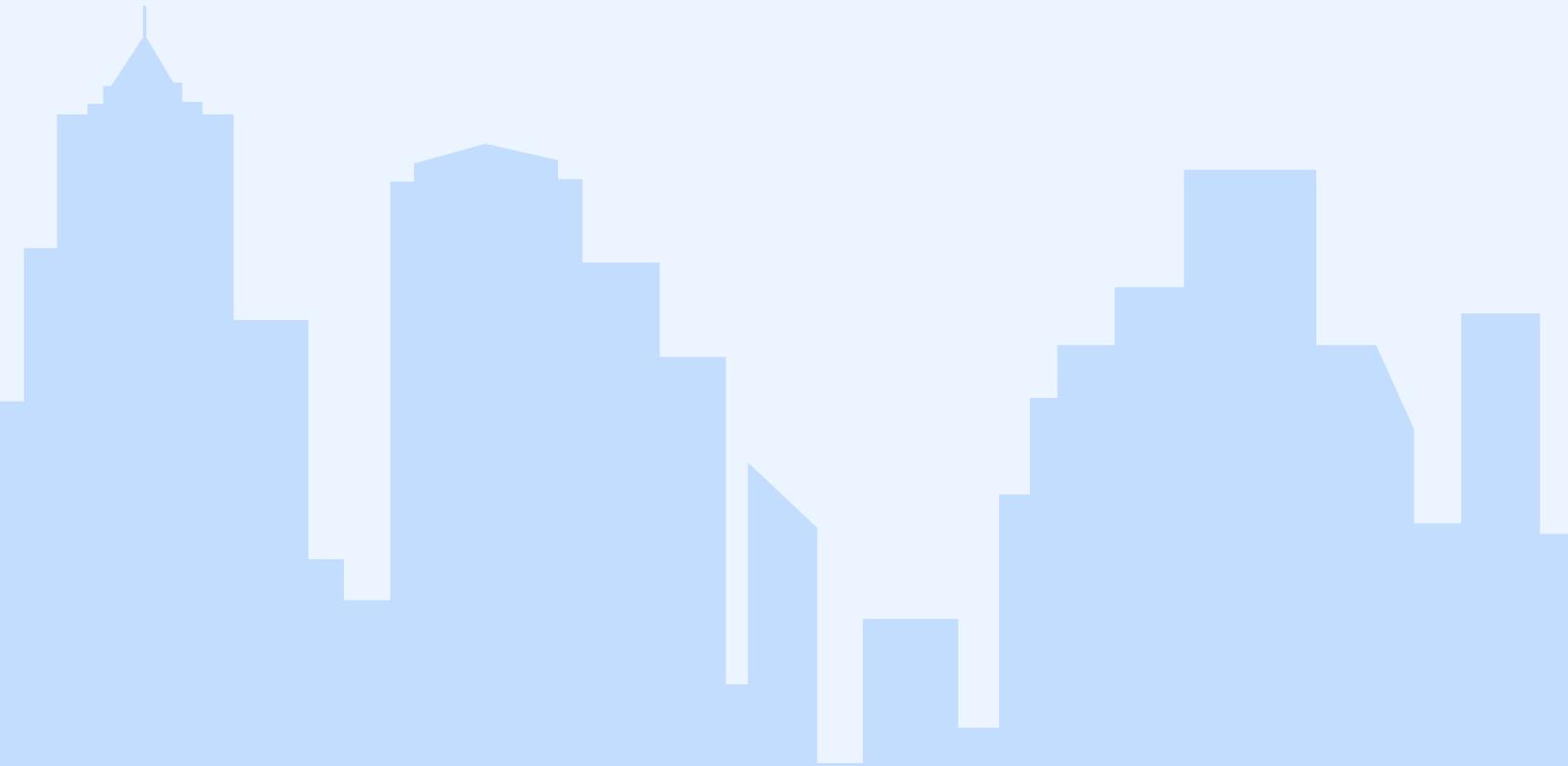




usability study



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Executive Summary



Airpals is a B2B courier service based in New York City. The website provides a clear and streamlined ordering process and order tracking dashboard for business professionals. The objective of this moderated remote user test is to identify usability issues within the order flow.

Our team conducted 11 moderated remote user tests on the order flow of the Airpals desktop website, asking participants to schedule a delivery for the next business day based on their previous experience of using courier services. In our recruitment process, we prioritized participants that had used a courier service for work before, and that work for companies based in New York City. These participants vary in gender, age, industry, and company size.

We collected and synthesized observations and user feedback of 8 of our recruited participants that best fit the target demographics. Overall, participants found the Airpals website friendly and efficient to use, with all of the participants successfully scheduling a delivery. Areas of improvement were also discovered during the process, mainly the information grouping of parcel details and delivery instructions, more significant error messages, and improving flexibility and user control in time, address, and editing sections. We came up with 6 recommendations for larger issues and 4 adjustments for smaller, but nevertheless important issues:

Recommendations

1. Streamline the flow for inputting parcel details
2. Clarify pick-up & drop-off instructions
3. Improve flexibility and consistency for time selection
4. Reinforce user control when editing order details
5. Increase error salience with more signifiers
6. Provide feedback and flexibility for address selection

Adjustments

1. Accept special characters in names
2. Add a field for phone extension numbers
3. Ensure consistency of the date format
4. Increase the color contrast

We believe that the implementation of these recommendations and adjustments would enhance the usability and user experience of the Airpals website. These changes would create a more seamless order flow, making it easier for users to complete all necessary details.

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Introduction



As an online platform for B2B courier services in New York City, Airpals aims to provide an efficient user experience for its customers. To ensure a seamless ordering experience, it is crucial to prioritize a user-friendly website that is free from usability issues. Our objective was to assess the usability of Airpals' order flow, pinpoint areas that require improvement based on user experience, and collect feedback on users' expectations after order placement. To assess the website's usability, our team of experienced researchers from the Center for Digital Experiences at Pratt Institute conducted eleven moderated user tests to identify any pain points or areas of improvements for the users.

The testing process involved recruiting a diverse group of participants within the target demographic of creative and business operational professionals and asking them to complete tasks related to the order flow on the Airpals website while we observed and recorded their actions and feedback. We employed a "think-aloud" methodology, allowing participants to speak freely about their experience and thought processes as they completed the tasks.

Based on the data collected during the testing phase, our team compiled and analyzed the results to identify key findings and areas for improvement. In this report, we will present our methodology, outline our key findings, and provide recommendations for improving the Airpals website's usability.

Our team believes that the insights and suggestions outlined in this report will help Airpals improve their website's usability and enhance the overall experience of their customers, potentially resulting in higher levels of satisfaction.



Methodology



Usability testing is a crucial process that aims to evaluate the usability and user experience of a product or service by testing it with representative users or participants. The goal is to identify any usability issues and gather feedback that can help improve the product or service (Moran, 2019). Moderated remote user testing is a type of usability testing that is conducted remotely, where a moderator guides the participant through the testing process. The moderator facilitates the testing by asking questions, providing instructions, and collecting feedback on the user experience (Moran & Pernice, 2020). One common method used in moderated remote user testing is the “think-aloud” method, in which the participant is asked to verbalize their thoughts as they navigate through the product or service. This enables the moderator to understand the participant’s thought process, identify pain points, and gather feedback on the overall experience (Nielsen, 2012).

The process for moderated remote user testing typically involves recruiting participants that represent the target audience, providing them with the necessary equipment and instructions, and scheduling a remote testing session. During the session, the moderator guides the participant through a series of tasks, asking them to provide feedback along the way. This session is recorded, either through video or audio, so that the moderator can review the session later to gather additional feedback. The session ends with a debriefing, where the moderator asks follow-up questions and gathers additional feedback on the participant’s overall experience, which the team later analyzes to generate recommendations (Moran & Pernice, 2020).

Moderated remote user testing is done to gather detailed feedback on a product or service from a specific target audience. It is useful for identifying pain points, areas of confusion, and other issues that may be missed in other forms of testing, such as unmoderated testing or heuristic evaluations. Additionally, remote testing allows for testing with participants who may not be geographically accessible. The procedure we used is described below, and the Appendix (refer to appendix pp. 45) contains a more detailed view of our testing data and insights gathered.

PROCEDURE

The moderated user testing study was conducted in four phases: **Preparation, Data Collection, Data Analysis, and Communication**. They are detailed below.

A. Preparation

To begin with, we scheduled a meeting with our client to discuss their goals and objectives for the usability test. During this meeting, we asked questions to better understand the client’s needs, such as the key task or feature of the website they wanted to test, the target audience they wanted to focus on and what they wanted to test, the desktop or mobile site. After getting answers to these questions, we developed a screening questionnaire to ensure that the participants we recruited were representative of the target audience. The questions included participant’s demographics, their experience with courier services, and their time availability for the user test (refer to appendix pp. 32).

More details on the participant demographics that we recruited can be found below in “Participant Demographics” under the “Results” section.

Next, we developed a script for the usability test that included a scenario and a task that the participants would complete using the Airpals website (refer to appendix pp. 36). The scenario was designed to provide context for the task. The scenario and task were as follows:

Scenario

Just like you have used delivery services before, you will be using Airpals today to send a package to me at the Pratt Institute Manhattan campus (144 W 14th St, New York, NY 10011) from work. Think about the last thing you had to deliver or something that you deliver frequently and what items you were sending.

Task: Locate and complete the form

Your task will be to locate and complete the form to send a package to me with delivery on the next business day. Remember to think about the last package you sent or one that you’ve sent before when filling out the form details.

Prior to the task, participants signed a consent form (refer to appendix pp. 41) to allow us to record their session and we asked them a few pre-test questions to gather more detailed demographic information and understand their familiarity with the website and courier services (refer to appendix pp. 35).

After participants completed the task, we asked a few post-task questions to gather their thoughts on their experience with the order flow and what they would expect to see or typically do after completing the task. Data was collected via verbal questions and a short Google Form questionnaire (refer to appendix pp. 42). This would allow us to understand their frustrations or expectations during and immediately after the task. Finally, we asked participants to complete a post-test questionnaire to gather their overall thoughts on the website (refer to appendix pp. 43 & 44). 5 pilot tests were conducted to refine the script and questions. During the pilot tests, we observed participants’ behavior and noted any issues or areas for improvement in the script. For example, we realized that some of the task instructions were vague or repetitive and needed revisions for better clarity.

To recruit participants, we also used social networks and online forums to advertise the study and our screening questionnaire, and reach a broader audience. Potential participants that met the requirements of our screener were contacted with more details and a Doodle link, an online scheduling tool with which potential participants could indicate their availability for the usability test sessions.

As participants responded with their preferred time slot, we created Zoom meetings for the remote usability testing sessions. Each session was 30 minutes long, and we assigned a moderator and a notetaker to oversee each session. Before the usability test sessions began, we sent participants an informed consent form to review and sign.

Overall, the preparation phase was crucial in ensuring that the usability test would be successful. By carefully screening participants and refining the script through pilot testing, we were able to create a more efficient and effective usability test that met the client's goals and objectives.

B. Data Collection

During the Data Collection phase, we conducted 11 moderated user testing sessions, each lasting for around 30 minutes via Zoom. In each session, we had a moderator and a notetaker present. The moderator guided the participants through the scenario and tasks, while the notetaker recorded observations and took note of any issues or feedback from the participants via a Google Form which can be found in the appendix.

Before starting each session, we provided the participants with an informed consent form that explained the purpose of the study, requested their permission for recording, and outlined their rights as a participant. We also asked them a few pre-test questions to gather basic demographic information and understand their familiarity with the website or any courier service. Next, we introduced the scenario and task to the participants and asked them to complete the task using the Airpals website. During the task, the moderator observed the participants and provided guidance or clarification when necessary. The notetaker recorded observations to track participant behavior and feedback.

After completing the task, we asked participants a few post-task questions to gather their thoughts on their experience completing the task and what they would expect to see after submitting an order. This, in addition to a brief post-task questionnaire, allowed us to understand their frustrations or expectations while completing the task. We also asked participants to complete a post-test questionnaire to gather their overall thoughts on the website.

Finally, we debriefed with each participant and provided them with a \$10 amazon gift card as compensation for their time and participation. We also used this time to gather any additional feedback or comments they may have had about the usability test. After the participant left the Zoom meeting, the moderator and notetaker conducted another debriefing in which key feedback was discussed and emphasized in the notes to inform data analysis.

Overall, the data collection phase was essential in gathering qualitative and quantitative data on how users interact with the Airpals website. By carefully observing and recording user behavior and feedback, we were able to identify usability issues and areas for improvement on the website.

The moderator's script, consent form, pre-test questions, post task questions, post-test questions, and the notetaker's form and notes are available in the Appendix (refer to appendix pp. 32-44).

C. Data Analysis

During the testing phase, we utilized a customized Google Form as our note-taking tool which allowed us to record participant information, observations on their behavior, comments, and feedback in a centralized location. We then exported these data to Google Sheets so that it would be easy to analyze all the participant feedback.

After conducting the usability testing sessions, our team moved on to analyzing and interpreting the collected data. This involved reviewing the videos and notes taken during the testing sessions and identifying patterns, trends, and issues that emerged during the process.

To streamline our analysis, we used a digital grouping spreadsheet with a thematic analysis approach to categorize the feedback based on the common frustrations, behaviors, or pain points presented during the user testing (Rosala, 2022). Data was first categorized by type of issue, such as “signifier missing” or “hierarchy.” New categories were formed after this step based on content or section of the form they were related to. For instance, we ultimately grouped “Information missing”, “Item Value” and “Language” feedback in one category for “Item Description.” This approach helped us identify the most common issues and themes that surfaced during the testing. With the feedback grouped into categories, we then analyzed each category in detail. This involved discussing patterns and trends within each group to identify potential solutions and recommendations (refer to appendix pp. 54-58).

Overall, by carefully analyzing the data collected and identifying common issues and themes, we were able to provide valuable insights and recommendations for improving the user experience of the Airpals website.

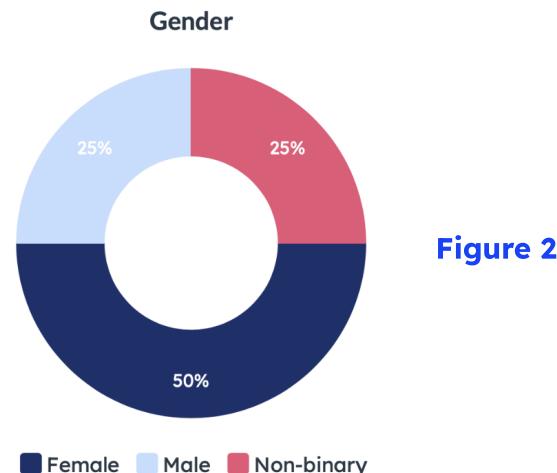
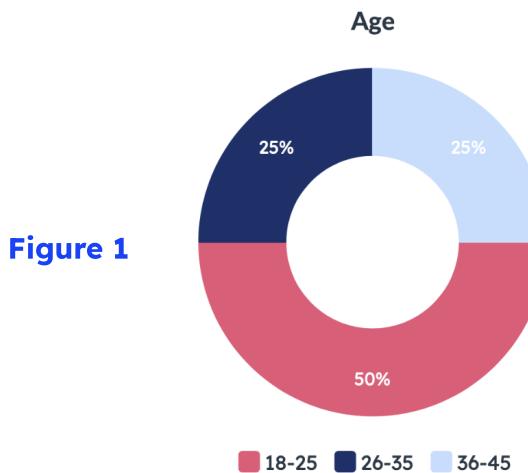
D. Report

After completing the data analysis phase, the next step in our usability study was to communicate the results of the study to the client. This phase involved presenting a summary of the findings, including identified usability issues and recommendations for improvement. The analysis results are also comprehensively documented in this report.

PARTICIPANT DEMOGRAPHICS

Creative and business operational professionals with courier service experience composed the target user group for this study, and the participants sampled from this group exhibited a diversity of age, gender, industry, and company size. Although 11 participants were recruited, **8 were retained as the best fit for the user group**, and the results reflect the responses of those retained.

75% of participants were between the ages of 18 and 35, with the remaining 25% of participants between 36 and 45 (Figure 1). **Half of the participants identified as female**, while another quarter identified as male, and another quarter as non-binary (Figure 2).



The industries in which our participants worked included **art and creative services, non-profit organizations, technology, and entertainment** (Figure 3). **50% worked at companies with over 500 employees**, and 25% worked at companies with less than 50 employees (Figure 4). All participants worked for companies based in New York City to match the actual Airpals user group. **75% of participants work in hybrid environments**, while 25% work exclusively in remote environments.

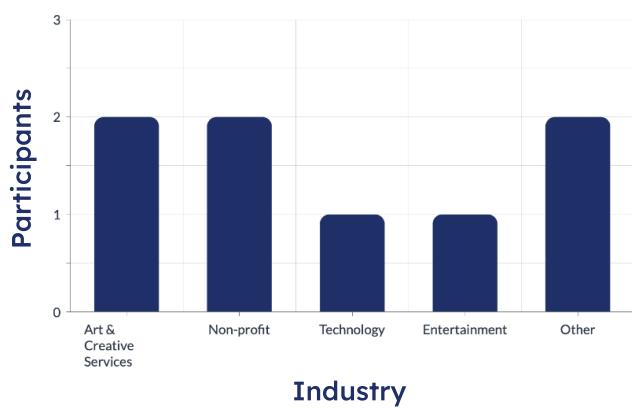


Figure 3

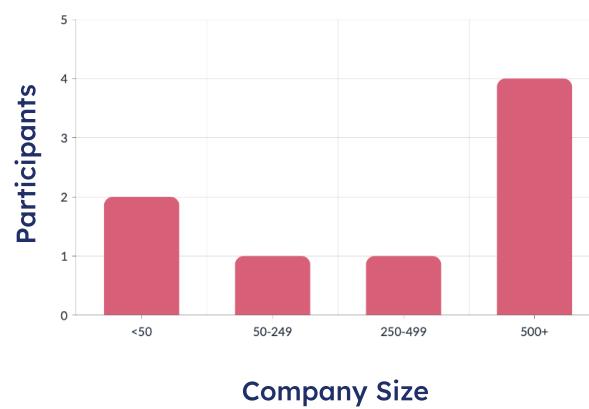


Figure 4

Participants had a history of using courier services for a range of shipments, including artwork, office supplies, and documents. One of the eight participants had used Airpals in the past.

Findings & Recommendations

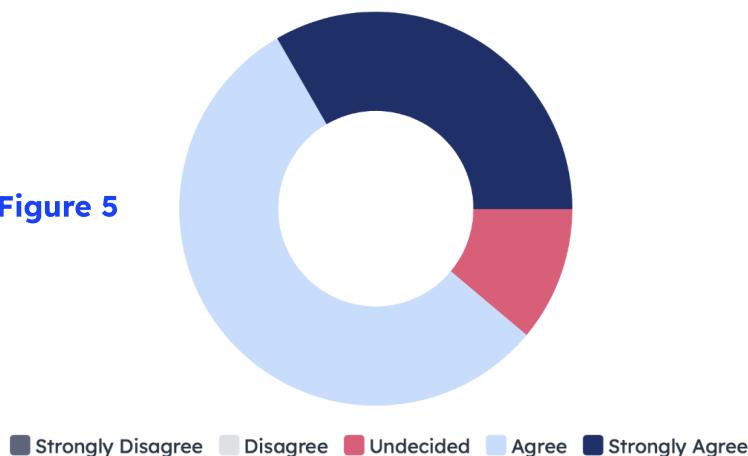


The Airpals website offers a friendly and efficient service for sending work-related shipments throughout New York City. The interface is simple and approachable, as one participant stated, “**It was very clean. It seemed...clear where I was supposed to go.**” Upon conducting 8 usability tests and analyzing the feedback and behavior of each participant, it was evident that the order form could benefit from a **clearer hierarchy, improved flexibility and user control, and more salient feedback.**

Participants thought aloud during the moderated usability tests and were observed throughout their completion of the Airpals order flow. Post-task and post-test questionnaires were completed by each participant to gain further insight into what they said and did during their tests. **The overall success rate was high, as all participants were able to complete the task of submitting an order.**

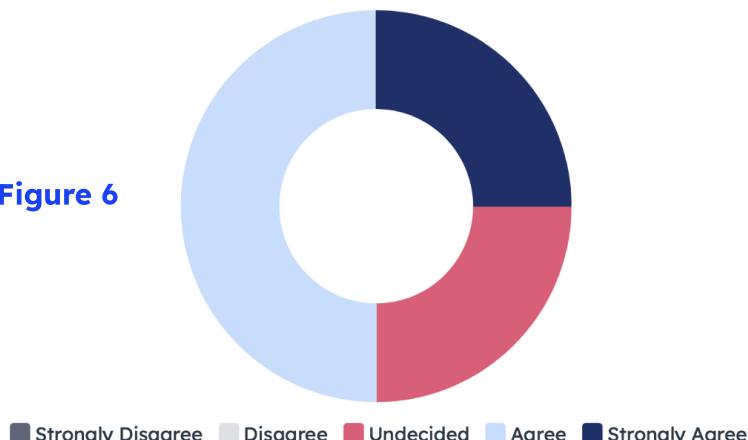
I am satisfied with the amount of time it took to complete the order.

Figure 5



I enjoyed using the Airpals interface.

Figure 6

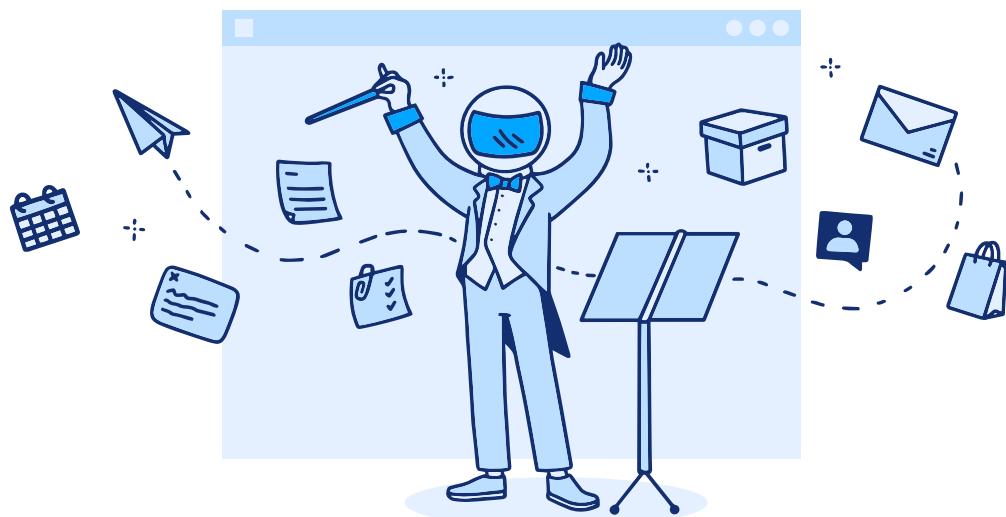


All participants agreed that it was easy to find the order form on the Airpals website, and that it was easy to navigate the site. 88% of participants were satisfied with the amount of time that it took to complete their order (Figure 5). Enjoyment in using the Airpals interface was expressed by 75% of participants (Figure 6).

As one of the post-task questions, participants were verbally asked what they would do or expect after submitting an order. **63% of participants mentioned that they would look for tracking information** and/or actually proceeded to the dashboard to view the tracking information. 50% also said they would follow-up with the recipient to notify them of the order. Finally, only 38% of participants noted that they would seek out a confirmation email or receipt.

The next sections outline **6 usability recommendations** for the Airpals interface based on the most frequent and severe issues encountered during testing. Each recommendation is accompanied by a description of the problem(s) that motivated it, and a mock-up to illustrate its changes to the interface. In addition to participant observations and feedback, the Nielsen Norman Group's ten usability heuristics, which are an industry standard for usability criteria, were used to guide our assessment of problems and formation of recommendations (Nielsen, 2020).

- 1 Streamline the flow for inputting parcel details
- 2 Clarify pick-up & drop-off instructions
- 3 Improve flexibility and consistency for time selection
- 4 Reinforce user control when editing order details
- 5 Increase error salience with more signifiers
- 6 Provide feedback and flexibility for address selection



Recommendation #1: Streamline the flow for inputting parcel details

The Problem

The current Airpals order form includes a page titled “How” which collects details about a user’s shipment, the sender and recipient information, and pick-up and drop-off notes (Figure 7). It is the longest page within the order flow and its length had a distinct effect on participant behavior, as they frequently made mistakes and omissions on this page.

3 of the 8 participants stated that they would need more details about the shipment size categories; these are currently distinguished as “small,” “medium,” and “large,” with examples of items that would fit in each category, and where the shipment could fit in a car. Participants were still unsure if they were selecting the right category when their parcel was bigger than an envelope, suggesting that the interface could do more to reinforce the usability heuristic of matching the system to the real world (Nielsen, 2020).

Almost done! Choose the category that best describes your shipment

Small  Mobile phone, keys, envelopes. (Fits in a gift box) - 0 +	Medium  Pair of shoes, laptop, tote bag. (Fits in a front seat) - 0 +	Large  Suitcase, garment bag, case of wine. (Fits in a car trunk) - 0 +
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Need more space? Please [contact us](#) and we would be happy to accommodate van and multi-stop requests.

What is the value of your entire delivery? *

0 ✖

⚠ All orders are insured only against theft for \$100.00. Additional insurance is available by request. Please visit our [terms](#) page.

Package and delivery Info

WHAT ARE YOU SENDING? *

Please provide details such as dimensions, weight, fragile item, must be facing up, etc.

Figure 7:
Item details on “How” page

Half of the participants also found it difficult to interpret and complete the value field on the “How” page. One participant said, “The value...I was a little tripped up on what that was. I decided it was what the cost of losing that parcel would be.” The language is ambiguous, as well as the lack of a “\$” to signify the type and format of input. Several participants typed a “\$” with their entry only to learn that it is not an accepted character (Figure 8). Furthermore, the automatic value of “0” in the field suggested to some users that the question was optional. These small points of confusion with the value field combine to create a significant usability challenge that contradicts the heuristic for maintaining the visibility of system status (Nielsen, 2020). The nature of the value input should be more apparent to users when they first encounter the field.

What is the value of your entire delivery? *

\$50 ✖

Required

Figure 8: Value field \$ error

The field titled “What are you sending?” also caused confusion, as every participant omitted necessary information from the field. Because the question is directly asking for a description of the shipment, participants simply described the item they were sending. Participants failed to notice the in-field subtext asking for handling instructions, so none of them specified these details (Figure 9). The combination of these pieces of information into a single question invites errors.

WHAT ARE YOU SENDING? *

Please provide details such as dimensions, weight, fragile item, must be facing up, etc.

Figure 9: Item description field

Our Recommendation

A multi-faceted solution is necessary to address every aspect of the parcel details problem. First, maximum dimensions should be added to the shipment size categories to more closely match the real world and disambiguate the criteria for each category (Figure 10). This would inspire more confidence in users as they make their size selection.

Choose the category that best describes your shipment

Small	Medium	Large
Mobile phone, keys, envelopes. Max. 10 x 13 x 3 in. (Fits in a gift bag or box)	Pair of shoes, laptop, tote bag. Max. 17 x 17 x 10 in. (Fits in a front seat)	Suitcase, garment bar, case of wine. 31 x 23 x 14 in. or larger (Fits in a car trunk)
- 0 +	- 0 +	- 0 +

Need more space? Please [contact us](#) and we would be happy to accommodate van and multi-stop requests.

Figure 10:
Mockup of shipment size categories

What is the estimated value of your shipment? *

\$

⚠️ All orders are insured only against theft for \$100.00. Additional insurance is available by request. Please visit our [terms](#) page.

The value field should have clearer language such as “What is the estimated value of your shipment?” to communicate to users that the value could be somewhat subjective. A “\$” should be added as a signifier to what type of input is needed, and the field should be initially blank to help suggest to users that an entry is required and not optional (Figure 11). We recommend placing this question last due to its summative nature, rather than interrupting the natural flow of shipment size to item description (Figure 12).

Almost done! Choose the category that best describes your shipment

Small	Medium	Large
Mobile phone, keys, envelopes. Max. 10 x 13 x 3 in. (Fits in a gift bag or box)	Pair of shoes, laptop, tote bag. Max. 17 x 17 x 10 in. (Fits in a front seat)	Suitcase, garment bar, case of wine. 31 x 23 x 14 in. or larger (Fits in a car trunk)
- 0 +	- 0 +	- 0 +

Need more space? Please [contact us](#) and we would be happy to accommodate van and multi-stop requests.

What are you sending? *

Please provide details like dimensions, weight, etc.

Special handling instructions

Please specify if the parcel is fragile, must be facing up, etc.

What is the estimated value of your shipment? *

\$ All orders are insured only against theft for \$100.00. Additional insurance is available by request. Please visit our [terms](#) page.

[Back](#) [Continue](#) \$ 27.45 *

*Not including tolls, parking fees, or extra charges.
Please see our [terms](#)

Figure 12: “What” page mockup

Item description and handling instructions should be clearly separated into two questions as a way of avoiding confusion, and would align with the usability heuristic for error prevention (Nielsen, 2020). “What are you sending?” is a clear way of asking for item characteristics like size and weight. This can be followed up by a “Special handling instructions” field in which users can enter anything regarding the parcel’s fragility, orientation, or other care needs (Figure 12).

Our recommendation also considers that the “How” page is quite long in comparison to the other pages in the form. Having multiple open-ended questions like item description, handling instructions, and pick-up/drop-off notes on one page could be overwhelming to users, compounding the issue of making mistakes on this long page. Therefore, we propose the removal of the sender and recipient information (names and phone numbers) and pick-up and drop-off notes from the page. The mockup in Figure 12 displays the updated page with the title “What” to create a clear focus on the parcel details.

Recommendation #2: Clarify pick-up and drop-off instructions

The Problem

The order flow collects the pick-up and drop-off addresses on the second page (“Where”) of the form, and then asks for recipient information, sender information, pick-up notes, and drop-off notes on the penultimate “How” page (Figures 13 & 14). Our previous recommendation streamlined the parcel details questions in part by removing the sender, recipient, and pick-up/drop-off fields from the “How” page (Figure 12). Yet these fields posed their own usability problems, demanding a different placement that motivated both the first and second recommendations.

The screenshot shows the 'WHERE' step of a six-step order flow. At the top, there's a navigation bar with icons for 'WHEN', 'WHERE' (which is highlighted in red), 'TIME', 'HOW', 'PAY', and 'REVIEW'. Below the bar, the text 'Pss... where to?' is displayed, followed by the instruction 'Enter the addresses to continue'. There are two main address input fields: 'Pick-up Address *' and 'Drop-off Address *'. Each field has a placeholder 'Enter complete address including zipcode' and a note below it: 'Apt/Floor (Avoid any issues by adding it)'. Below these fields are 'Continue' and 'Back' buttons, and a note at the bottom stating '\$ 0.00*' and a small note about tolls.

Figure 13: “Where” page

The screenshot shows the 'HOW' step of the order flow, titled 'PICK-UP'. It contains fields for 'Sender's name *' (with 'John Doe' entered) and 'Sender's phone number *'. Below these is a section for 'Pick-up notes' with the instruction: 'Anything we should know to pick up your order? How many flights of stairs are there? Is the elevator or freight available? What about a mailroom or parking conditions? Has your front desk already been notified?'. A note at the bottom states: 'Not including tolls, parking fees, or extra charges. Please see our terms'.

Figure 14:
Sender & pick-up details on “How” page

On the “Where” page, one participant mentioned that sender and recipient information would be expected alongside the corresponding address fields. Upon observation of all participants, it became apparent that the placement of sender, recipient, and pick-up/drop-off fields on the “How” page was a confusing diversion from the rest of the page (see Recommendation #1 on p. 12), as inputs were frequently incomplete or missing. Half of the participants skipped both the pick-up and drop-off notes, and all participants spent longer interpreting the pick-up and drop-off notes fields compared to other questions in the form. They noticeably lingered on the numerous in-field sub-questions within these fields in an attempt to understand what they should write (Figure 14). The lengthy explanations accompanying the pick-up and drop-off notes fields do not promote efficiency of use (Nielsen, 2020).

Finally, the pop-up which is designed to call out the importance of the frequently skipped pick-up and drop-off notes sometimes caused additional confusion (Figure 15). When participants completed one of the two notes fields, they still received a pop-up warning them of proceeding without pick-up and drop-off notes: “I already filled out the pick-up notes, so I’m not sure why this pop-up appeared,” said one participant. Participants who experienced this pop-up scenario were frustrated or confused by the inaccurate feedback.

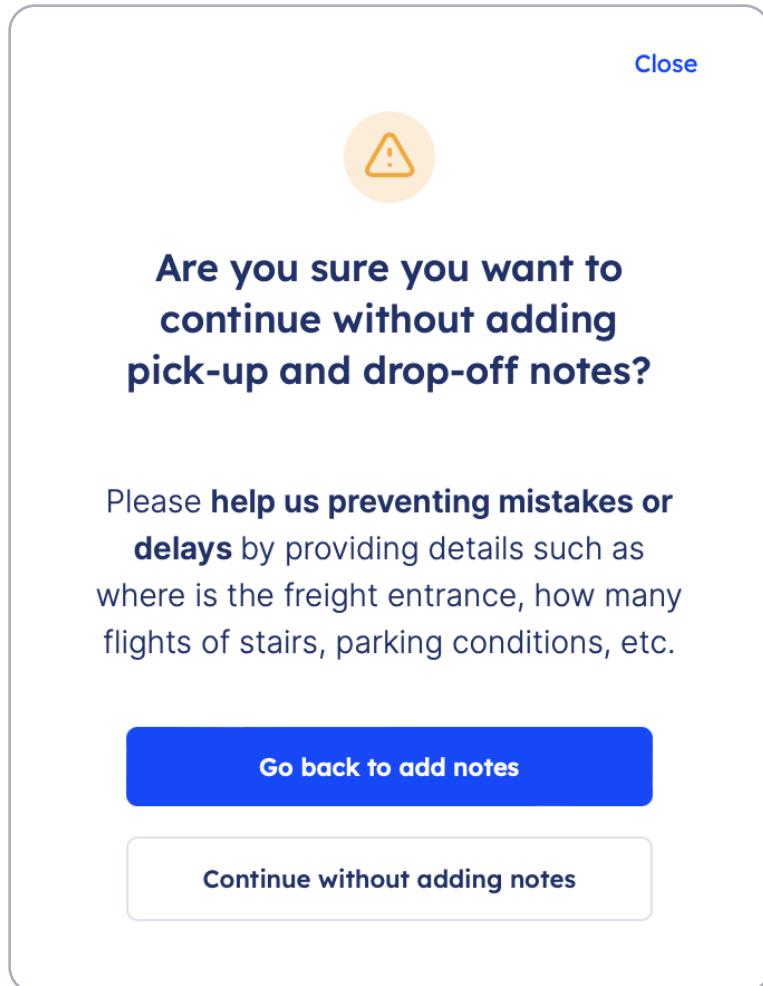


Figure 15:
Missing pick-up and drop-off notes pop-up

Our Recommendation

Because the previous recommendation removed the sender, recipient, and pick-up/drop-off information from the “How” page, this recommendation captures a new placement for these questions that clarifies the purpose of the pick-up and drop-off notes fields. **In order to reinforce the relationship among the addresses, sender/recipient details, and pick-up/drop-off instructions, we recommend that these fields are all included on the “Where” page (Figure 16).**

The mockup shows a user interface for a delivery service. At the top, there are four colored dots (red, light blue, dark blue) followed by navigation arrows (< >). Below this is a horizontal bar with icons for DATE (calendar), WHERE (location pin), TIME (clock), WHAT (box), PAY (credit card), and REVIEW (checkmark).

Pss... where to?
Enter the addresses to continue

Pick-up Address *
Enter complete address including zipcode
Apt/Floor (Avoid any issues by adding it)

Sender's name * John Doe Sender's phone number * Ext

How should we access the pick-up location?
Is there a front desk, parking, mailroom, elevator, or anything else we should know about pick up?

Drop-off Address *
Enter complete address including zipcode
Apt/Floor (Avoid any issues by adding it)

Recipient's name * Jane Smith Recipient's phone number * Ext

How should we access the drop-off location?
Is there a front desk, parking, mailroom, elevator, or anything else we should know about drop off?

\$ 0.00*

*Not including tolls, parking fees, or extra charges.
Please see our [terms](#).

[Back](#) [Continue](#)

A large map of New York City is displayed on the right side of the form, showing Manhattan, Brooklyn, and parts of New Jersey. The map includes labels for various neighborhoods like Manhattan Island, Upper East Side, Lenox Hill, The Rockefeller University, Chelsea, Hoboken, and Williamsburg.

Figure 16: “Where” page mockup

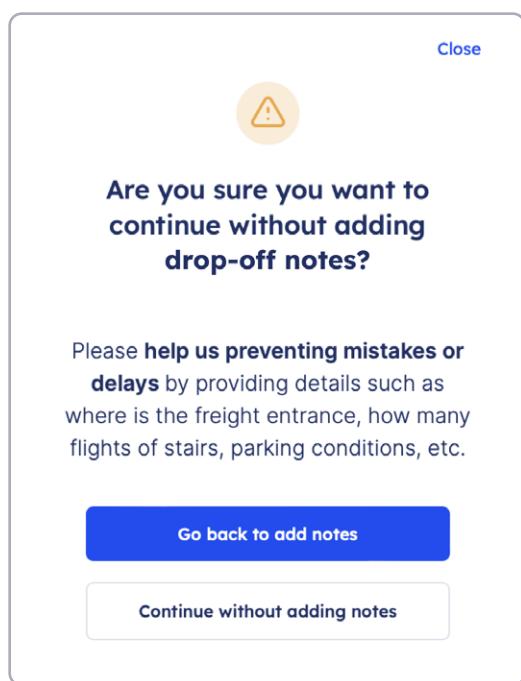
Shipping standards list the sender and recipient names alongside their respective addresses, so the inclusion of these fields on the “Where” page in Figures 16 & 17 would allow the form to better match a familiar real-world scenario (Nielsen, 2020). Relocating the pick-up and drop-off notes to the same page also takes advantage of an address association, as the notes are directly related to how the locations should be accessed (Figure 17). Providing this context will help users understand the purpose of the fields, in addition to adjustments to the language. Rather than simply asking for “pick-up notes” and having multiple explanatory questions, it is clearer to ask “How should we access the pick-up location?” with a few examples of what users should consider including.

The mockup shows a form layout with the following fields:

- Drop-off Address ***: A large input field labeled "Enter complete address including zipcode".
- Apt/Floor (Avoid any issues by adding it)**: A smaller input field below the address field.
- Recipient's name ***: An input field containing "Jane Smith".
- Recipient's phone number ***: An input field with a placeholder "Ext".
- How should we access the drop-off location?**: A question followed by a text area for notes.
- Is there a front desk, parking, mailroom, elevator, or anything else we should know about drop off?**: Another question followed by a text area for notes.

Figure 17:
Drop-off and recipient details mockup

Although these relocations make the “Where” page longer, the “How” page (renamed “What” in Recommendation #1) becomes significantly shorter, creating a more consistent page length across the form (Figures 12 & 16). Participants will have more context and less pressure from a lengthy page to increase their understanding of the pick-up/drop-off instructions fields and to motivate them to fill in the necessary information.



One final adjustment for this recommendation would be to create case-specific pop-ups for when only one of the pick-up or drop-off fields is left blank. This approach would provide the clearest feedback, aligning with a usability heuristic for promoting the visibility of system status (Nielsen, 2020).

Figure 18:
Missing drop-off notes pop-up

Recommendation #3: Improve flexibility and consistency of time selection

The Problem

Although all participants chose the pick up and deliver by time successfully, there are still some issues identified. Participants indicated that there were only three options (4:00PM, 6:00PM, and 8:00PM) for delivery time, and they would need to adjust the pick-up window in order to change the delivery window (Figure 19). They were also unable to select other times in between these three options. One participant said, “Thinking back, it didn’t seem to have provided me with too many options for time selection.”

Secondly, the default “deliver by” time was set to 8:00PM, a time when most offices are closed (Figure 19). 4 out of 8 participants changed the “deliver by” time to an earlier option to ensure that their packages are handed to receivers on the same date.

Lastly, the signifiers for pick-up time dropdowns were not obvious enough, causing some participants to be unsure if they could click on them. Moreover, the clickable areas of each dropdown were not clearly defined. While there appears to be one dropdown for start time and another for end time, each of the fields actually consist of three different dropdowns for hour, time, and AM/PM selection. As the interface did not reflect the actual numbers and clickable areas of the dropdowns, some participants clicked outside of the designated area and couldn’t open the dropdowns (Figure 19).

WHEN WHERE TIME HOW PAY REVIEW

It's all about timing

Pick-up time window

FROM 09 : 00 AM TO 12:00 PM

Delivery by

4 pm 6 pm 8 pm

*Hours displayed in New York time

Need a rush order? Please reach out and we will try to accommodate your request.

Back Continue \$ 21.23*

*Not including tolls, parking fees, or extra charges.
Please see our [terms](#)

Figure 19:
“Time” page

Our Recommendation

We believe that these usability issues can be solved with some changes to the “Time” page interface. **Changing the three buttons to a single dropdown for “deliver by” time is a way to provide users with more options on time selection** (Figure 20). Unavailable timing options can also be disabled, so that the “deliver by” time will not overlap with the pickup window.

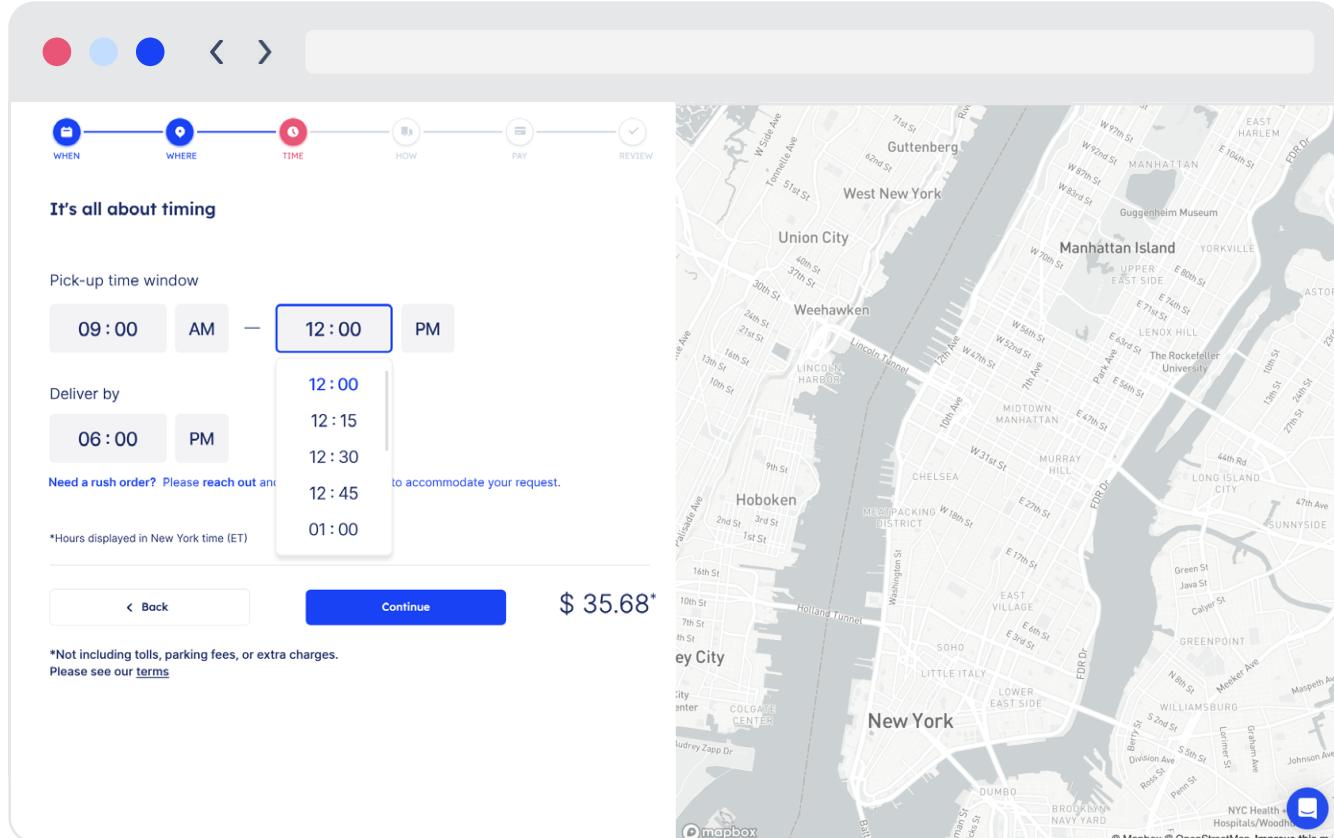


Figure 20: “Time” page mockup

Furthermore, since Airpals is targeting businesses, it would be important to take the office closing time into consideration. **We recommend setting the default “deliver by” time to 6PM, which is a more common closing time for offices** (Figure 20). This would ensure that the packages are received on the designated date by default. Users still have the freedom to adjust the timing to a later time for lower costs.

We also recommend defining the clickable areas and number of pickup dropdowns with clear borders. In the Figure 20 mockup, we reduced the number of dropdowns to two, and gave them both a clear clicking area. Each field indicates one dropdown to match the user expectation and result. The light gray background of the dropdowns are consistent with text fields in previous pages, and it also serves as a signifier that this area can be clicked and edited.

Recommendation #4: Reinforce user control when editing order details

The Problem

2 out of 8 participants tried to edit the time from the “Review” page of the order form and were navigated to the first page (“When”) of the form (Figure 21). Participants who clicked “Edit” for this field on the “Review” page of the form expected to go back to the “Time” page in which they could make the edit. Instead, they were redirected to the first page of the form. To quote one of the participants, “When I went back to edit the delivery time, I clicked edit and it brought me back to the very first screen of ‘When’ instead of bringing me back to the ‘Time.’”

On the “Review” page in Figure 21, date and time are displayed in a single row, which is inconsistent with the structure of the form (Nielsen, 2020). This confused participants when they tried to edit the time since they expected a direct link to the information that needed editing.

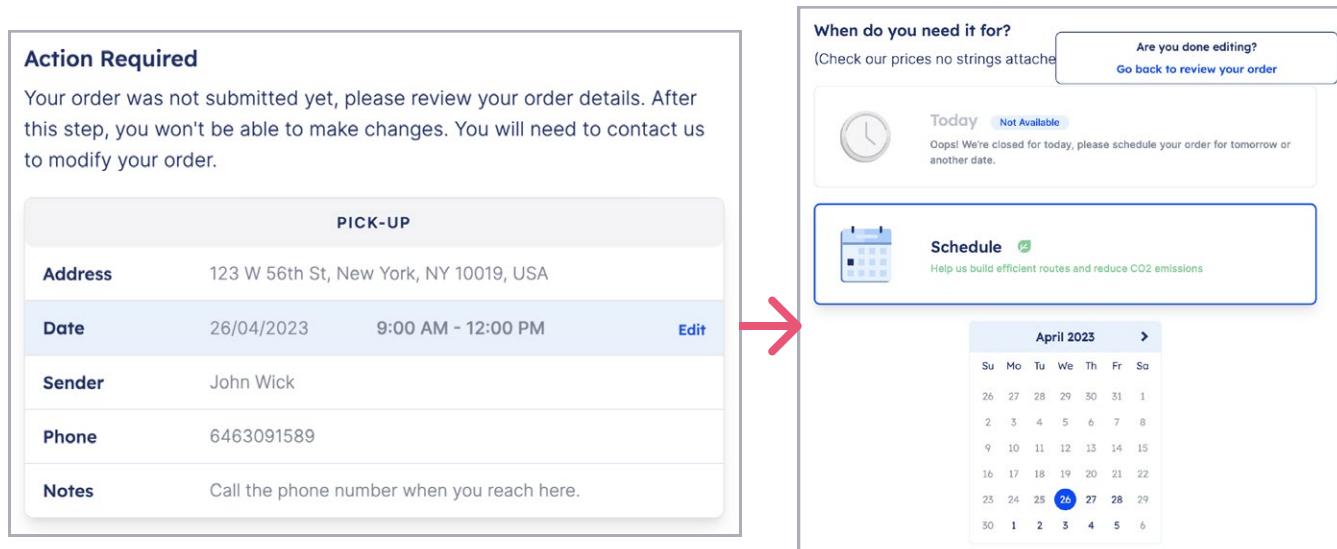


Figure 21: Editing time on “Review” page leads to “When” page

This form behavior does not utilize knowledge in the world and does not follow the user’s mental model where users expect to be navigated to the page that needs to be edited (Norman, 2013). It caused confusion for the participants and the next step that needed to be taken was not completely clear.

Our Recommendation

Based on the participants feedback and our observations we recommend navigating users to the specific form page that contains the field that needs to be edited, rather than navigating them to the start of the form. This can be accomplished by adding a designated row for each piece of information, as it is structured in the rest of the form (Figure 22). This will help reduce confusion regarding next steps for users that need to edit order information from the “Review” page by giving them appropriate feedback. It will follow the user’s mental model and improve efficiency, making it easier for users to edit and complete the order form.

Action Required

Your order was not submitted yet, please review your order details. After this step, you won't be able to make changes. You will need to contact us to modify your order.

PICK-UP

Address 123 W 56th St, New York, NY 10019, USA

Date 04/26/2023

Time 9:00 AM - 12:00 PM **Edit**

Sender John Wick

Phone 6463091589

Notes Call the phone number when you reach here.

WHEN WHERE TIME HOW PAY REVIEW

It's all about timing

Pick-up time window
09 : 00 AM — 12 : 00 PM

Deliver by
04 : 00 PM

*Hours displayed in New York time

Need a rush order? Please [reach out](#) and we will try to accommodate your request.

[Back](#) [Continue](#) \$ 35.68*

*Not including tolls, parking fees, or extra charges.
Please see our [terms](#)

Figure 22: “Review” page mockup and on-click behavior

Recommendation #5: Increase error salience with more signifiers

The Problem

3 out of 8 participants were unable to notice the error messages displayed on the screen. When participants entered invalid or incorrect data, or entered data in a format that was not accepted by the form, an error message appeared on the screen right under the field that needed correcting (Figure 23). These error messages often went unnoticed, especially when participants had scrolled to the bottom of the page and were prepared to click “Continue.”

DROP-OFF

Recipient's name *

Margaret O'Hara ×

Must contain only letters

Recipient's phone number *

12341234 ×

Must be a valid US phone

Drop-off notes

Call the phone number when you reach here.

Please fill all [*] required fields

< Back Continue \$ 32.79*

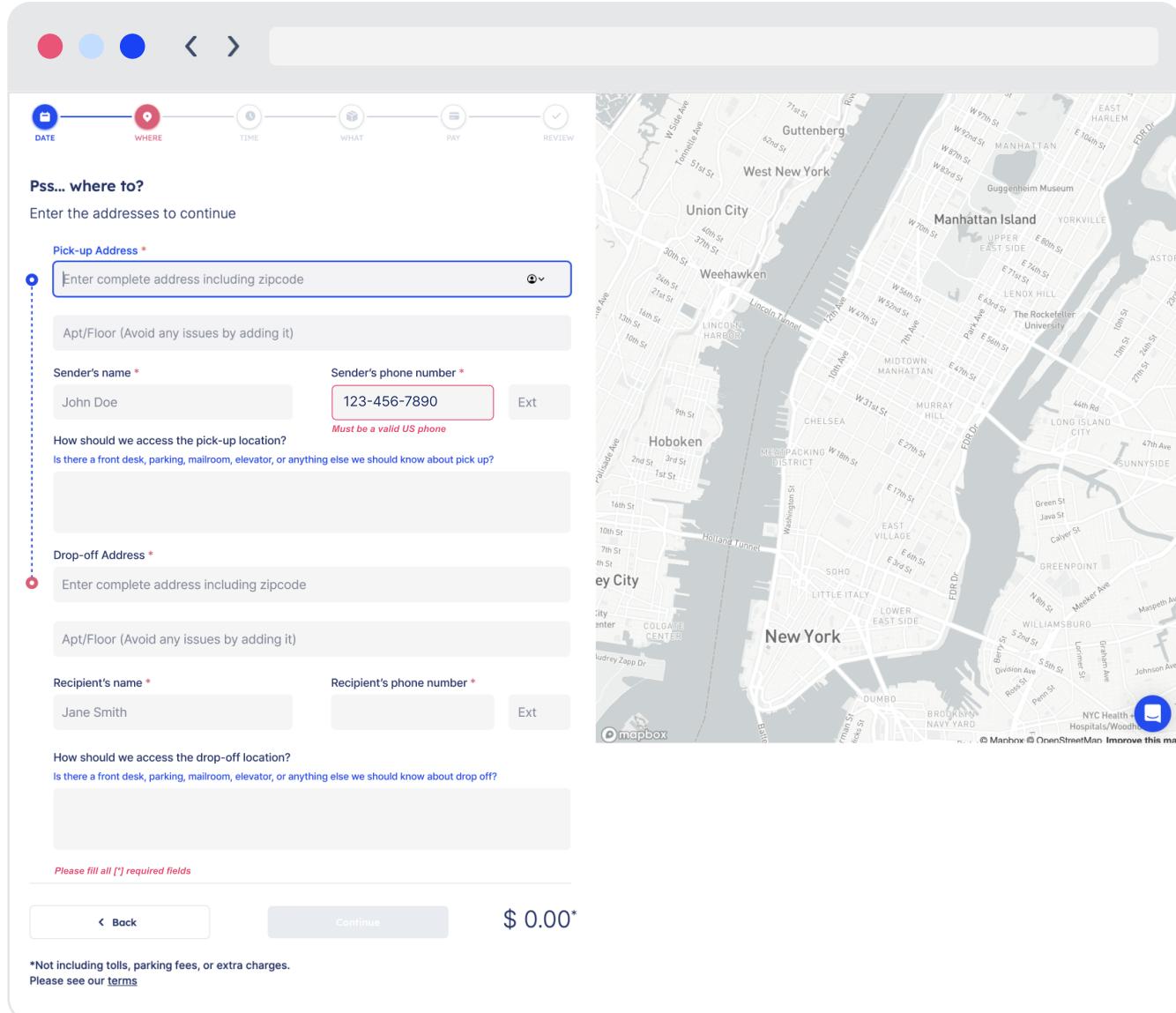
Figure 23:
Error messages

One of the participants had a special character (an apostrophe) in her name, but the name field does not accept special characters. Thus an error was displayed under the name field, but this message was not evident to the participant (Figure 23). When the participant tried to continue to the next section of the form, the form froze without giving any feedback to the participant. The participant said, “When I couldn’t submit the form because of the apostrophe in my name, if that error was much more visible on my screen that would probably help because I thought my computer was frozen.”

Another participant missed a required field on the form and was prompted with an error message at the end of the form page that read, “Please fill all [*] required fields” (Figure 23). The participant was unable to identify the missing required field easily.

Our Recommendation

We recommend making the error messages more visible by increasing the font size and font weight. We also recommend highlighting the field that needs to be corrected or filled in when the error message is displayed so that users have a clear signifier for the action that needs to be taken next to complete the order.



The mockup displays a delivery service's pickup and drop-off address entry screen. At the top, a navigation bar shows steps: DATE (red dot), WHERE (blue dot, currently selected), TIME, WHAT, PAY, and REVIEW. Below the steps, a message says "Pss... where to?" followed by "Enter the addresses to continue".

Pick-up Address *

Enter complete address including zipcode

Apt/Floor (Avoid any issues by adding it)

Sender's name * John Doe

Sender's phone number * 123-456-7890 Ext

Must be a valid US phone

How should we access the pick-up location?
Is there a front desk, parking, mailroom, elevator, or anything else we should know about pick up?

Drop-off Address *

Enter complete address including zipcode

Apt/Floor (Avoid any issues by adding it)

Recipient's name * Jane Smith

Recipient's phone number * Ext

How should we access the drop-off location?
Is there a front desk, parking, mailroom, elevator, or anything else we should know about drop off?

Please fill all [*] required fields

*Not including tolls, parking fees, or extra charges.
Please see our [terms](#).

Back Continue \$ 0.00*

A map of New York City is overlaid on the right side of the form, showing Manhattan, Brooklyn, and parts of New Jersey. The map includes labels for various neighborhoods like Union City, Hoboken, and Williamsburg, along with street names and landmarks like the Guggenheim Museum and Lincoln Tunnel.

Figure 24: Mockup with bolder error message and highlighted field

Recommendation #6: Provide feedback and flexibility for address selection

The Problem

Our participants experienced some frustrations while trying to fill out the address field. They found that the address field does not behave predictably if you do not select an address from the drop down (Figure 25). Participants experienced issues both if they copy/pasted an address into the field, or if they typed out the address.

Many participants were copying the address and pasting it in, a practice which is not uncommon. However, they found that if they copy/pasted an address, it disappeared when they tried to move on to the next field without selecting from the drop down menu. As participants felt that they had already entered their address when they copy/pasted it in, selecting from the drop down menu was an extra step they were not anticipating.

Some participants fully typed out the address, then hit tab to move to the next field without selecting from the drop down, again, anticipating that they had completed the necessary step and that no further action was needed. However, when they did this, the system automatically selected an address that was different from the address that was typed.

Finally, participants who had to fix an incorrect address—whether it was because they had entered it incorrectly, or that the drop down had selected an incorrect address for them—found that fixing the error was not immediately intuitive. To correct an incorrect address, participants wanted to click on the field to highlight the text, but you have to click the x first, introducing an additional step to the correction process.

The screenshot shows a mobile application interface for entering an address. At the top, there is a header with the text "Pss... where to?" and a sub-instruction "Enter the addresses to continue". Below this is a form field labeled "Pick-up Address *". A blue dotted line connects this field to a red circle on the left side of the screen. Inside the "Pick-up Address" field, the text "144 W 14" is typed. To the right of the input field is a blue "X" button. A dropdown menu is open, listing five address options:

- 144 West 14th Street
New York, NY, USA
- 144 West 141st Street
New York, NY, USA
- 144 West 144th Street
New York, NY, USA
- 144 West 14th Street
Deer Park, NY, USA
- 144 East 14th Street
New York, NY, USA

At the bottom of the screen, there are navigation buttons: a "BACK" button with a left arrow, a "Continue" button, and a "ψ υ.υυ" button with a right arrow. There is also a small asterisk (*) symbol at the bottom right.

Figure 25: Address dropdown on “Where” page

Our Recommendation

We recommend making it clearer to users that they must use the drop down menu for address selection, and to allow for easier error correction should the wrong address be entered. An error message will give users clear feedback on how to correctly input the address if they did not select the address from the drop down menu. To make editing easier, we recommend allowing users to click on the field directly to edit, without having to press the “x” to clear the field first, as this is what our participants instinctively wanted to do.

The figure shows a user interface for addressing a delivery. At the top, there is a navigation bar with colored dots (red, blue, green) and arrows for navigating through steps. Below this is a progress bar with icons for DATE, WHERE, TIME, WHAT, PAST, and REVIEW. The WHERE step is highlighted with a red dot. The main area contains fields for 'Pss... where to?' and 'Enter the addresses to continue'. A 'Pick-up Address' field contains '144 W 14th St' with a dropdown arrow icon. Below it is a note 'Select an address from the drop-down' and a placeholder 'Apt/Floor (Avoid any issues by adding it)'. There are fields for 'Sender's name' (John Doe) and 'Sender's phone number' (Ext). A section asks 'How should we access the pick-up location?' with a note about front desks, parking, or elevators. A 'Drop-off Address' field is present with a note to 'Enter complete address including zipcode' and a placeholder 'Apt/Floor (Avoid any issues by adding it)'. It also has fields for 'Recipient's name' (Jane Smith) and 'Recipient's phone number' (Ext). To the right of the form is a detailed map of New York City, specifically Manhattan, showing various neighborhoods like Guttenberg, Union City, Hoboken, and Brooklyn. The map includes street names and landmarks like the Guggenheim Museum and The Rockefeller University. A Mapbox logo is visible at the bottom of the map.

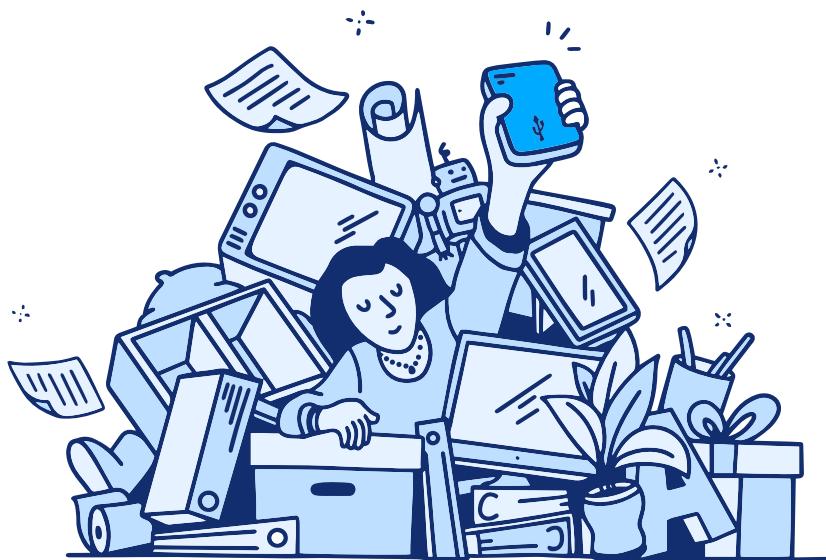
Figure 26: Address page mockup

Other Adjustments



During testing, our participants uncovered some other small but nevertheless important issues in addition to the more major problems that informed our recommendations. These should be addressed, but we believe that they will be simple fixes:

- 1 Accept special characters in names
- 2 Add a field for phone extension numbers
- 3 Ensure consistency of the date format
- 4 Increase the color contrast



Adjustment #1: Accept special characters in names

Our participants discovered that the dashboard doesn't accept the use of special characters such as apostrophes and hyphens in names. One participant received an error message and was unable to continue to the next screen until the apostrophe was removed (Figure 27). When we tested the interface, we discovered that hyphens were also not accepted in names. As apostrophes and hyphens are not uncommon in last names, the characters should be allowed in name fields.

The screenshot shows a user interface for entering a name. A field labeled "Sender's name *" contains the text "Jane O'Neal". To the right of the input field is a small "X" button. Below the input field, a red error message reads "Must contain only letters".

Figure 27: Special character error

Adjustment #2: Field for phone extension numbers

One of our participants noted that there was no field for phone number extensions. As this is a B2B business, users are likely to use a work number, which commonly includes an extension. An optional field should be added for phone number extensions, which will help facilitate communication should the courier need to contact either the sender or recipient (Figure 28).

The mockup shows a form with two fields. The first field is labeled "Recipient's name *" and contains the text "Jane Smith". The second field is labeled "Recipient's phone number *" and is currently empty. To the right of the second field is a button labeled "Ext".

Figure 28: Mockup with phone extension number

Adjustment #3: Date format

Multiple observant participants noted that the date format on the review page does not follow US conventions, it follows standard international conventions: day/month/year (Figure 29). In the US, the convention is month/day/year. As this is a New York based service, it would be best to follow US conventions.

PICK-UP			
Address	123 W 56th St, New York, NY 10019, USA		
Date	26/04/2023	9:00 AM - 12:00 PM	Edit
Sender	John Wick		
Phone	6463091589		
Notes	Call the phone number when you reach here.		

Figure 29:
Day/month/year format

Adjustment #4: Color contrast

Some participants remarked that they felt the text did not have enough contrast against the background, such as the row content in Figure 29 and field titles in Figure 30. The minimum recommended contrast ratio is 4.5: which accommodates users with visual impairments (W3C, n.d.). We checked the contrast ratio and it was 3.67:1 which does not meet the recommended standard (WebAIM, n.d.). We would advise increasing the contrast to meet accessibility standards for visual impairment.

Sender's name *	John Doe
Sender's phone number *	
Pick-up notes	Anything we should know to pick up your order? How many flights of stairs are there? Is the elevator or freight available? What about a mailroom or parking conditions? Has your front desk already been notified?

Figure 30:
Low contrast field titles

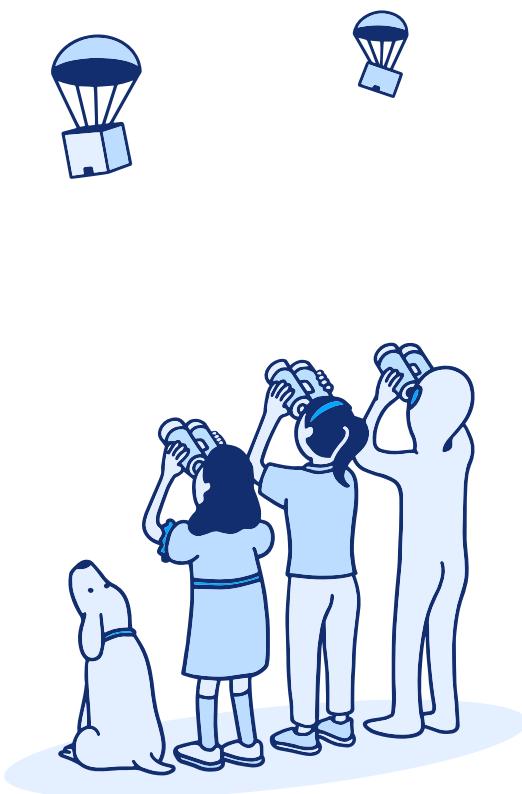
Conclusion



Our usability study of the Airpals website uncovered six larger issues, and a further four small but significant adjustments. We have offered recommendations for all six larger issues and the four smaller adjustments that we believe will improve the order flow, and address the concerns that Airpals expressed to our team—wanting more insight into the areas of the form where people struggled the most, why people were not filling out pick-up and drop-off notes, and what users' next actions may be after completing an order.

It should be noted that none of the issues that we uncovered during the testing process were insurmountable and the majority of participants still felt that the order form was easy to complete. User testing participants found the Airpals website to be intuitive, with the vast majority of participants saying they enjoyed using the interface and would be happy to use the service for work. They enjoyed the fun graphics, the clean design and how interactive the interface was.

We hope this report will help inform future improvements to the Airpals website, and has given Airpals greater insight into how users interact with their website and approach the order process.



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Appendix



APPENDIX A: Screening questionnaire

User Study Recruitment Form

We are a group of graduate students at Pratt Institute conducting a usability study on a courier service. Please fill out this questionnaire if you are interested in participating (eligible participants will be emailed later with further details). Tests will be held over Zoom from April 7-19 and will only take approximately 30 minutes. Each participant will be compensated with a \$10 Amazon gift card.

lchavan@pratt.edu Switch account



* Indicates required question

Email *

Your email

What is your preferred name? *

Your answer

What is your email address? *

Your answer

What is your age? *

- 18-25
- 26-35
- 36-45
- 46-55
- 56+

What is your gender? *

- Female
- Male
- Non-binary
- Prefer not to say

Are you currently employed? *

- Yes
- No

[Next](#)

Page 1 of 3

[Clear form](#)

Work Details

What is your role/job title at work? *

Your answer

What industry do you work in? *

- Entertainment
- Art, Design and other creative services
- Retail/Fashion
- Finance
- Advertising
- Technology
- Non-profit
- Other: _____

What is the size of your company? *

- <10 employees
- 10-49 employees
- 50-249 employees
- 250-499 employees
- 500+ employees

Where is your company located? *

- Brooklyn
- Bronx
- Manhattan
- Queens
- Staten Island
- Jersey City
- Other: _____

Do you ever need to send things or have things delivered to you via a third party * service within NYC for work?

- Never
- Seldom
- Sometimes
- Often

[Back](#)

[Next](#)

Page 2 of 3

[Clear form](#)

Availability

Are you available for a testing session between April 7th and April 19th? *

- Yes
- No

What days in a week works for your schedule? *

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

What times work best for you? *

Your answer

[Back](#)

[Submit](#)

Page 3 of 3

[Clear form](#)

APPENDIX B: Pre-test questions

Pre-Test Questions

Do you work remote, in person, or both?

Your answer _____

If you are remote, where are you based?

Your answer _____

Approximately how many employees are there at your company?

Your answer _____

What service(s) do you use or have you used before to send things for work?

Your answer _____

Have you ever used Airpals before?

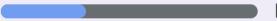
Yes
 No

Think about the last time you had items sent or delivered for work. What were the items?

Your answer _____

Are you okay with using your work address for this test? Any information you input into the interface you will be testing will not be used for anything else.

Your answer _____

[Back](#) [Next](#)  Page 2 of 6 [Clear form](#)

APPENDIX C: Moderator script

Airpals Moderated User Testing

Script for usability test of Airpals website on desktop

March-May 2023

Screening Questionnaire: <https://forms.gle/nQuc33EH7ssq3zae6>

Prepare

Before Participants Arrive

- Set up laptop:
 - Open browser
 - Open and log into Zoom and set up video recording
 - Have links available and Google open
 - <https://website-airpals-test.vercel.app/>
 - Have the script open online (to paste tasks in chat during session)
 - Have the Post test questionnaire link ready to paste
 - <https://forms.gle/xJ3Et7kuUXqHFZjw5>
- Organize and arrange materials for moderator:
 - Moderator script
 - Open timer to monitor testing time
 - Note taking materials - Fill in the participant details in the below Evaluator testing notes google form before the session.
 - <https://forms.gle/djcDAdt8AQFNNEmZ9>

Without Notetaker: Introduction & Informed Consent (2 mins)

Hi, [Good morning/afternoon/evening]. How are you?

Before we begin, could you please tell me the pronunciation of your name?

Hi [name], my name is [name] and I am a student at Pratt Institute's School of Information. We're gathering usability feedback for the Airpals website. It is a B2B courier service. I'll be reading from a script for consistency across sessions, so please bear with me if I sound robotic.

We are testing the Airpals website to learn how users navigate through and fill out the order form. I am not a part of the team that created this website, so please be as honest as possible. Also, keep in mind that we are testing the website, not you, so there are no wrong answers.

Please try to think out loud as much as possible during the testing. If you have any questions please feel free to ask. However, I may not be able to answer until the end of the session as I don't want to influence your response.

With your permission, I'll be recording the session. Recordings are confidential and will only be used for us to analyze for our research. Do I have your permission to record this session?

[TURN ON RECORDING]

Thank you. Have you had a chance to sign the consent form we sent out earlier?

[If NO:]

That's not a problem. I will send a link to the consent form in the chat. Please read through it and let me know when you've completed it..

[Paste the link below into the chat]

Consent form link: <https://forms.gle/1HNvacw92k9aL3E4A>

Thank you for your consent. Do you have any questions for me before we begin?

[If YES:]

Great, thank you for your consent. Do you have any questions for me before we begin?

With Notetaker: Introduction & Informed Consent (2 mins)

Hi, [Good morning/afternoon/evening]. How are you?

Before we begin, could you please tell me the pronunciation of your name?

Hi [name], my name is [name] and accompanying me is [notetaker's name]. Both of us are students at Pratt Institute's School of Information, and we are here to gather usability feedback for the Airpals website. It is a B2B courier service. I'll be reading from a script for consistency across sessions, so please bear with me if I sound robotic.

We are testing the Airpals website to learn how users navigate through and fill out the order form. I am not a part of the team that created this website, so please be as honest as possible. Also, keep in mind that we are testing the website, not you, so there are no wrong answers.

Please try to think out loud as much as possible during the testing. If you have any questions please feel free to ask. However, I may not be able to answer until the end of the session as I don't want to influence your response.

With your permission, I'll be recording the session. Recordings are confidential and will only be used for us to analyze for our research. Do I have your permission to record this session?

[TURN ON RECORDING]

Thank you. Have you had a chance to sign the consent form we sent out earlier?

[If NO:]

That's not a problem. I will send a link to the consent form in the chat. Please read through it and let me know when you've completed it..

[Paste the link below into the chat]

Consent form link: <https://forms.gle/1HNvacw92k9aL3E4A>

Thank you for your consent. Do you have any questions for me before we begin?

[If YES:]

Great, thank you for your consent. Do you have any questions for me before we begin?

Usability Test

Before we begin the tasks, I want to ask you a few demographic questions that will help give us context to understand how an Airpals user may interact with the service.

Pre-Test Questions:

1. Do you work remote, in-person, or both?
 - a. [If remote] Where are you based?
2. Approximately how many employees are there at your company?
3. What services do you use or have you used before to send things for work?
4. Have you ever used Airpals before?
5. Think about the last time you had items sent or delivered for work. What were the items?

Thank you for your answers! In our next step, I would like you to open the Airpals testing site and share your screen with me, so I can see where you are navigating and what you are looking at. I have pasted the link in the chat:

*Website link: <https://website-airpals-test.vercel.app/>

[Paste the link to the chat, make the participant co-host and wait for them to open the Airpals website and share their screen]

Thank you! Now we'll get into the tasks.

Scenario

[Scenario] Just like you have used delivery services before, you will be using Airpals today to send a package to me at the Pratt Institute Manhattan campus (144 W 14th St, New York, NY 10011) from work. Think about the last thing you had to deliver or something that you deliver frequently and what items you were sending.

[Paste the above paragraph into the chat for the participant's reference]

You will be using a test version of the application and will not actually be placing an order or scheduling a delivery. Remember that we're evaluating the site and not you, so there are no wrong answers.

Before we begin, would you be comfortable with using your work address and number for this test? Any information you put into the interface for this test will not be used for anything else. If not, we will provide you with necessary details to fill in.

Task: Locate and complete the form

Your first task will be to locate and complete the form to send a package to me with delivery on the next business day. Remember to think about the last package you sent or one that you've sent before when filling out the form details. I will be pasting the task in the chat for your reference along with the information needed to complete the order.

[Paste the above paragraph into the chat for the participant's reference]

1. [If NOT using their own work address and number] Here are the details needed for your order:

- Pick-up address: 123 W 56th St, New York, NY 10019
- Drop-off address: 144 W 14th St, New York, NY 10011
- Sender number: (551) 789-1234
- Recipient number: (646) 309-1588
- Credentials
 - Email: airpals.test.user@gmail.com
 - Password: airpalstest
- Card details
 - Card number: 4242 4242 4242 4242
 - Expiration date: 08 / 27
 - CVV: 123

2. [If using their own work address and number] Here are the details needed for your order:

- Drop-off address: 144 W 14th St, New York, NY 10011
- Recipient number: (646) 309-1588
- Credentials
 - Email: airpals.test.user@gmail.com
 - Password: airpalstest
- Card details
 - Card number: 4242 4242 4242 4242
 - Expiration date: 08 / 27
 - CVV: 123

[Paste the above details into the chat for the participant's reference]

[If needed, remind them to think aloud]

Post-Task Questions

Now I have a few questions about your experience with the order form.

- [If they skipped questions on the "How" page about description/pick-up/ drop-off] Why did you decide to leave the description/pick-up/drop-off notes field(s) blank?
- What would you typically do next after submitting your order?
- Is there anything else you would like to say about your experience with the form?

Now I have a questionnaire for you to fill out regarding the order form. Please fill out the first section of this questionnaire only.

- **Link to questionnaire:** <https://forms.gle/8rMDvPt8NwcJ11LdA>

[Paste the questionnaire link into the chat and ask them to elaborate on answers if needed]

- Was it easy to find the order form?

[If disagree] Where would you have looked for the form?

Post-Test Questions

Thank you, that was the end of the task and that was very helpful. You can stop sharing your screen now.

[Wait for participant to turn off their screen sharing]

I have a few more questions and a short questionnaire about your entire experience.

- Could you tell me how you felt about your overall experience with Airpals website?
- What did you like or dislike about the website?
- Is there anything you found especially frustrating that you can tell me more about?
- If you had a magic wand that would change one thing about the website, what would you change?
- Is there anything else you would like to comment on?

Great, thank you for the feedback. Now, please complete the second section of the questionnaire and let me know when you're done.

- **Link to questionnaire:** <https://forms.gle/8rMDvPt8NwcJ11LdA>

[Wait for them to finish the questionnaire]

Thank you for completing the questionnaire. Before we wrap up, is there anything else you would like to tell me about your experience?

Debriefing

Thank you for participating in this test. Your comments and feedback are extremely useful and appreciated. I have a \$10 Amazon gift card for you as compensation. What email address would you like to have the gift card sent to? The card should be sent by the end of the month.

Amazon Gift Card Form for moderators reference: https://docs.google.com/forms/d/e/1FAIpQLSek9tUSo-iVmwj1UrCOtWpu7ahC9quLuz9A0LGy4JIN8_jwQ/viewform

[Submit form with the participant's email address]

If you have any questions or concerns, please feel free to contact me. Thank you again for your time, and have a great day.

Evaluator Testing Notes:

<https://forms.gle/uRrw8kr2gQDfDpEE9>

APPENDIX D: Consent form

Record consent | Airpals Usability Testing

Remote User Study

The purpose of this study is to evaluate the usability of the Airpals website. This session will be held via Zoom and will take a maximum of 30 minutes. During that time, you will be asked to complete some tasks using the Think Aloud Method while using the Airpals website. You will be asked to fill out a post-task and post-test questionnaire about your experience. This study is confidential and your name will not appear on any publications.

The study is part of the "Usability Theory and Practice" course at the School of Information, Pratt Institute, under the supervision of Professor Sam Raddatz.

Voluntary Nature of the Study

You are voluntarily taking part in this study. At any point you are welcome to tell the moderator that you would like to discontinue your participation in the study. You may also ask the moderator any questions at any time during the study. Due to the nature of the study, the moderator will only be able to answer any questions asked during the study at the end of the session. Please note that your information, including your name and email address, will be anonymous and will be used only for the purposes of this study and will remain confidential.

Permission To Record

We will be video recording the session, capturing the desktop screen, observing and taking notes. Recordings from the session may be reviewed by members of the research team at Pratt Institute. The recordings are only for the purpose of the website research and will be anonymous and confidential. At no time will recordings be made available to the general public.

Ichavan@pratt.edu [Switch account](#) 

* Indicates required question

Email *

Your email

I have read the above information. I have asked any questions I had regarding the * experimental procedure and they have been answered to my satisfaction. I consent to participate in this study.

Yes

Your name *

Your answer

Today's date *

Date
mm/dd/yyyy

Submit **Clear form**

APPENDIX E: Post task questions and questionnaire

Verbally asked during the usability study session

- Why did you decide to leave the description/pick-up/drop-off notes field(s) blank?
- What would you typically do next after submitting your order?
- Is there anything else you would like to say about your experience with the form?

Questionnaire - Google form

Airpals Questionnaire

Post-Task Questions

lchavan@pratt.edu Switch account 

Not shared

* Indicates required question

It was easy to find the order form.

1 - Strongly Disagree

2 - Disagree

3 - Undecided

4 - Agree

5 - Strongly Agree

The instructions on the order form were clear.

1 - Strongly Disagree

2 - Disagree

3 - Undecided

4 - Agree

5 - Strongly Agree

The order form was easy to complete. *

1 - Strongly Disagree

2 - Disagree

3 - Undecided

4 - Agree

5 - Strongly Agree

I am satisfied with the amount of time it took to complete the order form. *

1 - Strongly Disagree

2 - Disagree

3 - Undecided

4 - Agree

5 - Strongly Agree

[Next](#) [Clear form](#)

APPENDIX F: Post test questions and questionnaire

Verbally asked during the usability study session

Post Test Check in

Could you tell me how you felt about your overall experience with Airpals website?

Your answer

What did you like or dislike about the website?

Your answer

Is there anything you found especially frustrating that you can tell me more about?

Your answer

If you had a magic wand that would change one thing about the website, what would you change?

Your answer

Is there anything else you would like to comment on?

Your answer

Questionnaire - Google form

Post-Test Questions

I thought the Airpals website was easy to navigate. *

1 - Strongly Disagree
 2 - Disagree
 3 - Undecided
 4 - Agree
 5 - Strongly Agree

I enjoyed using the Airpals interface. *

1 - Strongly Disagree
 2 - Disagree
 3 - Undecided
 4 - Agree
 5 - Strongly Agree

I would be happy to use Airpals for work. *

1 - Strongly Disagree
 2 - Disagree
 3 - Undecided
 4 - Agree
 5 - Strongly Agree

[Back](#) [Submit](#) [Clear form](#)

APPENDIX G: Notetaker form and insights

11 responses

View in Sheets

Accepting responses

Summary Question Individual

Demographics

Participant Name

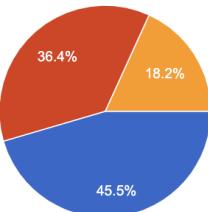
11 responses



Age Range

11 responses

Copy

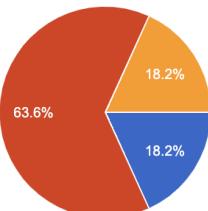


Age Range	Percentage
18-25	45.5%
26-35	36.4%
36-45	18.2%
46-55	0%
56+	0%

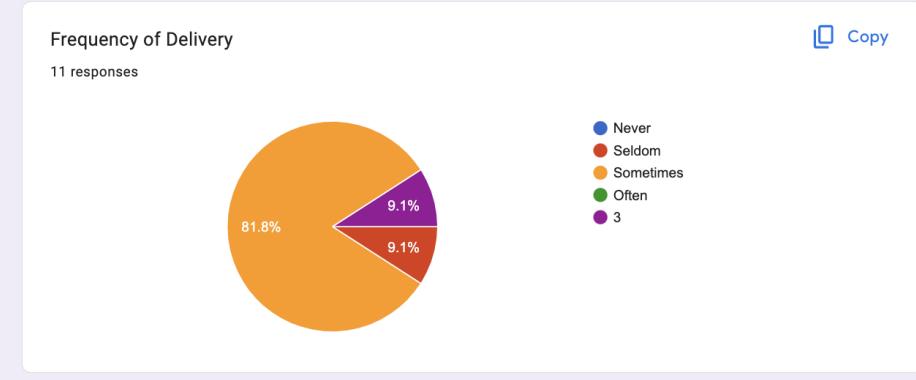
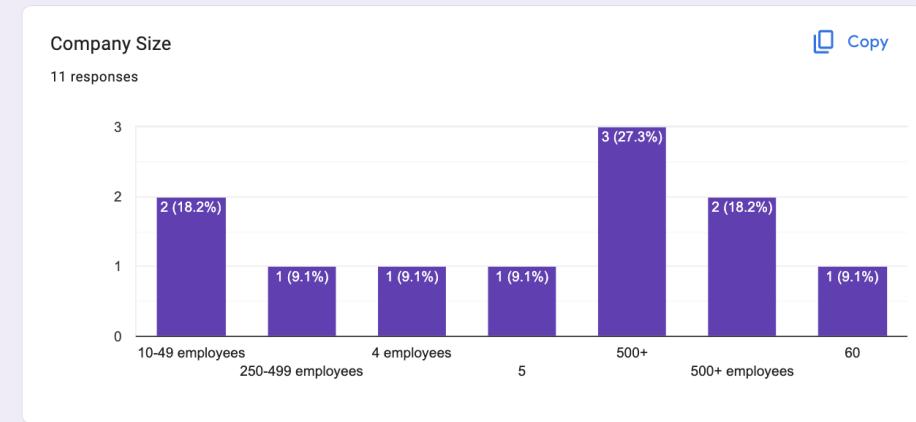
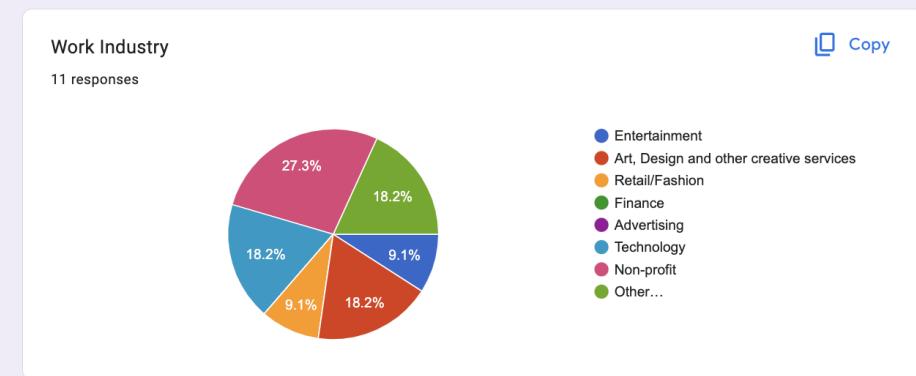
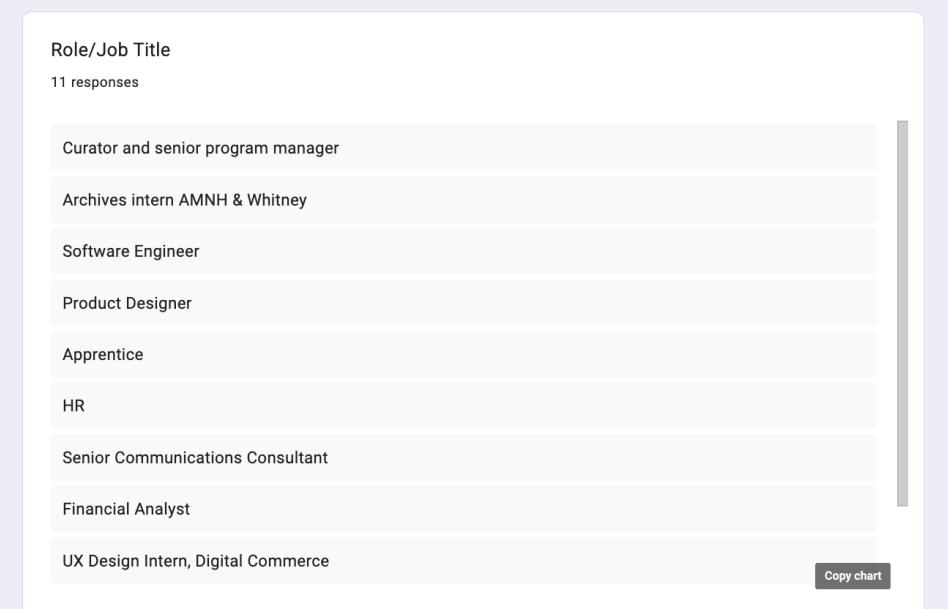
Gender

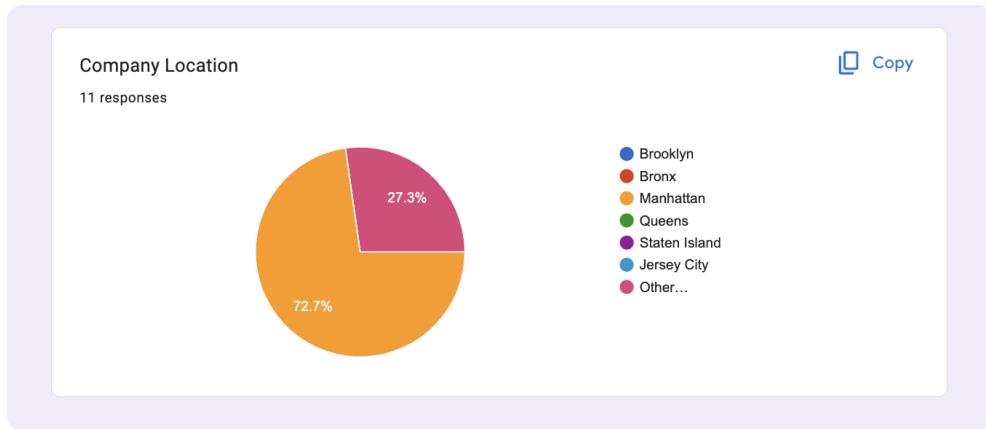
11 responses

Copy



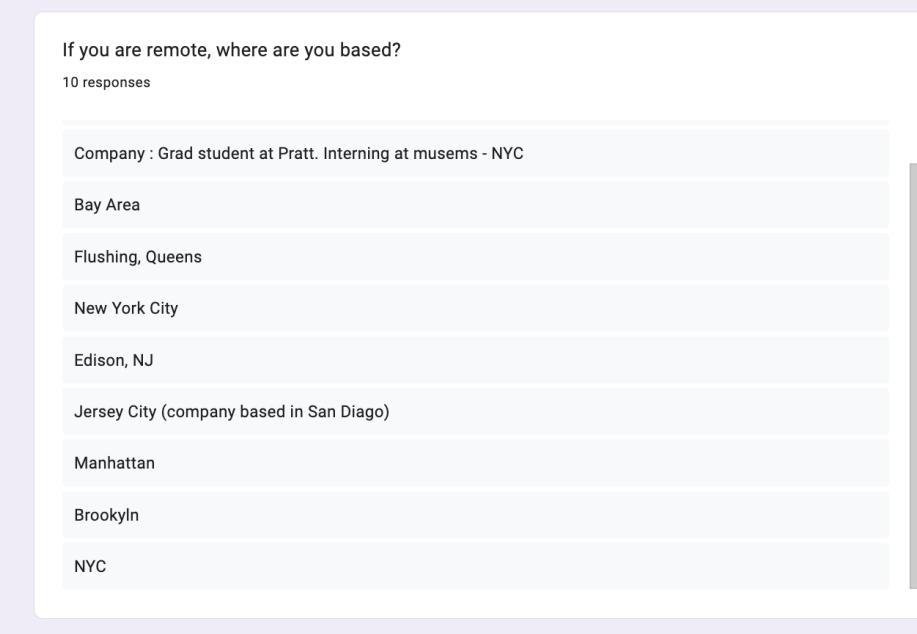
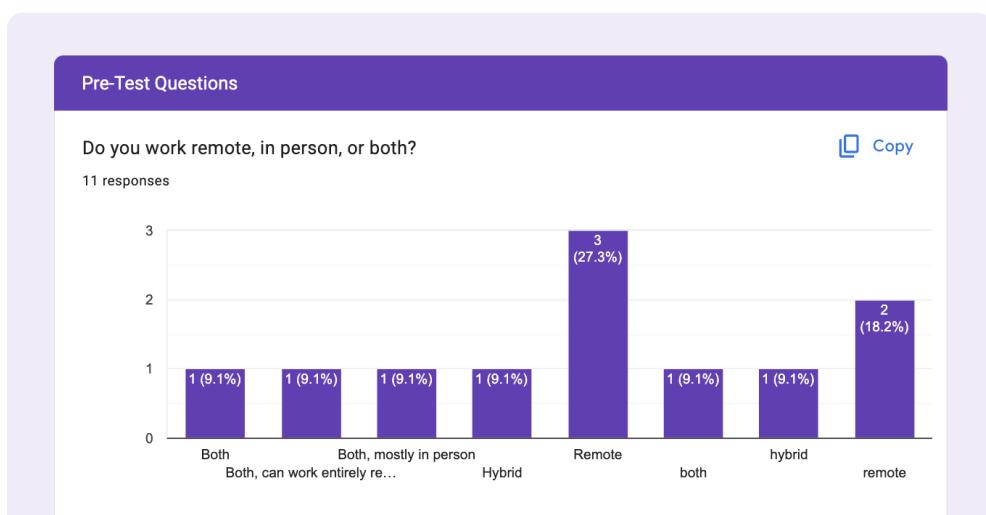
Gender	Percentage
Male	18.2%
Female	63.6%
Non-Binary	18.2%
Prefer not to say	0%





APPENDIX H: Participant responses

Pre-Test questions



Approximately how many employees are there at your company?

10 responses

More than 1000

1.5 million

5,000+ in the entire company, 50 people possibly in the local office

Over 500 employees

500 approx

5

60

20000+

20 people

What service(s) do you use or have you used before to send things for work?

11 responses

FedEx, UPS, some other like same day courier services, most recently I have used Airpals

Archival Boxes, Books - Not sure which service they use

UPS or FedEx

Purchases office supplies and have them delivered to the office, doordash or instacart, or will have things shipped to the office

Regular post service - USPS

Mostly UPS and Fedex

They don't send physical materials

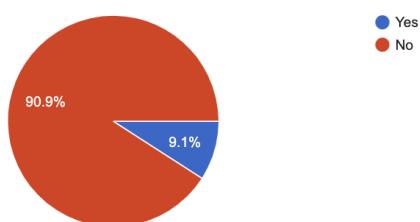
USPS, FedEx, bike messenger services (like Need it Now deliveries)

USPS

Have you ever used Airpals before?

11 responses

 Copy



Think about the last time you had items sent or delivered for work. What were the items?

11 responses

Artwork

Has Ordered things (Didn't specify)

Security key, a physical key

Mostly chargers or office supplies (pens, usb adaptors)

Application materials

Immigration Documents

Holiday party - sent giftbox for employee, used UPS

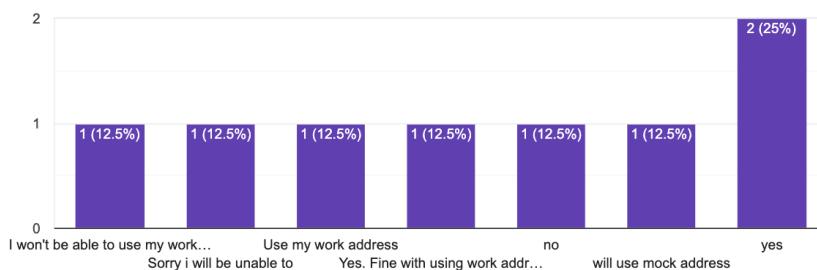
documents that need to be signed

Monitor

Are you okay with using your work address for this test? Any information you input into the interface you will be testing will not be used for anything else.

 Copy

8 responses



Post-Task questions

Ask: What would you naturally do or expect right now after hitting submit?

11 responses

Email confirmation in my email box is what I would check.

Check email and check order confirmation email. Through out the day would track the order.

clicked the "keep everyone in the loop" link. wanted to see the receipt.

probably try to track the order. (participant clicked through to see tracking)

Look at the Dashboard and send the link to the recipient. Also a copy of the email to the recipient.

Check tracking number by when package will deliver. Where she can send the tracking number to the recipient.

check to see the confirmation email, or look for a chance to confirm the order again, like the map, it verifies that the item is going to the right place

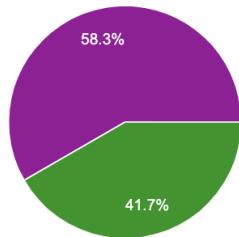
would send an email to the recipient letting them know when to expect it

Post-Task questionnaire

It was easy to find the order form.

12 responses

 Copy

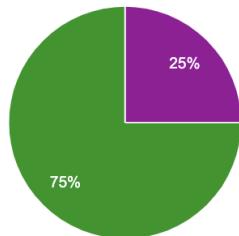


- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Undecided
- 4 - Agree
- 5 - Strongly Agree

The instructions on the order form were clear.

12 responses

 Copy

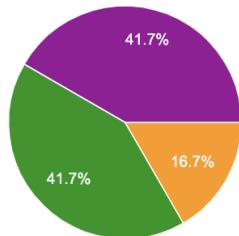


- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Undecided
- 4 - Agree
- 5 - Strongly Agree

The order form was easy to complete.

12 responses

 Copy

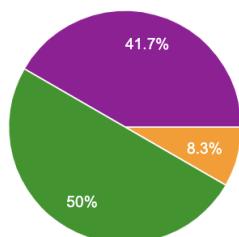


- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Undecided
- 4 - Agree
- 5 - Strongly Agree

I am satisfied with the amount of time it took to complete the order form.

12 responses

 Copy



- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Undecided
- 4 - Agree
- 5 - Strongly Agree

Post-Test questions

Post Test Check in

Could you tell me how you felt about your overall experience with Airpals website?

11 responses

I liked that it was easy to find the chat support and the order form.

Was very intuitive and accessible. I felt confident that I was doing everything correctly. Was helpful when there was a good sign or feedback when she made a mistake/error and she could not continue.

There were a few times he thought he'd put in the information and it just disappeared (this is a note he made while filling out the google form).

Overall it's pretty good and pretty straight forward. Since this is only beta there are some technical issues happen like something disappeared, or the wording of things (pick up notes), it's fine since it's beta right now. The sequence could be a bit better, but it's still pretty good.

Was confused by the logging in step, but otherwise it was pretty straight forward. If she were actually using the service for the first time, she would want to see the price first before signing up for an account.

It was easy to fill out the form, although I could not figure out initially the time part but eventually I could. Straightforward, it was quite easy. I felt it was pretty easy. It definitely does what it needs to do.

What did you like or dislike about the website?

10 responses

Like: Nice interface, accessible, Liked the question prompts like deliver and pick up

Dislike: In future state- if there was a brief way to understand how and where to communicate in order to deliver (a chat to ask them).

Likes how interactive the website is, especially the review section and how easy it makes it to edit. Likes how it highlights a whole field if you click to edit it. There are some pretty easy pieces that could be edited.

She felt that having a large map take up half the screen was bigger than it needed be, though it was nice to visualize the delivery and make sure the addresses were right. Didn't give too many options for time selection. It's difficult as well having to enter the send and deliver details, wonders if there's a faster way of doing it.

The changing prices depending on package type and the policies clearly mentioned out. Pick up times could be made more intuitive.

It was simple. Dislike : Tracking number was not clearly visible. Clear instructions on weight and dimensions

Is there anything you found especially frustrating that you can tell me more about?

10 responses

Not extremely frustrating but if there were more examples regarding the sizing of the package that can be sent, it would be nice.

Surname error - if that could be improved. She felt for a reason that the screen was frozen.

Likes the estimated prices at the bottom and the overall graphics. Asked if the service was for individuals, wondered why it was intended just for businesses. Would like the option for multiple addresses if you had multiple things to send out for multiple stops.

Nothing frustrating.

No it was simple

it took a few seconds for the address to be recognize, not a big deal but a little uncomfortable

"not especially frustrating, but one thing I would say is when I went back to edit the delivery time, I clicked edit and it brought me back to the very first screen of "when" instead of bringing me back to the "time" screen. I thought that could be more precise especially if I'm trying to do things quickly"

If you had a magic wand that would change one thing about the website, what would you change?

11 responses

The start of the order form where it says Today vs schedule is a bit confusing for me because the website gave me an impression that it is a same day delivery service and I wasn't aware that I could schedule orders.

Sizing options small, medium, and, large, having a bit more examples, helpful to see the backseat of a car, even more information would make me feel more secure and trusting. If I am making the right size selection for my package and if there is the right amount of space available to send my package.

Surname error - if that could be improved. She felt for a reason that the screen was frozen.

Sometimes it took a long time to load, but thinks that may not be the site

Liked the illustrations on the website, but the colors were a little bit...they used a lot of really light colors and would like to see more color contrast and would like the form itself to be more interactive and fun (like the illustrations)

Colours could be made more dynamic. It is my personal preference.

Is there anything else you would like to comment on?

9 responses

It has cute graphics and it was friendly. How professional is this? made me question coz it was cute but i doubted the professionalism. The playfulness, it was a little different from what I am used to. It was easier to access info and connect with chat support but in my brain I am used to a more serious interface.

-

nothing else

They have an opportunity for them to have a subscription service or some kind of promotion to encourage users to make more deliveries or pickups.

No.

Good , user friendly, easy.

just noticed the green leaf on the schedule btn, didn't notice at first, could be more obvious, maybe offer a discount to really enforce that it is a positive change

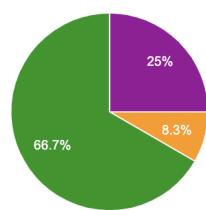
Post-Test questionnaire

Post-Test Questions

I thought the Airpals website was easy to navigate.

 Copy

12 responses

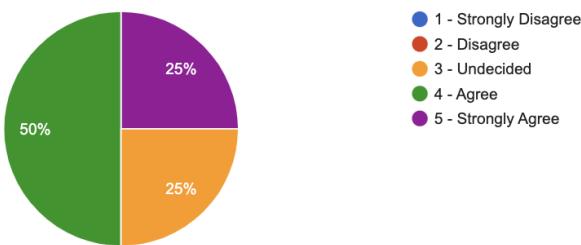


- 1 - Strongly Disagree
- 2 - Disagree
- 3 - Undecided
- 4 - Agree
- 5 - Strongly Agree

I enjoyed using the Airpals interface.

 Copy

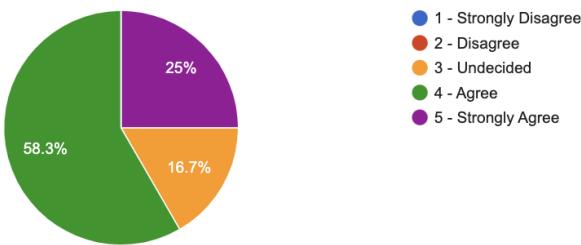
12 responses



I would be happy to use Airpals for work.

 Copy

12 responses



APPENDIX I: Digital Grouping Sheet

Problem Statement	Participant	Category	What
Sometimes information would disappear from a field after being entered (the site expects you to use the drop down and not past in the address)	P3	Flexibility	Address
Users entered the address and clicked away without choosing from the dropdown, and the entered address disappears.	P6	Flexibility	Address
Had a hard time editing the address after it had been entered already	P3	Flexibility	Address
Confused about what the three dot loading animation means after filling in the address.	P6	Signifier missing	Address
Colors do not have enough contrast	P4	Accessibility	Color
Colors are just shades of blue and gray. Very monotonous.	P5	Accessibility	Color
Wanted to see their receipt on the order confirmation page	P3	Information missing	Confirmation page
Did not notice the shareable link to send to recipient	P7	Signifier	Confirmation page
Did not find the link sharing option to directly send the order summary link to the recipient.	P5	Signifier	Confirmation page
Attempted to edit time and was brought back to the date selection screen	P7	Form Hierarchy	Edit form
When editing "time" in the review page, was taken to the "when" field (date)	P3	Form Hierarchy	Edit form
Page sequence should be: when, time, where	P3	Form Hierarchy	Edit form
User did not notice error for invalid phone number	P3	Signifier	Error warning
Did not see the error and was confused why the screen froze	P2	Signifier	Error warning
Clicks continue and sees the error message for required fields, but can't see the field that needs to be filled in	P8	Signifier	Error warning

Problem Statement	Participant	Category	What
If there could be an easy way to convey where the parcel should be delivered through chat (Future state)	P2	Future state	Future state
Wondered why the service was just for businesses and not for individuals	P4	Future state	Future state
The landing page of the form/start page is confusing. It took some time to figure out how to schedule order. The calendar was confusing.	P1	Form Hierarchy	Home page
Form embedded in a page makes it easy to scroll away from the form on the page	P8	General	Home page
The website was too playful. Doubted if it was legitimate because of the cute graphics.	P1	Visuals	Illustrations
Form should be more interactive and fun like the illustrations	P4	Visuals	Illustrations
Needs confidential / fragile / priority options.	P6	Information missing	Item description
Failed to see insurance information in the process. Suggested options for purchasing insurance.	P6	Information missing	Item description
Didn't have a place to add package weight. It could be small but heavy.	P6	Information missing	Item description
There was no dimension given to package sizes. People could assume the sizes for small/medium/large very differently.	P6	Information missing	Item description
Value is difficult if it's just paper documents, but the cost would be thousands if lost	P7	Item Value	Item description
Value field did not accept a \$	P7	Item Value	Item description
Not enough information on calculating the value of the package.	P5	Item Value	Item description
Skipped instructions for handling the item ("what are you sending?")	P7	Language	Item description
Did not provide details for handling the item beyond what the item was	P3	Language	Item description

Problem Statement	Participant Category	What
Giving more examples/details regarding what each package size (small/medium/large) signifies will be helpful.	P1	Language Item description
Size distinction between object sizes wasn't sufficiently clear	P4	Language Item description
Missed the value field, which is confusing with automatically having 0 but not accepting 0, lacking a \$, and having incremental buttons	P8	Item Value Item description
Too many steps	P8	Form Hierarchy Length
Refreshed the home page because the form was unavailable	P7	Technical difficulties Loading
Site sometimes took a long time to load	P3	Technical difficulties Loading
The form submission took some time to load.	P6	Technical difficulties Loading
Site takes time to load	P2	Technical difficulties Loading
Entering send and delivery details is slow	P4	Technical difficulties Loading
Long loading time	P8	Technical difficulties Loading
Didn't want to sign in/create account for a one-time use	P7	Log in Account sign up
Confused about the Google login popup. Says "Why does it take me to a separate popup?"	P6	Log in Log in
Distinction between google and email log in is confusing	P4	Log in Log in
Map is bigger than it needed to be	P4	Visuals Map
A more information popup explaining the field would be helpful for novice users who not necessarily know what to fill in in the box.	P6	Flexibility More info

Problem Statement	Participant Category	What
Lingered for a long time reading the pick-up notes description and struggled to understand what the field was for	P3	Notes
Left pick-up/drop-off notes blank because the information wasn't provided	P7	Notes
Did not add a drop off note because they were not given that information for the receiver	P3	Notes
Confused by language in pop up instructing user to add pick-up and drop-off notes as the participant had added a pick-up note.	P3	Notes
Continued without adding drop off notes, since she thinks they are simple addresses and didn't require further instructions.	P6	Notes
Continued without adding drop off notes (She said because we didn't provide)	P2	Notes
Added pickup notes and still saw the popup for pickup and dropoff notes	P8	Notes
Having promocode field under the tip field implied a relationship and felt promocode should come after the payment method	P3	Page Hierarchy
Set card to default button has color and orientation mismatched to expectation	P8	Signifier
Formatted the phone numbers himself	P8	Signifier
Nowhere to put phone number extensions	P8	Flexibility
The price changes depending on the delivery times should be made more evident.	P5	Price
Wants to see price before signing up for an account	P4	Price
Nowhere to write business name alongside address is confusing	P8	Page Hierarchy
The date format is day/month/year on review page	P7	Language
Date format is day/month/year	P8	Language

Problem Statement	Participant Category	What
Dashboard did not accept her surname: "O'Keefe" because of the special character (Could not go to next page)	P2	Accessibility Sender's name field
Wrote Recipients details in Senders and vice versa. Noticed later and changed it to the right order.	P6	Language Sender/ recipient fields
Needed to set the pickup window later to narrow the delivery window to a later time	P7	Flexibility Time field
Time selection options are limited	P4	Flexibility Time field
No information provided for when it needs to be sent by (The information is not clear)	P2	Language Time field
No information provided for when it needs to be sent by (The information is not clear)	P2	Language Time field
Difficulty changing pick-up times. Not obvious that the pick-up time field is clickable.	P5	Signifier missing Time field
The tracking number doesn't have a label beside it, so it was hard to find. Participant was not sure if it was a tracking number.	P5	Signifier missing Tracking number
Confusing information regarding the Airpals courier service: Confused whether it is a same-day or you can schedule order based on the information provided on the website.	P1	Language Website

