Methodology

- National online survey of adults age 18 and older
  - Conducted 2/28/2022 – 4/18/2022
    - 1190 smart speaker owners
    - 560 do not own smart speaker; use voice-operated assistants on at least one other device (Voice-users/no smart speaker)
    - 584 do not use voice-operated assistants at all (Non-voice users)
  - Tracking from previous online studies from Spring 2017, Spring 2018, Spring 2019 and Spring 2020

- In-depth interviews conducted via Zoom
  - Interviews with smart speaker owners, smartphone voice assistant users, and those who do not use any voice assistance
  - Follow up interviews with those who participated in ethnography interviews from The Smart Audio Report 2017
What’s new?

- **VOICE IS EVERYWHERE:** There has been incredible increase in the amount of voice tech available at the consumer level and incredible increase in voice assistant usage.
- **USE IS INCREASING:** As people become more familiar with the technology, some increase usage and refine their habits to just the most useful skills.
- **MESSAGES ARE HEARD:** Voice assistant users are receptive to ad messaging.
Voice is Everywhere
35% of Americans 18+
own a smart speaker,
or around 100 million people

In 2021, 32% of U.S. adults 18+ owned a
smart speaker, or around 82 million people

Source: The Infinite Dial
Google Home: Google Home is a trademark of Google Inc.
% of Americans 18+ who own a smart speaker:

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>16</td>
<td>13%</td>
</tr>
<tr>
<td>2018</td>
<td>18</td>
<td>16%</td>
</tr>
<tr>
<td>2019</td>
<td>21</td>
<td>29%</td>
</tr>
<tr>
<td>2020</td>
<td>27</td>
<td>19%</td>
</tr>
<tr>
<td>2021</td>
<td>32</td>
<td>9%</td>
</tr>
<tr>
<td>2022</td>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

Percentage of those in the U.S. age 18+ who own a smart speaker

Source: The Infinite Dial
How it started

Top three reason for getting a smart speaker in 2017

1) Listen to music
2) Ask questions without needing to type
3) Seems like a fun new gadget

How it’s going

Top three reason for getting a smart speaker in 2022

1) Listen to music
2) Ask questions without needing to type
3) Seems like a fun new gadget
Reasons for getting a smart speaker that have increased since 2017:

Technology upgrades  Access to media  Accessibility
Reasons for wanting a smart speaker: Technology

- Replace an old radio: 31% increase
- Control Smart home device: 10% increase

Base: Smart Speaker owners
Smart speaker owners

Agree/Disagree: “Smart speakers allow for a more convenient living experience”

86% agree
Reasons for wanting a smart speaker: **Media Access**

- **Entertain children**: 36% increase
  - 2017 - Total: 36%
  - 2022 - Owned less than one year: 49%

- **Discover new songs**: 19% increase
  - 2017 - Total: 53%
  - 2022 - Owned less than one year: 63%

- **Listen to podcasts**: 18% increase
  - 2017 - Total: 40%
  - 2022 - Owned less than one year: 47%

*Base: Smart Speaker owners*
Smart speaker owners

Agree/Disagree: “Smart speakers make it easy to discover new content or events”

80% agree
Reasons for wanting a smart speaker: **Accessibility**

- Help an elderly person: 150% increase
- Help with a disability: 50% increase

Base: Smart Speaker owners
Smart speaker owners
Agree/Disagree: “Smart speakers interactions are short and easy, with low level of effort”

90% agree
User feedback about accessibility:

“There are some things it can't do. Voice recognition if you have a speech problem it can't individually interpret what you're saying. It can't be a fit for that one person. **It's uniform for everyone so it doesn't pick up on little nuances.**”

– Herb, 50

"Microsoft and Apple have accessibility features where you can use your voice to command anything like writing things, like using a mouse through voice. But that's not a mainstream feature, that's an accessibility feature that if you know how to turn it on how to set up the settings you can actually use voice. I'm not sure why they separate it. **I feel like the accessibility features could be integrated into the full series all-access type thing because they are really powerful.**"

– Derrick, 36

“I found with my little son when he's used it he may say something and [voice assistant] says in a different way and that gets him upset or frustrated, so I could see how that technology could be a point of frustration for the young or for the elderly or those that are having trouble communicating.”

– Lauren, 42
62% of Americans 18+ use a voice assistant on any device

Source: The Infinite Dial
Do you currently ever use a voice-operated personal assistant…

<table>
<thead>
<tr>
<th>Device</th>
<th>2022</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smartspeaker</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>On a Smartphone</td>
<td>51</td>
<td>56</td>
</tr>
<tr>
<td>On your TV/TV remote</td>
<td>34</td>
<td>24</td>
</tr>
<tr>
<td>In your car</td>
<td>29</td>
<td>23</td>
</tr>
<tr>
<td>On a computer/laptop</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>On a tablet</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>On a household appliance</td>
<td>12</td>
<td>9</td>
</tr>
</tbody>
</table>

Base: Total U.S. Online population 18+

Spring 2022

#SmartAudioReport
<table>
<thead>
<tr>
<th>How it started</th>
<th>How it’s going</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debates about smart speakers “always listening”</td>
<td>Debates about smart speakers “always listening”</td>
</tr>
</tbody>
</table>
Agree/Disagree: Smart speaker owners

- **You worry that hackers could use your smart speaker to get access to your home or personal information**: 48% agreeing (2017), 52% agreeing (2022)
- **It bothers you that your smart speaker is always listening**: 38% agreeing (2017), 47% agreeing (2022)
- **You worry that your smart speaker could allow the government to listen to your private conversations**: 48% agreeing (2017), 43% agreeing (2022)
- **You trust the companies that make the smart speaker to keep your information secure**: N/A, 58% agreeing (2022)

Base: Own a smart speaker
<table>
<thead>
<tr>
<th>Smart speaker owners</th>
<th>% of smart speaker owners who agree</th>
<th>Do not own smart speaker</th>
<th>% who say it is a reason they do not own a smart speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>You worry that hackers could use your smart speaker to get access to your home or personal information</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>It bothers you that your smart speaker is always listening</td>
<td>51</td>
</tr>
<tr>
<td></td>
<td>47</td>
<td>You worry that your smart speaker could allow the government to listen to your private conversations</td>
<td>36</td>
</tr>
<tr>
<td></td>
<td>43</td>
<td>You trust the companies that make the smart speaker to keep your information secure</td>
<td>46</td>
</tr>
<tr>
<td></td>
<td>58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Spring 2022
Base: Own a smart speaker

#SmartAudioReport

npr | Edison Research
Smart speaker non-owners

How likely are you to purchase a voice-enabled speaker in the next six months?

<table>
<thead>
<tr>
<th></th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Not at all likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>All smart speaker</td>
<td>13%</td>
<td>41%</td>
<td>46%</td>
</tr>
<tr>
<td>non-owners 2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All smart speaker</td>
<td>9%</td>
<td>29%</td>
<td>62%</td>
</tr>
<tr>
<td>non-owners 2022</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Base: Do not own a smart speaker
Voice Assistant Use is Increasing
Share of Time Spent Listening to Audio through a Smart Speaker
Base: U.S. Population 13+

400% increase

Share of Time Spent Listening to Podcasts through a Smart Speaker
Base: Podcast listeners

200% increase

Spring 2022
Source: Edison Research Share of Ear Q1 2022
How do you listen to audio most often?

<table>
<thead>
<tr>
<th></th>
<th>Smartphone or tablet</th>
<th>AM/FM Radio</th>
<th>Smart speaker</th>
<th>Computer or laptop</th>
<th>Other</th>
</tr>
</thead>
</table>
| **Smart Speaker Owners**  
  **Spring 2017**       | 28%                  | 20%         | 18%           | 8%                 | 26%   |
| **Smart Speaker Owners**  
  **Spring 2022**       | 34%                  | 19%         | 20%           | 11%                | 16%   |

*Spring 2022*

Base: Own a smart speaker

#SmartAudioReport
Smart speaker owners

% who listen to audio on smart speaker **most often:**

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% Listening</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>20</td>
</tr>
<tr>
<td>Age 18-24</td>
<td>4</td>
</tr>
<tr>
<td>Age 25-34</td>
<td>17</td>
</tr>
<tr>
<td>Age 35-44</td>
<td>18</td>
</tr>
<tr>
<td>Age 45-54</td>
<td>28</td>
</tr>
<tr>
<td>Age 55-64</td>
<td>16</td>
</tr>
<tr>
<td>Age 65+</td>
<td>21</td>
</tr>
</tbody>
</table>

*Spring 2022*  
Base: Own a smart speaker

#SmartAudioReport
Voice-operated assistant users
How often do you use voice commands?

<table>
<thead>
<tr>
<th></th>
<th>At least once per day</th>
<th>At least once per week</th>
<th>At least once per month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter 2019</td>
<td>46%</td>
<td>25%</td>
<td>29%</td>
</tr>
<tr>
<td>Spring 2020</td>
<td>52%</td>
<td>22%</td>
<td>26%</td>
</tr>
<tr>
<td>Spring 2022</td>
<td>57%</td>
<td>23%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Spring 2022
Base: Ever use voice-operated personal assistants
Average number of different types of tasks requested on a **smart speaker** in a typical week:

- **2017:** 7.5
- **2022:** 12.4

*Spring 2022*

Base: Own a smart speaker
Average number of different types of tasks requested on a smartphone voice assistant in a typical week:

2020: 8.8
2022: 10.7

Spring 2022
Base: Own a smart speaker
Set a timer/alarm
Get the news
Order an item
Play a podcast
Add to to-do list
Sports score/update
Check/add to calendar
Add an item to shopping list
Questions
Control household devices
Tell a joke/something funny
Find restaurants/businesses
Look up recipes/cooking requests
Read short stories
Play an audiobook
Play music
Get the news
Make a phone call
Order food
Get the traffic
Weather
Listen to an AM/FM radio station
Connect with smart speakers outside home
Order food
Play NPR
Play music
Check the time
Listen to a game
Connect with smart speakers inside home
Spring 2022
Base: Own a smart speaker

THE smart audio REPORT
npr
Edison Research
The number of speaker owners who listen to a podcast on their smart speaker in a typical week increased by 22% over the past 5 years (from 32% in 2017 to 39% in 2022)
Smart speaker owners

% who ever listen to news on their smart speaker

Spring 2019: 55%
Spring 2020: 62%
Spring 2022: 66%

Spring 2022
Base: Own a smart speaker
Smart speaker owners

Time spent listening to news on smart speaker in a typical week

<table>
<thead>
<tr>
<th></th>
<th>Less than one hour</th>
<th>1 hour to less than 3 hours</th>
<th>3 hours or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring 2019</td>
<td>30</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>Spring 2020</td>
<td>25</td>
<td>43</td>
<td>32</td>
</tr>
<tr>
<td>Spring 2022</td>
<td>22</td>
<td>44</td>
<td>34</td>
</tr>
</tbody>
</table>

Base: Own a smart speaker and listen to news programming on their smart speaker in a typical week

Spring 2022
Smart speaker owners

Compared to the first month you owned your smart speaker, are you using your smart speaker…?

- More often: 44%
- About the same amount: 35%
- Less often: 21%

Spring 2022
Base: Own a smart speaker

#SmartAudioReport
Messages are Heard
Smart speaker owners

Has your smart speaker ever…?

- Offered more information than you requested: 51
- Recommended a feature for your smart speaker without your prompting: 41
- Suggested you purchase something without your prompting: 31
## Smart speaker owners

### How much does it bother you when your smart speaker…?

<table>
<thead>
<tr>
<th>Offered more information than you requested</th>
<th>Bothers you a lot</th>
<th>Bothers you a little</th>
<th>Doesn’t bother you at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>18%</td>
<td>42%</td>
<td>40%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommends a feature for your smart speaker without your prompting</th>
<th>Bothers you a lot</th>
<th>Bothers you a little</th>
<th>Doesn’t bother you at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>24%</td>
<td>37%</td>
<td>39%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Suggests you purchase something without your prompting</th>
<th>Bothers you a lot</th>
<th>Bothers you a little</th>
<th>Doesn’t bother you at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>40%</td>
<td>27%</td>
<td></td>
</tr>
</tbody>
</table>

Base: Smart speaker has ever done item described
Smart speaker owners

Have you ever heard an advertisement on your smart speaker?

- Yes: 50%
- No: 37%
- Not Sure: 13%

Spring 2022
Base: Own a smart speaker
“You are likely to respond to ads on smart speakers”

41% of smart speaker owners agree

53% of smart speaker owners who have heard an ad on device agree
Smart speaker owners

Compared to ads you hear in other places, would hearing an ad on a smart speaker make you….?

<table>
<thead>
<tr>
<th></th>
<th>More likely to consider a brand</th>
<th>No difference</th>
<th>Less likely to consider a brand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>33%</td>
<td>55%</td>
<td>12%</td>
</tr>
<tr>
<td>Smart speaker owners who heard an ad on a smart speaker</td>
<td>48%</td>
<td>47%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Base: Own a smart speaker
## Smart speaker owners

If given the opportunity to interact with an ad on smart speakers using your voice, how likely would you be to…?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Very likely</th>
<th>Somewhat likely</th>
<th>Not at all likely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set a reminder</td>
<td>36%</td>
<td>41%</td>
<td>23%</td>
</tr>
<tr>
<td>Ask to be sent more information</td>
<td>33%</td>
<td>37%</td>
<td>30%</td>
</tr>
<tr>
<td>Add an item to a shopping cart</td>
<td>33%</td>
<td>32%</td>
<td>35%</td>
</tr>
</tbody>
</table>

Base: Own a smart speaker
Smart speaker owners
Agree/Disagree: “Brands that advertise on
smart speakers are innovative”

66% of smart speaker owners agree

80% of smart speaker owners who have heard an ad on device agree
Takeaways

• **VOICE IS EVERYWHERE**: There has been incredible increase in the amount of voice tech available at the consumer level and incredible increase in voice assistant usage

• **USE IS INCREASING**: As people become more familiar with the technology, some increase usage and refine their habits to just the most useful skills

• **MESSAGES ARE HEARD**: Voice assistant users are receptive to messaging