Hiya Connect

Usability Testing

HCDE 517 Winter 2022
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Presented by:
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12:45

Incoming call

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Agenda

Our Team

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Hiya Connect

About Product

Hiya Connect is operated by the company **Hiya** and helps businesses to reach more customers through **branded calls**. Through the **Hiya Connect console**, businesses can upload and manage their phone numbers and related information (i.e., name, logo, call reason) that will be displayed on their customer's phone during outbound calls. **We are focusing on the web-based console experience.**

Target Audience

We recruited **8 participants** who were:
- Ages 21 years and older
- Has 6+ months of professional experience using a work-related SaaS product
- No prior experience using Hiya Connect
- Familiar with using spreadsheets

With Hiya

Without Hiya
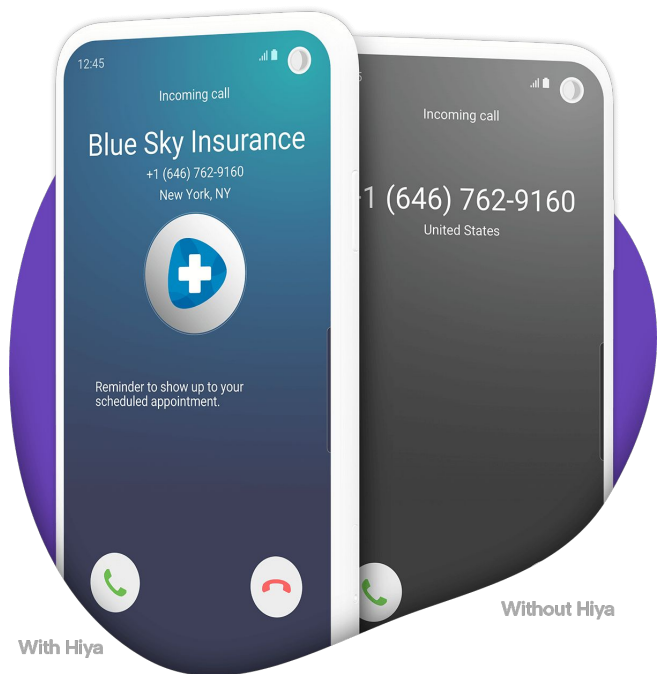
Research Questions

01. Can new users successfully **create their accounts in the console**?
If not, what issues do they encounter during this process?

02. How **easily** can new users **upload single and bulk phone numbers** into the console? Was this process **intuitive**?

03. How **easily** can new users **manage** the brand attributes for **single and bulk phone numbers**?

Methods

- There were **4 test conditions** due to the counterbalanced orders of task 2/3 and task 4/5.
- We recruited **8 participants** with 2 each randomly assigned to one of the four test conditions.
- Participants were recruited through UW-related **Slack channels** and **Zillow's** professional network.
- All test sessions were **video-recorded** upon participant consent and recordings are stored on a secured platform.

ii. Task Counterbalancing Chart

Test Condition #	Task 1	Task 2 (A)	Task 3 (B)	Task 4 (A)	Task 5 (B)	Task 6
A	x	AB		AB		x
B	x	AB		BA		x
C	x	BA		AB		x
D	x	BA		BA		x

iii. Usability Guide Version Chart

Participant ID	Guide Version
1	Version A
2	Version B
3	Version C
4	Version D
5	Version A
6	Version B
7	Version C
8	Version D

Summary of Key Findings

"Aside from a few things, the console was a **positive experience** and I can definitely see this being **relevant to my work**." - P4 (works in marketing)

What went well?

- Users were overall satisfied.
- Console felt clean and simple.
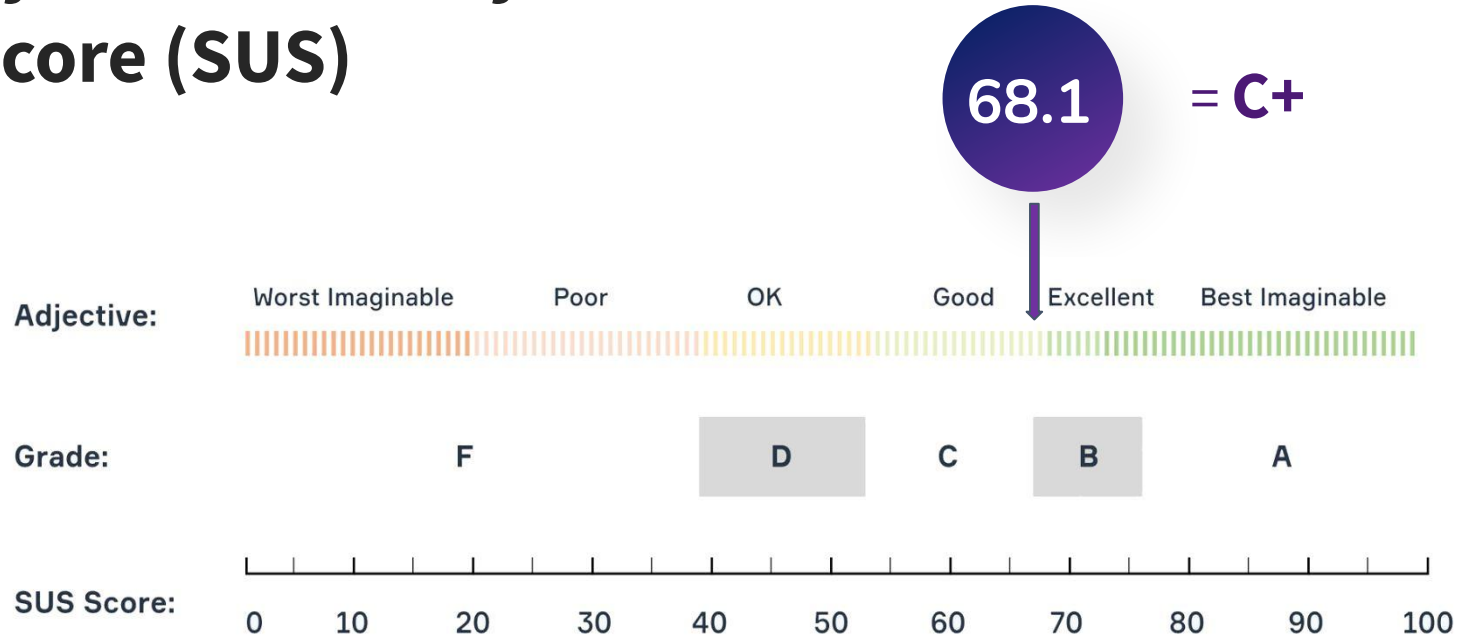- Uploading single numbers felt the most intuitive.

What needs improvement?

- Tasks with bulk numbers were most difficult.
- Onboarding experience was confusing.
- Search and filter functions were unsatisfactory compared to user expectations.

Key Recommendations

- Consider providing **more clarity** of **instructions** and **user feedback** during bulk number tasks and the onboarding process.

System Usability Score (SUS)

68.1 = **C+**

Adjective: Worst Imaginable   Poor   OK   Good   Excellent   Best Imaginable

Grade: F   D   C   B   A

SUS Score: 0   10   20   30   40   50   60   70   80   90   100

How We Prioritized Tasks

High — Bulk phone number upload
Ease of use score: **2.5**

High — Manage attributes for bulk phone numbers
Ease of use score: **3.4**

High — New account onboarding
Ease of use score: **3.6**

Low — Manage attributes for one phone number
Ease of use score: **4.3**

Low — Single phone number upload
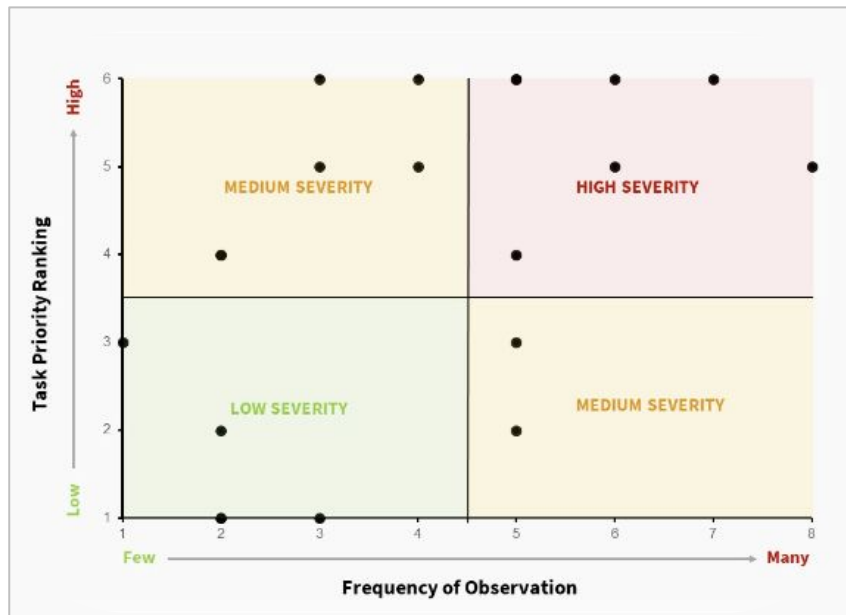*Ease of use score:* **4.6**

Low — Tagging phone numbers
Optional

Determining Severity Ratings

Each observation was categorized into 1 of 3 **severity levels** (**Low**, **Medium**, **High**) based on 2 measures:

1. Task Priority Ranking

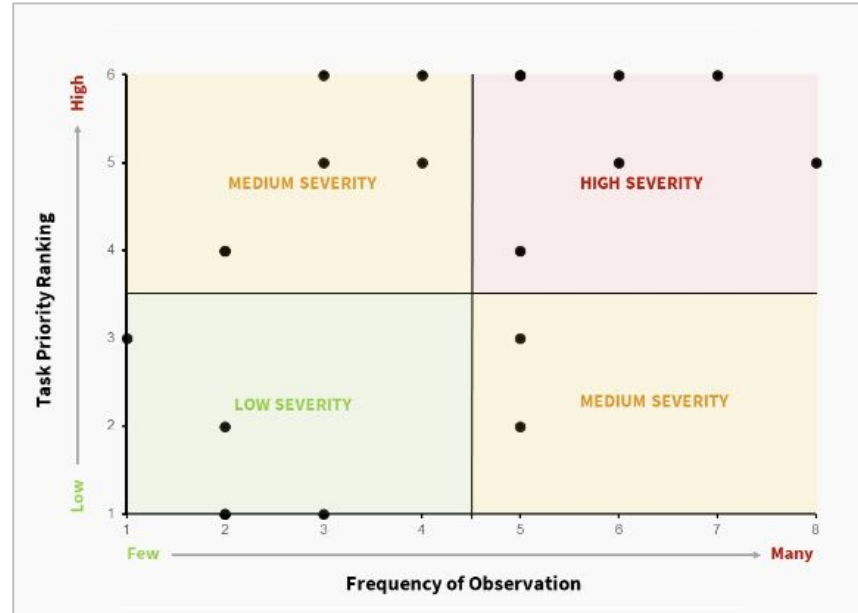Ease of use score at the task level to determine impact

2. Observation Frequency

Number of users that experienced each pain point/observation

1. Task Priority Ranking

Ease of use score at the task level to determine impact

2. Observation Frequency

Number of users that experienced each pain point/observation

Task
Bulk Number Upload

Overview

Users were tasked with **uploading a spreadsheet of 20+ phone numbers and their associated brand attributes** via a prescribed "bulk upload" template which is found on the "Bulk upload" screen.

What went well?

1. "Bulk upload" screen was **easy** to find.
2. Users that found the "how-to" guide thought it was **useful.**
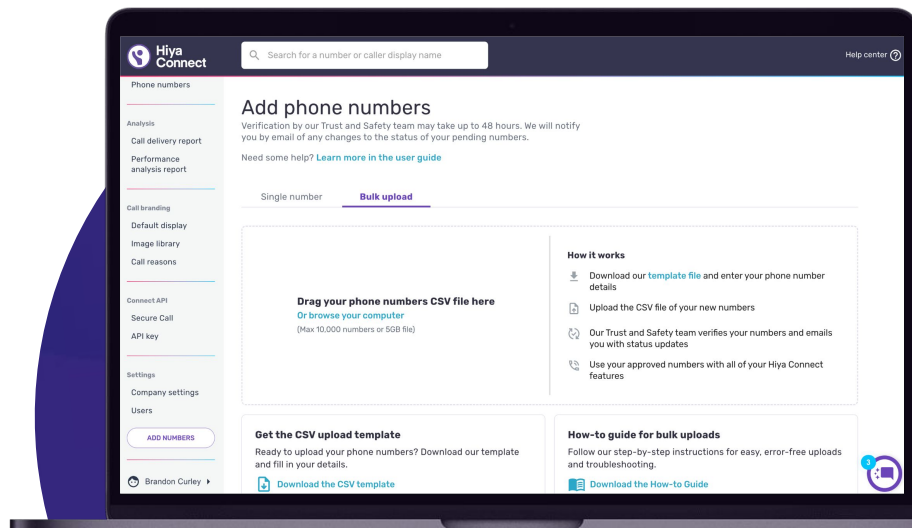
Task Completion Rate

25%   100%

Ease of Use Score

2.5   5 (Very Easy)

Finding 1: Unclear error feedback

- **"File format" errors were unclear**, causing users to repeatedly upload the same incorrectly formatted file until some gave up.

- Users were **unsure where to find specific error details** for their bulk upload files based on the error pop-up notification.

- Users were **unsure if the numbers they provided in the spreadsheet had been uploaded**.

Recommendations:
See next slide →

Observation Frequency   88%
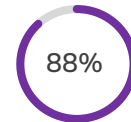
7/8 Participants

> " Tell me where it creates the error log of my upload - where is the error log created? I can't find it.
> *- Participant 2* "

> " If somewhere it would tell you why you are getting a "failed" message that would be great.
> *- Participant 3* "

Recommendation 1: Unclear error feedback

- Consider **highlighting the template in the "File processing failed"** messages so users can understand where to find the proper formatting.

- Consider **moving the "recent uploads" section with error logs above the fold** or use the error pop-up messages to link to their error log so users can easily find errors.

- **Clarify whether the numbers were uploaded** or not via the error pop-up and recent uploads section.
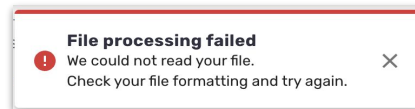
Error pop-up user gets when using an incorrectly formatted file
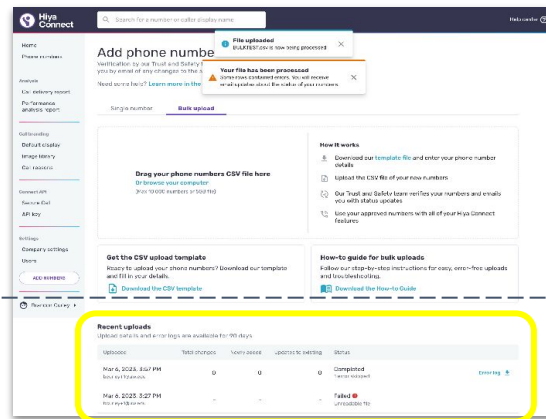
Error logs are hidden below the fold and error messages don't specify where to find error details.
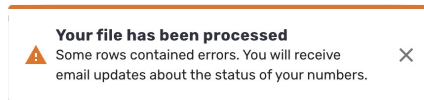
Error pop-up user gets when uploading numbers that have an error

Finding 2: Confusing upload templates

- **Instructions** to use the template were **frequently overlooked** by users.

- Users were unsure as to **which template columns were optional vs mandatory.**

- **Bulk image upload** instructions were **particularly difficult to comprehend** and users struggled to locate the caller image IDs.
  - Instead, users tended to add the images separately in the Phone Numbers tab but struggled to identify the numbers they just uploaded.

Recommendations:
See next slide →

Observation Frequency

75%
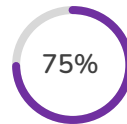
6/8 Participants

❝ My eyes went directly to the upload section and I did not read all of the instructions on the right because it did not catch my attention. - *Participant 3* ❞

❝ After I found the template, I was not sure what columns were mandatory or not. I thought maybe I'm getting an error because I'm missing data in a column?
 - *Participant 2* ❞

Recommendations 2: Confusing upload templates

- **Emphasize a single, prominent instructional message** with visuals that capture the user's attention as opposed to three sections of copy and two template links.

- Clearly **label** which template columns are **mandatory or optional**.

- Add more **specific language around how bulk image uploading works** in the instructions or template itself to clarify where to find the caller image IDs in the Image Library.
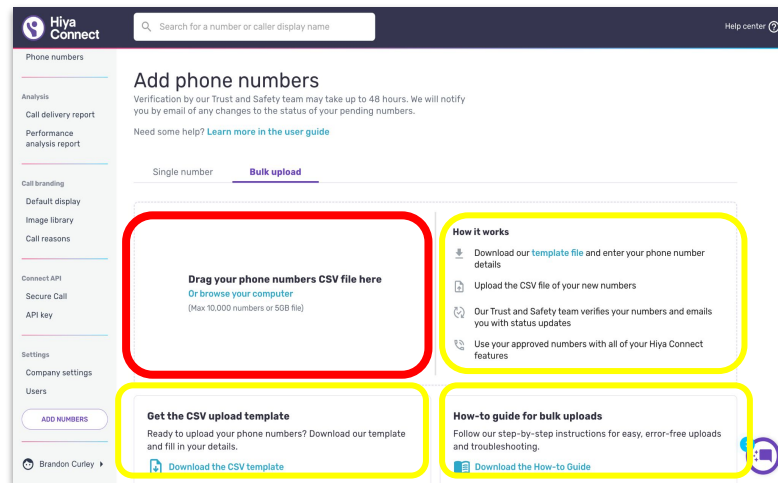
Instructional copy is dispersed; user attention first goes to the top left section

Managing Attributes for Multiple Numbers

Task Completion Rate

88%   100%

Ease of Use Score

3.4   5 (Very Easy)

Overview

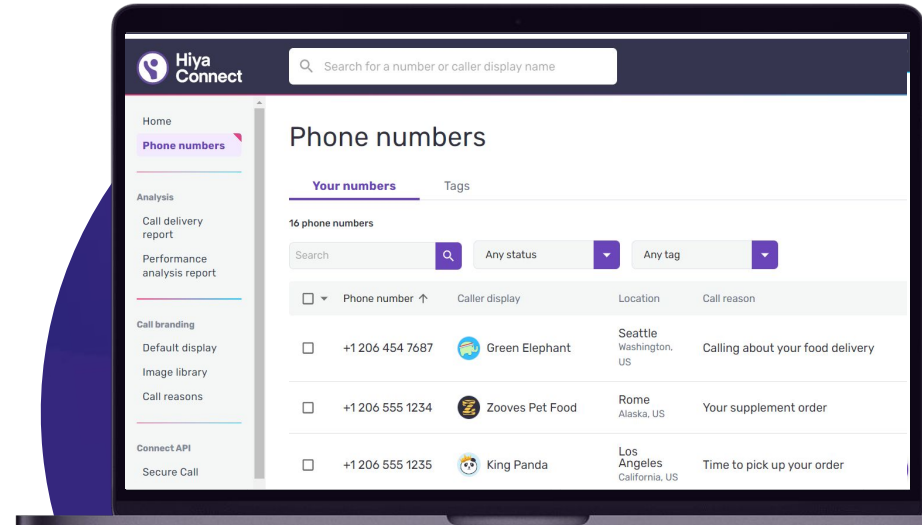Users were tasked with **changing the call reason for multiple numbers.**

What went well?

1. Users were able to **find the right numbers** that needed a change of call reason.
2. Users were able to **edit the call reason** attribute.

Finding 3: Expectation for robust filter and searches

- Users expected to find a **filter function for attributes** such as location and call reason.

- Users found it **tedious to select multiple numbers manually** using the checkbox.

- Some users **expected that the search bar could be used to search for attributes** but it can only be used to search for phone numbers.

Recommendations:

- Include **filter drop down** menu for attributes

- Add **ability to search for attributes** into the search bar

Observation Frequency

100%

8/8 Participants

> Now there are 15 numbers but if there are 15 thousand customers that would be a problem. There should be a filter for filtering out for location. - Participant 6

> I expected that the search bar would search through all the attributes and give me the one that I was looking for. So I thought, just putting 'calling for a food offer' will filter out everything that didn't have that and that way it would be easier for me to click on them. - Participant 7

Onboarding and Login

Overview

Users were tasked with **opening an email that the tester sent through the console** and setting a password to access the console.
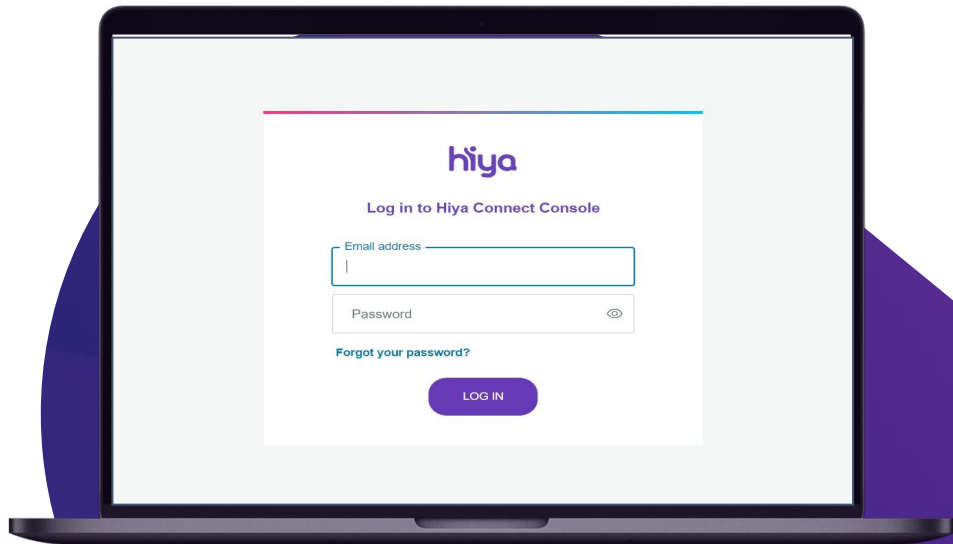
What went well?

1. The **SMS option** was easy to use.
2. Users with **prior experience of authentication** apps were able to login using the QR code.

Task Completion Rate

100%   100%

Ease of Use Score

3.6   5 (Very Easy)

hiya

Log in to Hiya Connect Console

Email address

Password

Forgot your password?

LOG IN

Finding 4: QR code authentication was confusing

- Users were **not able to complete the QR code** scanning process (desktop/mobile).

- The **"Use SMS" option** was hard to find.

Recommendations

- It would be helpful to have the **QR code and SMS options side-by-side for clear visibility**.

- A pop-up message that gives a **brief description of the authenticator app** would be useful for those who have never used such apps before.

Observation Frequency   63%

5/8 Participants

> " I didn't know what an authenticator app was because I haven't downloaded that ever. I thought it would just look like a QR Code so I thought I would just scan it through my phone and things like that which didn't really help. *- Participant 7* "

> " Oh, I would've seen [Use SMS button]] instead of the QR code had I seen it. Wait, was this here before? *- Participant 4* "

Manage Attributes for Single Number

Overview

Users were tasked with **locating a specific phone number and changing the call reason** attribute.
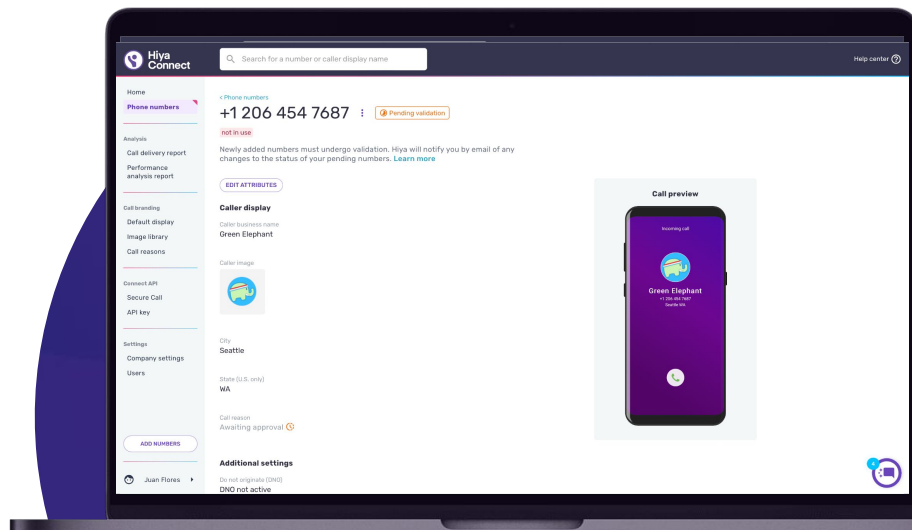
What went well?

1. Once the number was found, **the process was intuitive and easy**

Task Completion Rate

100%   100%

Ease of Use Score

4.3   5 (Very Easy)

Finding 5: Search bar formatting requirements were unclear

- When participants **included a "1" or a "+"** in the number format, no phone numbers were found.

- Users had to **edit the format of the phone number** in order to find it via the search bar.

- Some users scrolled through the entire list of numbers to **manually locate the given phone number**.

Recommendations:

- Search bar should **recognize different number formats**

- Search bar should **indicate format of search terms to follow**

Observation Frequency

63%

5/8 Participants

> " I do not see the number, maybe the spaces are an issue...*(deletes spaces, searches again, no results, deletes +, number shows up)* the plus one was an issue, that I did not expect.
> - *Participant 7* "

> " The search bar did not work, I guess I could scroll through and try to find the match, that would not be very fun if you had a bazillion numbers. - *Participant 5* "

Single Number Upload

Task Completion Rate

100%   100%

Ease of Use Score

4.6   5 (Very Easy)

Overview

Users were tasked with **uploading a single phone number with brand attributes** to the console.
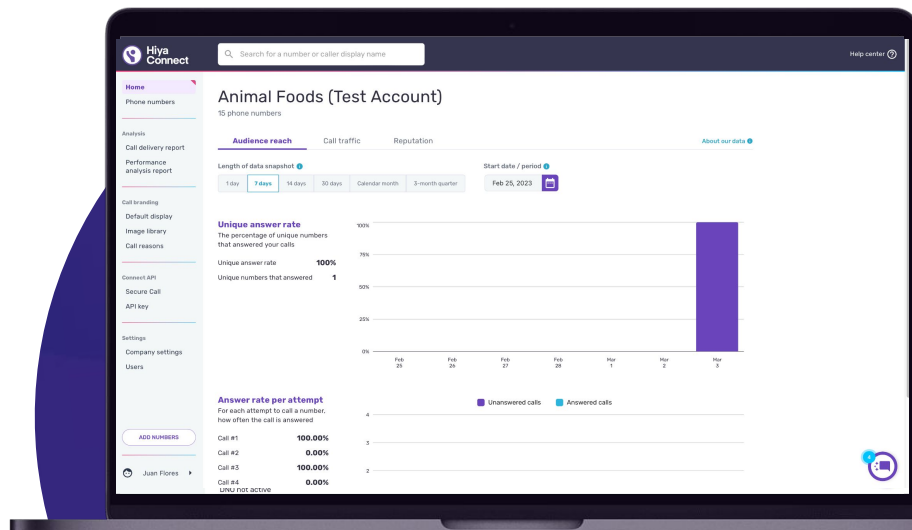
What went well?

1. Once the the **"Add Numbers" button** was located, the process was **easy to navigate**.
2. Users found it **useful to have the call preview** screen as they edited the attributes.

Finding 6: "Add Phone Number" button was difficult to discover

- "Add Numbers" button is **at the very bottom of the navigation bar.** On some screens, this requires users to scroll through the side panel to find the button.

- Most users clicked on **"Phone Numbers" in the sidebar first**, expecting to find an add number feature there.

Recommendations:

- Move **"Add Number" button within phone numbers tab** that redirects them to the add numbers functionality.

- Alternatively, consider moving the **"Add Number" button higher up on the Home page** for user to more easily find.

Observation Frequency

63%

5/8 Participants

" "Adding numbers could be more intuitive. The primary thing you are doing is rarely seen at the side bar in UI. *- Participant 6* "

" I'm looking for something that has like and 'add something" but I'm not finding it...*(after 3 minutes go by)* Oh my god, here it is, wow. *- Participant 1* "

Reflection: What went well?

Strong response in recruitment

Recruitment responses exceeded expectations. When participants didn't show up or responded on time, we had multiple backup options available to replace them.

Pilot testing was helpful

The pilot study we ran was important to **adjusting our methods**. Previously some **tasks were dependent on other tasks** which would have impacted our study.

Task delivery was effective

Use of slide deck to present tasks to participants was efficient. It **reduced the level of verbal prompts** needed by the moderator.

Active stakeholder involvement

Our **relationship with our stakeholders was reciprocal.** We kept them informed throughout the process and they were diligent in assisting us when required.

Reflection: What would we change?

Conduct In-Person Testing

If we had more time, we would have **conducted some user testing in person in addition to remotely**. This was mainly because our stakeholder (Hiya) noted a preference for it at the beginning of the study.

Breakdown of Tasks into sub-tasks

For tasks requiring multiple steps, it would help to break down the instructions into **smaller sub-tasks** for participants to check through each required action. This would help **reduce task fatigue**.

Word selection in Task Instructions

Some users had questions about **what certain words meant and asked for further clarification** on certain instructions.. With more time we could have **included definitions or used simpler terms.**

We would like to acknowledge **John, Sarah** and the **Hiya Product Team** for their continuous support on this project.

Incoming call

Northstar Credit

+1 (646) 762-9160

New York, NY

12:45
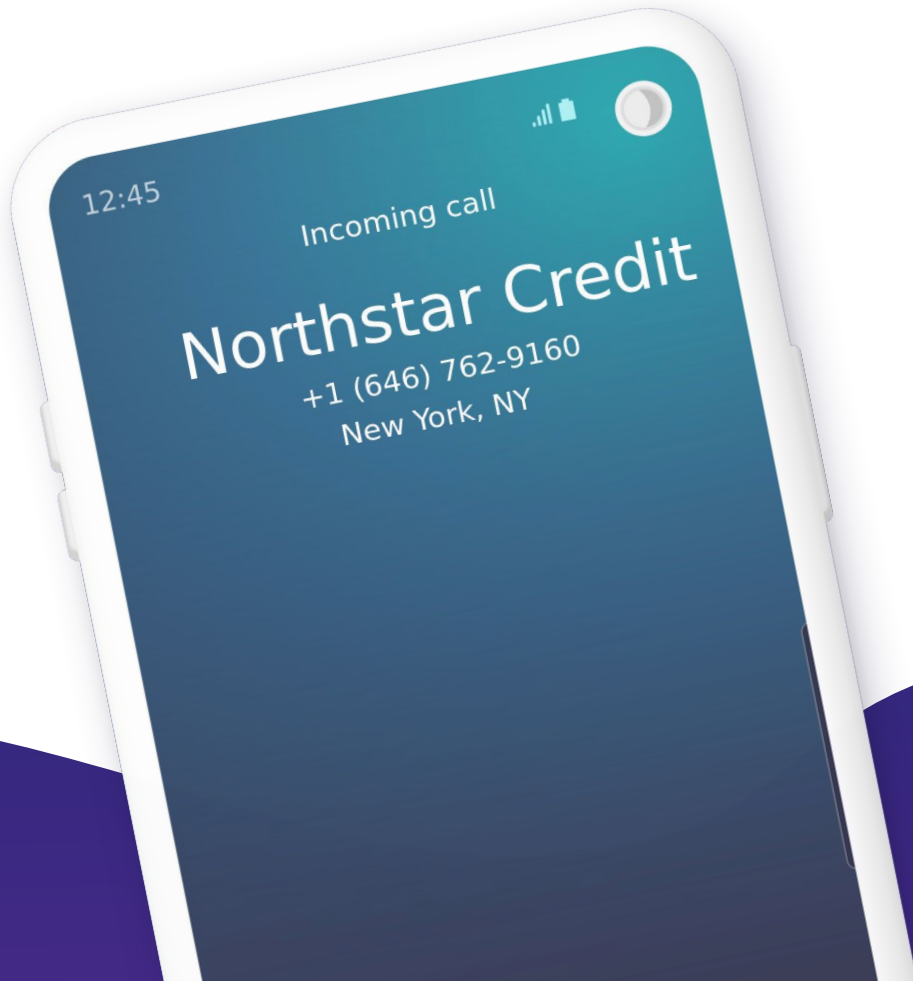
Thank you
for listening!

Appendix

All artefacts from our study are linked below:

System Usability Score Calculations

Final SUS Score: 68.125

Grade = C

Participant ID	1. I think that I would like to use this dashboard frequently	2. I found the dashboard unnecessarily complex	3. I thought the dashboard was easy to use	4. I think that I would need the support of a technical person to be able to use this dashboard	5. I found the various functions in the dashboard were well integrated	6. I thought there was too much inconsistency in this dashboard	7. I would imagine that most people would learn to use this dashboard very quickly	8. I found the dashboard very cumbersome to use	9. I felt very confident using the dashboard	10. I needed to learn a lot of things before I could get going with this dashboard	Raw Score	SUS Score	Grade
P1	4	5	3	1	4	5	3	4	2	4	17	42.5	
P2	3	2	2	3	4	5	2	2	3	4	18	45	
P3	4	1	4	1	4	1	5	1	4	1	36	90	
P4	4	2	4	3	4	2	4	1	4	3	29	72.5	
P5	3	4	3	3	3	4	3	2	3	3	19	47.5	
P6	4	3	4	1	3	3	4	1	4	1	30	75	
P7	4	2	4	2	5	1	5	1	4	2	34	85	
P8	5	2	4	1	4	1	4	1	4	1	35	87.5	
										Mean	27.25	68.125	C

Quantitative Metrics Analysis

Participant ID	Task 1			Task 2			Task 3			Task 4			Task 5			Task 6 (OPTIONAL)		
	Task Completion	# of Prompts	Ease of Use	Task Completion	# of Prompts	Ease of Use	Task Completion	# of Prompts	Ease of Use	Task Completion	# of Prompts	Ease of Use	Task Completion	# of Prompts	Ease of Use	Task Completion	# of Prompts	Ease of Use
P1	1	0	2	1	0	4	0	0	2	1	0	2	1	0	5	1	0	4
P2	1	0	4	1	0	4	0	1	3	1	0	3	1	0	5	N/A	N/A	N/A
P3	1	0	5	1	0	5	1	1	3	1	0	5	1	0	5	N/A	N/A	N/A
P4	1	0	2	1	0	5	1	0	4	1	0	3	1	0	5	N/A	N/A	N/A
P5	1	1	3	1	0	4	0	1	1	0	0	1	1	0	4	1	0	4
P6	1	0	3.5	1	0	4.5	0	1	2	1	0	4	1	0	4.5	1	0	4
P7	1	0	4	1	0	5	0	1	1	1	0	4	1	0	3	1	0	4
P8	1	1	5	1	0	5	0	1	4	1	0	5	1	0	3	1	0	4
Mean	100.00%	0.3	3.6	100.00%	0.0	4.6	25.00%	0.8	2.5	87.50%	0.0	3.4	100.00%	0.0	4.3	100.00%	0.0	4.0
Count	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	5	5	5
Standard deviation	0.0	0.5	1.2	0.0	0.0	0.5	0.5	0.5	1.2	0.4	0.0	1.4	0.0	0.0	0.9	0.0	0.0	0.0
Priority Ranking			4			2			6			5			3			1

Calculating Observation Frequency

| Task ID	Observations	Where?	P1 Apoorva	P2 Prerna	P3 Sneha	P4 Lori	P5 Rebecca	P6 Gaurav	P7 Raveena	P8 Philip	Frequency	Task Priority Score	Severity
Task 1: Onboarding	Confusion on how to use QR Code	Set Up Account Page	1	1	0	1	1	0	1		5	4	High
	Lack of Discoverability for "Use SMS" button	Set Up Account Page	0	0	0	1	0	0	0	1	2	4	low
	Confusion about onboarding language instructions	Onboarding Email + Set Up Account Page	0	0	0	0	1	0	1	0	2	4	low
Task 2: Single Upload	Unclear on the auto-fill functionality for "City"	Edit Attributes page	0	0	0	1	1	0	0	0	2	2	low
	Location of "Add Numbers" Button is not discoverable	Dashboard homepage + Phone Numbers tab	1	1	1	1	0	0	0	1	5	2	medium
Task 3: Bulk Upload	Overwhelming "how-to" guide/instructions	Bulk Upload page	0	0	0	1	0		1	1	3	6	Medium
	Failed to notice/read instructions on page	Bulk Upload page	1	0	1	0	1	1	1	0	5	6	High
	Error feedback was unclear or undiscoverable	Bulk Upload page	1	1	1	0	1	1	1	1	7	6	High
	Confusion around how to use template	Bulk Upload page + CSV file	1	1	1	0	0	1	1	1	6	6	High
	Confusion about which numbers on the console they had just uploaded	Phone Numbers tab	0	1	0	1	0	1	1	0	5	6	High
	Confusion on how to upload image using caller Image ID	Bulk Upload page + CSV file	0	1	1	0	0	1	1	0	4	6	Medium
Task 4: Manage Group of #	Need for Additional Filter Functionality for [location, call reason]	Phone Numbers tab	1	1	1	1	1	1	1	1	8	5	High
	Need for attributes searchable via search bar	Phone Numbers tab	1	1	1	1	1	0		1	6	5	High
	Tried to edit call reason w/in call reason tab	Phone Numbers tab	0	1	0	1	1	0	0	0	3	5	Medium
	Lack of discoverability of batch edit of attributes	Phone Numbers tab	1	0	0	1	0	1	0	1	4	5	Medium
Task 5: Manage Single Number	Phone number input format unclear	Phone Numbers tab	1	0	0	1	1	1	1	0	5	3	Medium
	Search Bar not discoverable	Phone Numbers tab	0	1	0	0	0	0	0	0	1	3	low
Task 6 (OPTIONAL)	Need for Filter Function for location	Phone Numbers tab	0				1	1	0	1	3	1	low
	Need for tag editability w/in "edit attribute"	Phone Numbers tab	0				0	1	1	0	2	1	low
	Editing Multiple number tags was unclear	Phone Numbers tab	1				0	0	0	1	2	1	low

Synthesize Key Findings
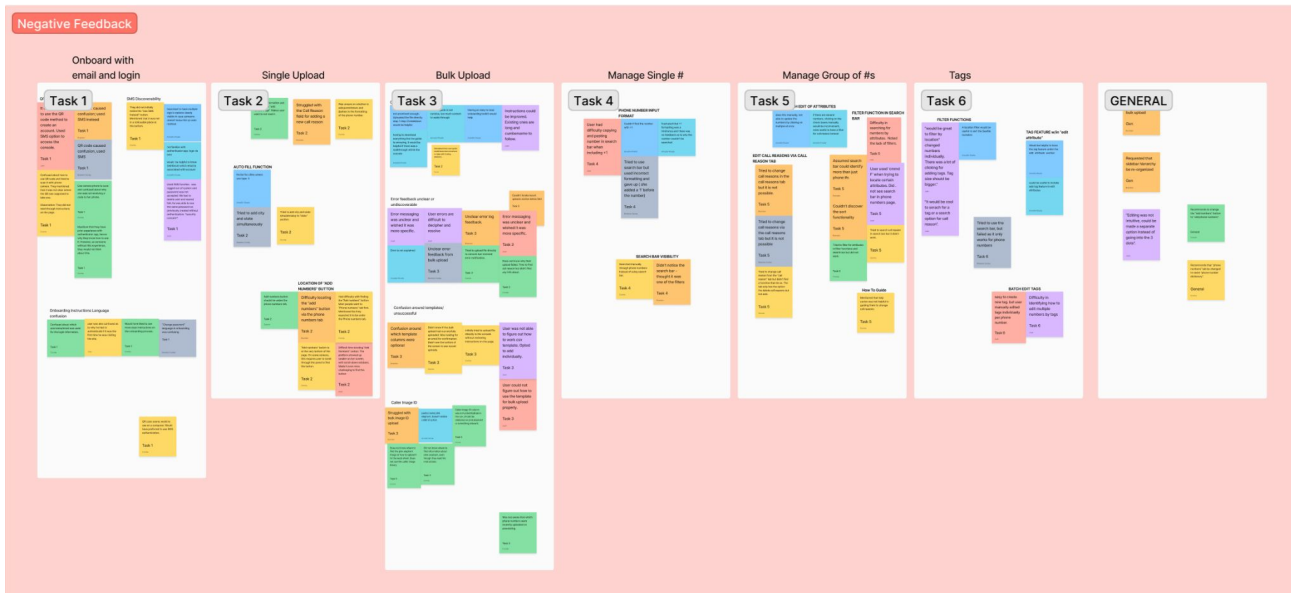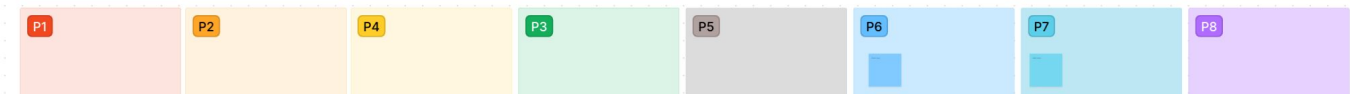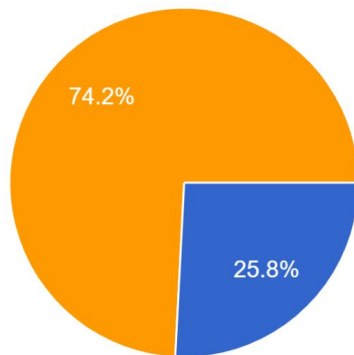
Participant Demographics

What is your age?

31 responses
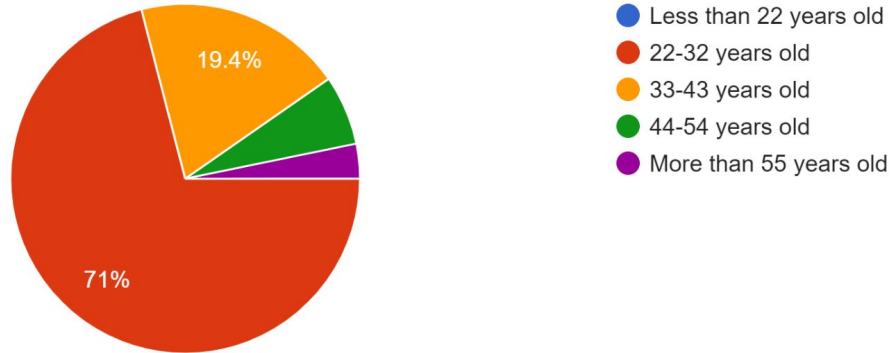
Participant Demographics

Which gender do you identify with?

31 responses

Legend:
- Man
- Non-binary
- Woman
- Prefer not to specify

74.2%
25.8%

Background

Do you have experience with any of the following software tools? Please check all that apply.

31 responses

Tool	Responses
Marketo	5 (16.1%)
Hiya Connect	0 (0%)
TalkDesk	1 (3.2%)
Five9	0 (0%)
Twilio	6 (19.4%)
Salesforce	14 (45.2%)
Envelope.io	0 (0%)
Zalient	0 (0%)
None of the above	16 (51.6%)