EINS

Data User Stories

May 20th 2020

Data User Stories

https://www.lucidchart.com/documents/edit/5cdb9be6-d5ed-4ebf-8673-7c6ebe55cbfe/0_0

Registration Process

1. A user downloads the app.
2. The user is required to confirm if they are older/younger than 16 years of age. If a user is younger than 16 years old then they are required to confirm that their legal guardian has provided consent to use the app.
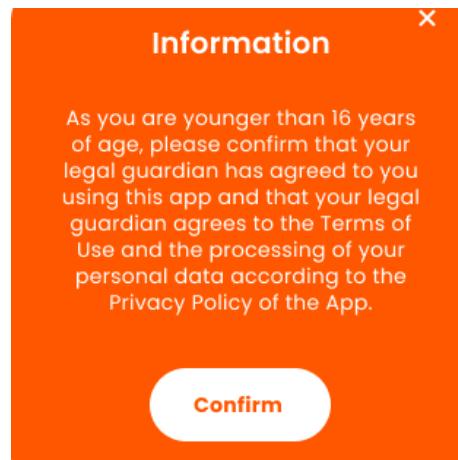

Privacy driven Covid-19 tracing
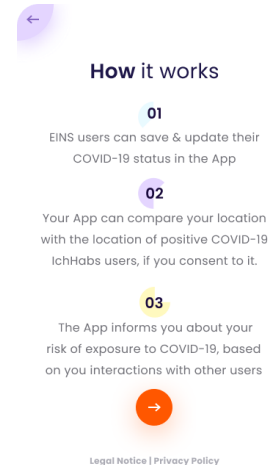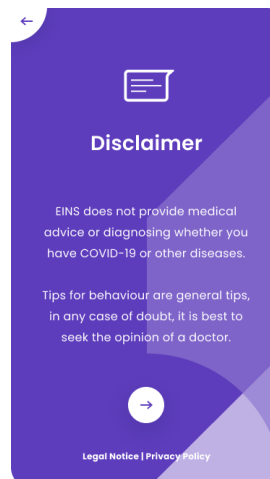
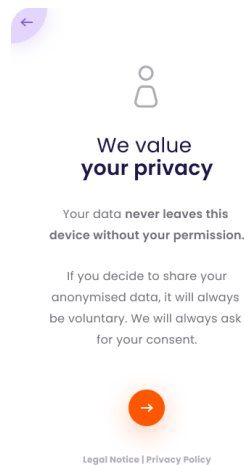Are you 16 years of age or older?

Yes   No

By clicking "Get started" you agree to the Terms of Use. Our Privacy Policy applies.

Get Started →

Legal Notice

Information ✕

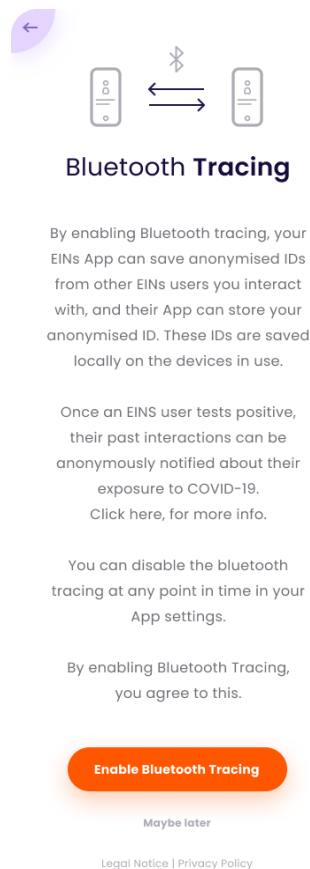As you are younger than 16 years of age, please confirm that your legal guardian has agreed to you using this app and that your legal guardian agrees to the Terms of Use and the processing of your personal data according to the Privacy Policy of the App.

Confirm

3. The user completes the following onboarding screens.

The world needs your data to save lives

By using EINS, you are supporting global efforts to **prevent the spread** of COVID.

→

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We value your privacy

Your data **never leaves this device without your permission.**

If you decide to share your anonymised data, it will always be voluntary. We will always ask for your consent.

→

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Disclaimer

EINS does not provide medical advice or diagnosing whether you have COVID-19 or other diseases.

Tips for behaviour are general tips, in any case of doubt, it is best to seek the opinion of a doctor.

→

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How it works

01
EINS users can save & update their COVID-19 status in the App

02
Your App can compare your location with the location of positive COVID-19 IchHabs users, if you consent to it.

03
The App informs you about your risk of exposure to COVID-19, based on you interactions with other users

→

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4. The user locks the app with their biometrics or device password.

Biometric
Passcode

To keep your data
safe, **let's lock your
App** with biometrics.
Those will never
leave your device.

→
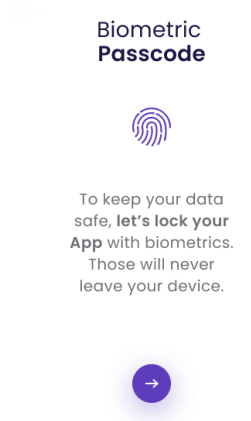
5. The app connects to the VIA servers:
      a. End-to-end asymmetric encryption is achieved.
      b. The app stores hashed AppID on the server.
6. The user has the choice to enable Bluetooth Tracing

Bluetooth **Tracing**

By enabling Bluetooth tracing, your
EINs App can save anonymised IDs
from other EINs users you interact
with, and their App can store your
anonymised ID. These IDs are saved
locally on the devices in use.

Once an EINS user tests positive,
their past interactions can be
anonymously notified about their
exposure to COVID-19.
Click here, for more info.

You can disable the bluetooth
tracing at any point in time in your
App settings.

By enabling Bluetooth Tracing,
you agree to this.

Enable Bluetooth Tracing

Maybe later

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7. If the user agrees to enable Bluetooth they are prompted to turn on their Bluetooth

8. Users are asked to enable push notifications. If agreed:
    a. The app requests push token from the apple or android servers.
    b. The app receives the push token.
    c. The app sends the push token, along with hashed AppID, to the server for storage.
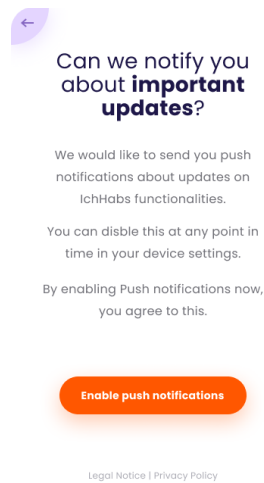
9. The user enters their COVID-19 status and subsequent questions.
    a. The app stores the answers into an encrypted local device.

10. The user enters basic survey data based on the status answer.

Educate the medical community

The following questions can help educate and support the medical community.
All questions are voluntary to answer. Your data is not leaving this device without your explicit consent.

How old are you?

What symptoms did you experience prior to getting diagnosed?

What symptoms did you experience prior to getting diagnosed?

Sore throat	Shortness of breath
Headache	Diarrhea	Cough
Sniffling	Tiredness/Weakness
Limb pain	Chills	Fever
Loss of taste	Loss of smell

Next

No, I'd rather not answer any further question

11. Users are then asked if they are happy to donate and share the survey data anonymously. If agreed:

    a. User age is masked by adding a random factor of +-2 years to the date. This anonymizes the data, without statistically damaging the set.

    b. The data is uploaded along with the hashed AppID (ensures no double submissions).

Help educate & support the medical community

Are you willing to share this additional information (COVID-19 Status, Age, Date of tests, Symptom Start, Symptoms) anonymously with the medical community for statistical purposes?
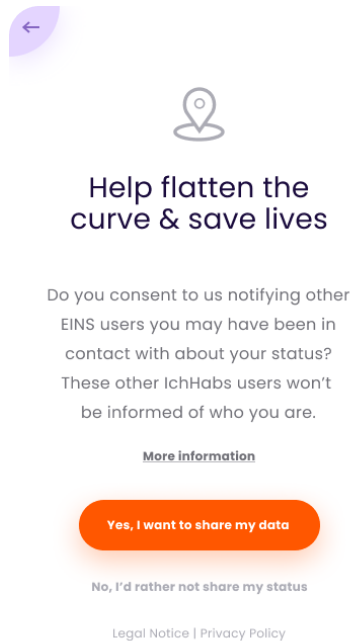
More information

Yes, I want to share my data
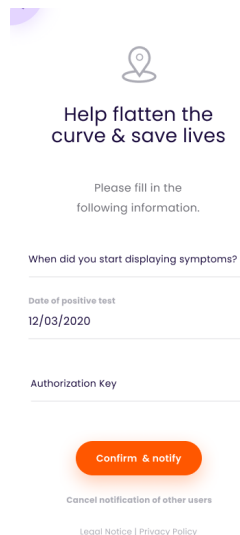
No, I'd rather not share my data

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User Updates COVID-19 Status

1. The user updates their COVID-19 status.

2. If the user tests positive, he/she is asked if he/she is consenting to EINS notifying his/her contacts about their exposure to COVID-19.
3. If the user agrees, he/she is then asked for the date of symptom start, date of the positive test result and an authorization key in order to verify that the test status is valid
   a. The app uploads the data to the server along with the hashed AppId.
   b. The hashed AppID is stored in a submission table to prevent abuse and multi submission protection.
   c. The submission for the dataset is stored separately and anonymously.

Help flatten the
curve & save lives

Please fill in the
following information.

When did you start displaying symptoms?

Date of positive test
12/03/2020

Authorization Key

Confirm & notify

Cancel notification of other users

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Registration Process

1. The server receives the AppID of a newly installed app on a new device.
2. If agreed to by the app user, the server stores the push token of each app install with the AppID.
3. If the user agrees to submit their survey data, the server accepts the survey data along with the AppID.
   a. The AppID is hashed and checked against a list of hashed IDs saved. If the hash is already present, then the submission is discarded as a duplicate or a malicious submission.
   b. If the AppID was not found, the survey data is saved and the AppID is added to the list and then discarded. The AppID is not saved alongside the survey response.

User Updates COVID-19 Status

1. Through Bluetooth, the app logs all person to person interactions that the user has had with other users. These interactions are stored on the user's device. If the user specifies their COVID-19 status as positive, all recorded 'high-risk' interactions will be uploaded to the EINS database. All devices regularly check this central list, should any of the contacts match the device identifier, then the user is notified.

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User Tests Path for COVID-19 Contact

1. The server will receive a list of all the contacts (users) that the positive user came into contact with (only where high risk) within a given date and time period.
2. The mobile application then fetches (in the background) all contacts that involve a contagious user on the server. The application then searches (on the device) for any contacts that has a key that matches its own key value.

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