Robotic Vacuum Cleaner Questionnaire

We appreciate your willingness to participate in our survey about robotic vacuum cleaners. This survey is completely confidential; we will only use the information for research purposes. You should be able to complete the survey in about 15-20 minutes.

Simply answer each question by clicking inside the appropriate box. You will use the "continue" button on your screen to move to the next question. Do not use the "Back" or "Forward" buttons on your web browser as this may close down your survey.

Screener Questions

Q1. **[SHOW IMAGES OF ROBOTIC VACUUMS]** Which of the following best describes your involvement with robotic vacuums in your home?
   a. Currently own and use a robotic vacuum
   b. Used to own, but no longer use a robotic vacuum **[TERMINATE]**
   c. Currently shopping for my first robotic vacuum
   d. Might consider a robotic vacuum sometime in the next 5 years
   e. Considered and rejected purchasing a robotic vacuum **[TERMINATE]**
   f. No plans to consider a robotic vacuum **[TERMINATE]**

Q2. **[SHOW RESPONDENTS IF Q1 = A]** Is this your first robotic vacuum?
   a. No
   b. Yes

Q3. **[SHOW RESPONDENTS IF Q1 = A]** How satisfied are you with your current robotic vacuum?
   a. Very Satisfied
   b. Satisfied
   c. Dissatisfied
   d. Very Dissatisfied

Q4. **[SHOW RESPONDENTS IF Q1 = A]** What brand is your current robotic vacuum?
   a. iRobot
   b. Neato
   c. Samsung
   d. iClebo
   e. Moneual
   f. bObsweep
   g. iTouchless
   h. Bissell
   i. Other (please specify)

Q5. When do you think you'll purchase a new robotic vacuum?

a. Within next 3 months
b. 3 to 6 months from now
c. 6 to 12 months from now
d. 1 to 2 years from now
e. More than 2 years from now
f. Never, I wouldn't buy one **[TERMINATE]**

Q6. How old are you?
a. Under 18 **[TERMINATE]**
b. 18 to 24 **[TERMINATE]**
c. 25 to 29
d. 30 to 34
e. 35 to 39
f. 40 to 44
g. 45 to 49
h. 50 to 54
i. 55 to 59
j. 60 to 64 **[TERMINATE]**
k. 65+ **[TERMINATE]**

Q7. What is your total household income before taxes?
a. Less than $25,000 **[TERMINATE]**
b. $25,000 to $39,999 **[TERMINATE]**
c. $40,000 to $59,999
d. $60,000 to $79,999
e. $80,000 to $99,999
f. $100,000 to $149,000
g. $150,000 or more

Attitudes Toward Cleaning

Q8. Please indicate which of the following statements apply to anyone in your household:
[ROTATE ORDER]
1. I enjoy coming home to a clean house.
2. I don't feel relaxed when I know my home isn't clean.
3. I worry about pet hair and dander in the home.
4. I have trouble keeping the floor beneath my furniture clean.
5. I worry about germs and dirt on my floor and carpet.
6. I get anxious about having guests when my home is dirty.
7. I don't like going to someone's home that is dirty.
8. I don't like touching dirty things.
9. I don't spend much time cleaning.
10. I spend over two hours per week cleaning.

11. I have a cleaning person who cleans for me.

Q9. The following are statements made by some people who have used robotic vacuums. Please check all with which you agree: **[ROTATE ORDER]**
1. Robotic vacuums are too expensive.
2. Robotic vacuums are too complicated to program, set up, and operate.
3. Robotic vacuums often need to be "rescued" because they get stuck.
4. Robotic vacuums need to have their trash containers changed too often.
5. Robotic vacuums don't do a good enough job cleaning the floor and carpet.
6. Robotic vacuums don't spend enough time on the really dirty spots on the floor.
7. Robotic vacuums scare household pets.

Discrete Choice Task

In this next series of questions, we are going to show you several screens (one at a time), each with robotic vacuums that may or may not be currently offered in the real world market. These products will change from screen to screen.

You will be asked to evaluate all of the products and select the one you most prefer. Remember, there are no right or wrong answers to these questions, we are simply interested in your preferences.

Before we begin, please carefully read the following glossary of terms you will see when comparing the different vacuums.

Glossary

You will be choosing among five options on each screen. Options 1 through 4 are products defined by the features in their respective columns. The fifth column is an option for not selecting any of the products described in the choice task.

Brand – The name of the robotic vacuum manufacturer.
a. Neato – Based out of Newark, California, Neato Robotics sold its first robotic vacuum in 2010. Neato robotic vacuums and accessories are available at leading retailers, including Walmart and Amazon.
b. iRobot – Based out of Bedford, Massachusetts, iRobot robotic vacuums were introduced in 2002 and have sold over 10 million units worldwide. iRobot robotic vacuums are available at leading retailers, including Walmart and Amazon.
c. Samsung – Based out of South Korea, Samsung manufactures cell phones, computers, televisions, digital cameras, wearable technology, and a variety of household electronics, including robotic vacuums. Samsung robotic vacuums are available at leading retailers, including Walmart and Amazon.

d. Black & Decker – Based out of Baltimore, Maryland, and founded in 1910, Black & Decker manufactures power tools, lawn and garden products, home cleaning products, and batteries. Black & Decker products are available at leading retailers, including Walmart and Amazon.
e. None – The option to <u>not</u> select any of the vacuums described.

Cleaning Performance – Percentage of dirt and debris cleaned on carpeted floors in a normal environment, including pet hair, cereal, and dust.
a. 70%
b. 85%

Capacity – The frequency the trash container needs to be emptied.
a. Before every use.
b. Before every 2-3 uses.

Navigation – Cleaning pattern.
a. Random – Robot changes direction after bumping into furniture and walls.
b. Smart – Robot scans the floor and determines optimal cleaning route.

Programming – Set-up, give instructions, monitor status, and schedule cleaning times.
a. Base unit – Programming is done on the base unit.
b. App – Programming is done through your smartphone.

Virtual Borders – The ability to create invisible walls the vacuum will not cross. Walls can be straight (e.g., prevent the vacuum from leaving a room) or circular (e.g., prevent the vacuum from entering the area around a dog bowl).
a. No
b. Yes

Price – Retail price of the vacuum.
a. $299
b. $399
c. $499
d. $599

Conjoint Choice Tasks

Produced by the Sawtooth Discover tool.

Brand Beliefs

Q10. Please indicate which of the following statements are addressed by each brand of robotic vacuum. You may select a statement for all or none of the brands or any combination.
[ROTATE ORDER]

	Neato	iRobot	Samsung	Black & Decker
1. Reliably cleans my carpet while I'm away				
2. Keeps pet hair and dander out of my home				
3. Cleans in hard-to-reach places				
4. Gets germs and dirt out of my home				
5. Helps me entertain guests without worrying about dirt				
6. Cleans without getting me dirty				
7. Reduces the amount of time I spend cleaning				
8. Reduces the amount of time I worry about cleaning				
9. Stays away from areas I don't want cleaned				
10. Easy to program and use				

Attitudes Toward Shopping

Q11. Please indicate which of the following statements apply to you. Select all that apply.
[ROTATE ORDER]
1. I shop around to take advantage of specials or bargains.
2. I like to learn about expensive products before making a purchase.
3. I do not buy unknown brands just to save money.
4. I generally plan far ahead to buy expensive technological items.
5. I always look for the brand name of a product.
6. I usually read the information on product labels.
7. I prefer to buy things that my friends and neighbors would approve.

Retailers

Q12. Where might you purchase a robotic vacuum? Select all that apply. **[ROTATE ORDER]**
1. General retailers (e.g., Sears, Macy's, JCPenney)
2. Discount retailers (e.g., Target, Walmart)
3. Specialty retailers (e.g., Bed, Bath & Beyond)
4. Home repair retailers (e.g., Lowe's, Home Depot)
5. Internet retailers (e.g., Amazon)
6. Other (please specify) **[DON'T ROTATE]**

Related Behaviors

Q13. Please indicate which of the following currently apply to you: **[ROTATE ORDER]**

1. I own a regular vacuum.
2. I own a smartphone.
3. I manage my calendar on my computer and/or smartphone.
4. I subscribe to Netflix, Hulu, or Amazon Prime.
5. I have a cat at home.
6. I have a dog at home.
7. I eat dinner at a restaurant at least 2-3 times a week.
8. I am converting my home to a smart home.
9. I am usually one of the first to buy new technology.

Demographics

Q14. Gender Identity
a. Female
b. Male

Q15. Which of the following best describes your primary residence?
a. Single Family Home
b. Apartment
c. Townhouse or Rowhome
d. Mobile Home
e. Other (please specify)

Q16. How would you describe the neighborhood where you live?
a. Rural
b. Suburban
c. Urban

Q17. Which of the following best describes your situation at home?
a. Single
b. Married
c. Single with children
d. Married with children
e. Living with roommates

Q18. **[SHOW RESPONDENTS IF Q17 = C OR D]** How many children do you have living at home?
a. 1
b. 2
c. 3 or more

Q19. **[SHOW RESPONDENTS IF Q17 = C OR D]** How old is the youngest child living at home?
a. Less than 12 months
b. 1 to 3 years

    c.   3 to 8 years
    d.   8 to 12 years
    e.   Older than 12 years

Q20. What is your occupation?
    a.   Professional/technical
    b.   Clerical
    c.   Sales
    d.   Craft/trade
    e.   Operator
    f.   Laborer
    g.   Service worker
    h.   Retired
    i.   Homemaker
    j.   Student
    k.   Other (please specify)

Q21. Please indicate the highest level of education you have completed.
    a.   High School (or equivalent)
    b.   Some College
    c.   College Graduate
    d.   Graduate School
    e.   Professional School
    f.   Other (please specify)

Q22. What is your ethnicity?
    a.   White/Caucasian
    b.   African American
    c.   Hispanic/Latino
    d.   Asian
    e.   American Indian
    f.   Pacific Islander
    g.   Other (please specify)