



Digital identity document storage



Compendium of knowledge in 100+ slides - choose your adventure

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1

What we're solving for

Hidden Needs

50%

of HOST (Homelessness Outreach Street Team) clients who are seeking access to 13 vital services lack an ID.

75 - 80%

of clients from The Other Ones Foundation lack one or more key documents for services

Hidden Costs

\$20,000

spent annually by the Downtown Austin Community Court and Trinity Center on document replacement (2017)

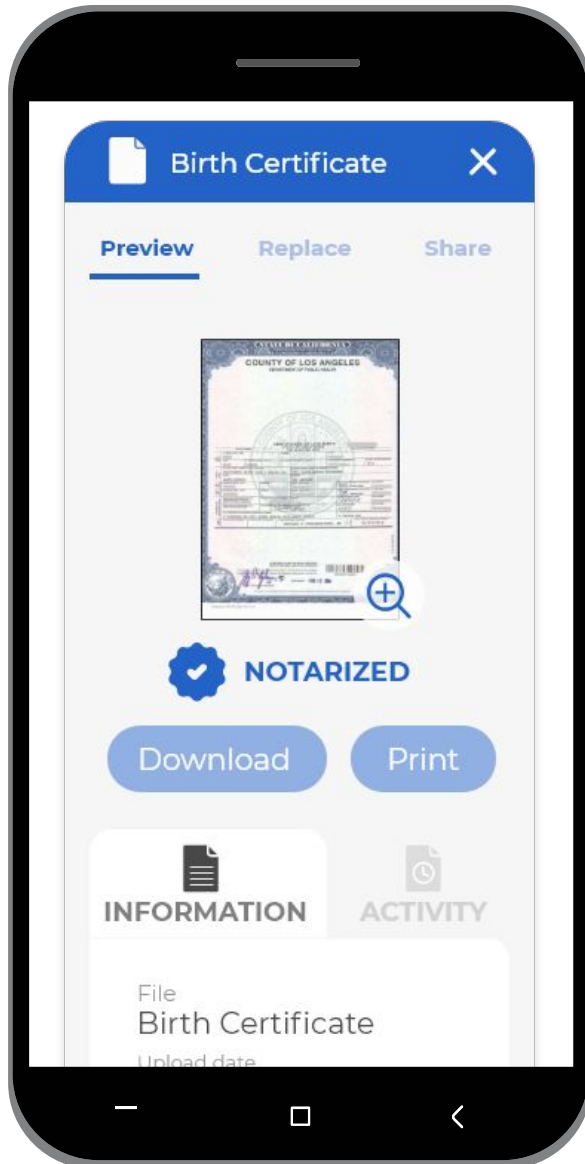
1200 hours

amount of staff time The Other Ones Foundation spent in a year helping clients procure documents

A sense of agency

Neighbors experiencing homelessness told us it would give them more agency and control and less worry.

They told us that this small act of a digital ID can save lives.



“Your phone is your life out here.

Paper documents are hard to keep up with and expensive and time consuming to replace. Having the ability to have documents [digitally] notarized here too is an awesome [feature].”

~Person experiencing homelessness

“It's a secure place to keep my documents without the fear of them **being stolen** or **[my] identity taken.**”

~Person experiencing homelessness

“Easy access, don't have to worry about losing, potential employers could see it, **[can overcome] limit on social security cards/documents**”

~Person experiencing homelessness

**In their
own
words,
during
user
testing**



Possible future use cases

Mutual Aid groups can help get community members organized and prepared to apply for federal, state, and local assistance.

For applicants benefiting from multiple programs and referrals, instead of having their documents in shared drives inside organizations, applicants can share digitally notarized documents with anyone.

Outreach workers have expressed interest in learning more about LifeFiles and how they could use it within their organizations.



Sunrise Homeless Navigation Center

“We are the only full-service navigation center that stayed open during the pandemic. We see first hand the trap that lost/stolen/destroyed documents pose to people without homes as they expend tremendous time and energy trying to reacquire documents over and over again.

Without these documents they cannot get jobs, apply for housing, cash checks, open bank accounts etc. They cannot get on their feet. LifeFiles would allow us to help motivated clients out of this endless cycle, *particularly at a time when the camping ban and imminent sweeps will result in their property being lost, stolen or destroyed.*” - Sarah Weier, Assistant Director

Foundation Communities

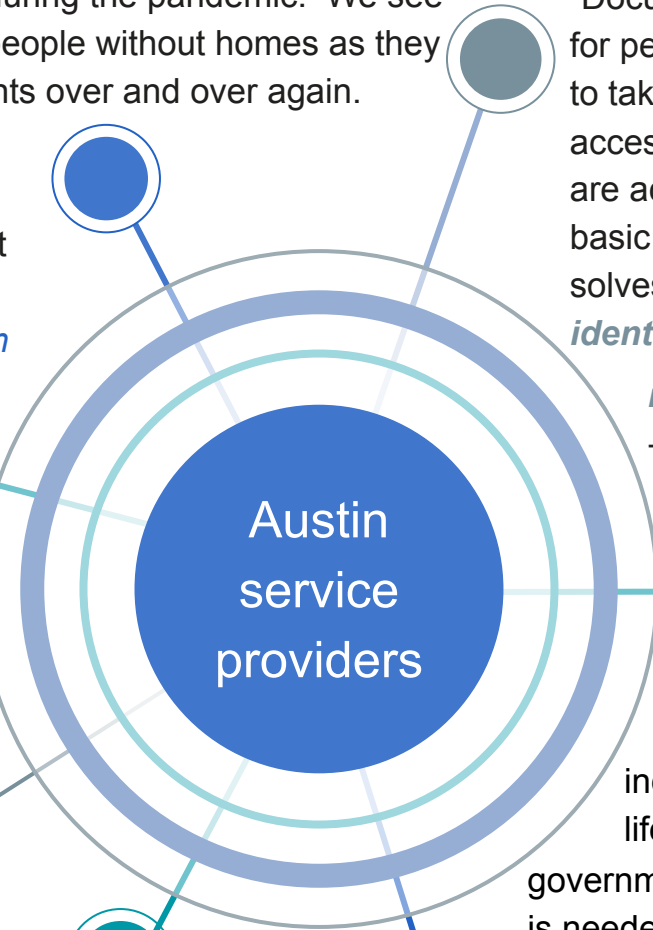
“It would be immensely beneficial for clients that come to us for one service but also need others. *Some clients cancel appointments because they can't find their documentation. Having access through a shared resource amongst partner organizations would be immensely beneficial.* It would require less documentation being brought to an appointment if they have access to it.” - Connor Tantu, Program Coordinator

Integral Care

“Historically the population I serve has missed out on many opportunities to change their life due to not having the right identity documents accessible. *LifeFiles will make it possible for individuals to not miss out on these opportunities* by having a safe and secure place to store these documents. - David Gomez, Program Manager for Homeless Services

Texas Homelessness Network

“LifeFiles would be *solving a problem that we have been trying to solve for a long time.*” - Eric Samuels, President and CEO



Austin Public Health

“Document and identity management are immense hurdles for people experiencing unsheltered homelessness. It is easy to take for granted the ease with which most of us access the marketplace and essential services, because we are accustomed to holding the keys that unlock the doors to basic healthcare, food, housing, and employment. LifeFiles solves for numerous barriers to systems entry by *making identity management and document storage resilient, secure, and intuitive for the end user.*” - Charles Loosen, Homeless Strategy Division

Downtown Austin Community Court

“Replacing an ID or driver license can be very difficult if the information on the ID is unknown, specifically the ID/DL number. In addition, the Social Security Administration only allows an individual to possess ten social security cards in a lifetime. If this amount is exceeded then a letter from a government agency, specifying the need for a replacement card, is needed. This means only certain providers can request this exception. *LifeFiles would save time and resources.*” - Jennifer Sowinski, Clinical Operations Manager

Housing Authority of the City of Austin

“I definitely think that LifeFiles would be a value-add to the community for all the programs that applicants have to apply for.” - Pilar Sanchez, VP of Austin Pathways

2

Background

How long we've been at it....



Bloomberg's i-Team, finds a major barrier in helping people experiencing homelessness: safekeeping their private documents.

2017



Through Bloomberg's Mayor Challenge, City of Austin Innovation office dives further into the foundation of MyPass, weighing both its potential and its feasibility.

2018



Robert Wood Johnson's Foundation gives MyPass wings to acquire the team and resources needed to start the design and development of MyPass' Minimum Viable Product.

2019



Robert Wood Johnson Foundation



The grant-funded team completes the minimum viable product, and rebrands it as LifeFiles to avoid a trademark conflict

2021

Collaborators Along the way



ID 2020



**THE OTHER ONES
FOUNDATION**



3

Overview of the Platform

Key features of the platform



5 Design Principles



Secure

LifeFiles keeps your digital documents safe using the most advanced security features available.



Private

You alone retain the ability to share, revoke, or delete access of your identity documents.



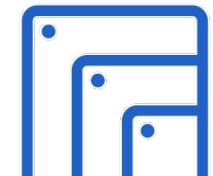
Self-Determinant

In the face of a system that perceives you through data you don't control, LifeFiles gives you full control over the documents that represent you (to facilitate access to services you may need).



Accessible

Whether you love, hate, struggle with, or don't understand technology, LifeFiles was built with your preferences and abilities in mind.



Extensible

LifeFiles technology was built to adapt with changing times, contexts, and a variety of use cases.

Two types of users...



Document Helper

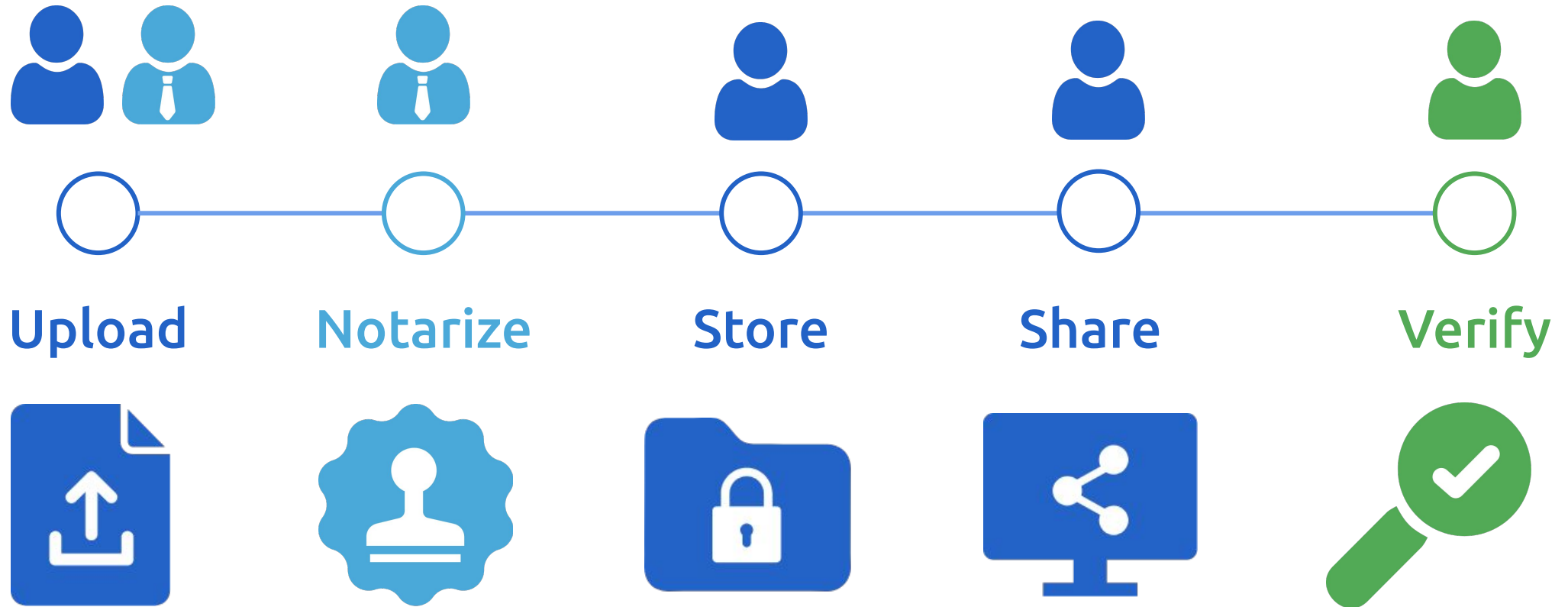
Helper users are case workers, family members or a notaries with clients that require assistance in notarizing and/or uploading their documents.



Document Owner

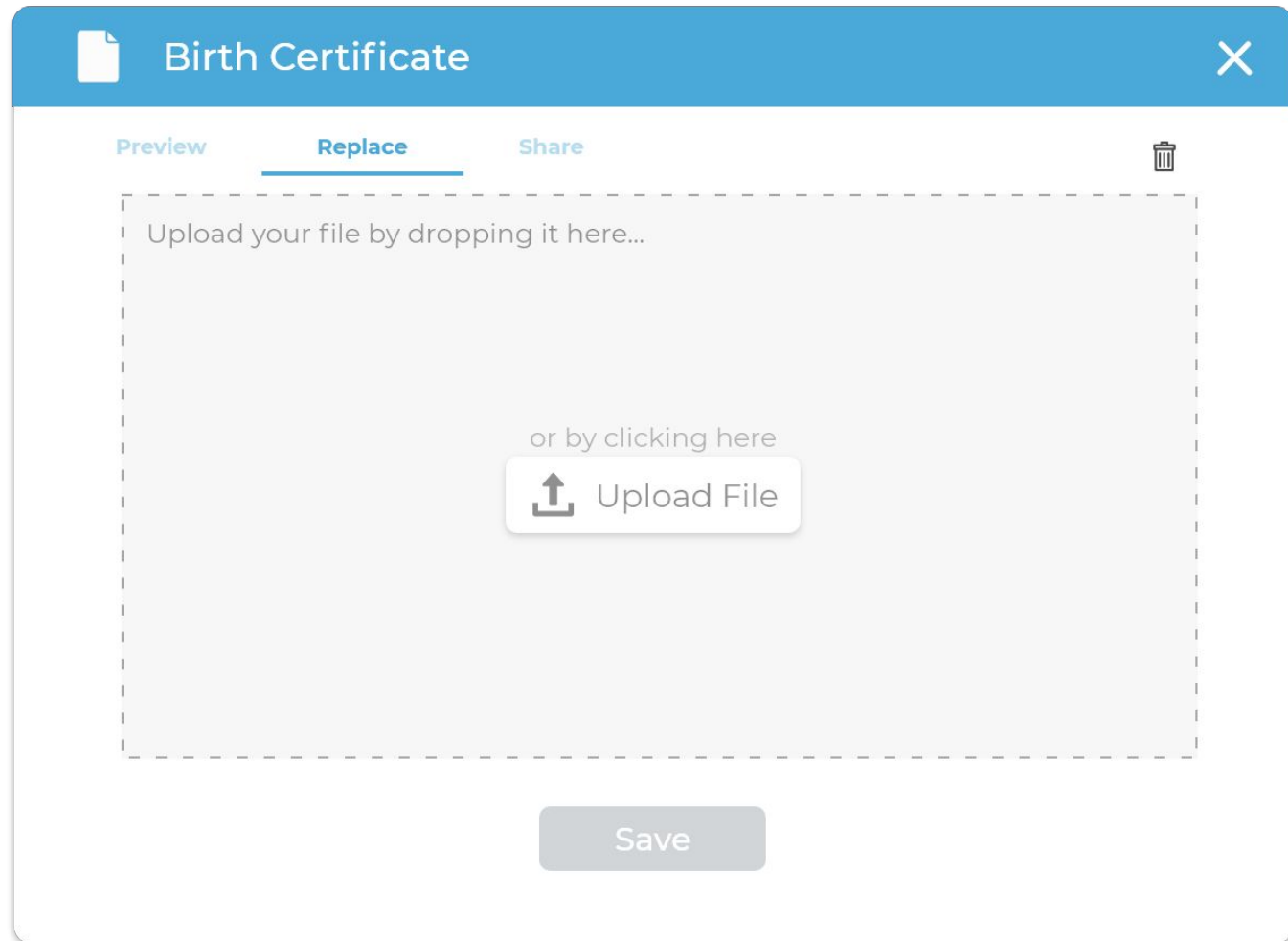
Owners are the proprietors of the documents. They have full autonomy how their digital files are stored, and who they are shared with, if they are shared at all.

Document Journey



Upload

Document Owners (or Helpers) can upload scans or photos of any important document that they don't want to lose.



Birth Certificate

Preview Replace Share

NOTARIZED



INFORMATION ACTIVITY

File
Birth Certificate
Upload date
01/12 /2020
Upload by
Will Foxx
Upload by
N/A

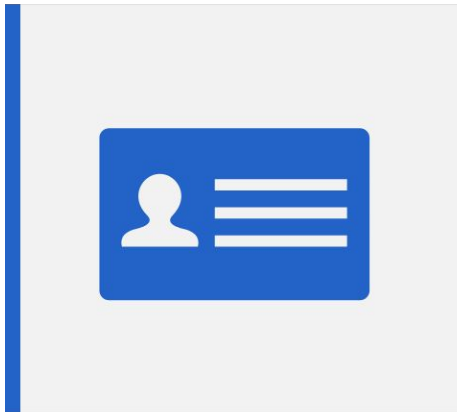
Zoom in Download Print File Information

Store

Once uploaded documents are encrypted and stored with enterprise-level security. Providing the maximum privacy and control to the owners of the documents

Securely Encrypted

Original File



Encrypt →

Output

```
6C7D 2CDB FE3D 79A9
EE82 90B1 FB99 BB41
F97C DB2C 0488 91DC
EC82 4F8C 2184 1337
825D FFE4 77C6 662B
BB8D 8A6C 72EA D091
```


Upload →

Database




Notarize

Although it's not necessary, LifeFiles provides the tools for a notary public to make a certified copy of any uploaded document, which can aid in verifying the document later.

 Will Foxx - Birth Certificate ✕

Preview Replace Notarize



NOTARIZATION TYPE

Certified Copy ▼

NOTARY INFORMATION

Notary Name: Jacob Gonzales

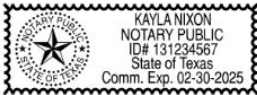
Notary State: TX ▼

Notary #: ABC12345

SIGNING KEY

Use PEM Use PEM


Upload New Seal Upload New Seal



Notarize

Birth Certificate

Preview Replace **Share**



CONTACTS
Select a contact to share this document with

Jacob Gonzales Patrick Harrison Laura Bermuda

TIME LIMIT
Specify how long this document will be shared

Share for... A month FROM March 27, 2020 TO May 27, 2020

Share Birth Certificate?

This file is currently being shared with Jacob Gonzales

Share

Whether it's a family member or a case manager, we often rely on others to help us fill out applications. LifeFiles allows for documents to be shared with helpers in order to help navigate services.





Texas Digital Notary Verification

What is the DID for this document?

Example: did:ethr:0xf6fedeaec20e79071251ffa655f1bdDCa65c027

Passport.pdf

 This document is a **Certified Copy** of a **Passport**. The subject of this document is **Sally Owner** and the issuer is **Billy Caseworker**.

 This document was registered on **Thu, 23 Apr 2020 19:53:45 GMT** and issued on **Thu, 23 Apr 2020 19:53:44 GMT**.


	This document is not valid until Thu, 23 Apr 2020 19:53:44 GMT .	This document will expire on Sun, 04 Apr 2021 00:00:00 GMT .
---	---	---

Verify

In order to accept copies of document officials want proof that the copy is authentic. Any document notarized through mypass can be verified as authentic, and legally executable

<https://verificationsite.webflow.io/verify>


Notarization is valid


 **Document is digitally signed**

What's happening? | **Technical Steps**


In the cryptographic world, there are two types of keys: **private** and **public**. Both keys can be used to encrypt and decrypt documents. Every user has at least one of each.


Julia
(Notary)*



x2  Private

Bob
(Owner)



 Private

Login Methods

Everybody is different. There's no ultimate solution for accessibility. What works for one person may be a nightmare for their neighbor. This is why we're developing a system that allows for *multiple ways to login*.

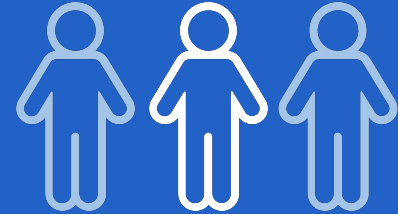
 Two-Step Verify 

What you have



 Social Support 

Who you know



 Password 

What you know



 Palm Recognition 

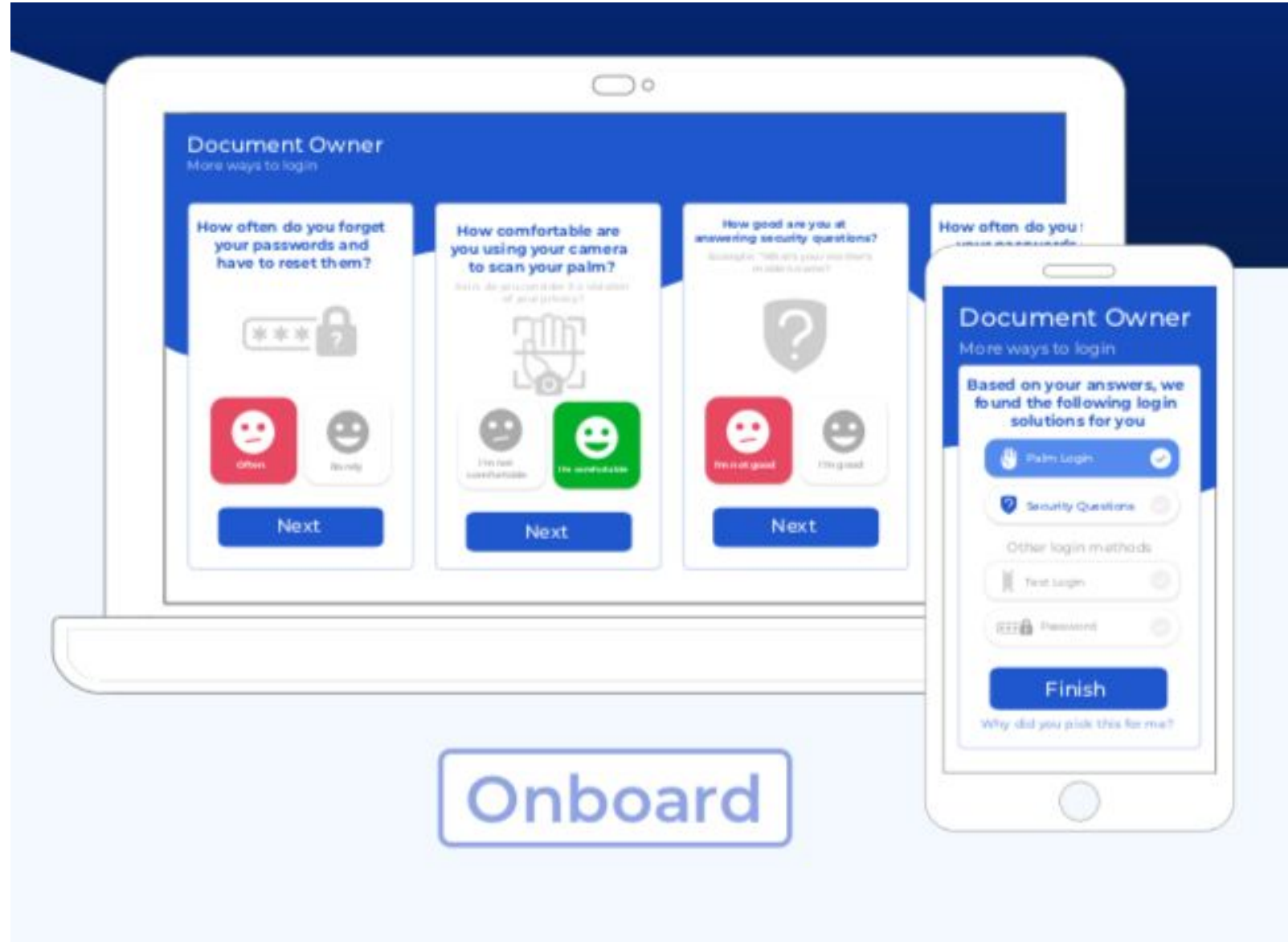
Who you are



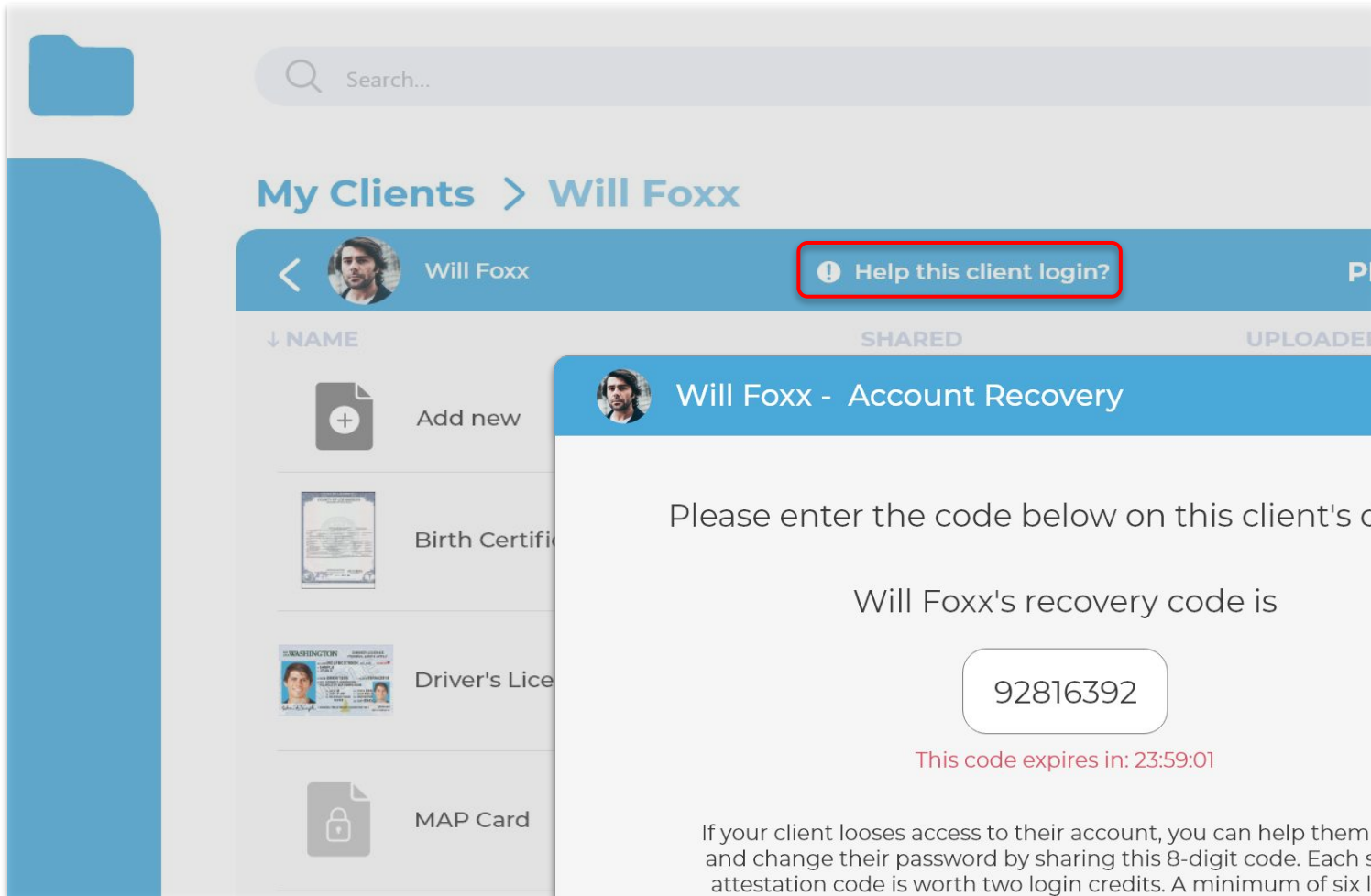
Security vs Accessibility

Document owners receive options for a secure and accessible log-on method based upon a short quiz on how they:

- remember passwords
- remember answers to security questions,
- have access to a device with a camera,
- how often they lose their phone or
- how they feel about biometrics



Social attestation for account recovery



Will Foxx - Account Recovery

Please enter the code below on this client's device

Will Foxx's recovery code is

92816392

This code expires in: 23:59:01

If your client loses access to their account, you can help them login and change their password by sharing this 8-digit code. Each social attestation code is worth two login credits. A minimum of six login credits are required to gain back access to the account.

Got it

Social Attestation

What's this?

If you lose access to your account, you may obtain login credits by asking people in your network to confirm your identity by sharing a unique recovery code.

Please enter your code(s) below:

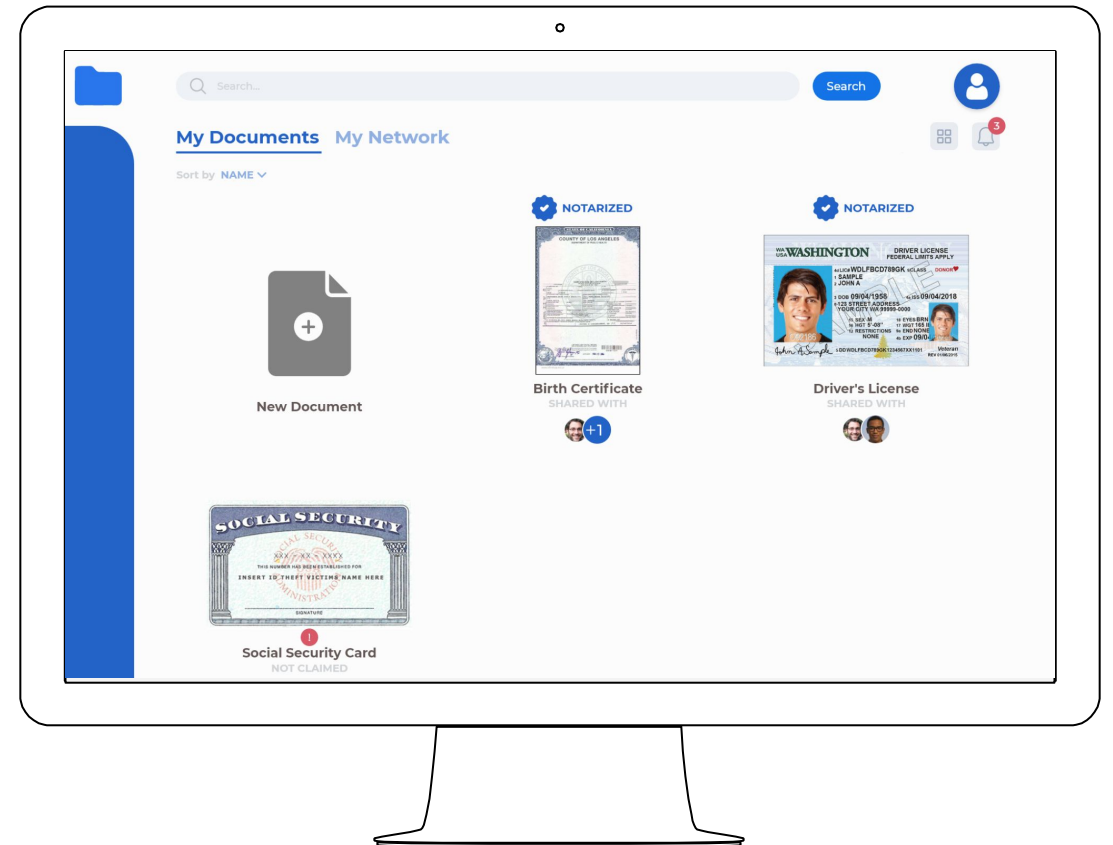
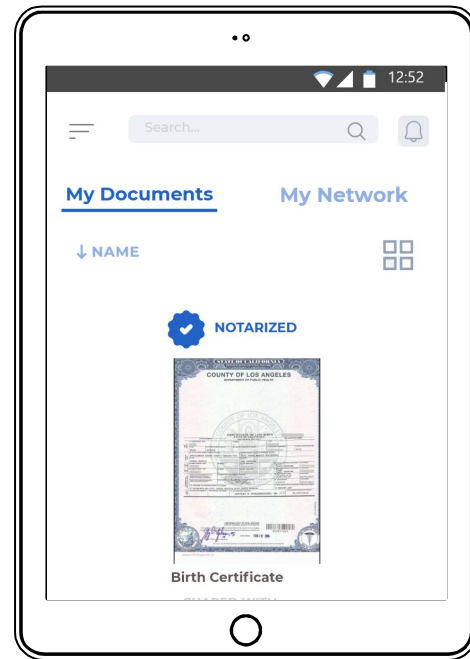
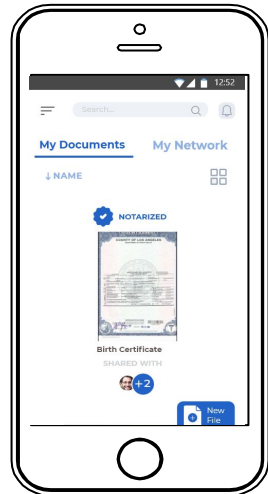
92816392

Code approved!
You have earned 2 login credits

Next

take me back

Responsive Website



Customizable Options

1. Installation
2. Administrative Setup
3. Onboarding
4. Roles

Owner
<input checked="" type="checkbox"/> Can upload documents
<input checked="" type="checkbox"/> Can replace documents
<input checked="" type="checkbox"/> Can delete documents
<input checked="" type="checkbox"/> Can update expiration date
<input checked="" type="checkbox"/> Can update account info
<input checked="" type="checkbox"/> Can approve share requests
<input checked="" type="checkbox"/> Can push shared documents
<input checked="" type="checkbox"/> Can revoke shared documents
<input checked="" type="checkbox"/> Can set time limit for share
<input checked="" type="checkbox"/> Can share user info

How much does it cost to run MyPass?

Hosting Costs		
# of Users	Monthly	Annually
80	\$0	\$0
1,000	\$0.14	\$1.71
10,000	\$76.42	\$917

*based AWS S3, Heroku and Atlas costs

4

Security & accessibility

How blockchain fits in the platform design

How we deliver on



Design Principles



Secure

LifeFiles keeps your digital documents safe using the most advanced security features available.



Accessible

Whether you love, hate, struggle with, or don't understand technology, LifeFiles was built with your preferences and abilities in mind.



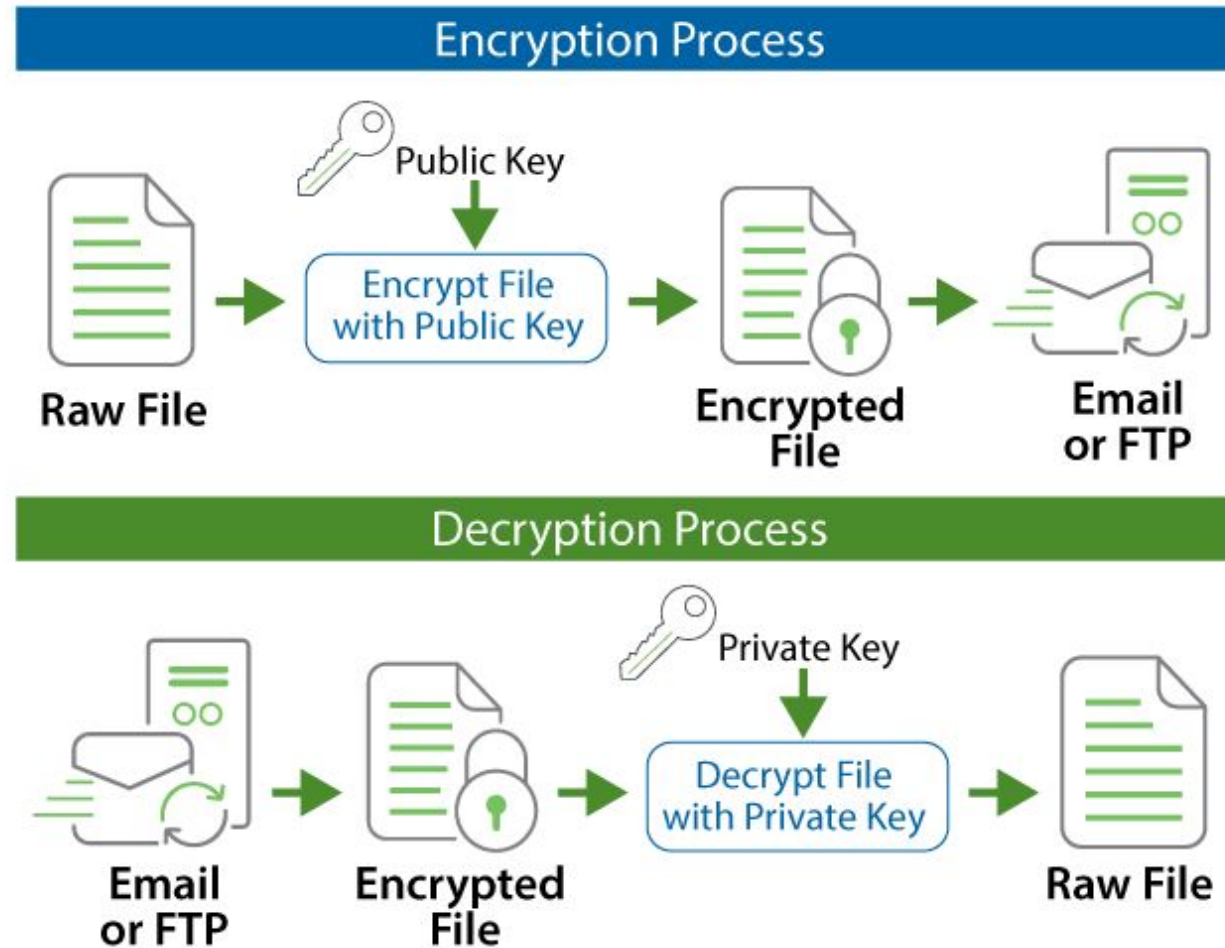
Challenge 1

Security and Sharing

How do we make sure that files are completely secure, and still allow sharing of documents with anyone the user chooses?

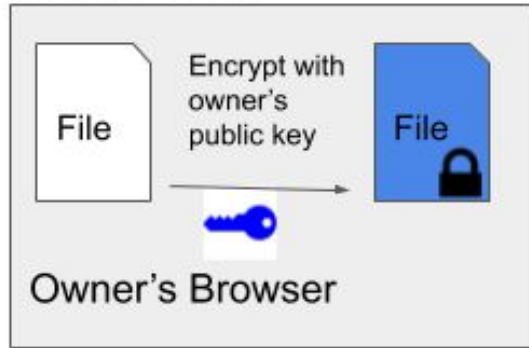
Security and Sharing

DPKI Decentralized Public Key Infrastructure



Security and Sharing

Upload a File:

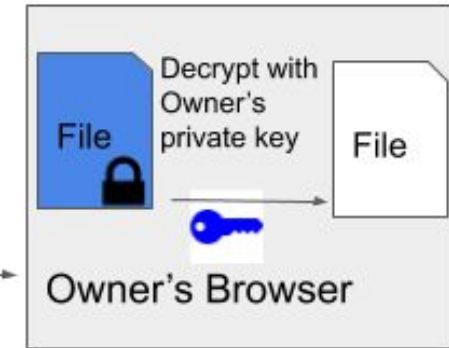


Save file in hosted storage using MyPass app key



File downloaded from server

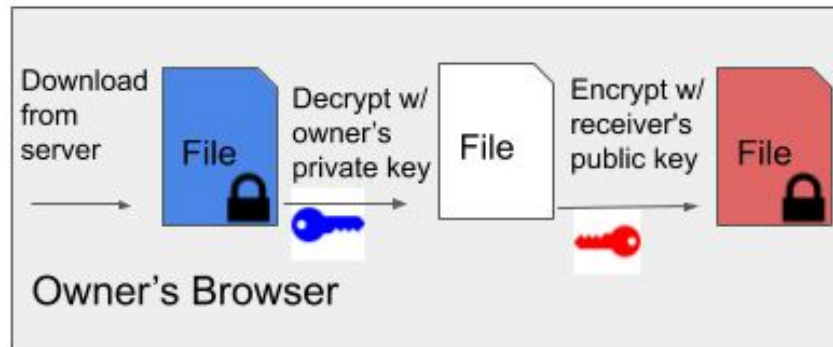
Owner view a File:



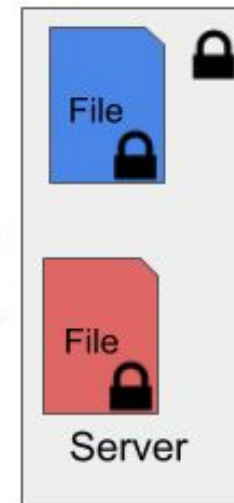
Key pair sent to client on login



Owner Share a File with a Receiver:

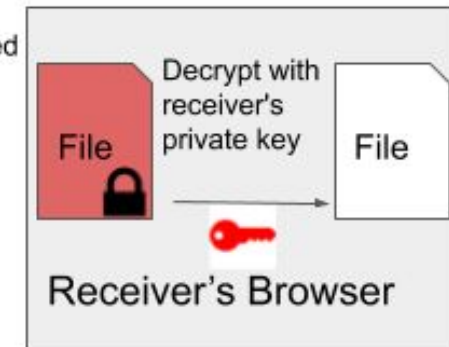


Save shared file to server with MyPass app key



File downloaded from server

Key pair sent to client on login





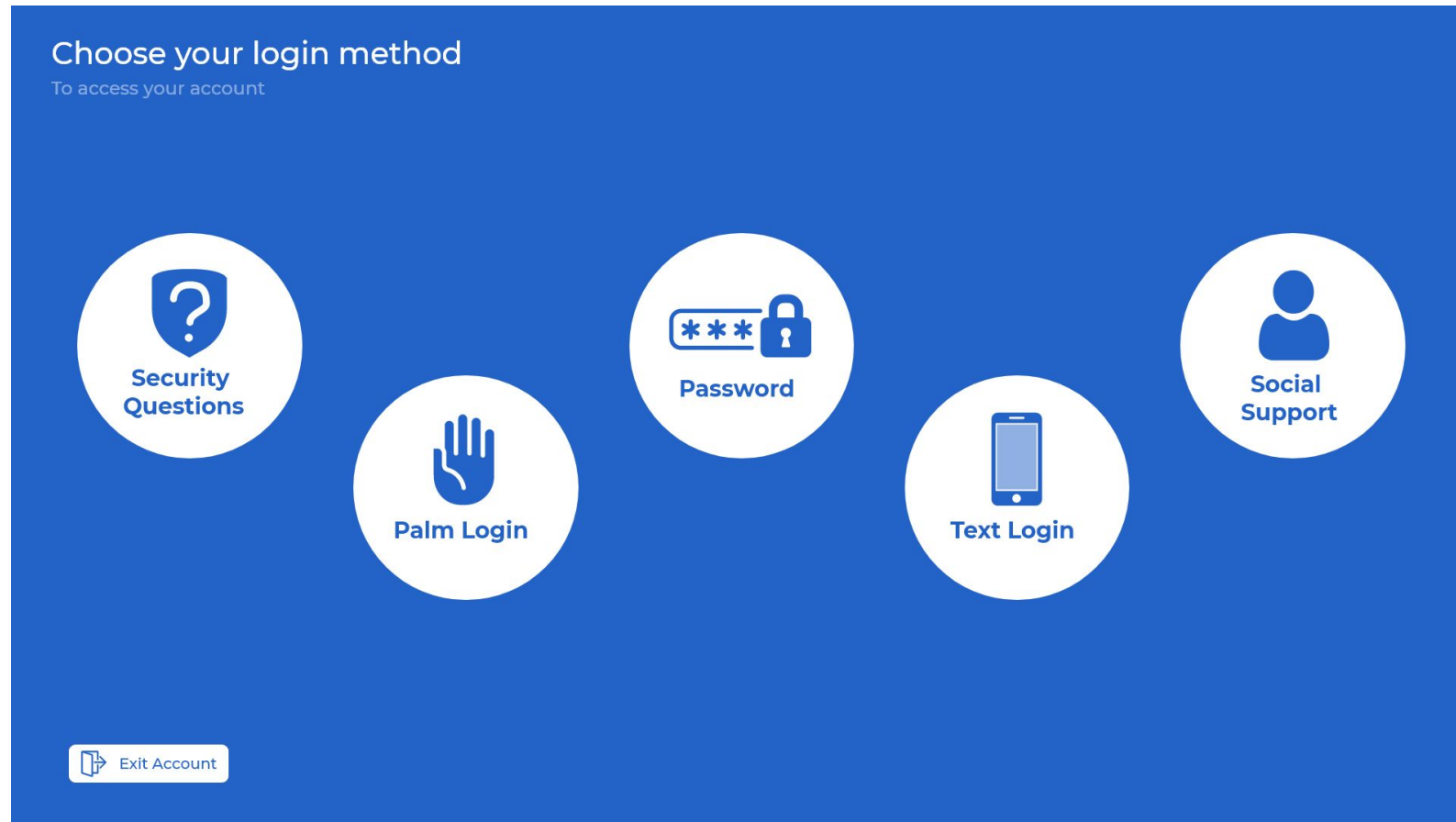
Challenge 2

Key Stewardship

How do folks log into our app if they have a hard time remembering passwords?

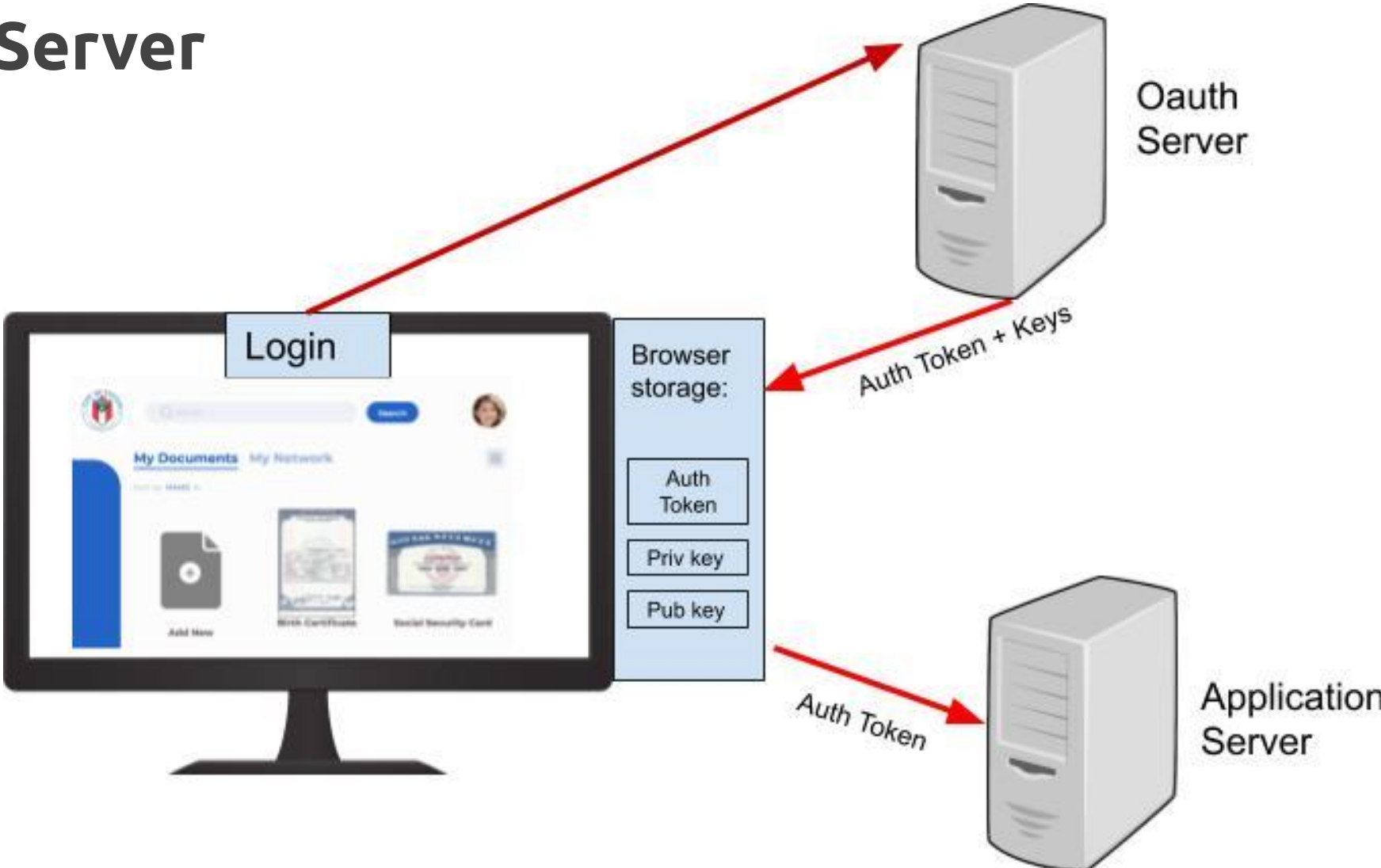
Key Stewardship

Multiple ways to log in



Key Stewardship

Oauth Server





Challenge 3

Transactions with digital documents

How do we expect people to use these images of documents as if they were originals?

There are

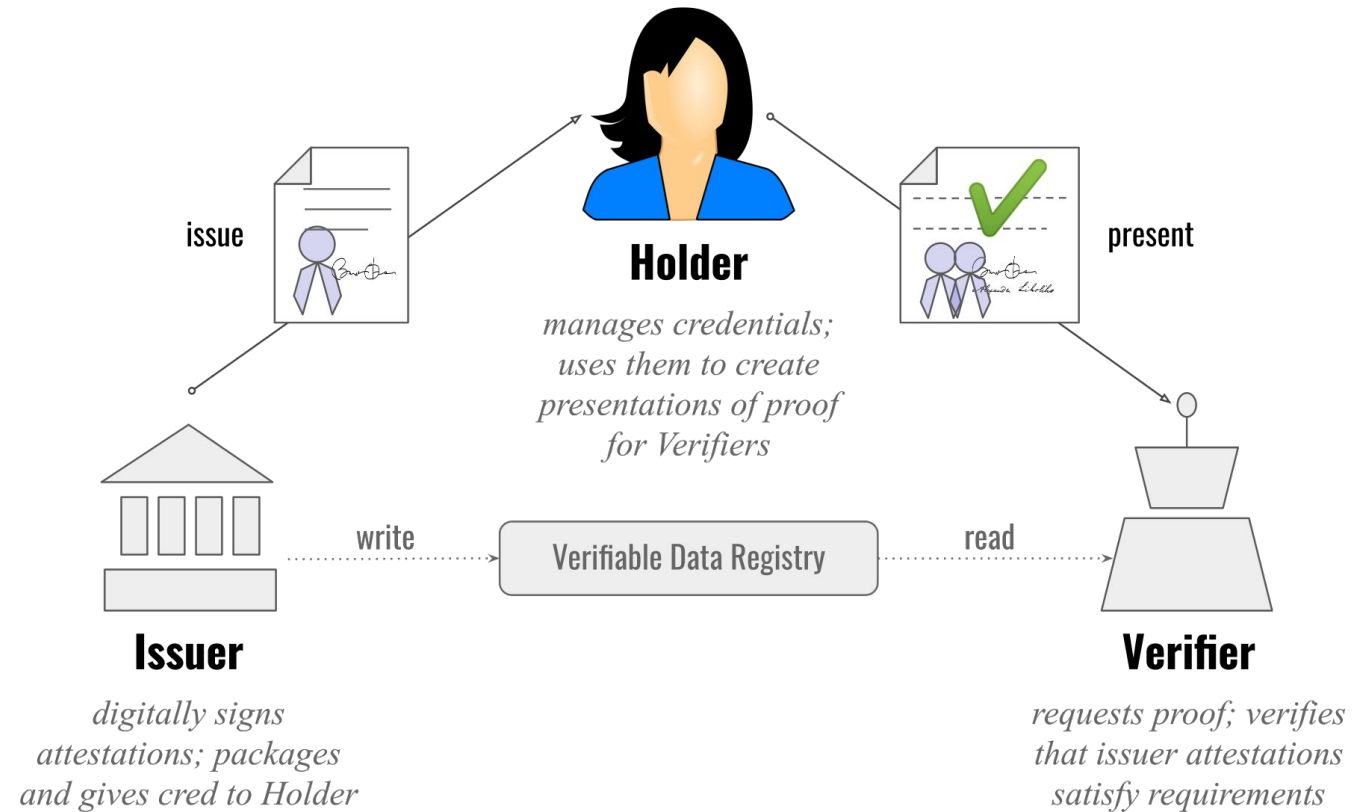
5

legal requirements for
a document to be
digitally notarized

- A digital signature is used
- Signer is a notary
- Document is tamper-resistant
- Notarized document is controlled by its owner
- The notarized document is original, not a copy

Transactions with Digital Documents

Verifiable Credentials



Transactions with Digital Documents

e-notarization

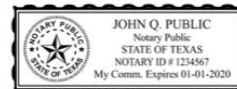
BlueCross BlueShield		Plan Name Here
Subscriber Name:		
JOHN DOE	01	Group No: 123456789
Subscriber ID:		RxBln/Group: 123456
YPPW123456789		Date Issued: 00/00/00
Members:		
JANE	02	In-Network Member Responsibility:
SAM	03	Primary \$25
		Specialist \$50
		Urgent Care \$50
		ER \$200
		Prescription Drug \$8/\$35/\$50/25%
		Preventive Care No Copay
Dental Blue	Blue®	

Certified Copy of a Non-Recordable Document

State of Texas

County of Travis.

On this date, Jan 1, 2021, I certify that the preceding of attached document, is a true, exact, complete, and unaltered copy made by me of Insurance Card, presented to me by the document's custodian, John Doe, and that, to the best of my knowledge, the photocopied document is neither a public record nor a publicly recordable document, certified copies of which are available from an official source other than a notary.



Notary Seal

John Public


(Signature of notary)


did:ethr:0x6efedeaeac20e79071251ffa655F1bdDCa65c027

Transactions with Digital Documents

Notarization Tools

e-Notarization Tool

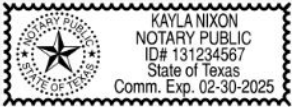
 Arkansas BlueCross BlueShield	METALLIC <i>True</i> BLUE PPO
Member Name: JOHN L DOE	Member DOB: 10/04/1945
Member ID: ZZZ123456789	Group #: 9876543210
RxBIN: 123456	Deductible: \$500
RxPCN: ADV	CoPay: \$20 PCP
RxGRP: RX0000	
Off. CoPay: \$20	
Rx: \$100+20%	Gold



NOTARIZATION TYPE
Certified Copy

NOTARY INFORMATION
Notary Name: Kayla Nixon
Notary State: TX

Notary #
131234567



SIGNING KEY
Use PEM
Upload New Seal

Skip Notarize



Challenge 4

Adoption by document “receivers”

How do we help folks interact with digital notarizations? How do we prove to folks that it is real?


Adoption by document “receivers”

Decentralized Verification




Texas Digital Notary Verification
What is the DID for this document?

Example: did:ethr:0x6efedeaec20e79071251fffa655f1bdDca65c027

 **Document** ▼

Upload your file by dropping it here...

or by clicking here

 Upload File

Submit



Texas Digital Notary Verification
What is the DID for this document?

did:ethr:0xe0b1833c7032aAc1B8d4661aF9295623F40fc956

 **Document** ▶


Checking for valid notarization...

 **Document is digitally signed** ▶

 **Document has not been altered** ▶

 **Verifying notary's secure key from state notary list...** ▶

Checking for transferability...

 **Processing...** ▶

Adoption by document “receivers”

Radical Transparency: Auditability

Notarization is valid



Document is digitally signed



What's happening?

Technical Steps

1

Retrieve the information stored on the blockchain at the [Decentralized Identified address \(DID\)](#) and resolve it to obtain the first JWT payload.



INPUT

DID Address:

`did:ethr:0xe0b1833c7032aAc1B8d4661aF9295623F40fc956`



OUTPUT

Public Keys:

`did:ethr:0xe0b1833c7032aAc1B8d4661aF9295623F40fc956#controller`

JWT Payload:

`eyJ0eXAiOiJKV1QiLCJhbGciOiJFUzI1NkstUiJ9...`

Adoption by document “receivers”

Radical Transparency: Plain Language

Notarization is valid



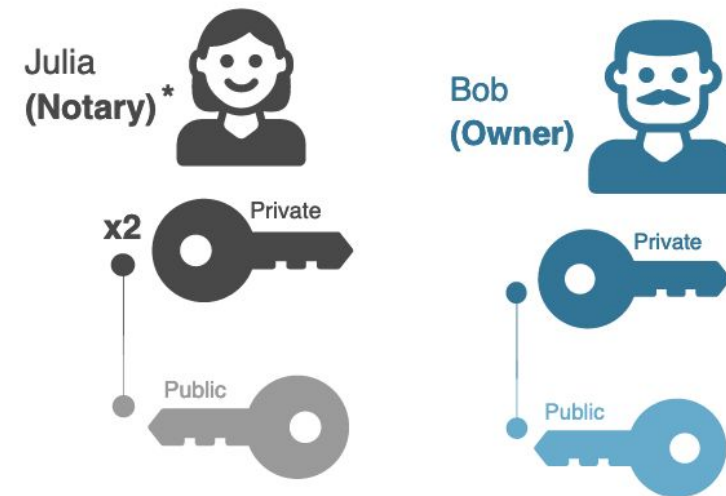
Document is digitally signed



What's happening?

Technical Steps

In the cryptographic world, there are two types of keys: **private and public**. Both keys can be used to encrypt and decrypt documents. Every user has at least one of each.



*Note: Notaries have two sets of Private/Public Keys (PEM keys and Blockchain keys)

5

Privacy & Administration

How we deliver on



Design Principles



Private

You alone retain the ability to share, revoke, or delete access of your identity documents.



Self-Determinant

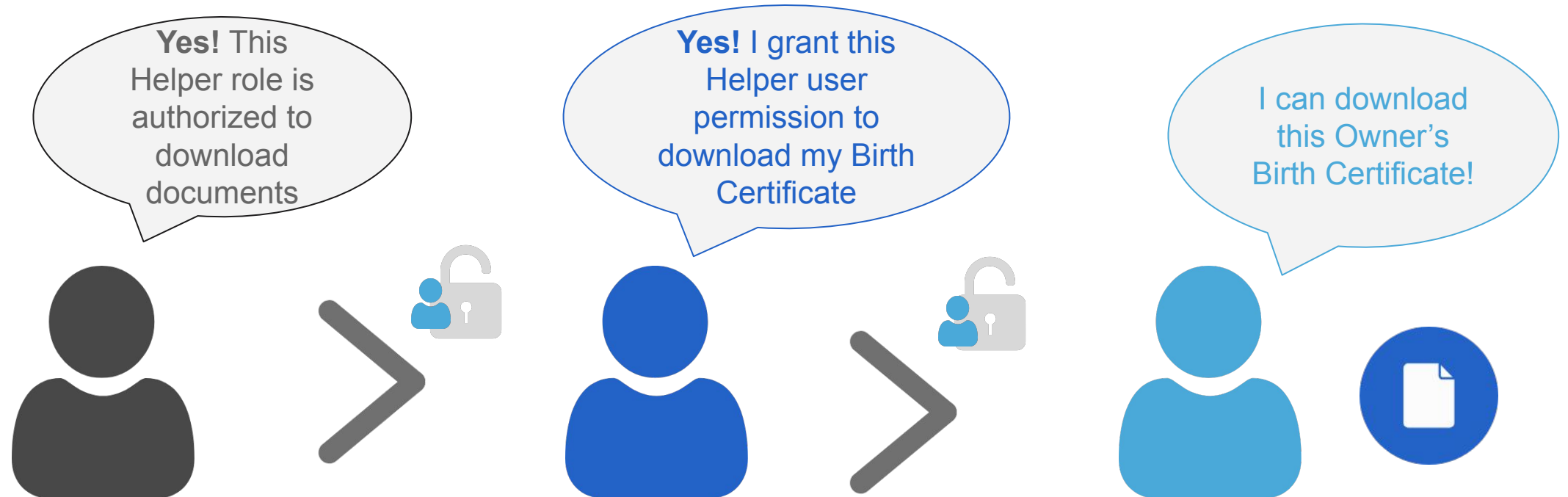
In the face of a system that perceives you through data you don't control, LifeFiles gives you full control over the documents that represent you (to facilitate access to services you may need).

Permissions Hierarchy

Helper permissions are determined in the following order:

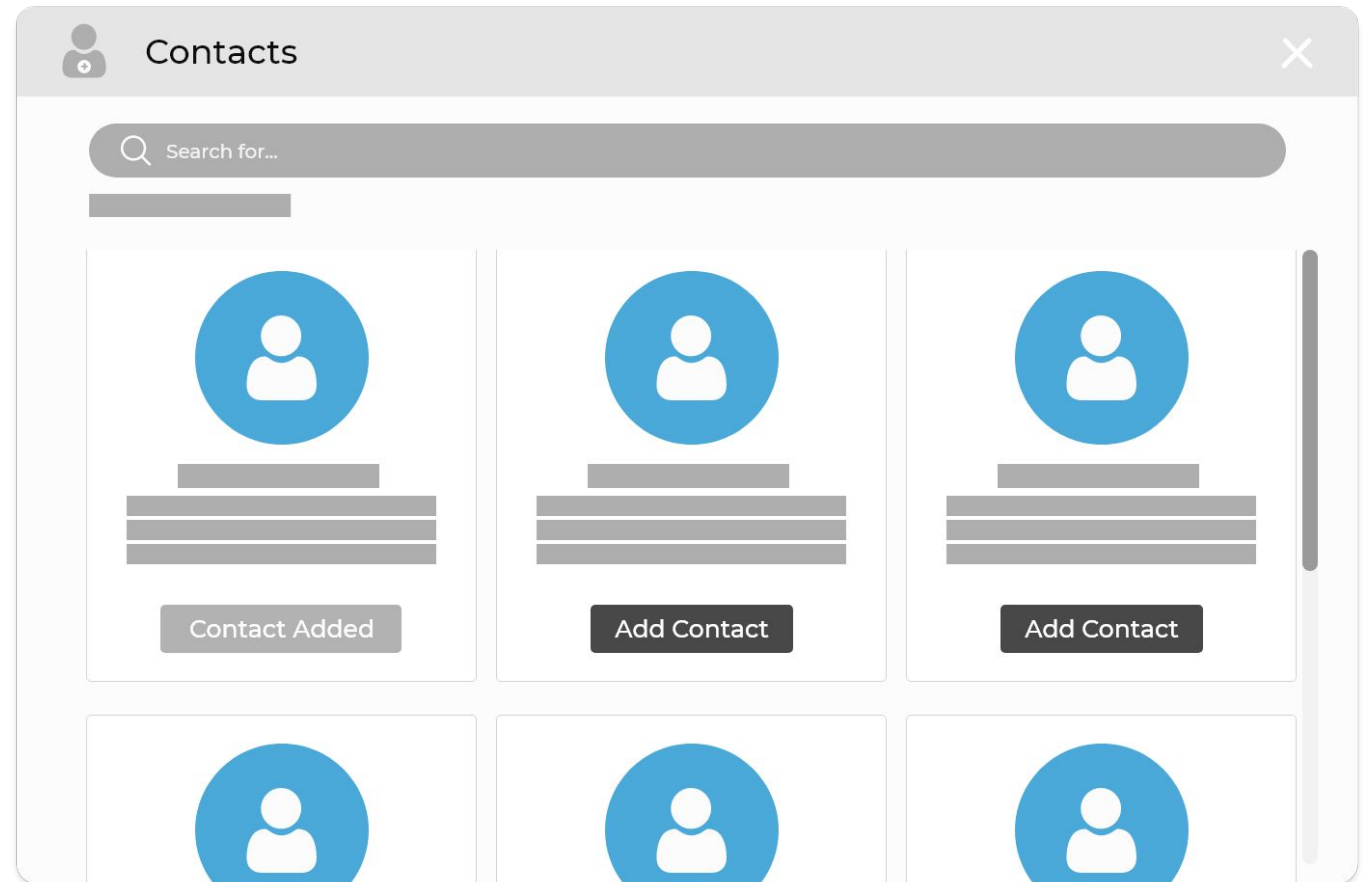
1. Whether the **Admin** has granted the user type access to the feature
2. Whether the **Owner** has shared the relevant permission with the helper

For example, if a Helper user needs to download an Owner's Birth Certificate...



How it works: **Owners** connect to **Helpers**

Document Owners **add** Helpers to their network as contacts to get assistance with their documents

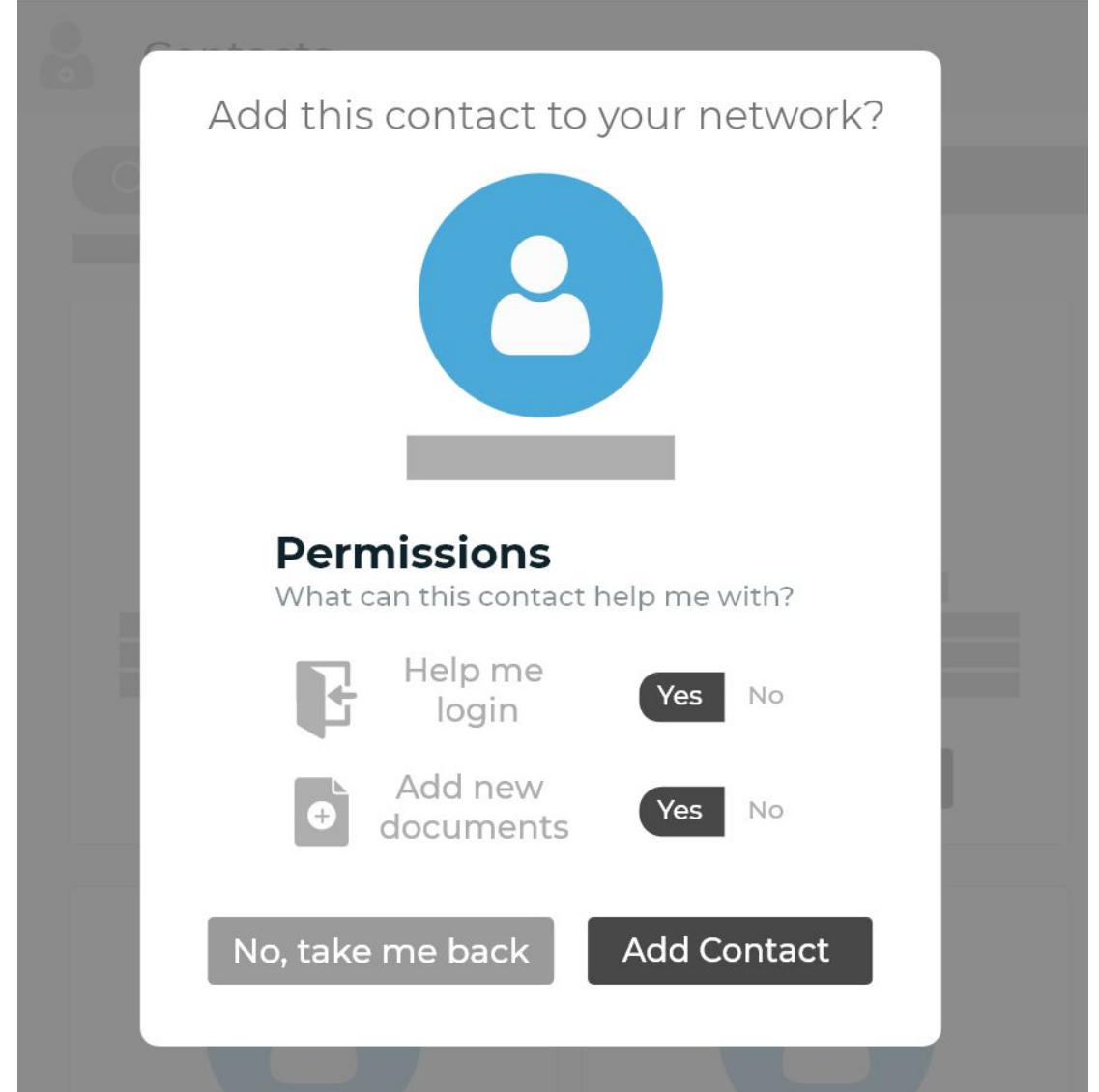


How it works:

Owners Give Permission to Helpers

When **Owners** add a **Helper** contact for the first time, they set the permissions to...

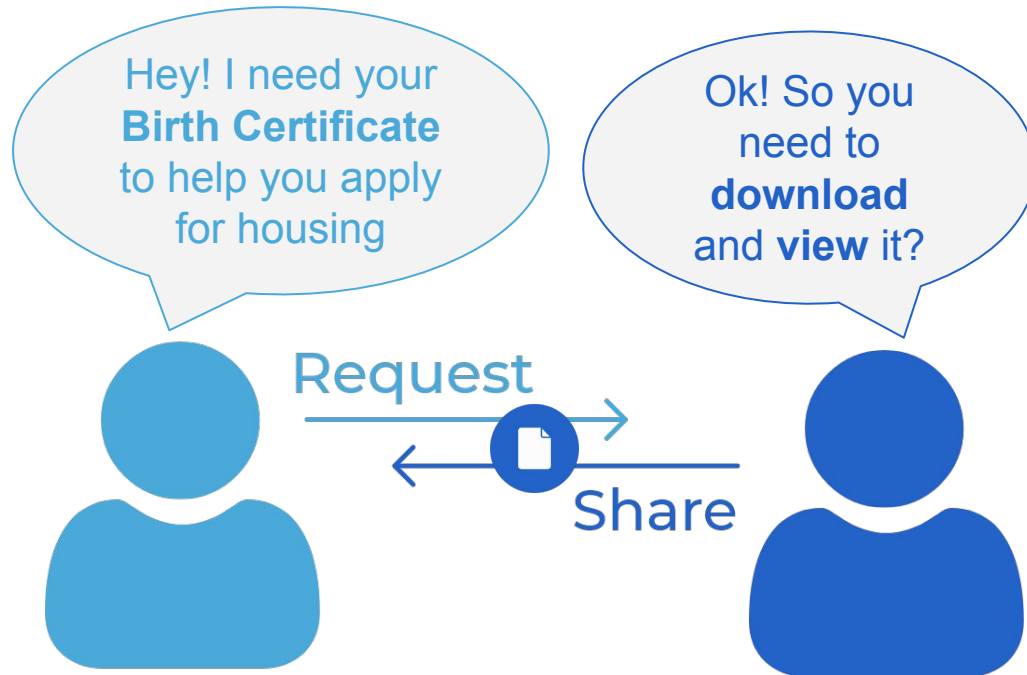
- Recover their account by help them login using a code (social attestation)
- Upload documents on their behalf



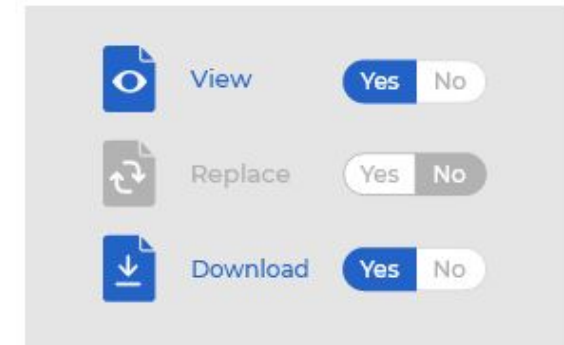
How it works: **Owners** set Permissions at the Document Level

Once connected, **Helpers** can request access to **Owner** documents and owners can grant them the following permissions...

- Can this person **view** my document?
- Can this person **download** my document?
- Can this person **replace** my document?



Permissions

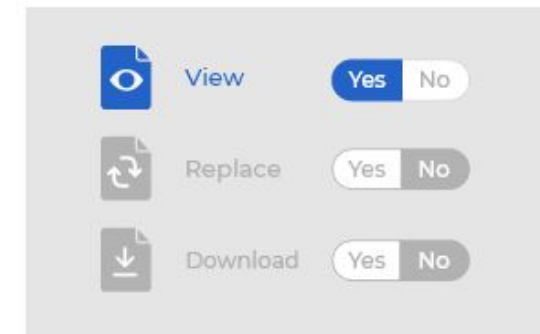


How it works: Document Permissions

When a document Owner shares **view**, but **not download** access to a document, the file image is covered with a **watermark** to invalidate it as a digital copy and protect the Owner's document

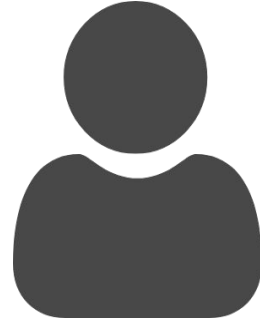


Permissions



Platform Administrator

Behind the scenes, there is a third type of user in LifeFiles

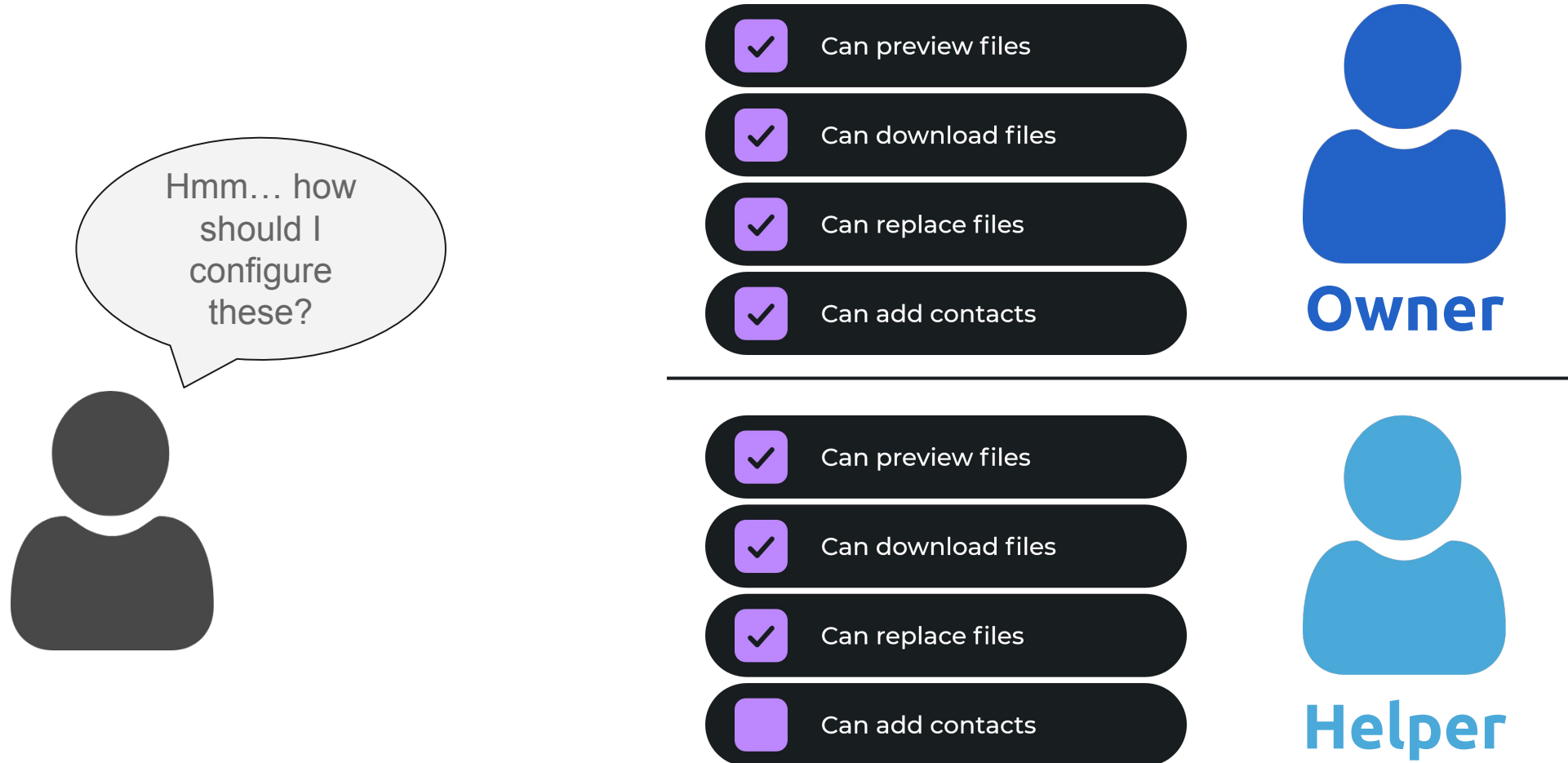


Administrator

LifeFiles Administrators can adapt the application to the contextual needs. Responsibilities include setting up document types, delineating role permissions and toggling features for Owners and Helpers.

Admin Page

Through the *Admin page*, an administrator can toggle features and functions on or off for each user type...



Admin Page



Document Owner

- Document owners by default have access to most of LifeFiles features and functions.
- To maintain full autonomy over their documents, their respective permissions should ***always be kept unrestricted*** by the platform's administrator



Owner

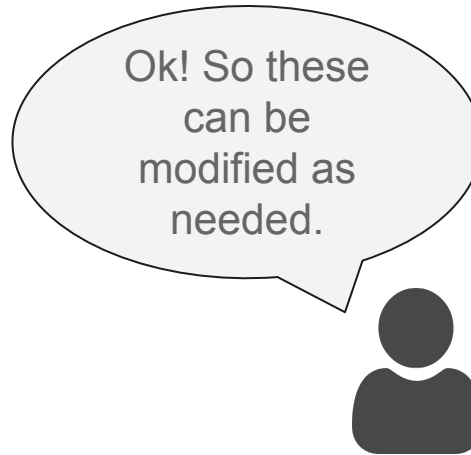
- Can upload documents
- Can replace documents
- Can delete documents
- Can update expiration date
- Can update account info
- Can approve share requests
- Can push shared documents
- Can revoke shared documents
- Can set time limit for share
- Can share user info
- Can view helpers to share

Admin Page



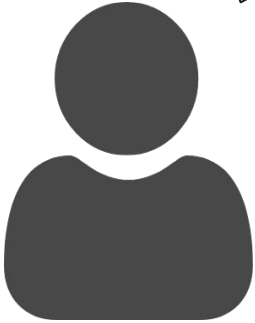
Document Helper

- Document Helpers are can be modified to fit the one of several administration models (pre-configured administrative settings)
- Admins **can create multiple Helper account types** with varying permissions depending on the needs of the organization that adopts LifeFiles



Verified Helper	Verified Helper Note
<input checked="" type="checkbox"/> Can upload docs on behalf of owner	<input checked="" type="checkbox"/> Can upload do
<input checked="" type="checkbox"/> Can replace owners docs	<input checked="" type="checkbox"/> Can replace ow
<input checked="" type="checkbox"/> Can delete owners docs	<input checked="" type="checkbox"/> Can delete own
<input checked="" type="checkbox"/> Can update expiration date	<input checked="" type="checkbox"/> Can update exp
<input checked="" type="checkbox"/> Can update owner user info	<input checked="" type="checkbox"/> Can update ow
<input checked="" type="checkbox"/> Can request a shared document	<input checked="" type="checkbox"/> Can request a s
<input checked="" type="checkbox"/> Can share doc with others	<input checked="" type="checkbox"/> Can share doc
<input checked="" type="checkbox"/> Can revoke share request	<input checked="" type="checkbox"/> Can revoke sha
<input checked="" type="checkbox"/> Can set time limit for share	<input checked="" type="checkbox"/> Can set time lin
<input checked="" type="checkbox"/> Can view owners to request share	<input checked="" type="checkbox"/> Can view owne
<input checked="" type="checkbox"/> Can view existing file to request share	<input checked="" type="checkbox"/> Can view existi
<input checked="" type="checkbox"/> Can Notarize Documents	<input checked="" type="checkbox"/> Can Notarize D
<input checked="" type="checkbox"/> Can transfer clients to other helpers	<input checked="" type="checkbox"/> Can transfer cli

Let's Review how Administrative Controls affect the front end experience



So what happens
when I turn
features on or off
in the admin
page?

VIEW

REQUEST

(RE)UPLOAD/DOWNLOAD

NOTARIZE



View Permissions

- File thumbnails
- Document preview/info
- User information
- Zoom-in

File Thumbnails

As an **Owner**, I always have the ability to see the thumbnails of my documents



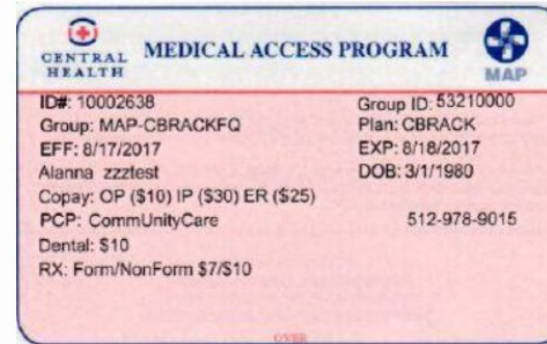
Shared



Birth Certificate
SHARED WITH



Unshared



MAP Card

File Thumbnails

As a **Helper**, my ability to see document thumbnails varies...

has the **Owner** shared it with me?

has the **Administrator** authorized me to see them?

A diagram illustrating file sharing from the Owner's perspective. At the top, a blue person icon represents the Owner. Below it, two document thumbnails are shown. The first is labeled 'Shared' in a blue box and shows a 'Birth Certificate' with 'SHARED' written below it. The second is labeled 'Unshared' in a grey box and shows a 'MAP Card' with 'NOT SHARED' written below it. A blue 'Request Access' button is positioned below the MAP Card thumbnail.

A diagram illustrating file sharing from the Administrator's perspective. At the top, a blue person icon represents the Administrator. Below it, two document thumbnails are shown. The first is labeled 'Shared' in a blue box and shows a 'Birth Certificate' with 'SHARED' written below it. The second is labeled 'Unshared' in a grey box and shows a document thumbnail with a greyed-out eye icon, indicating it is not visible to the Administrator.

Can view existing file to request share

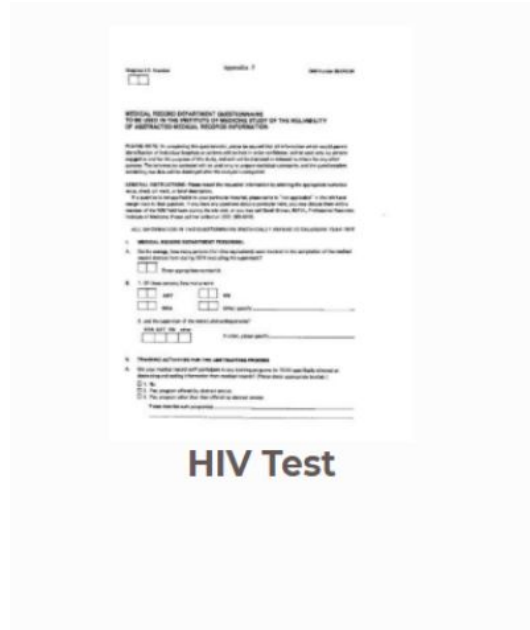
As an **Admin**, I can limit Helper's ability to see file thumbnails

Can view existing file to request share

File Thumbnails (Protected Docs)



As an **Owner**, I can always see my private (protected) documents.



HIV Test

Name	Protected
Medical Record	<input checked="" type="checkbox"/>



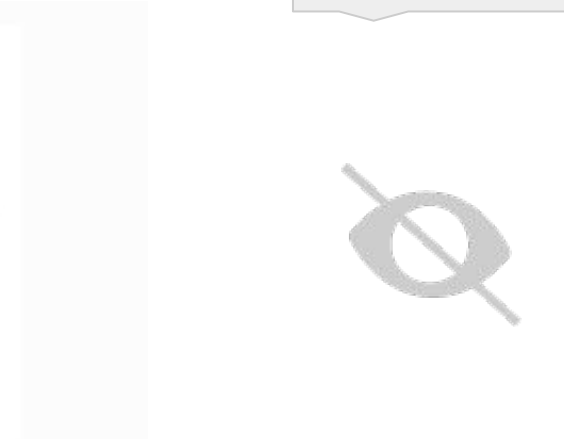
As a **Helper**, I can't see an Owner's private (protected) document unless they share it with me

Shared

Unshared



HIV Test



As an **Admin**, I determine whether or not a document type is considered Private/Protected

Document Preview


As an **Owner**, I can always preview documents on my account and share this permission to helpers in my network



Birth Certificate

Preview Replace Share


NOTARIZED



INFORMATION ACTIVITY



File
MAP Card
Upload date
12/12 /2020
Expiration Date
N/A
Uploaded by
Kayla Nixon

Zoom in Download Print



Name	Patrick Harrison
Organization	DFE
Role	Case Manager
Phone	512.524.4095
E-mail	p.harrison@dfc.com


Share Birth Certificate?


	View	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	Replace	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
	Download	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Document Preview

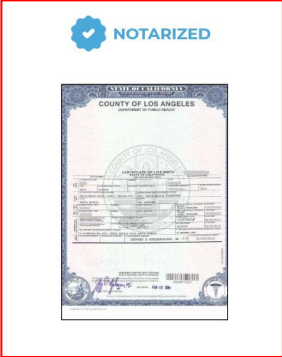
As a **Helper** my ability to preview documents varies...

has the Owner shared it with me?

Shared 




Will Foxx - Birth Certificate 

Preview Replace



NOTARIZED

File
Birth Certificate
Upload date
01/12 /2020
Upload by
Jacob Gonzalez
Valid until
N/A

 Zoom in  Download  Print

Document Preview

has the Administrator authorized me to preview them?

Shared 

Will Foxx - Birth Certificate 

Preview Replace

File
Birth Certificate
Upload date
01/12 /2020
Upload by
Jacob Gonzalez
Valid until
N/A

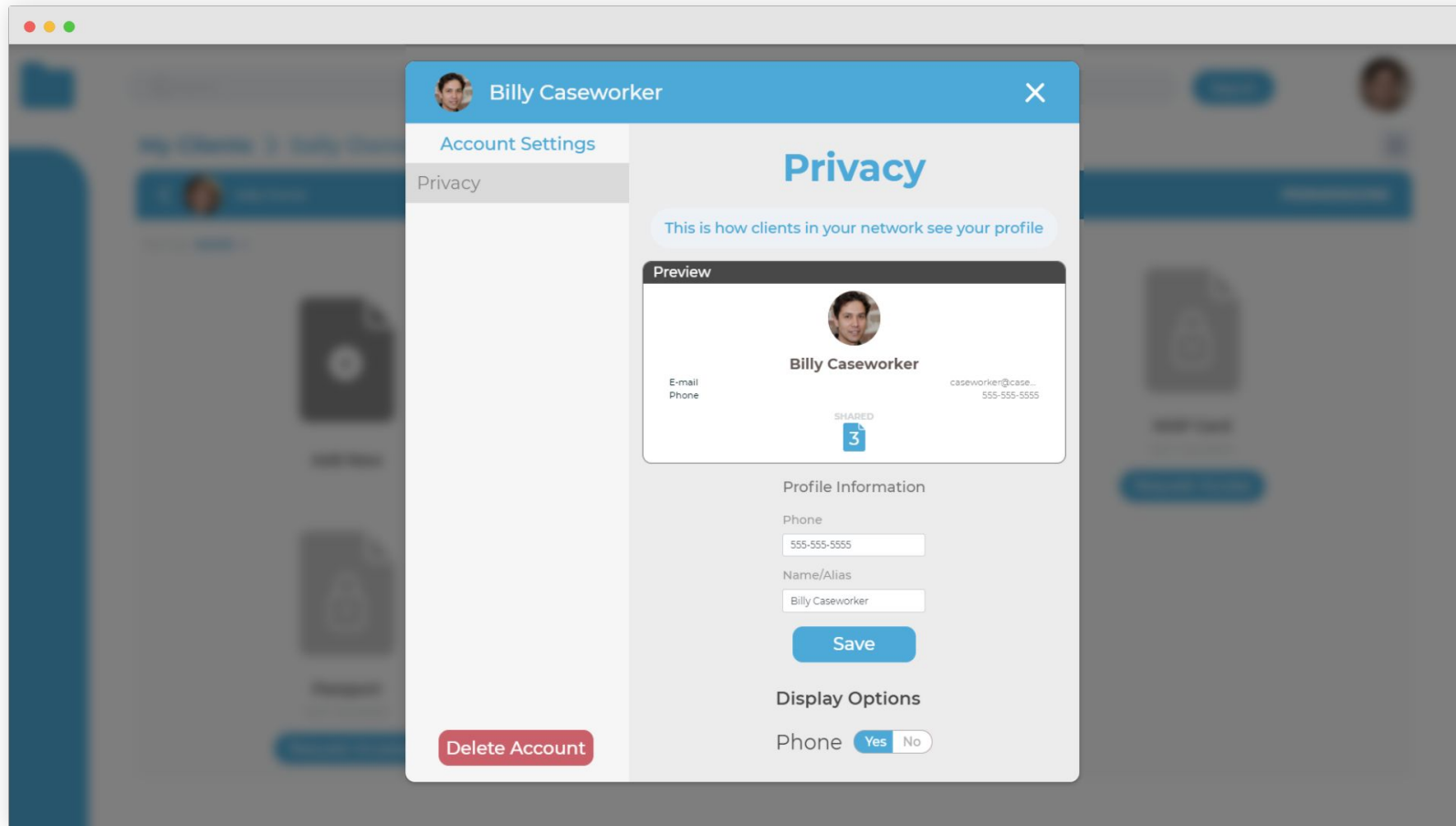
 Zoom in  Download  Print

Document Preview

As an **Admin**, I can limit Helper's ability to preview Owner documents

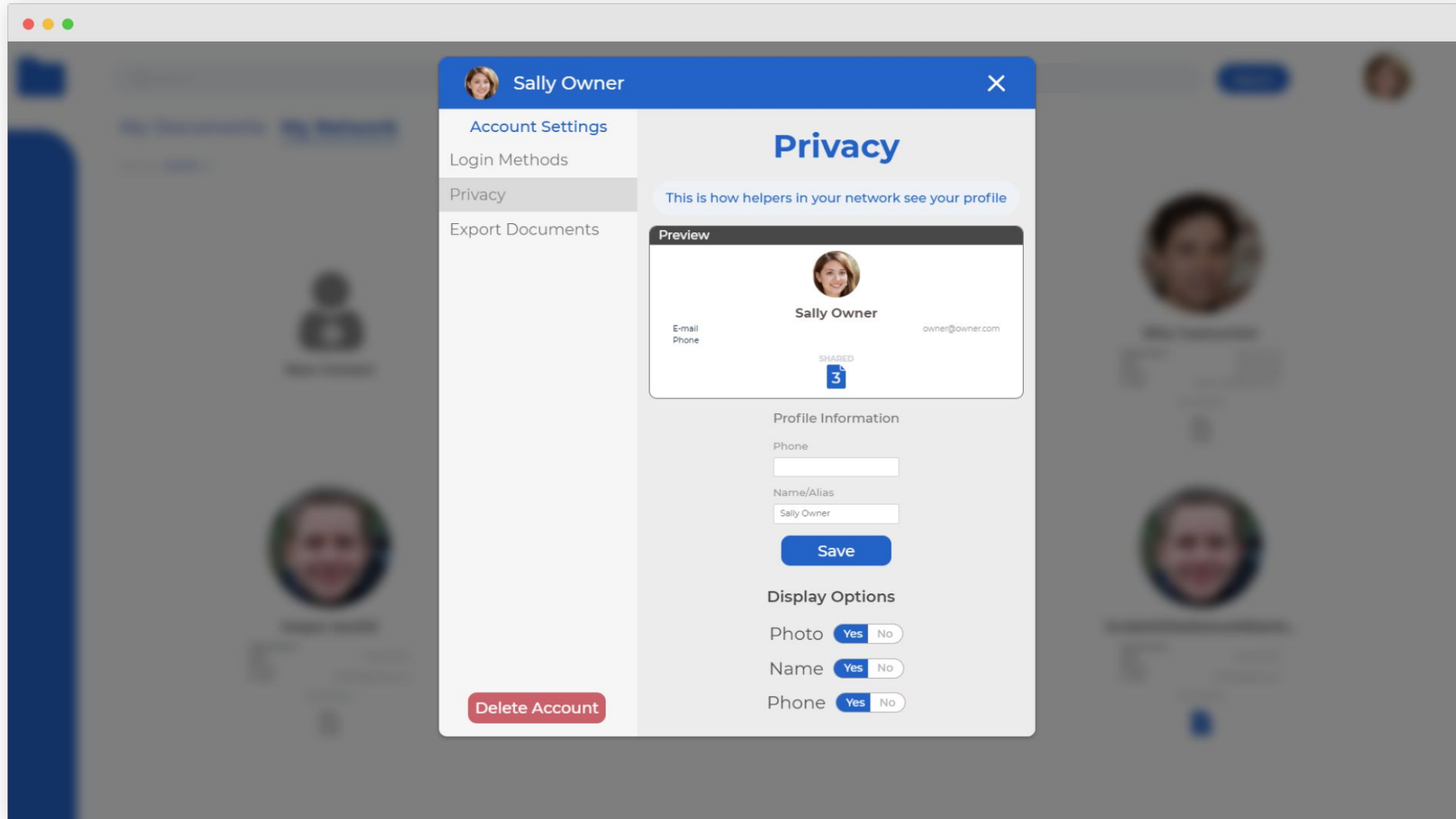
User Information

As a **Helper**, I get to choose what profile information is displayed publicly to all Owners in the platform through my account settings page



User Information

As an **Owner**, I get to choose what profile information is displayed to my added Helper contacts through my account settings page

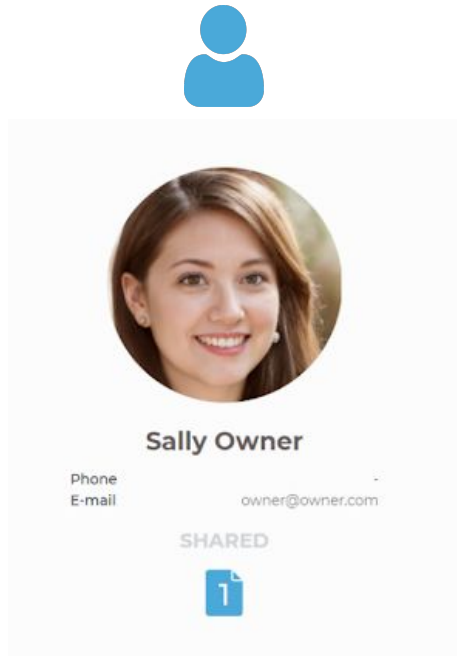


User Information

As a **Helper** my ability to preview owner user information varies...

what information has this document **Owner** shared?

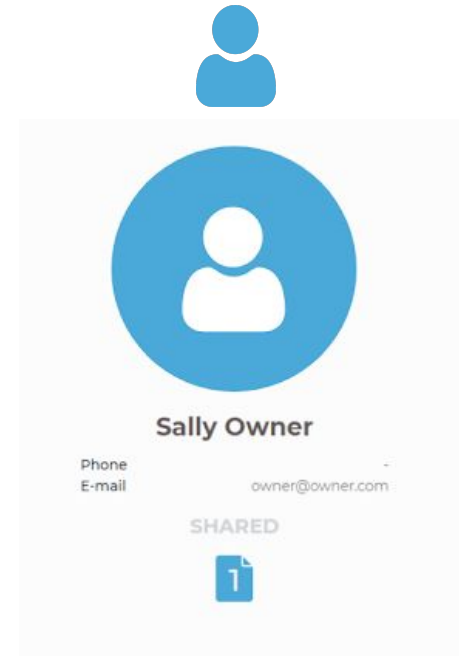
has the **Administrator** authorized me to see it?



- User image
- User email
- User phone



As an **Admin**, I can limit Helper's ability to see Owner users' profile information



- User image
- User email
- User phone

VIEW

REQUEST

(RE)UPLOAD/DOWNLOAD

NOTARIZE

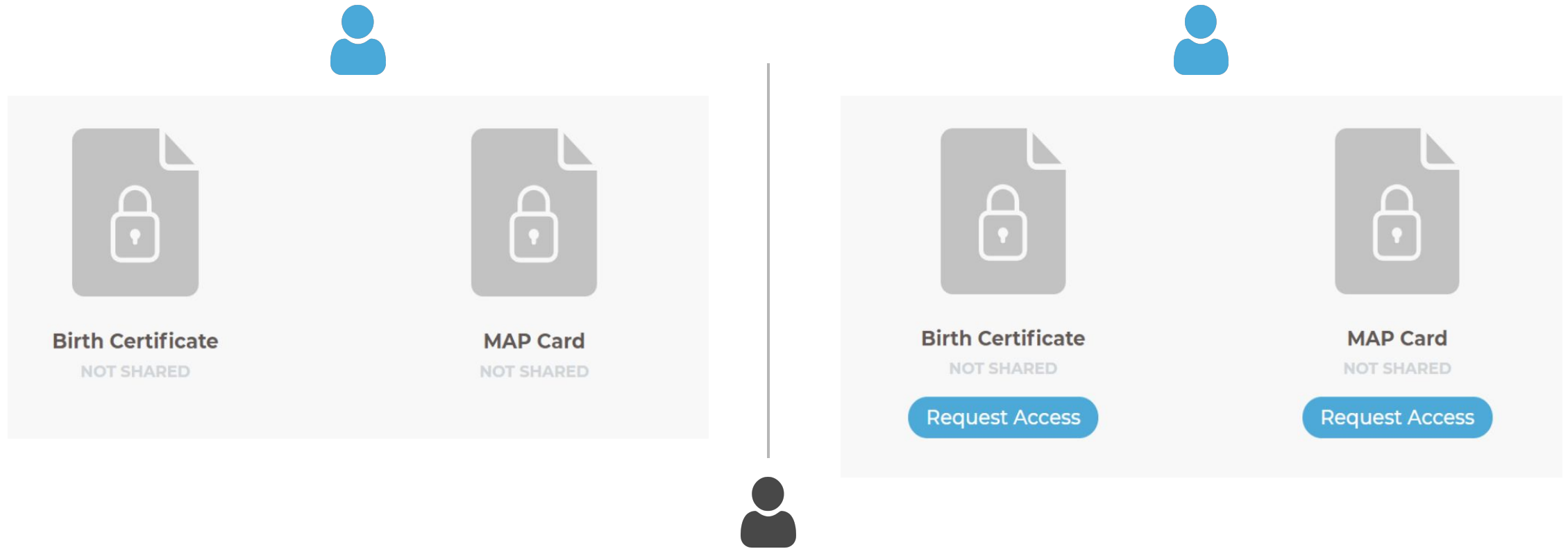


Request Permissions

- Initiate or cancel document share request
- Set time limits on share requests

Document Request

As a **Helper** I can request for an Owner to share a document with me unless restricted by an Admin



Can request a shared document

As an **Admin**, I can limit Helper's ability to request an Owner to share their documents

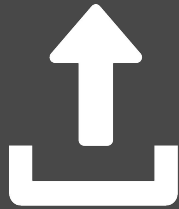
Can request a shared document

VIEW

REQUEST

(RE)UPLOAD/DOWNLOAD

NOTARIZE

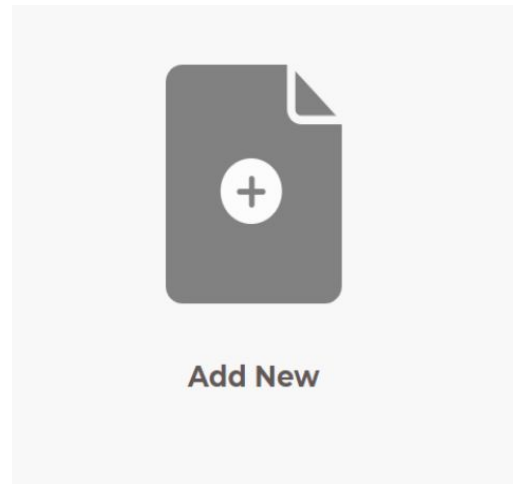


(Re)Upload/Download Permissions


- Upload documents on behalf of Owners
- Download Owner documents
- Replace Owner documents

Document Upload

As an **Owner**, I can always upload documents to my account, and also grant Helpers in my network the permission to upload documents on my behalf





Add this contact to your network?



Jacob Smith

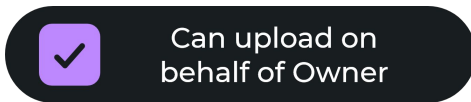
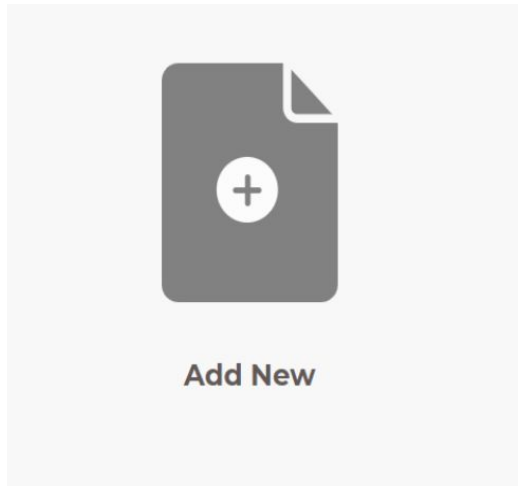
Permissions
What can this contact help me with?

	Help me login	Yes	<input checked="" type="radio"/> No
	Add new documents	<input checked="" type="radio"/> Yes	No

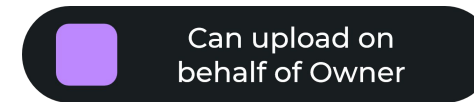
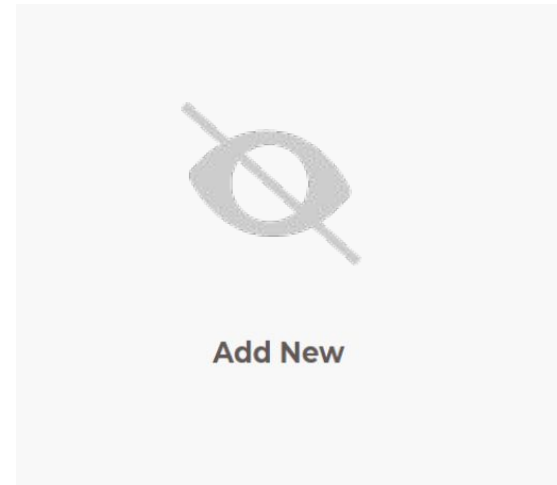
Document Upload

As a **Helper** my ability to upload documents on an Owner's behalf varies...

has the Owner granted me this permission as a contact?



has the Administrator authorized me upload to documents for others?



As an **Admin**, I can limit Helper's ability to request an Owner to share their documents

Document Replace

As an **Owner**, I can always replace documents on my account and share this permission to helpers in my network




Birth Certificate ✕

Preview **Replace** Share 🗑️


Upload your file by dropping it here...

or by clicking here

 Upload File




Note: All your share settings will be saved and contacts you've shared this document with will still have access after replacing it.

Save



Name	Patrick Harrison
Organization	DFE
Role	Case Manager
Phone	512.524.4095
E-mail	p.harrison@dfc.com

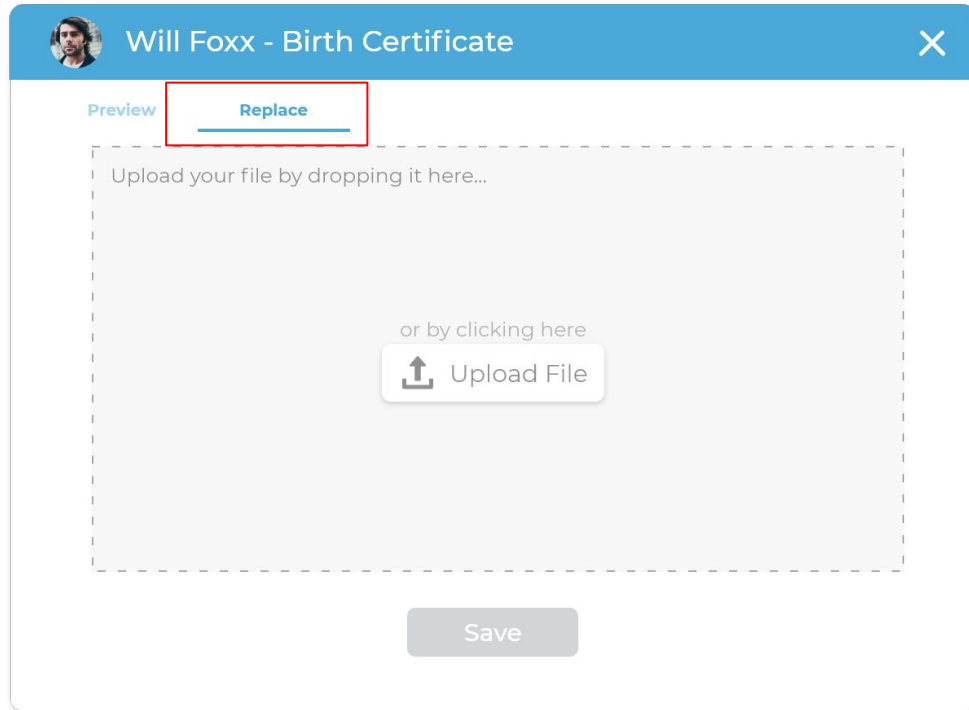
Share Birth Certificate?

	View	<input type="radio"/> Yes <input checked="" type="radio"/> No
	Replace	<input checked="" type="radio"/> Yes <input type="radio"/> No
	Download	<input type="radio"/> Yes <input checked="" type="radio"/> No

Document Replace

As a **Helper** my ability to replace documents on an Owner's behalf varies...

has the **Owner** granted me this permission over their document?



Can replace Owner's docs

has the **Administrator** authorized me to replace Owner documents?



Can replace Owner's docs

As an **Admin**, I can limit a Helper's ability to replace Owner documents

Document Download

As an **Owner**, I can always download documents on my account and share this permission over my documents to Helpers in my network



Birth Certificate [Close]

Preview **Replace** Share [Trash]

NOTARIZED

INFORMATION ACTIVITY

File
MAP Card
Upload date
12/12 /2020
Expiration Date
N/A
Uploaded by
Kayla Nixon

Zoom in **Download** Print

Name Patrick Harrison
Organization DFE
Role Case Manager
Phone 512.524.4095
E-mail p.harrison@dfc.com

Share Birth Certificate?

View Yes No

Replace Yes No

Download Yes No

Document Download

As a **Helper** my ability to download documents on an Owner's behalf varies...

has the Owner granted me this permission over their document?



Will Foxx - Birth Certificate

Preview

NOTARIZED



File
Birth Certificate
Upload date
01/12 /2020
Upload by
Jacob Gonzalez
Valid until
N/A

Zoom in **Download** Print

has the Administrator authorized me download Owner documents?



Will Foxx - Birth Certificate

Preview

NOTARIZED



File
Birth Certificate
Upload date
01/12 /2020
Upload by
Jacob Gonzalez
Valid until
N/A

Zoom in **Download** Print

Can download Owner's docs



As an **Admin**, I can limit a Helper's ability to *download* Owner documents

Can download Owner's docs

VIEW

REQUEST

(RE)UPLOAD/DOWNLOAD

NOTARIZE



Notarize Permissions

- Create and upload certified copies for document Owners

Document Notarization

As a **Helper** my ability to notarize documents on an Owner's behalf varies...

- are my Texas notary credentials valid and up to date?
- is the document a type that supports notarization?
- has the Administrator authorized me to *notarize* Owner documents?



Would you like to notarize this document?

No, skip this step

Document Custodian
Document Custodian...

NOTARY INFORMATION
Notary Name
Testtest
Notary ID
Notary Id...
County
County...

SIGNING KEY (Use PEM)
Choose File No fi...osen
Notary Seal: Choose File No fi...osen

Notarization Destination
Amazon S3



Can notarize
Owner's docs



As an **Admin**, I can limit a Helper's ability to *notarize* Owner documents

Admin Page (Helper Permissions)

[Full breakdown](#)



Verified Helper	Verified Helper Notary	Dedicated Notary	Unverified Helper
<input checked="" type="checkbox"/> Can upload docs on behalf of owner	<input checked="" type="checkbox"/> Can upload docs on behalf of owner	<input checked="" type="checkbox"/> Can upload docs on behalf of owner	<input type="checkbox"/> Can upload docs on behalf of owner
<input checked="" type="checkbox"/> Can replace owners docs	<input checked="" type="checkbox"/> Can replace owners docs	<input checked="" type="checkbox"/> Can replace owners docs	<input type="checkbox"/> Can replace owners docs
<input checked="" type="checkbox"/> Can delete owners docs	<input checked="" type="checkbox"/> Can delete owners docs	<input checked="" type="checkbox"/> Can delete owners docs	<input type="checkbox"/> Can delete owners docs
<input checked="" type="checkbox"/> Can update expiration date	<input checked="" type="checkbox"/> Can update expiration date	<input checked="" type="checkbox"/> Can update expiration date	<input type="checkbox"/> Can update expiration date
<input checked="" type="checkbox"/> Can update owner user info	<input checked="" type="checkbox"/> Can update owner user info	<input checked="" type="checkbox"/> Can update owner user info	<input type="checkbox"/> Can update owner user info
<input checked="" type="checkbox"/> Can request a shared document	<input checked="" type="checkbox"/> Can request a shared document	<input checked="" type="checkbox"/> Can request a shared document	<input type="checkbox"/> Can request a shared document
<input checked="" type="checkbox"/> Can share doc with others	<input checked="" type="checkbox"/> Can share doc with others	<input checked="" type="checkbox"/> Can share doc with others	<input type="checkbox"/> Can share doc with others
<input checked="" type="checkbox"/> Can revoke share request	<input checked="" type="checkbox"/> Can revoke share request	<input checked="" type="checkbox"/> Can revoke share request	<input type="checkbox"/> Can revoke share request
<input checked="" type="checkbox"/> Can set time limit for share	<input checked="" type="checkbox"/> Can set time limit for share	<input checked="" type="checkbox"/> Can set time limit for share	<input type="checkbox"/> Can set time limit for share
<input checked="" type="checkbox"/> Can view owners to request share	<input checked="" type="checkbox"/> Can view owners to request share	<input checked="" type="checkbox"/> Can view owners to request share	<input type="checkbox"/> Can view owners to request share
<input checked="" type="checkbox"/> Can view existing file to request share	<input checked="" type="checkbox"/> Can view existing file to request share	<input checked="" type="checkbox"/> Can view existing file to request share	<input type="checkbox"/> Can view existing file to request share
<input checked="" type="checkbox"/> Can Notarize Documents	<input checked="" type="checkbox"/> Can Notarize Documents	<input checked="" type="checkbox"/> Can Notarize Documents	<input type="checkbox"/> Can Notarize Documents
<input checked="" type="checkbox"/> Can transfer clients to other helpers	<input checked="" type="checkbox"/> Can transfer clients to other helpers	<input checked="" type="checkbox"/> Can transfer clients to other helpers	<input type="checkbox"/> Can transfer clients to other helpers

Note: Owner permissions can also be configured by an Admin, but should never be disabled as this platform is all about giving Owners the capacity to be self-determinant

VIEW

REQUEST

(RE)UPLOAD/DOWNLOAD

NOTARIZE



Default Administrative Settings

Organization + Owner-based verification

We considered 4 types of administrative models, and decided on a hybrid closed model, where there are two types of Administrators



Super Admins have two responsibilities:

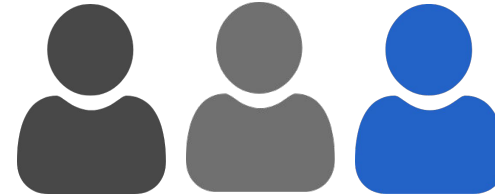
- Onboard organizations and sub-admins into LifeFiles
- Provide technical maintenance



Sub-Admins have one responsibility:

- Verify, onboard and monitor Helper users of their organization in LifeFiles

What is the Hybrid - closed model?



Organization-based verification

Helper permissions depend on the account type a representative of their organization (sub-admin) sets for them. Helpers are

verified by a sub-admin and
authorized by an owner

Helper Onboarding Overview



Super Admin

Super Admin can also fork out LifeFiles to organizations

Verify onboard Monitor



Sub-Admin

Organization 3 Representative



Sub-Admin

Organization 1 Representative



Sub-Admin

Organization 2 Representative

Verify onboard Monitor



j.adams@org3.com

Helper ▾



a.williams@org3.com

Volunteer ▾



j.adams@org1.edu

Helper ▾



a.williams@org1.edu

Volunteer ▾



j.adams@org2.gov

Helper ▾



a.williams@org2.gov

Volunteer ▾

Advantages

High level of control and user protection

A tightly controlled platform means a high level of protection over its users

Lessens the Admin effort

Organization Sub-Admins onboarding their own helpers to reduce effort on the Super Admin side

Bad actors handled by the organization itself

If something goes wrong, the Sub-Admin has the ability to revoke their network's helper accounts.

Ability to create time-limited Helper accounts

Can be automatically de-activated upon expiry (for niche use cases such as doc clinic volunteers)

Official Helper accounts can boost Owner's confidence in LifeFiles

Knowing that a Helper belongs to an organization, may help Owners be less concerned about being preyed upon by impersonators or bad actors

Disadvantages

Family members, advocates and unaffiliated users cannot become Helper users

Making it so that only the Super Admin and Sub Admins have the ability to onboard helper users means people that do not belong to any organization cannot become Helper users (*Unless we explore a possible path for unaffiliated helpers known as 'Personal Helpers'*).

The extra setup process for Sub Admins

The Super Admin needs to work with organizations to onboard a representative into becoming a Sub Admin (this could be a potential bottleneck at first)



Hybrid - Closed model development needs

1. Identify the back-end needs for Super-Admin and Admin roles
2. Integration of Texas notary database with platform for notary automation verification
3. Limited time Helper account set-up
4. Owner documents sharing informed decisions feature
5. Confirmatory warnings for sharing documents
6. Revisit the helper role default permissions set-up in Admin platform

COMMON NEEDS ACROSS ALL VERIFICATION MODELS

1. Need for Email/Phone number verification via activation link on Helper platform, when Helper creating an account
2. Revisit the helper role default permissions set-up in Admin platform
3. Integration of Texas notary database with platform for notary automation verification

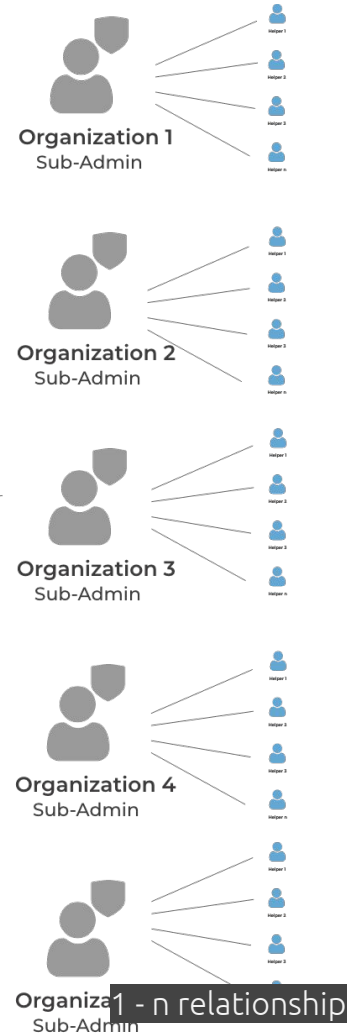
Relationship dynamics

Organization and organization



1 - n relationship

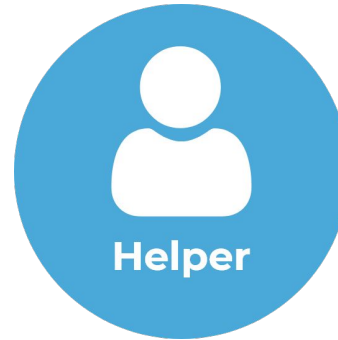
Organization and Helper



Helper and Owner



Hybrid - Closed modal Helper user types



Has access to **all permissions** and features on Platform
Upload + Replace + Request + View + Download
*can be granted notarization privileges if Helper is certified notary

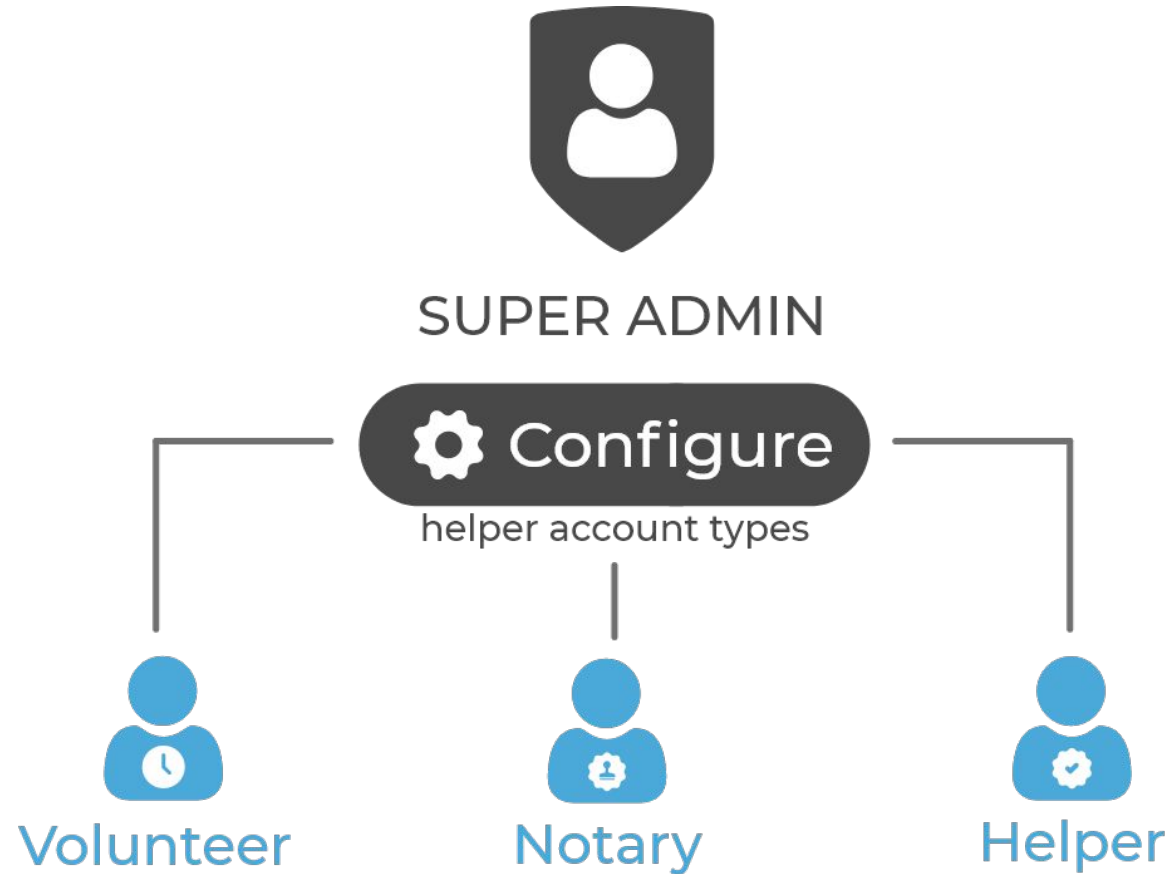


The permissions are **limited to assisting** owners with uploading and replacing documents. These accounts can be temporary and set to expire
(Re)Upload + Replace

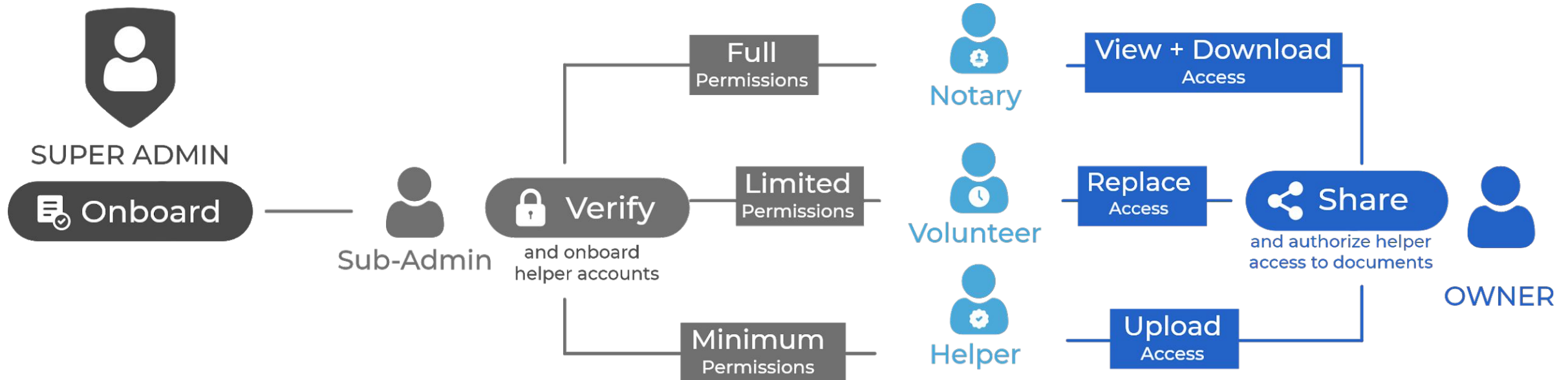


This is a third-party **registered notary** that is in the platform to notarize owner documents and nothing else.
Upload + Reupload + Request + View + Download/Print

Hybrid model permissions overview



Hybrid model permissions overview



Platform Administration & Blockchain

- **There are 3 options for storing notarization data:**
 - a. Ethereum
 - b. Rootstack
 - c. Free notarization option available with public S3 bucket from AWS
- **This section identifies how an administrator can establish a blockchain wallet to pay for notarizations**

The notary chooses where the notarial data is stored. If on Ethereum or Rootstack, the platform pays for the cost.

The screenshot shows a user interface for a notary service. At the top, a blue header bar contains the user's profile picture and name, "Sally Owner", and a close button (X). Below the header, a light blue banner asks, "Would you like to notarize this document?". A large button labeled "No, skip this step" is positioned above a document preview. The document is a "MEDICAL RECORD DEPARTMENT QUESTIONNAIRE TO BE USED IN THE INSTITUTE OF MEDICINE STUDY OF THE RELIABILITY OF ABSTRACTED MEDICAL RECORDS INFORMATION". To the right of the document is a form for notary information. The form includes fields for "Document Custodian", "Notary Name", "Notary ID", "County", and "SIGNING KEY (Use PEM)". A red circle highlights the "Notary Seal" field, which has a dropdown menu open showing "Amazon S3", "Ethereum Network", "RSK Network", and "Amazon S3". At the bottom of the form are "Go Back" and "Next" buttons.

Sally Owner

Would you like to notarize this document?

No, skip this step

Document Custodian

Document Custodian...

NOTARY INFORMATION

Notary Name

Notarytest

Notary ID

Notary Id...

County

County...

SIGNING KEY (Use PEM)

Choose File No fi...osen

Notary Seal: Choose File No fi...osen

Notarization Destination

Amazon S3

Ethereum Network

RSK Network

Amazon S3

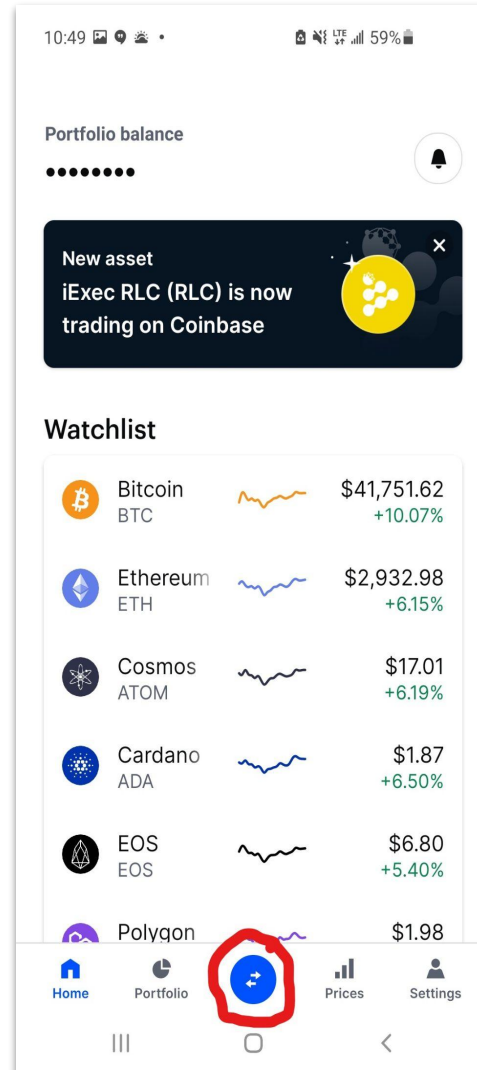
Go Back

Next

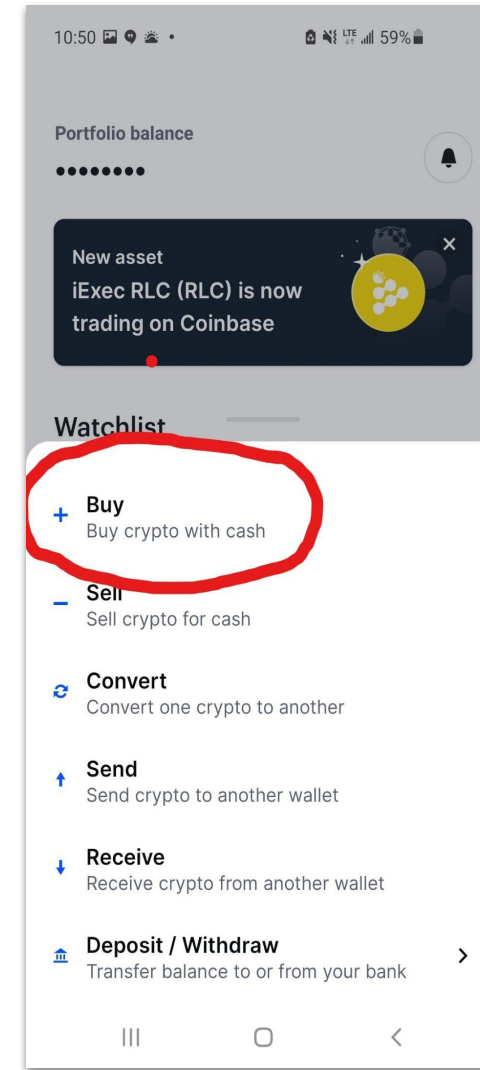
To fund the notarization data on blockchain...

1. Log into or create a blockchain vendor account.
[Binance](#), [Coinbase](#), [Voyager](#), [Gemini](#)
2. Buy Ethereum or Rootstock. Here's an example of how to do it with Coinbase...

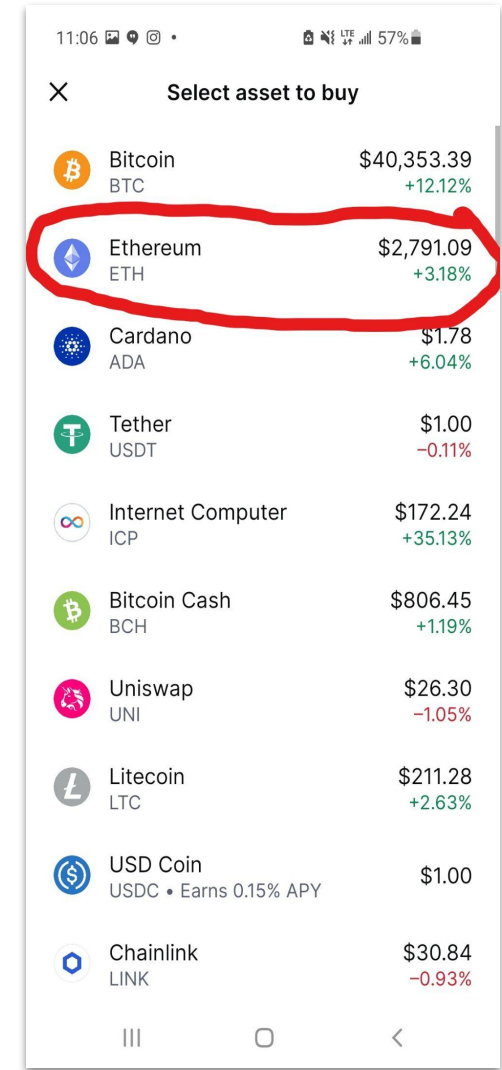
Find a button that allows you to complete transactions...



Select the option to buy crypto



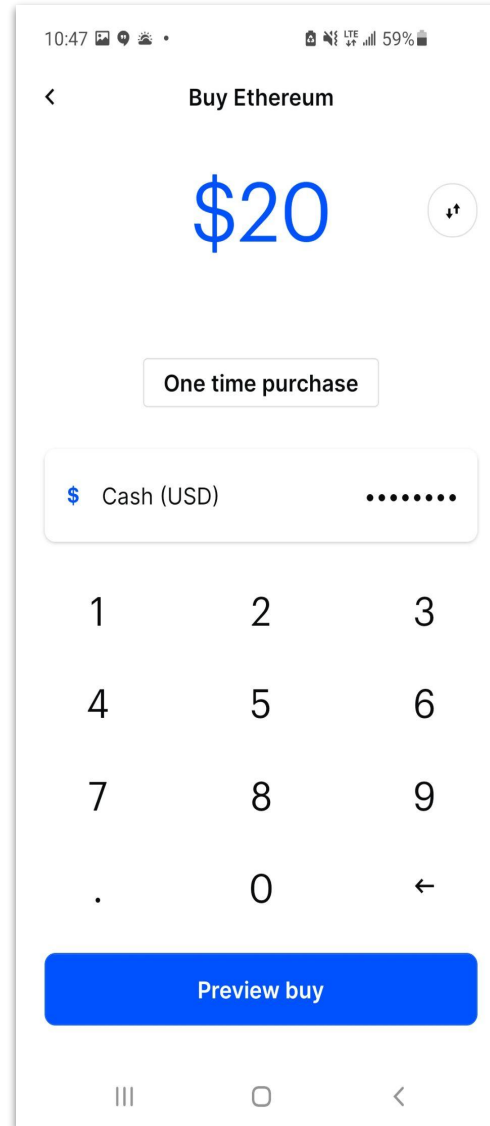
Select which coin to buy (choose from either Ethereum or Rootstock)



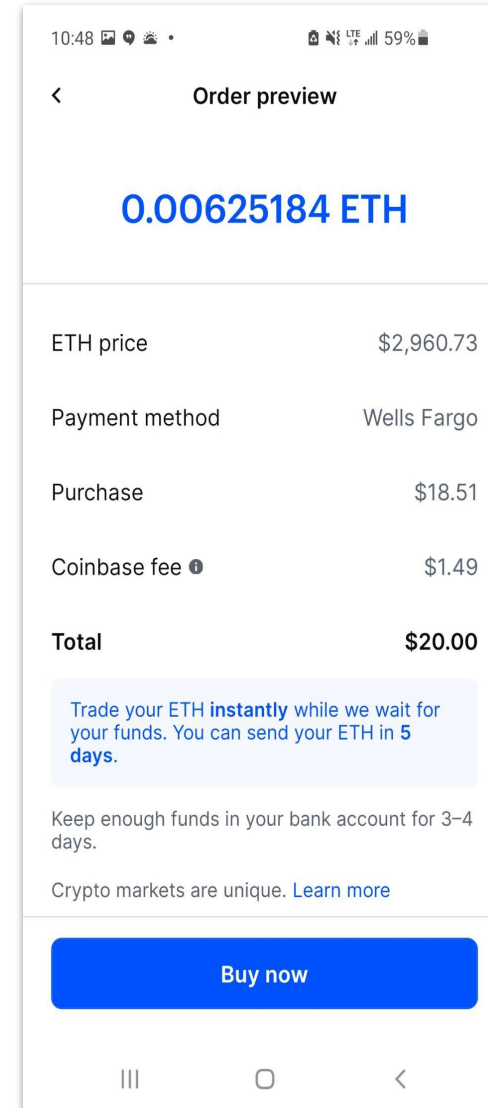
...then...

3. Send your newly added crypto to the LifeFiles wallet

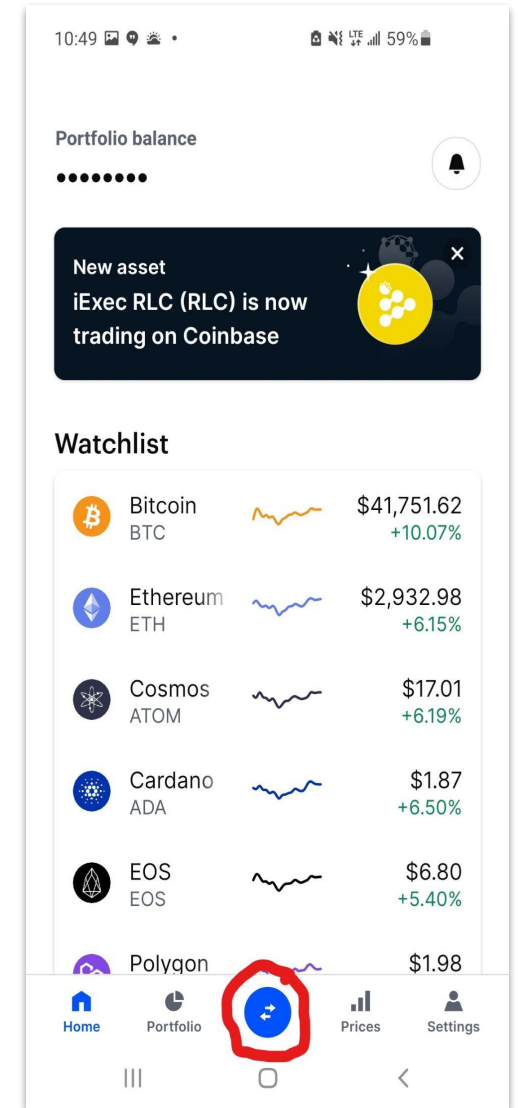
Determine the amount to be purchased and select or add your payment method



Purchase your desired amount of crypto



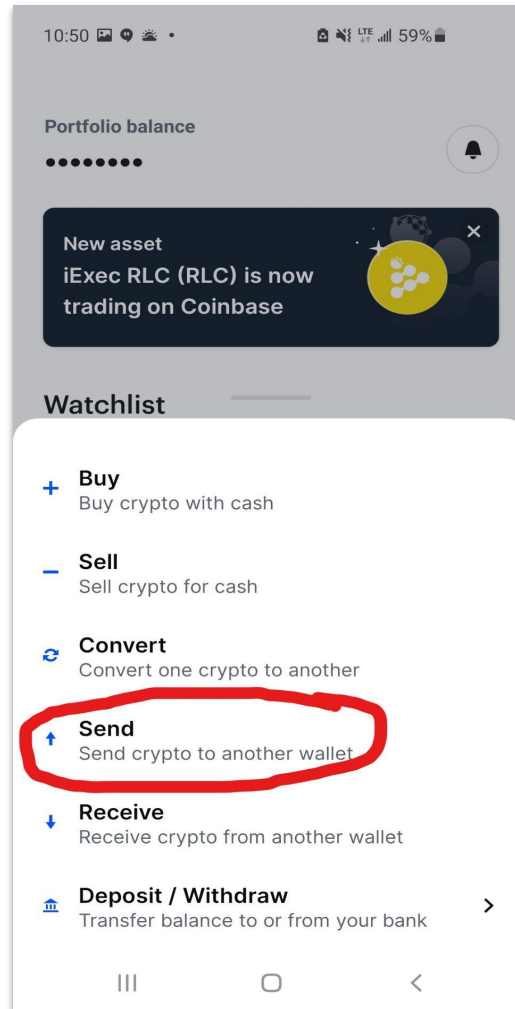
Go back to the home page and click on the 'Transact' button again



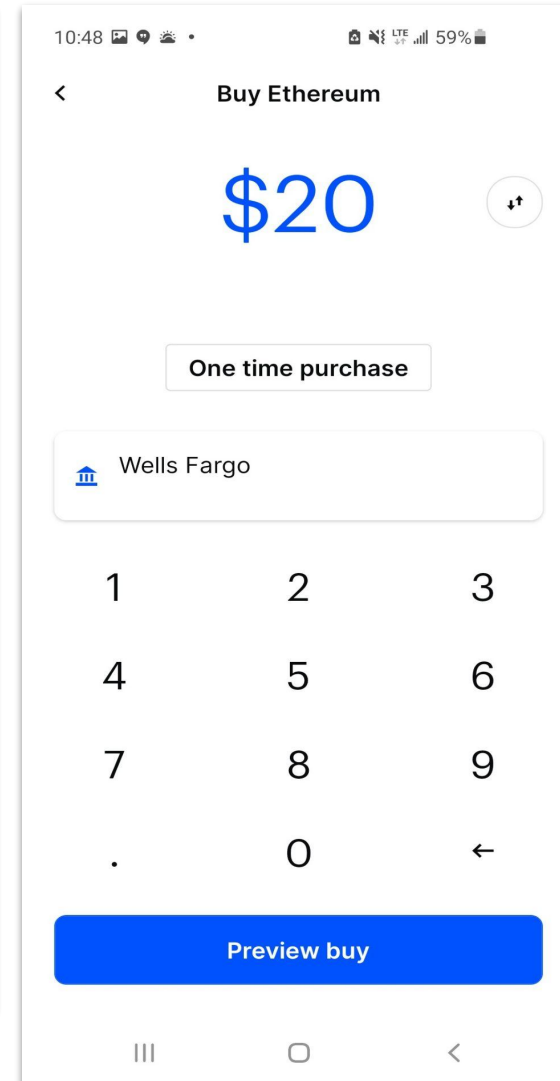
...finishing up

3. Send your newly added crypto to the LifeFiles wallet

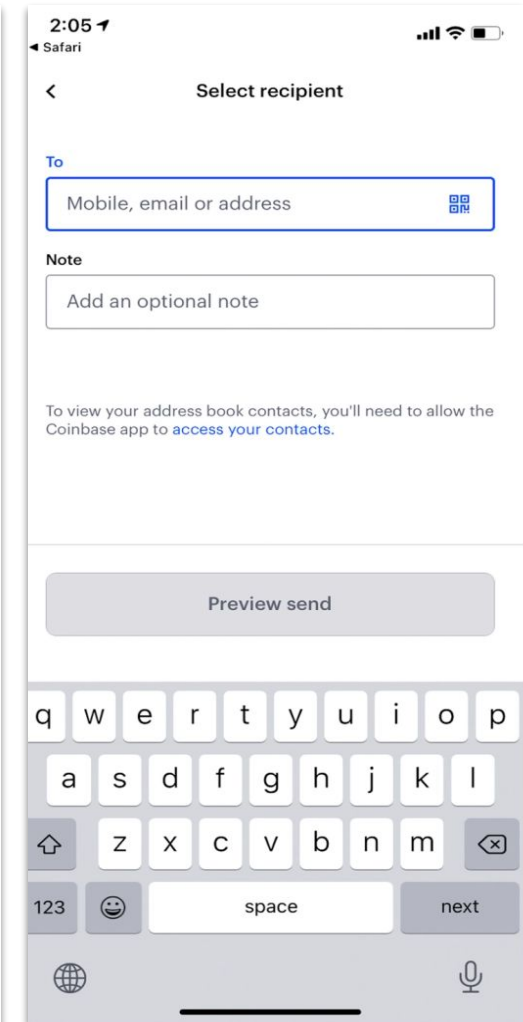
Now click on 'send' to send funds to the LifeFiles wallet



Select which coin to send and the total funds you wish to send to the LifeFiles wallet



Send your funds, you can enter the wallet address listed above or scan the QR code



6

Roadmap

MVP - Alpha - Beta - Launch

Learning Launch

A learning experiment conducted quickly and inexpensively to gather contextual data to determine the merit of committing further time, people and resources



Conditions for Learning Launch

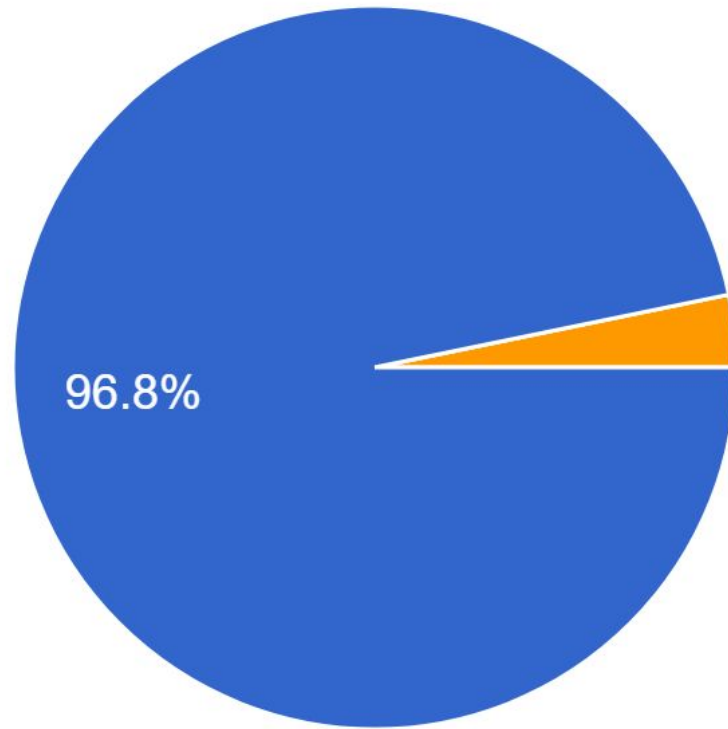
1	Platform Administrator	<ul style="list-style-type: none">• One platform administrator
2	On-boarding	<ul style="list-style-type: none">• Main focus is for on-boarding document owners and a few document helpers
3	Helpers	<ul style="list-style-type: none">• Organizationally-affiliated helpers, same organization as the platform administrator.
4	Document Owner	<ul style="list-style-type: none">• Limited to clients of the platform administrator
5	Notary	<ul style="list-style-type: none">• Digital notary affiliated with the administering organization
6	Document Receiver	<ul style="list-style-type: none">• Either used for document replacement assistance, and/or• Direct service offered from administering organization• Work to get some recognition by other document receiving services

Learning Launch Results

		Critical Path	Essential learning	Result	
1	Platform Administrator	Can the new potential Admin navigate the Admin page well enough to be an Admin?	Whats the time/resources commitment for Admins, on-boarding and post on-boarding?	• • •	✓
2	Organizationally-affiliated Helper	Is it easier or harder to use than their current software suite (Gdrive, Apricot)?	How does the process flow from Admin training helpers, to Helpers onboarding Owners?	• • •	✓
3	Document Owner	Is it easy to remember how to use LF a week after having been onboarded by a helper?	How well do Doc owners understand the sharing mechanics?	• • •	✓
4	Notary	Does the notary trust LifeFiles?	Can we onboard a registered notary (y/n)	• • •	✓
5	Document Receiver	Can a doc owner transact with a document receiver using LifeFiles? (if no, why not?)	Which of the share methods would a type of receiver accept?	• • •	✗

Do you think there is a benefit in having a digital and legally valid copy of your IDs and documents?

Survey sample of 50 People experiencing homelessness



- Yes
- No
- Maybe

Sunrise Homeless Navigation Center

“We are the only full-service navigation center that stayed open during the pandemic. We see first hand the trap that lost/stolen/destroyed documents pose to people without homes as they expend tremendous time and energy trying to reacquire documents over and over again.

Without these documents they cannot get jobs, apply for housing, cash checks, open bank accounts etc. They cannot get on their feet. LifeFiles would allow us to help motivated clients out of this endless cycle, *particularly at a time when the camping ban and imminent sweeps will result in their property being lost, stolen or destroyed.*” - Sarah Weier, Assistant Director

Foundation Communities

“It would be immensely beneficial for clients that come to us for one service but also need others. *Some clients cancel appointments because they can't find their documentation. Having access through a shared resource amongst partner organizations would be immensely beneficial.* It would require less documentation being brought to an appointment if they have access to it.” - Connor Tantu, Program Coordinator

Integral Care

“Historically the population I serve has missed out on many opportunities to change their life due to not having the right identity documents accessible. *LifeFiles will make it possible for individuals to not miss out on these opportunities* by having a safe and secure place to store these documents. - David Gomez, Program Manager for Homeless Services

Texas Homelessness Network

“LifeFiles would be *solving a problem that we have been trying to solve for a long time.*” - Eric Samuels, President and CEO

Austin service providers

Austin Public Health

“Document and identity management are immense hurdles for people experiencing unsheltered homelessness. It is easy to take for granted the ease with which most of us access the marketplace and essential services, because we are accustomed to holding the keys that unlock the doors to basic healthcare, food, housing, and employment. LifeFiles solves for numerous barriers to systems entry by *making identity management and document storage resilient, secure, and intuitive for the end user.*” - Charles Loosen, Homeless Strategy Division

Downtown Austin Community Court

“Replacing an ID or driver license can be very difficult if the information on the ID is unknown, specifically the ID/DL number. In addition, the Social Security Administration only allows an individual to possess ten social security cards in a lifetime. If this amount is exceeded then a letter from a government agency, specifying the need for a replacement card, is needed. This means only certain providers can request this exception. *LifeFiles would save time and resources.*” - Jennifer Sowinski, Clinical Operations Manager

Austin-Travis County EMS

“This would allow me to continue to work on the client’s navigational path rather than start over every time I come across a new (to me) client. It would also give the client one thing that can’t be taken from them, some control amid the chaos.” - Amber Price, Paramedic

Future Roadmap

- ✓ Can preview files
- ✓ Can download files
- ✓ Can replace files
- ✓ Can add contacts



Administer

Onboard

**Helper /
Notary**

Store

Share

Verify



Sub-admin feature
Volunteer helper
w/ time limitation
Analytics that
respect privacy

NIST certification
and proof of
personhood to the
multimodal login

Error Handling
when an account
in the database
that has that
email

Email/phone
validation

Look-up notary to
prevent fraudulent
notary sign-up

Biometric log-on

Ability to have the
client share where
the physical
document is
stored

Look-up notary to
prevent fraudulent
notary sign-up

Micro instruction
to wait for
document upload
process

Document
history

Multi-page
upload

Identify
document as
private, with
share warning
confirmation

Enhanced "share"
mechanism - API,
OCR, send a
secure link

Ability to adapt
API to Secretary
of State website

What is meant by “digital identity”?

87th Texas State Legislative Session [House Bill 2199](#) (did not pass), proposing the formation of a digital identity working group, defines "Digital identity" this way:

- A. credentials issued by federal, state, and local governmental agencies to a person for identification, licensure, registration, and other purposes;
- B. credentials conferred to a person to verify the person's skills and qualifications;
- C. digital credentials issued for user authentication and access management; and
- D. digitally-verifiable claims.

Life Files interacts with that concept of “digital identity” in this way

Stores scanned digital copies, with potential notarization, if needed

- A. credentials issued by federal, state, and local governmental agencies to a person for identification, licensure, registration, and other purposes;
- B. credentials conferred to a person to verify the person's skills and qualifications;
- C. digital credentials issued for user authentication and access management; and
- D. digitally-verifiable claims.

Stores scanned digital copies, with potential notarization, if needed

Does not do this, but could with further development

Includes these in the architecture of digital notarization to support the long-term use case of an authoritative source creating and signing the document that is then stored

3 technical needs to enable digital credentials and access management (part c in previous slide)

(36 person-months in total. ~ 300K)

1 The need to prove that a person signed into the app is authentic

Deliverables:

1. Add AAL levels and NIST certification and proof of personhood to the multimodal login
2. Contribute to the municipal / national standard for AAL and proof of personhood

Estimate: 12 person months work

2 The need to prove that a document required for the transaction is authentic

Deliverable:

1. Pull notarization out of LifeFiles to create stand alone notarization tools
2. Create email-to-DID tools to allow the general public to use SSI applications

Estimate: 6 person months

3 The need to support digital signatures

Deliverable:

1. Create a stand alone digital signing tool. Think of this as an open source docuSign that can easily be added like a custom form to existing government CMSs.

(This is also a future need of LifeFiles for signing LOAs and contracts)

Estimate: 18 person months

Comparative Landscape

	LifeFiles	MyDigital Locker	ID.me	SigniX	Notarize
Function	digital document storage, notarization, and verification	digital document & data storage	digital credentials and access management	digital signatures and notarization	digital notarization
Core users	Homeless folks, Continuum of Care providers and their clients; other service providers outside of the continuum of care; mutual aid groups, foster care, low income individuals, full time RVers/nomads	Continuum of Care providers and their clients	Military, students, alumni, teachers, nurses, first responders, company employees, government employees, age groups	Titles, tax, real estate closings, wealth management, legal, healthcare, construction, insurance & annuities, government, education	Lenders, auto retailers, businesses, credit unions and banks, title agents, notaries, real estate closings
Document storage	available	available	not available	not available	available
eNotarization	available	not available		Available, NIST digital signature compliance	designed around digital notarization, complete with video conferencing
Accessible multi-modal log-in	available, accessible	available, not accessible	not available	?	?



Resources & Links

Open Source Resources

MyPass Secure Document Storage:

<https://github.com/cityofaustin/mypass>

Decentralized Verification, and digital notarization templates

<https://github.com/cityofaustin/mypass-verification>

Multimodal login Oauth server

<https://github.com/cityofaustin/multimodal-login>

MyPass Blockchain Report

<https://github.com/cityofaustin/mypass/wiki/blockchain-report>

UX Components Library

<https://lifefilesds.webflow.io/>