



Engage **communities** through
shared **goals** and experiences

Roadmap

A horizontal line with four circular nodes. The nodes are colored in a sequence of light green, dark green, light green, and dark green from left to right. The text inside each node is white.

**Our
Team**

Method

Results

Discussion

Our team



**Nate
Fleischli**



**Elysia
Smyers**



**Lyndsea
Warkenthien**



**Jack
Clark**



**Tristan
Sinclair**

Method

How we ran our testing and gathered useful data.

We recruited 5 participants



Priney

50 year old man,
non-native english
speaker, average
tech proficiency



Christian

28 year old man,
works in app testing



Nicole

In her 30s, works in
CT testing of
machinery



Gene

Early 20s, HCI grad
student



Annika

22 years old, IR
grad students,
former college
athlete

We tested at Town and Country and on campus



Tools Used

iPhone

We used our personal phones and made sure to screen record during the user testing.

Expo

Expo allowed us to use a real device for testing and give opportunity for a user to have a live experience

Aptabase

Aptabase allowed us to fully track all user actions while using the app, helping to record their actions and time the study!

Aptabase

[Blog](#) [Pricing](#) [Star us on GitHub](#) [Get Started →](#)



Analytics for React Native Apps

Privacy-First. Simple. Real-Time.

Aptabase is an Open Source alternative to Google Firebase Analytics for React Native Apps

1. Register

Signing up takes less than a minute.

[Get Started →](#)

2. Instrument

Use the [React Native SDK for Aptabase](#) to instrument your app. You're in total control of what events to track.

Here's an example 📌

```
trackEvent("play_music", {
```

TheMusic App Dashboard

- Home
- Dashboard
- Live View
- Export
- Settings
- Instructions
- SUPPORT
 - Help
 - Feedback

Dashboard

224 Daily Users ↗ 16%	12.0k Sessions ↗ 12%	41.3k Events ↗ 12%	1m 30s Avg. Duration ↘ -5%
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Countries	Sessions
United States	1.9k
Brazil	749
Netherlands	685
Canada	623
France	578

timestamp		event_name	string_props		
LOG ACTIVITY				TIME (s)	100.0000001
2024-02-13 1:51:50	2024-02-12 17:51:50	page_view	{"page":"Home"}		
2024-02-13 1:51:53	2024-02-12 17:51:53	page_view	{"page":"Search"}		
2024-02-13 1:51:56	2024-02-12 17:51:56	navigate	{"to":"log activity flow"}		
2024-02-13 1:51:56	2024-02-12 17:51:56	page_view	{"page":"LogActivity"}		
2024-02-13 1:51:56	2024-02-12 17:51:56	page_view	{"page":"Home"}		
2024-02-13 1:52:01	2024-02-12 17:52:01	page_view	{"page":"Home"}		
2024-02-13 1:52:01	2024-02-12 17:52:01	page_view	{"page":"Search"}		
2024-02-13 1:52:35	2024-02-12 17:52:35	submit_activity_attemp	{"activity":"","inputNum":"60","unit":"minutes"}		
2024-02-13 1:52:35	2024-02-12 17:52:35	submit_activity_error	{"error":"No photo URI"}		
2024-02-13 1:52:48	2024-02-12 17:52:48	image_uploaded	{}		
2024-02-13 1:52:52	2024-02-12 17:52:52	submit_activity_attemp	{"activity":"","inputNum":"60","unit":"minutes"}		
2024-02-13 1:53:13	2024-02-12 17:53:13	submit_activity_attemp	{"activity":"","inputNum":"60","unit":"minutes"}		
2024-02-13 1:53:20	2024-02-12 17:53:20	submit_activity_attemp	{"activity":"Run","inputNum":"60","unit":"minutes"}		
2024-02-13 1:53:30	2024-02-12 17:53:30	page_view	{"page":"Home"}		
ADD FRIEND				TIME (s)	17.0000002
2024-02-13 1:53:51	2024-02-12 17:53:51	page_view	{"page":"Home"}		
2024-02-13 1:53:51	2024-02-12 17:53:51	page_view	{"page":"Search"}		
2024-02-13 1:54:04	2024-02-12 17:54:04	button press	{"action":"navigate to profile","page":"search","profile":"annabelle stoker"}		
2024-02-13 1:54:04	2024-02-12 17:54:04	page_view	{"page":"Search"}		
2024-02-13 1:54:04	2024-02-12 17:54:04	page_view	{"page":"Profile"}		
2024-02-13 1:54:06	2024-02-12 17:54:06	button press	{"action":"add friend","page":"friend","profile":"annabelle stoker"}		
2024-02-13 1:54:08	2024-02-12 17:54:08	page_view	{"page":"Search"}		
2024-02-13 1:54:08	2024-02-12 17:54:08	page_view	{"page":"Profile"}		
CREATE COMMUNITY				TIME (s)	81.9999968
2024-02-13 1:54:15	2024-02-12 17:54:15	page_view	{"page":"Home"}		
2024-02-13 1:54:15	2024-02-12 17:54:15	page_view	{"page":"Search"}		
2024-02-13 1:54:16	2024-02-12 17:54:16	navigate	{"to":"new community flow"}		
2024-02-13 1:54:16	2024-02-12 17:54:16	page_view	{"page":"NewCommunities"}		
2024-02-13 1:54:16	2024-02-12 17:54:16	page_view	{"page":"Home"}		
2024-02-13 1:54:24	2024-02-12 17:54:24	changing field	{"field":"community name","page":"create community","value":"c"}		
2024-02-13 1:54:24	2024-02-12 17:54:24	changing field	{"field":"community name","page":"create community","value":"co"}		
2024-02-13 1:54:24	2024-02-12 17:54:24	changing field	{"field":"community name","page":"create community","value":"com"}		
2024-02-13 1:54:24	2024-02-12 17:54:24	changing field	{"field":"community name","page":"create community","value":"comm"}		
2024-02-13 1:54:25	2024-02-12 17:54:25	changing field	{"field":"community name","page":"create community","value":"commu"}		

LOG ACTIVITY

2024-02-19 6:51:49	2024-02-18 22:51:49	navigate	{"to":"log activity flow"}
2024-02-19 6:51:49	2024-02-18 22:51:49	page_view	{"page":"LogActivity"}
2024-02-19 6:51:49	2024-02-18 22:51:49	page_view	{"page":"Home"}
2024-02-19 6:52:20	2024-02-18 22:52:20	submit_activity_attemp	{"activity":"Walk","inputNum":"60","unit":"minutes"}
2024-02-19 6:52:20	2024-02-18 22:52:20	submit_activity_error	{"error":"No photo URI"}
2024-02-19 6:52:30	2024-02-18 22:52:30	image_uploaded	{}
2024-02-19 6:52:31	2024-02-18 22:52:31	submit_activity_attemp	{"activity":"Walk","inputNum":"60","unit":"minutes"}
2024-02-19 6:52:46	2024-02-18 22:52:46	activity_type_logged	{"activity_type":"Walk"}
2024-02-19 6:52:46	2024-02-18 22:52:46	activity_unit_type	{"unit_type":"minutes"}
2024-02-19 6:52:46	2024-02-18 22:52:46	page_view	{"page":"Home"}
2024-02-19 6:52:46	2024-02-18 22:52:46	submit_activity_success	{}

ADD FRIEND

2024-02-19 6:52:53	2024-02-18 22:52:53	page_view	{"page":"Search"}
2024-02-19 6:52:56	2024-02-18 22:52:56	changing field	{"field":"search","page":"search","value":"A"}
2024-02-19 6:52:57	2024-02-18 22:52:57	changing field	{"field":"search","page":"search","value":"An"}
2024-02-19 6:52:57	2024-02-18 22:52:57	changing field	{"field":"search","page":"search","value":"Ann"}
2024-02-19 6:52:59	2024-02-18 22:52:59	button press	{"action":"navigate to profile","page":"search","profile":"Annika Khouri"}
2024-02-19 6:52:59	2024-02-18 22:52:59	page_view	{"page":"Search"}
2024-02-19 6:52:59	2024-02-18 22:52:59	page_view	{"page":"Profile"}

Our Procedure

1

Introduction, signing consent form, begin recording, and brief demo

2

Prompting of tasks, participant taps through and thinks aloud

3

Taking notes of feedback and comments a user makes during the tests

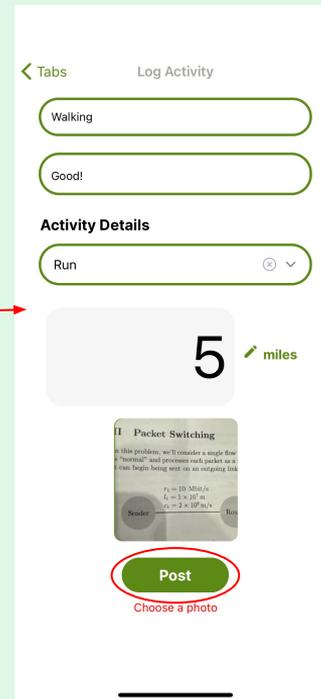
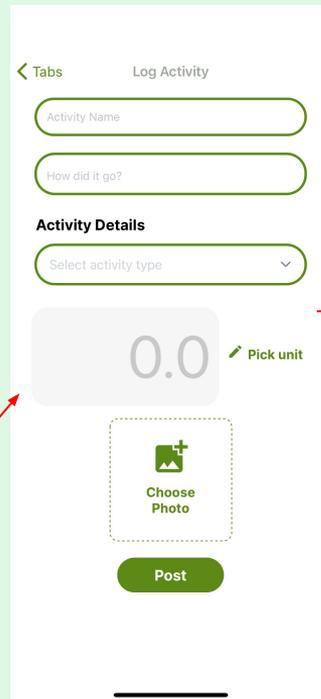
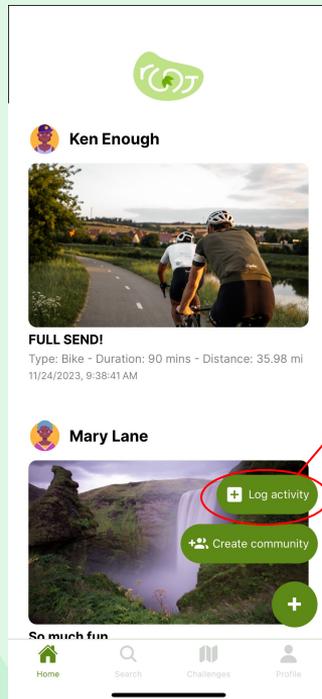
4

Ask wrap-up questions on a scale of 1-5

5

Review footage afterwards to confirm data

Simple Task: log a 60 minute community beach walk



Goal: Test one of the most common tasks, which should be quick and easy for a user to do.

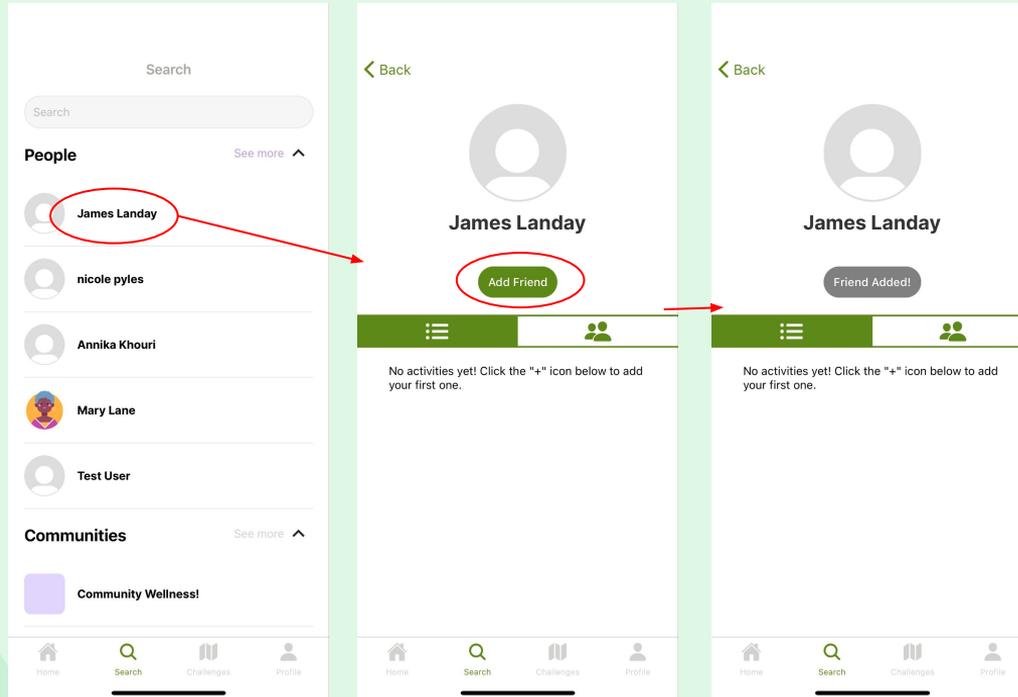
Simple Task: Prompt



Your first task is to log an activity in the app. Imagine you've just finished walking for 60 minutes along the beach for a community clean-up activity and want to record it. Please start when you're ready.



Moderate Task: Add a Friend



Goal: Test the searching tool and a relatively common task, searching for and finding new friends.

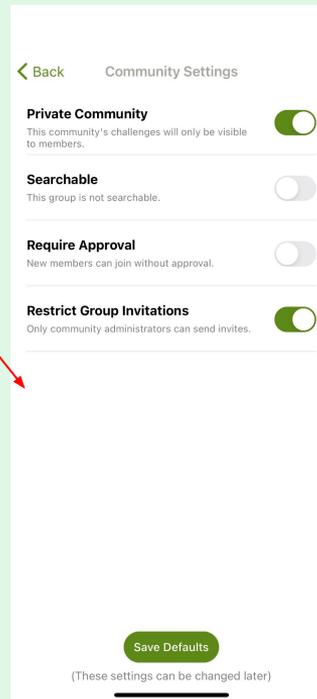
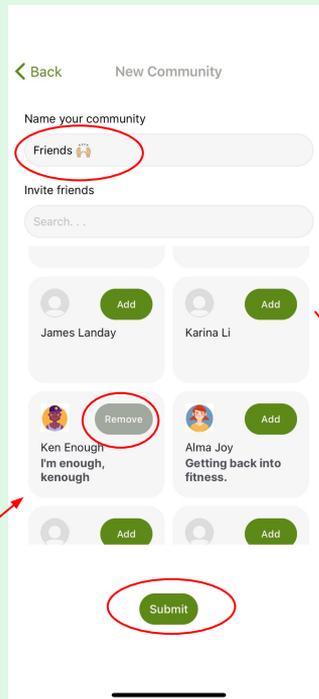
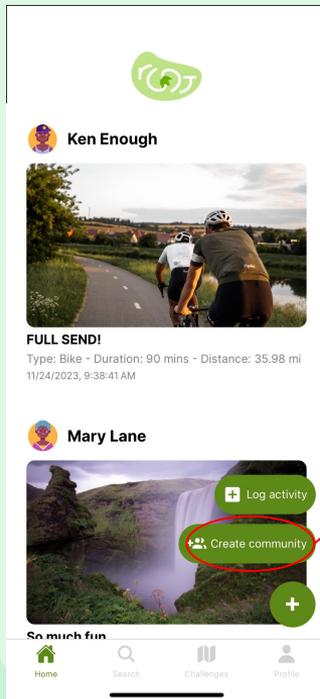
Moderate Task: Prompt



For the second task, add a new friend to your network in the app. Try to find and add 'Matt J'. Begin when you're ready.



Complex Task: Create a New Community



Goal: Test if the flow of creating a new community is intuitive and allows for easy creation without frustration.

Complex Task: Prompt



Your final task is to create a community within the app, centered around 'community wellness.'



Closing Interview Questions

1-5

Do you think you'd like to use this system frequently?

Did you find the system unnecessarily complex?

1-5

How confident did you feel using the system?

1-5

Quantitative Metrics

1

Time to complete
each task

2

Critical errors or
complete start overs

3

Hesitations or
confusion

Results

How the tests went and what we learned from them!

Priney



Priney - Quantitative Data

Measurement	Units	Simple task	Medium task	Complex task
Time to complete a task	Time (min:sec)	1:30	0:17	1:22
Error or start over	Count (#)	2	1	0
Hesitation or confusion	Count (#)	4	0	0

Priney - Notable Errors and Confusions

Simple Task:

- Did not go to the plus button first, looked at different tabs to look for logging
- Took multiple clicks before realizing error message

Medium Task:

- N/A

Complex Task:

- Recalled from the Simple Task where to find the create community function
- Had a smooth setup of a community

Priney - Takeaways

Loading State:

- Adding a loading state for when a log or community is being sent to the backend will help prevent confusion and double submitting logs.

Plus Button:

- After initial usage, the plus button was recalled easily. This would be an important piece for onboarding new users.

Priney - Follow up questions

3/5

Do you think you'd like to use this system frequently?

Did you find the system unnecessarily complex?

4/5

How confident did you feel using the system?

4/5

Christian



Christian - Quantitative Data

Measurement	Units	Simple task	Medium task	Complex task
Time to complete a task	Time (min:sec)	0:12	0:09	0:48
Error or start over	Count (#)	0	0	0
Hesitation or confusion	Count (#)	0	0	0

Christian - Notable Errors and Confusions

Simple Task:

- Understood the plus button immediately

Medium Task:

- N/A

Complex Task:

- N/A

Christian - Takeaways

Tech people:

- People who are familiar with mobile apps should be ok
- This guy was particularly savvy, would be an extreme user
 - Have to consider this when looking at the results
- Have to plan for the extreme users on the other side, those who aren't as savvy

Christian - Follow up questions

4/5

Do you think you'd like to use this system frequently?

Did you find the system unnecessarily complex?

5/5

How confident did you feel using the system?

5/5

Nicole



Nicole - Quantitative Data

Measurement	Units	Simple task	Medium task	Complex task
Time to complete a task	Time (min:sec)	0:17	1:14	0:53
Error or start over	Count (#)	0	1	0
Hesitation or confusion	Count (#)	1	1	1

Nicole - Notable Errors and Confusions

Simple Task:

- Was confused about the distinction between “Name of activity” vs. “Type of activity”

Medium Task:

- Issue in the screen if a person hasn't added a friend yet

Complex Task:

- What should I name the community?
- Unsure what happens after creating a community

Nicole - Takeaways

Clearer distinction between activity type vs. name

- Need a better distinction here
- Possibly fixed with a dropdown for current challenges

Handling new users better:

- We need to do some more testing of new users who don't have any friends, communities, or challenges
- Create a designated "new user" testing account for this purpose

Post community creation:

- Confusion after community creation has occurred
- Maybe an onboarding screen of how to manage a community could fix this?

Gene



Gene - Quantitative Data

Measurement	Units	Simple task	Medium task	Complex task
Time to complete a task	Time (min:sec)	1:57	0:25	1:28
Error or start over	Count (#)	2	0	0
Hesitation or confusion	Count (#)	2	0	0

Gene - Notable Errors and Confusions

Simple Task:

- Not clear what to type in activity type
- Missed the unit part
- Didn't know what happened after logging the activity

Medium Task:

- N/A

Complex Task:

- Recalled the create community button from the plus button
- Wanted to see a list of who's added to the community
- Wanted to know where the new community goes after creating it
- Submit button should be after settings

Gene - Takeaways

Logging screen still needs some improvements

- We want to make this extremely straightforward and simple
- It should be the most common task a user does

Success screens:

- Not the first person to be confused on what happens after they logged or created a community
- Success screen, taking the user to the log or the community would help with this

Search function is being used easily:

- Little confusion on this task

Gene - Follow up questions

4/5

Do you think you'd like to use this system frequently?

Did you find the system unnecessarily complex?

5/5

How confident did you feel using the system?

5/5

Annika



Annika - Quantitative Data

Measurement	Units	Simple task	Medium task	Complex task
Time to complete a task	Time (min:sec)	0:57	0:08	1:43
Error or start over	Count (#)	1	0	0
Hesitation or confusion	Count (#)	1	0	0

Annika - Notable Errors and Confusions

Simple Task:

- Thought the error message for a missing field should be more visible
- Again wanted to know where the log went after posting
- Figured out the plus button quickly

Medium Task:

- Noted the need for the ability to remove a friend

Complex Task:

- Liked that their friends were shown to add to the community
- Wanted to see the community after created
- Thought the settings page for a community could be separated better

Annika - Takeaways

Clearer error messaging

- More visible error messaging/highlighting is needed to help overcome errors

Full functionality for features needs to be finished:

- Removing friends
- Leaving communities

Setting pages:

- Grouped settings would be helpful
 - Privacy, security, etc

Annika - Follow up questions

4/5

Do you think you'd like to use this system frequently?

Did you find the system unnecessarily complex?

4/5

5/5

How confident did you feel using the system?

Discussion

Now what? These are the steps we'll take to fix some of the issues we encountered.

Highest priority fixes

Logging screen

- Need to continue to work on this screen
- Decrease time it takes for a user to log
- Decrease errors encountered
- Improve recovery upon error
- Find a better solution for "naming" vs. "challenge"

Success screen

- Users want to know what happens after the log or create a community
- Some sort of confirmation/success notice is needed
- We're going to explore sending a user to their post/new community after these actions

Creating communities

- Almost no errors or hesitations when doing this task
- Flow is simple and only small suggestions were made about how this could be better

Successes

Search page

- This page was a huge success
- Users easily added friends and understood where to look
- We plan to continue improving this screen and functionality

FAB

- “Floating action button”
- Users quickly learned how this button worked and recall was perfect
- Is an important piece for the onboarding of a new user

Loading states

- Upon submitting a log or creating a new community, a loading state is needed
- Helps prevent hesitation/frustration why the app seems to be “frozen”

Challenges

Aptabase

- Running tests and using Aptabase for timing of an activity required some intuition
- Super cool functionality for seeing errors
- We plan to continue using it!

Recruitment

- The varying levels of experience for test users results in some interesting results
- Very tech savvy users provide little insight
- Less experienced users can struggle without onboarding and get frustrated

Loading states

- Upon submitting a log or creating a new community, a loading state is needed
- Helps prevent hesitation/frustration why the app seems to be “frozen”

Future changes to testing

More tasks to test!

- We have some more tasks we could test in the future:
 - Starting a challenge
 - Joining a community
 - Posting to a community
 - Removing friends
 - Leaving a community

Handling a new user

- We need to begin working on onboarding
- Clean up any errors for when a new user doesn't have any data in the system
 - "Empty states"
- Handle integrating a new user quickly, so they're excited about the app!



Appendix

Links

Aptabase Data

<https://docs.google.com/spreadsheets/d/1jYSrKtjeh2liHgjBG8m9VyI6dHojQQW0GtSCgnmhjig/edit#gid=684307379>

Notes

https://docs.google.com/document/d/1rqoyu61jKYYN9hbrCzwzK9aBz5hBQjc4_YIAE8dqJXs/edit

Script

https://docs.google.com/document/d/1L3OL5HwU_os0932c_KWQXHQiQ0bMSCFnTE2xAD71pQ/edit#heading=h.k008ujhq4wxc

Consent Forms

<https://drive.google.com/drive/u/2/folders/1MuOq9wegUxorMB4i8LDCWeY9XsA4j-Xj>

Interview Recordings

https://drive.google.com/drive/u/2/folders/1GCXYS_2DbhKzrH5OSJ75mA_zxHHiDpwV