Your feedback really does make a difference – *so let’s begin!*

- S1.** To start, do you live in the United States?
- a. Yes
 - b. No **[TERMINATE]**
- S2.** Which state do you live in?
[SHOW DROP DOWN LIST OF STATES – TERMINATE IF “OTHER”]
- S3.** Which of the following best describes the area where you live?
- a. A city or urban area
 - b. A town or suburban area
 - c. A small town
 - d. A rural area
 - e. A remote area with few other nearby residents



S4a. Do you own, rent, or not pay for housing at your primary residence?

In answering this question, please focus just on your primary residence, as opposed to any second home or investment properties.

- a. Own
- b. Rent
- c. Do not pay for your primary housing (Live with others, etc.)
- d. Other (Please specify):

S4b. Which of the following describes the type of home you currently live in?

In answering this question, please focus just on your primary residence, as opposed to any second home or investment properties.

- a. Mobile home
- b. One family house detached from any other house
- c. One family house attached to one or more houses
- d. Building or house with 4 or fewer apartments
- e. Building with 5 to 49 apartments
- f. Building with 50 or more apartments
- g. Other (Please specify):

S4c. Which, if any, of the following are a feature of your primary residence? *Please select all that apply.*

In answering this question, please focus just on your primary residence, as opposed to any second home or investment properties.

- a. Private front yard or lawn [HIDE IF EF AT S4B]
- b. Shared front yard or lawn [HIDE IF B AT S4B]
- c. Private back or side yard or lawn [HIDE IF EF AT S4B]
- d. Shared back or side yard or lawn [HIDE IF B AT S4B]
- e. Uncovered deck, balcony, porch or patio
- f. Covered deck, balcony, porch or patio
- g. Private driveway [HIDE IF EF AT S4B]
- h. Shared driveway [HIDE IF B AT S4B]
- i. None of these

S5. Are you currently...

- a. Employed full-time for pay
- b. Employed part-time for pay
- c. Not currently employed for pay, but actively looking for paid work
- d. Not currently employed for pay, and not looking for paid work
- e. Disabled or otherwise unable to work
- f. Retired
- g. Other (Please specify):



[ASK S6 IF EMPLOYED AT S5. RANDOMIZE ORDER OF LIST, ANCHOR POSITION OF OTHER]

- S6.** Which of the following best describes the type of work you do?
- a. Government
 - b. Healthcare
 - c. Education
 - d. Marketing, advertising or marketing research **[TERMINATE]**
 - e. Mailing industry/Supply chain/Logistics
 - f. Information technology/telecom
 - g. Energy
 - h. Legal
 - i. Manufacturing
 - j. Accounting
 - k. Other

S7. Are you...

- a. Male
- b. Female

S8. What is your age in years?

[Open-ended numeric. TERMINATE IF <18 OR >75]

S9. Are you of Hispanic, Latino, or Spanish origin?

- a. Yes
- b. No

[ASK S10 IF YES AT S9]

S10. Were you born in the United States?

- a. Yes
- b. No

S11. How would you describe yourself? *For the purposes of this question, persons of Spanish/Hispanic/Latino origin may be of any race.*

[RANDOMIZE ORDER OF LIST, ANCHOR POSITION OF MORE THAN ONE/OTHER/PREFER NOT TO ANSWER]

- a. White or Caucasian
- b. Black or African American
- c. Asian or Pacific Islander
- d. Native American or Alaska Native
- e. More than one race
- f. Other
- g. Prefer not to answer



S12. Paying attention and reading the instructions carefully is critical, if you are paying attention please choose Orange below.

[RANDOMIZE ORDER OF LIST]

- a. Red **[TERMINATE]**
- b. Orange
- c. Blue **[TERMINATE]**
- d. Silver **[TERMINATE]**
- e. Green **[TERMINATE]**
- f. Yellow **[TERMINATE]**

[IF TERMINATED: Text Box]:

We're sorry, but unfortunately you do not meet the qualifications for this survey.

We sincerely thank you and appreciate your time, dedication, and continued participation in online research!

Section II: Main Questionnaire

[RANDOMIZE ORDER OF BRANDS]

Q1. How familiar are you with the following organizations?

[Scale: Extremely familiar, Very familiar, Moderately familiar, Slightly familiar, Not at all familiar]

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)

[ASK Q2 FOR ALL BRANDS "SLIGHTLY FAMILIAR OR MORE" AT Q1. SKIP IF NOT AT ALL FAMILIAR WITH EVERY BRAND AT Q1. RANDOMIZE ORDER OF BRANDS.]

Q2. How positive or negative is your overall impression of the following organizations?

[Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative]

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)

[ASK Q3 FOR ALL BRANDS "SLIGHTLY FAMILIAR OR MORE" AT Q1. SKIP IF NOT AT ALL FAMILIAR WITH EVERY BRAND AT Q1. RANDOMIZE ORDER OF BRANDS.]

Q3. Overall, how innovative do you feel the following organizations are?

[Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative]

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)



[RANDOMIZE ORDER OF BRANDS]

Q4a. In general, how often do you use the following organizations' mobile apps?

[Scale: On 5 or more days per week, 1-4 days per week, 1-3 days per month, 7-12 days per year, 1-6 days per year, Less than once per year, Never visited]

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)

[RANDOMIZE ORDER OF BRANDS]

Q4b. In general, how often do you visit the following organizations' websites?

[Scale: On 5 or more days per week, 1-4 days per week, 1-3 days per month, 7-12 days per year, 1-6 days per year, Less than once per year, Never visited]

- f. United States Postal Service (USPS)
- g. Google
- h. United Parcel Service (UPS)
- i. Amazon
- j. Federal Express (FedEx)

[RANDOMIZE ORDER OF BRANDS]

Q4c. In general, how often do you visit the following organizations' retail locations?

By retail location, we mean a location where you would interact with a person to process a shipment or make a purchase, such as a post office, a UPS Store, or a FedEx Express Ship center.

[Scale: On 5 or more days per week, 1-4 days per week, 1-3 days per month, 7-12 days per year, 1-6 days per year, Less than once per year, Never visited]

- a. United States Postal Service (USPS)
- b. United Parcel Service (UPS)
- c. Federal Express (FedEx)

Q5. When was the last time you or someone in your household ordered a product online and had it delivered to your home?

- a. Within the past week
- b. Within the past month but not the past week
- c. Within the past 3 months but not the past month
- d. Within the past 6 months but not the past 3 months
- e. More than 6 months ago
- f. I have not ordered a product online and had it delivered to my home



[ASK Q6 IF PAST MONTH OR PAST WEEK AT Q5]

Q6. In the past **month**, how many times did you or someone in your household order a product online and have it delivered to your home?

[Open-ended numeric. ERROR IF <1 OR >99]

[RANDOMIZE ORDER OF OPTIONS, ANCHOR POSITION OF OTHER]

Q7. Which of the following best describes the place where you usually receive packages that do not fit in a mailbox?

- a. By a door/on a porch
- b. Next to your mailbox
- c. A mail window in a mail center or mailroom, for example at your school or apartment building
- d. A post office, UPS Store, or FedEx location
- e. From a doorman or concierge in your residence
- f. With a friend or neighbor
- g. At my office or place of employment
- h. Other (Please specify):

Q8. Which of the following best describes the place where you usually receive your mail?

- a. A single mailbox installed by the road that stands by itself
- b. A mailbox installed by the road that is located next to or within a group of other residents' mailboxes
- c. A mailbox or mail window in a mail center or mailroom, for example at your school or apartment building
- d. A post office box
- e. A mailbox attached to your residence
- f. A mail slot in your door
- g. Other (Please specify):

Q9. Have you seen or heard anything about organizations that are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or Drones?

- a. Yes, I have seen or heard a lot about this
- b. Yes, I have seen or heard some information about this
- c. Yes, I have seen or heard a little bit about this
- d. No, I have not seen or heard anything about this



[ASK Q10 IF “YES” AT Q9. RANDOMIZE ORDER OF BRANDS, ANCHOR POSITION OF OTHER AND I DON’T RECALL OPTIONS]

Q10. According to what you have seen or heard, which, if any, of the following organizations are considering delivering mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones? *Please select all that apply.*

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)
- f. DHL Express
- g. Other (Please specify):
- h. I don’t recall any specific companies
- i. I don’t recall hearing about this

[Text Box – Drone Delivery Introduction 1]:

Some organizations have been considering delivering packages or the mail with Unmanned Aerial Vehicles, also known as UAVs or drones.

One approach to delivering in this way involves sending a single vehicle with packages or mail for the occupants of a single residence.

Vehicles that deliver mail or packages to a single residence might look like this:



Q11. Were you able to see the picture of the Unmanned Aerial Vehicle, also known as a UAV or drone?

- a. Yes
- b. No



[Text Box – Drone Delivery Introduction 2]:



Once at a residence, an Unmanned Aerial Vehicle like the one shown would land, drop off the package or mail, and then return to the place where it came from.

If the residence did not have a place for the vehicle to land, the vehicle would deliver its mail or package to a nearby location that had been specially set up to receive deliveries.

The delivery company would then notify the resident that their mail or package had arrived, and they would come and retrieve it from the nearby location that had been specially set up to receive deliveries.

[RANDOMIZE ORDER OF LIST]

Q12. Paying attention and reading the instructions carefully is critical, if you are paying attention please choose Red below.

- a. Red
- b. Orange **[TERMINATE]**
- c. Blue **[TERMINATE]**
- d. Silver **[TERMINATE]**
- e. Green **[TERMINATE]**
- f. Yellow **[TERMINATE]**

Q13. How much do you like or dislike the idea of delivery by Unmanned Aerial Vehicles, also known as UAVs or drones?

- a. I like the idea very much
- b. I like the idea somewhat
- c. I neither dislike nor like the idea
- d. I dislike the idea somewhat
- e. I dislike the idea very much



[RANDOMIZE ORDER OF LIST]

Q14. To what extent do you agree or disagree with the following statements about deliveries that would be made with Unmanned Aerial Vehicles, also known as UAVs or drones?

[Scale: Strongly agree, Somewhat agree, Neither agree nor disagree, Somewhat disagree, Strongly disagree]

- a. Deliveries would be fast
- b. Deliveries would be safe
- c. Deliveries would be environmentally friendly
- d. Deliveries would cost less
- e. I would have more control over where I receive my package
- f. I would have more control over when I receive my package

Q15. When, if ever, do you expect that companies might start to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone?

- a. Within the next year
- b. Within the next 3 years, but not the next year
- c. Within the next 5 years, but not the next 3 years
- d. Within the next 10 years, but not the next 5 years
- e. Within the next 20 years, but not the next 10 years
- f. More than 20 years
- g. Never

[RANDOMIZE ORDER OF BRANDS. ON PC's, RESPONDENTS DRAG AND DROP RANKINGS, ON TABLETS AND MOBILE DEVICES RESPONDENTS CLICK IN ORDER OF RANKINGS.]

Q16. Please rank the following organizations from 1 to 5, where 1 is the organization you would most trust to make deliveries using Unmanned Aerial Vehicles, and 5 is the organization you would least trust to make deliveries using Unmanned Aerial Vehicles, also known as UAVs or Drones.

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)



[RANDOMIZE ORDER OF BRANDS]

Q17. How positive or negative would your overall impression of the following organizations be if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones?

[Scale: Very positive, Somewhat positive, Neither positive nor negative, Somewhat negative, Very negative]

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)

[RANDOMIZE ORDER OF BRANDS]

Q18. Overall, how innovative would you feel that the following organizations were if you knew that they would be delivering mail or packages with Unmanned Aerial Vehicles, also known as UAVs or drones?

[Scale: Extremely innovative, Very innovative, Moderately innovative, Slightly innovative, Not at all innovative]

- a. United States Postal Service (USPS)
- b. Google
- c. United Parcel Service (UPS)
- d. Amazon
- e. Federal Express (FedEx)

[RANDOMIZE ORDER OF LIST. ON PC'S, RESPONDENTS DRAG AND DROP RANKINGS, ON TABLETS AND MOBILE DEVICES RESPONDENTS CLICK IN ORDER OF RANKINGS.]

Q19. Please rank the following services from 1 to 7, where 1 is the most interesting use of Unmanned Aerial Vehicles for the delivery of mail or packages, and 7 is the least interesting use of Unmanned Aerial Vehicles, also known as UAVs or Drones, for the delivery of mail or packages.

- a. Evening delivery
- b. 1 hour delivery
- c. Delivery to wherever I am, not just my home
- d. Sunday delivery
- e. Delivery in cases of emergency
- f. Delivery to hard to reach locations (mountains, islands, etc.)
- g. Delivery to remote locations where few people live



[RANDOMIZE ORDER OF LIST, ANCHOR POSITION OF OTHER AND NONE]

Q20. Which, if any, of the following would you be **concerned about** if companies were to deliver mail or packages using Unmanned Aerial Vehicles, also known as UAVs or drones?

Are you concerned the Unmanned Aerial Vehicle...

Please select all that apply.

- a. ...might make the sky less pleasant to look at
- b. ...might malfunction and damage property
- c. ...might malfunction and damage the package it's carrying
- d. ...might malfunction and injure someone
- e. ...would have no place to land at my residence
- f. ...might be used to transport illicit goods
- g. ...might be intentionally used to injure people or property
- h. ...might be damaged by others
- i. ...and/or the package it's carrying might be stolen
- j. ...might not be used in a way that respects my privacy
- k. ...might deliver my package to a different address
- l. Other (Please specify):
- m. I am not concerned about any of these

[RANDOMIZE ORDER OF LIST. SKIP Q21 IF NONE AT Q20. SHOW ITEMS IN Q21 THAT WERE SELECTED AT Q21]

Q21. And which of the following would you be **most** concerned about if a company were to deliver mail or packages using an Unmanned Aerial Vehicle, also known as a UAV or drone?

Please select the one item below that you would be the most concerned about.

- a. ...might make the sky less pleasant to look at
- b. ...might malfunction and damage property
- c. ...might malfunction and damage the package it's carrying
- d. ...might malfunction and injure someone
- e. ...would have no place to land at my residence
- f. ...might be used to transport illicit goods
- g. ...might be intentionally used to injure people or property
- h. ...might be damaged by others
- i. ...and/or the package it's carrying might be stolen
- j. ...might not be used in a way that respects my privacy
- k. ...might deliver my package to a different address
- l. Other (Please specify): **[IF ENTERED AT Q20, TEXT WILL BE PIPED IN]**



Section III: Demographics

[Text Box]: Now we would like to ask you a few final questions for classification purposes.

- D1.** What is the highest level of education that you have completed?
- a. Left school before completing high school – no diploma
 - b. High school graduate – high school diploma or the equivalent (for example: GED)
 - c. Some college, but no degree
 - d. Associate degree
 - e. Bachelor’s degree
 - f. Master’s degree
 - g. Doctorate or Professional degree, such as PhD, DDS or JD
- D2.** What is your marital status?
- a. Single/member of an unmarried couple (never married)
 - b. Married
 - c. Divorced
 - d. Widowed
 - e. Separated
- D3.** What was your total household income before taxes during the past 12 months?
- a. Less than \$25,000
 - b. \$25,000 to \$34,999
 - c. \$35,000 to \$49,999
 - d. \$50,000 to \$74,999
 - e. \$75,000 to \$99,999
 - f. \$100,000 to \$149,999
 - g. \$150,000 or more
 - h. Prefer not to answer

Section IV: End Page

[Text Box]:

That is the end of the survey—thank you for your participation!



Appendix D

External Review Certification





Chase H. Harrison Ph.D.
Somerville, MA 02143

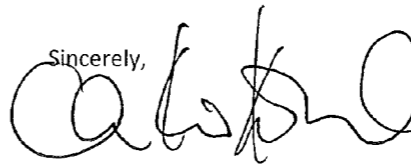
United States Postal Service Office of Inspector General (OIG)
Risk Analysis Research Center
1735 N Lynn St
Arlington, VA 22209

September 8, 2016

To Whom It May Concern;

I certify that I have reviewed the survey methodology and reporting for the USPS OIG's paper regarding public perception of drone delivery in the United States.

I am confident that this report and its underlying methodology meet the professional standards typically employed for online opt-in market and survey research, and that researchers have provided the documentation required by the American Association for Public Opinion Research's guidelines for public disclosure.

Sincerely,

Chase H. Harrison, Ph.D.

Appendix E: Management's Comments

KEVIN L. McADAMS
VICE PRESIDENT, DELIVERY OPERATIONS



October 3, 2016

RENEE SHEEHY
DIRECTOR
RARC CENTRAL, RISK ANALYSIS RESEARCH CENTER

SUBJECT: Final Review Draft – Public Perception of Drone Delivery in the United States

This is in response to the Office of Inspector General's (OIG) draft white paper titled "Public Perception of Drone Delivery in the United States".

Overall we find ourselves not entirely surprised with the results of the OIG survey. Internal informal communication amongst our own employees demonstrates anecdotal evidence to the same divisions of opinions as seen in the report; particularly with regard to certain age groups. We believe there is a direct correlation to the portions of the OIG survey regarding millennials and geographic regions as younger age groups tend to be more urban centered.

The Postal Service is keenly interested in exploring the potential for this delivery method and the OIG's report will certainly help us in understanding our niche and potential market. Among ourselves we have discussed many of the same issues that both intrigue and concern the general public. Our task is to find a way to allay the concerns through technology, process, policy and obviously compliance with all local, state and federal regulations.

This technology must also offer the Postal Service a way to become either more efficient and/or generate additional revenue. We need to fully understand the regulatory frame work in which we will be able utilize drone delivery effectively. Public safety will be of utmost importance. Not only due to potential liabilities associated with any accidents, but the potential negative public perception of drones if they become too frequent. We believe this concern is the reason for the impact on "Brand Positivity" if drone delivery is launched before the public believes it is ready (page 9, Effect of Drone Delivery on Brand Positivity).

Whether drone delivery turns out be a niche market applying only to on demand deliveries or becomes a wide spread delivery and/or pick up method it is important for the Postal Service to be a part of it. The Postal Service must maintain its viability in the market and be perceived as a modern cutting edge delivery company that can stand head to head with its competitors.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kevin L. McAdams".

Kevin L. McAdams

cc: Paola Piscioneri, Director, Digital and Global, RARC
Allison Glass, RARC, USPS OIG
Sally Haring, CARM Manager
E-FOIA@usps.oig.gov

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