TiiQu

CERTiif and VERiiF redesign

The User Experience of a Block-chain Certifier and Verifier : The certifier and verifier is a software application developed by TiiQu Ltd which allows institutions to issue certifications that are rich in details, and can be instantly verified by anyone at any time. The collaboration will aim to:

- Analyse the existing certifier and verifier system to gain familiarity with it.
- Identify the structure and level of detail a degree certification from Northumbria would need to / ideally have.
- Test the certifier and verifier system to identify user experience improvements for both the institution issuing certifications, the recipient of the certification and the institution verifying the integrity of the certification.
- Implement the user experience improvements identified in section C
- Test the improved system with a trial sample of participating students of Northumbria University

Existing website research

iCredify is an Indian University verification website designed to verify degree certificates. The system works the same as TiiQu but there are clear differences in layout but content is different

Appearance

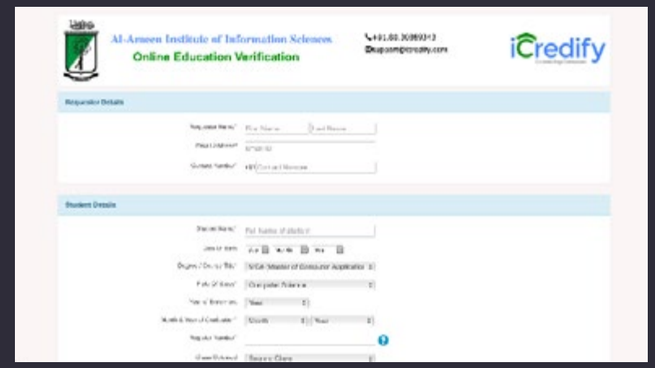
- Clear layout, designed to present clear information towards the user.
- Pictures with University clients
- Strong blue bars along with green icons to stand out clear information to the user.

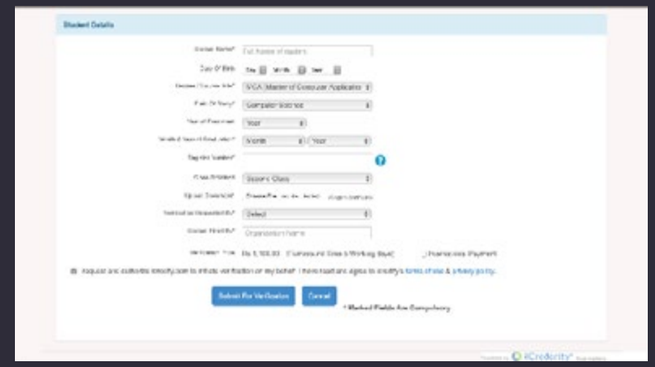
Usability

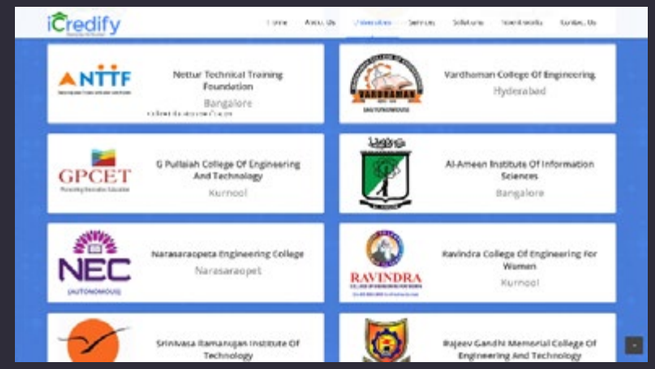
- Toolbar neatly displaying website content.
- Top of website displaying company information and social media likes

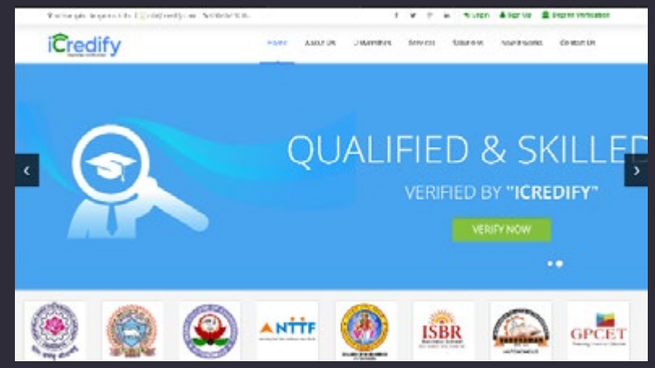
The Degree form

- Two Forms which allows the user to fill in information about what degree they do.
- The use of drop down menu's
- Contact Details are displayed in the top section









Existing website research

DegreeVerify is the system used by the US firm National Clearing House. There objective is support the US educational acts in various forms

Appearance

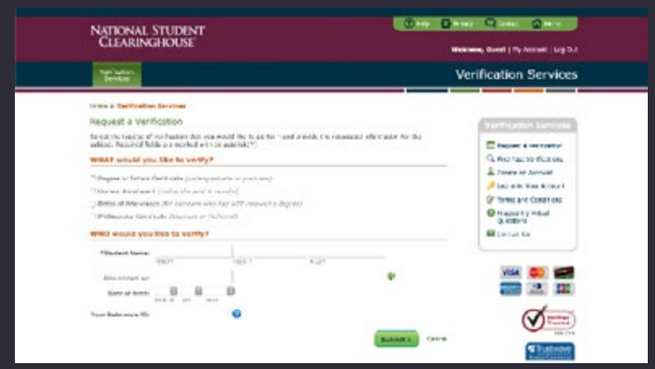
- Bleak grey colour scheme, gives across a serious manor
- Using strong vibrant colours to separate different sections of the website
- Social media icons are displayed in the bottom of the website

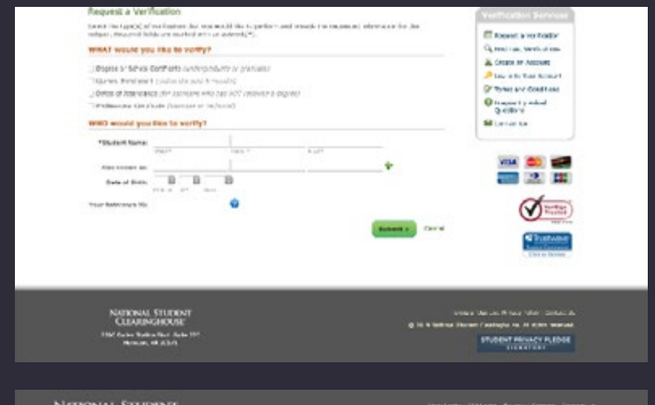
Usability

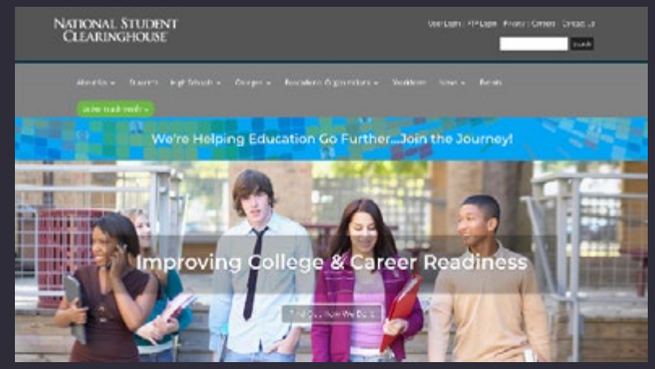
- Toolbar neatly displaying website content.
- Top of website displaying company information and social media likes

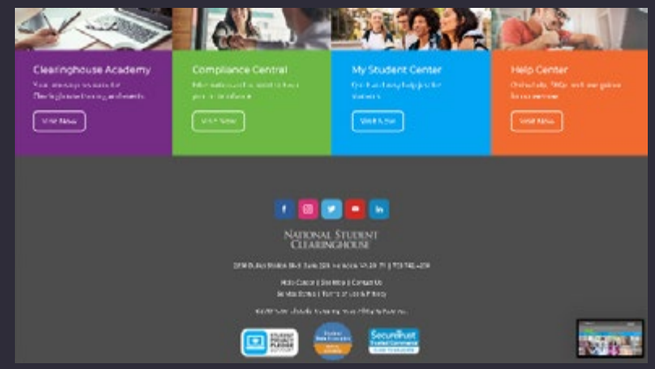
Degree Form

- Two Forms which allows the user to fill in information about what degree they do.
- The use of drop down menu's
- Left side bar displaying important links and FAO about degree certification
- Payment information displayed in the left hand side

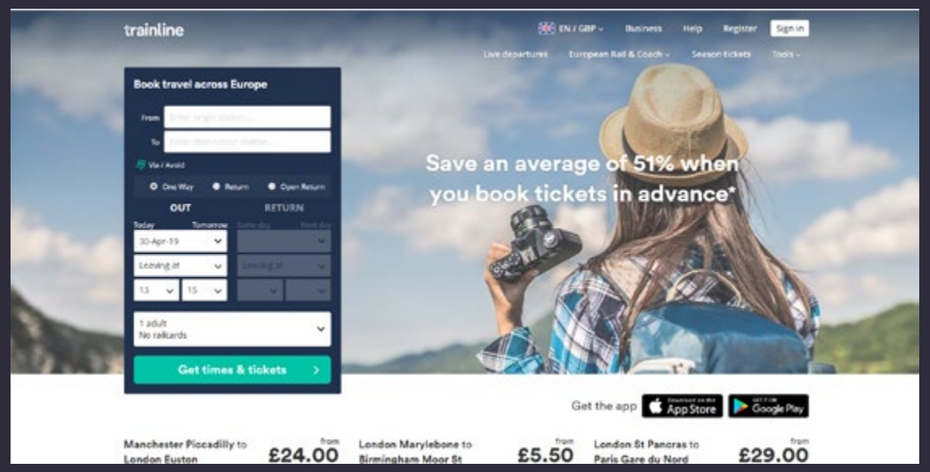


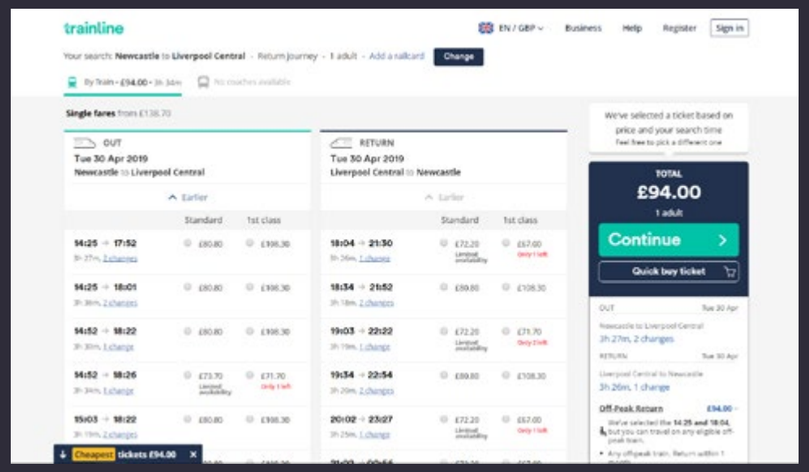


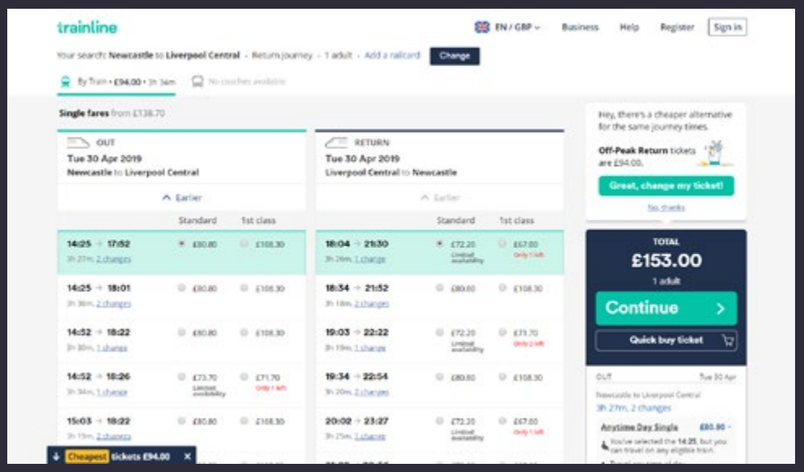


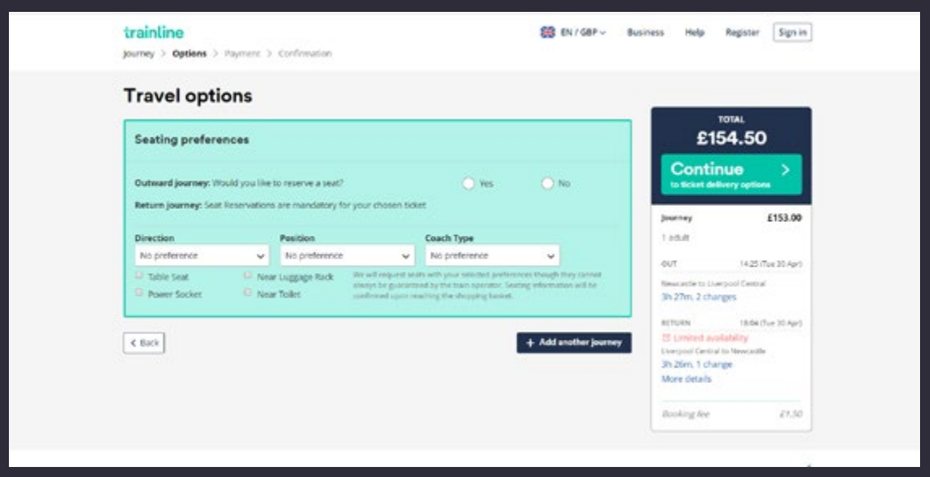


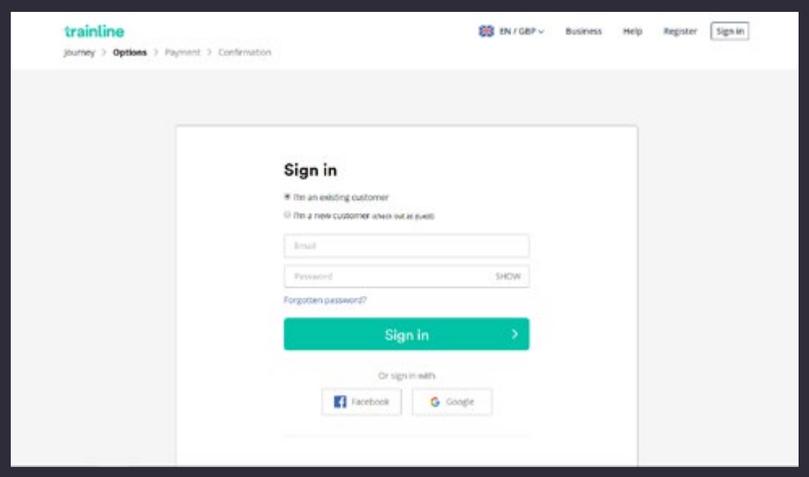
Background Research

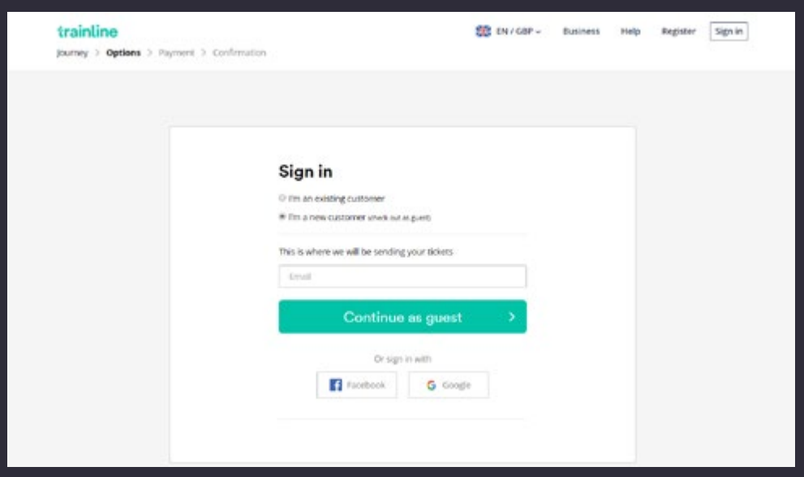


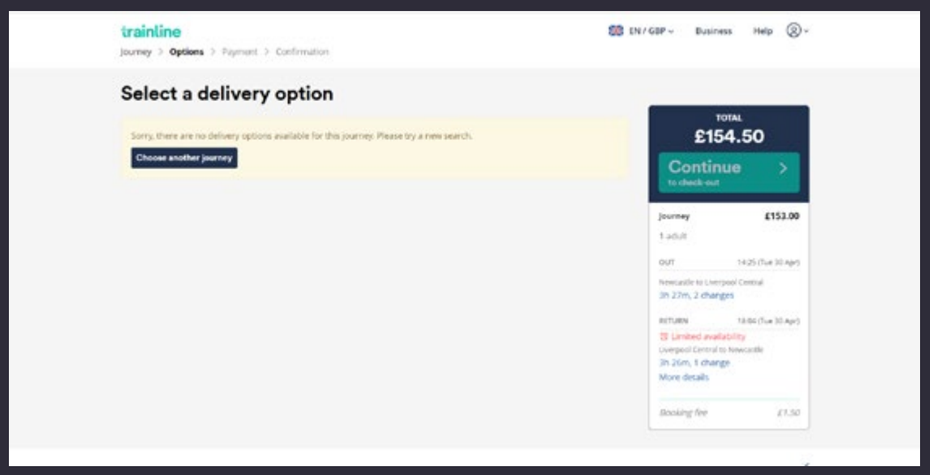


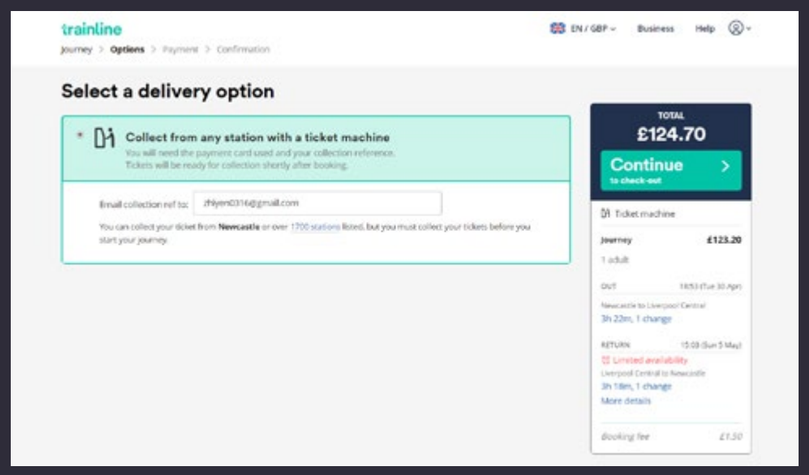


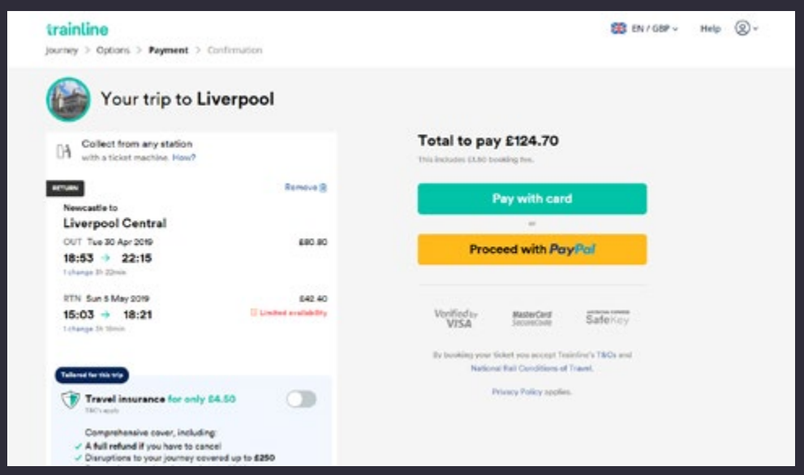












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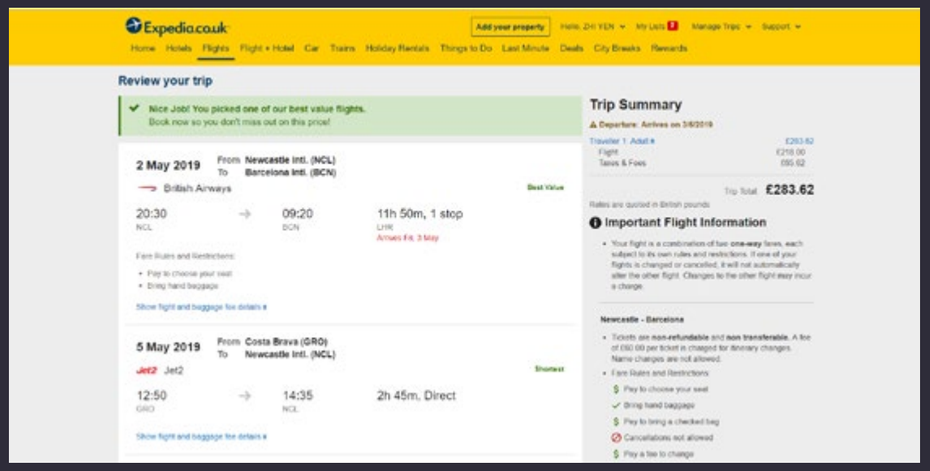
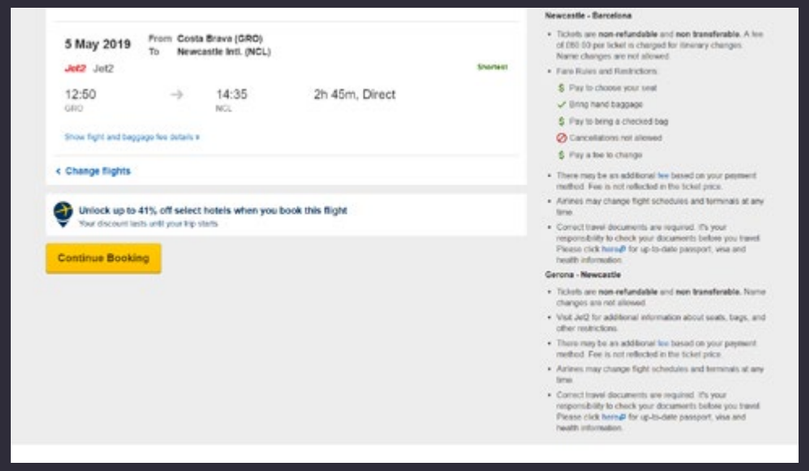
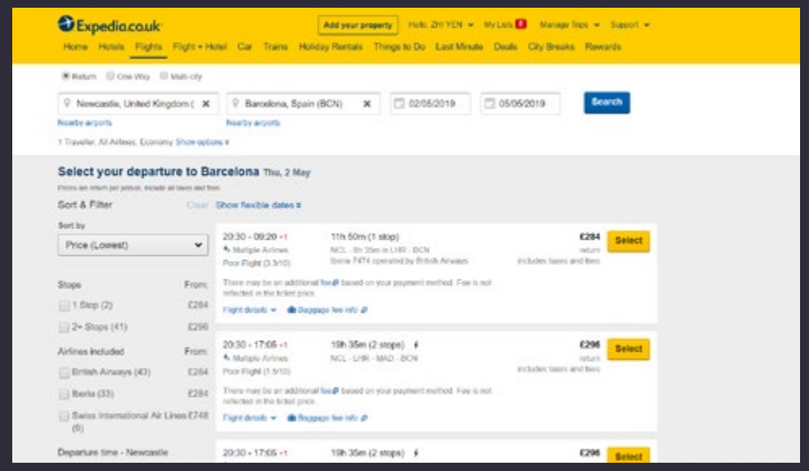
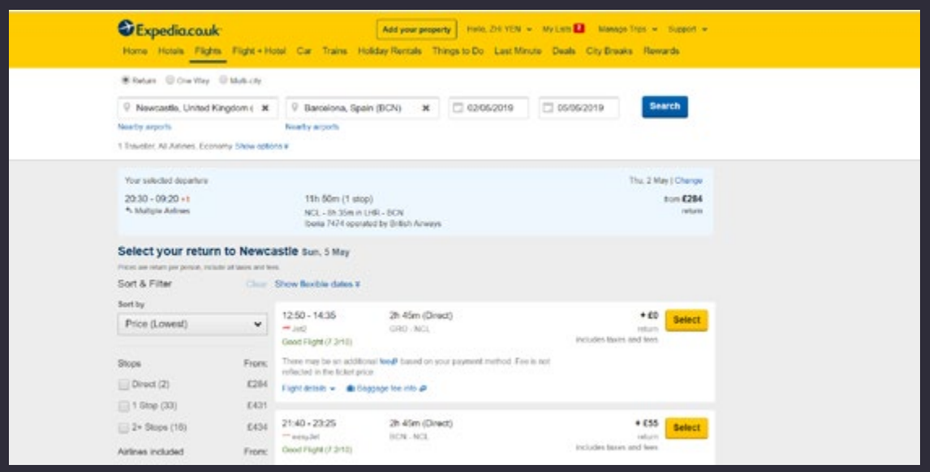
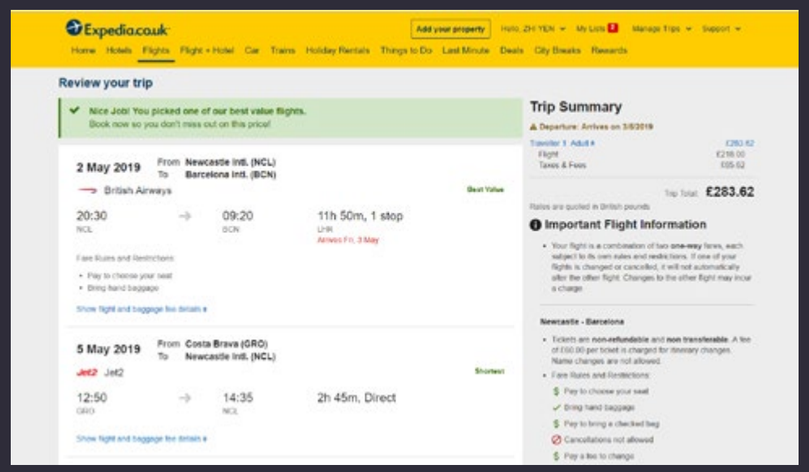
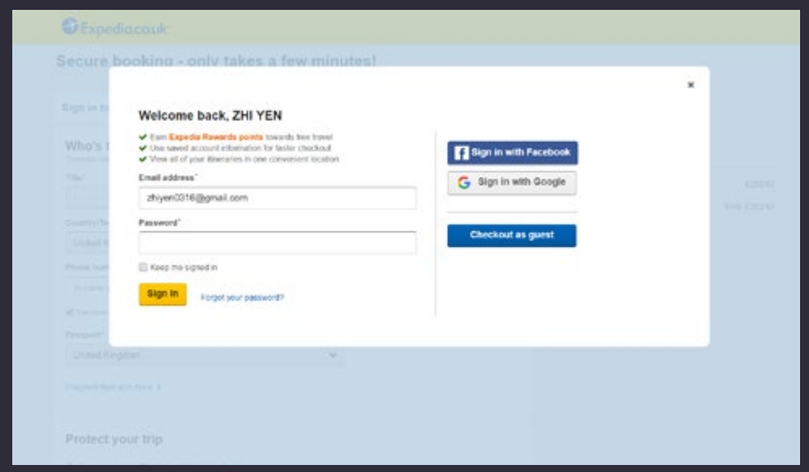




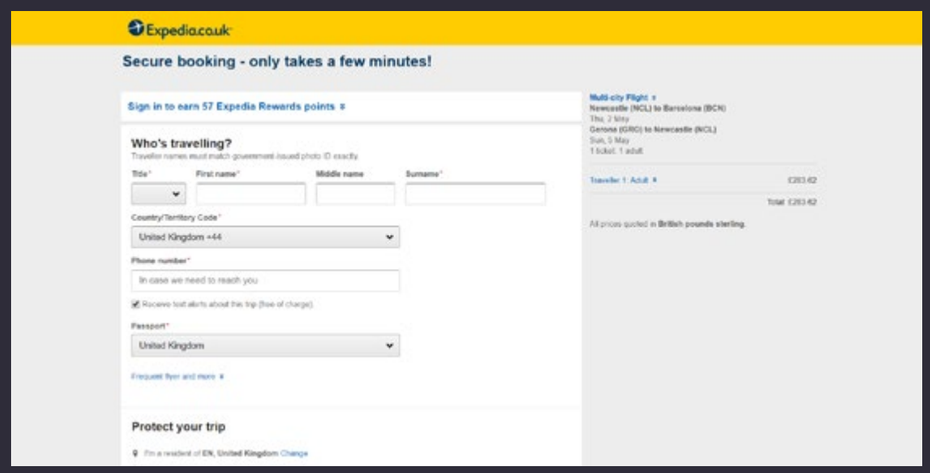








These images are the screen shots of Expedia website. It shows how the website works and the flow of the pages. We use this as an example and research for the UX and UI of this website to see which part we may adapt to apply on the interface design and experience of using the TiiQu CERTiiF software such as colours, contrast, consistency, typeface, buttons, loading pages, and user experience.



TiiQu

Daniel Adams

Age: 32

Location: London

Occupation: Immigration office

Daniel is a hard working member of the goverment immigration office team. He lives at home with his wife and daughter and often finds himself stressed with work.

He is responsible for sorting through a variety of immigration documents, such as visas, green cards, citizenship applications etc. He often has to make great effort to dig through the applicants details and history to know if they are indeed who they say they are, and to avoid illegal immigration into the company via fraudulent and forged personal documents. The system he uses while at work is slightly dated and it is definitely taking its toll on the accuracy of his work.

Movtivations

- Career
- Social and home life
- Health
- Organisation
- Time management

Goals

- To impress his boss.
- To make his life less stressful.
- To enjoy more time with his family.
- To make less for work himself.
- To reduce bringing work home with him.

Looking to improve

- To improve his productivity
- To build his IT skills.
- To eat healthier.
- To enjoy his work more.
- To cut down on caffiene

Scenario

Even with his skills and knowledge, he does make the occasional mistake. Recently due to the extra stress of work he has gotten himself into trouble for accidently giving an illegal immigrant access into the country. He needs a way of easily checking the validity of the documents with a simple yes/no solution to his growing stress. By using the Tiiqu Certiif and Veriif applications he would easily be able to check whether or not the document he is viewing is legitimate or fraudulent. Which would solve the problem of his stress and would also allow him to do his job much more effectively.

Day in the life

7:00	Wake up.
7:30	Shower/shave.
8:30	Coffee and breakfast.
9:00	Start Work.
10:00	Reply to emails.
12:00	Lunch.
13:00	File paperwork for passports.
14:00	File paperwork for Visas.
15:00	File paperwork for Residencies.
16:00	File paperwork for emmigrations.
17:00	Finish work.
18:00	Eat dinner.
19:00	Go over some work for tomorrow.
19:00	Family time.
21:00	Put daughter to bed.
22:00	Watch TV with wife.
23:00	Bed.

TiiQu

Maria White

Age: 24

Location: Manchester

Occupation: Estate agent

Maria graduated top of her class at university studying real estate and she has recently got a job as an estate agent. She is doing very well for herself and she is learning more and more about her new occupation every day. She gets a lot of applicants for housing and residency from foriegn countries and often has to spend hours sifting through heaps of paperwork from abroad with many applicants trying to forge identity or use false information.

She often has to conduct extensive background checks for applicants who make false claims, and then having to wait for the checks to verify to continue with her process. She is finding it to be the most tedius aspect of her new job.

Goals

- To be promoted at work.
- To increase her income.
- To build a name for herself.
- To impress her parents.
- To pay off her student loans.

Looking to improve

- To try to network more.
- To improve investment strategies.
- To be more productive at home.
- To exercise more.
- To expand her skillset.

Movtivations

- Career
- Social and home life
- Health
- Organisation
- Time management

Scenario

She is currently serving a client who is trying to put down a mortgage on a local property. The majority of his background checks add up other than his occupational records. He has provided proof of occupation with a hospital with a relatively low salary but he is applying for a mortgage on a very expensive property and his financial records are not adding up. She needs a way of accurately checking if he has some form of undeclared possibly illegal income. She would use Certiif and veriif to verify the applicants details and discover if he is being truthful or not.

Day in the life

7:00	Wake up.
7:30	Shower and make-up.
8:30	Tea and cereal.
9:00	Start Work.
10:00	Meeting with client.
12:00	File paperwork for Tenancy agreements.
13:00	Lunch.
14:00	File paperwork for Mortgages.
15:00	Meeting with client.
16:00	Take phone calls for property viewings.
17:00	Finish work.
18:00	Drive home.
19:00	Eat dinner.
20:00	Watch reality TV.
21:00	Facetime her friend.
22:00	Applies a face mask.
23:00	Bed.

TiiQu

Clara Woods

Age: 34

Location: Manchester

Occupation: Bank Manager

Clara is a 34 year old woman who is currently working in Barclay Bank in Manchester as a Bank Manager. Currently, the branch in her workplace has a vacancy in accountant position.

As the department manager, Clara is employing an new employee to be able to fit the accountant role. Firstly, she needs to determine whether the person has the qualification and skills to be able to do h

Motivations

- Career
- Social and home life
- Health
- Organisation
- Time management

Goals

- To lead her team to improve.
- Develop further knowledge in management and leadership.
- Always looking to spend free time with her friends
- To help the company's solve some financial problems and flaws.
- To guide her subordinate to coordinate with each others and importance of time management.

Looking to improve

- Caring to her subordinates.
- Better knowledge in Information Technology.
- Taking care of her own health due to work overtime often
- To be fair and just when treating her subordinates.
- Strict in testing the skills and qualification of the employee when recruiting someone.

Scenario

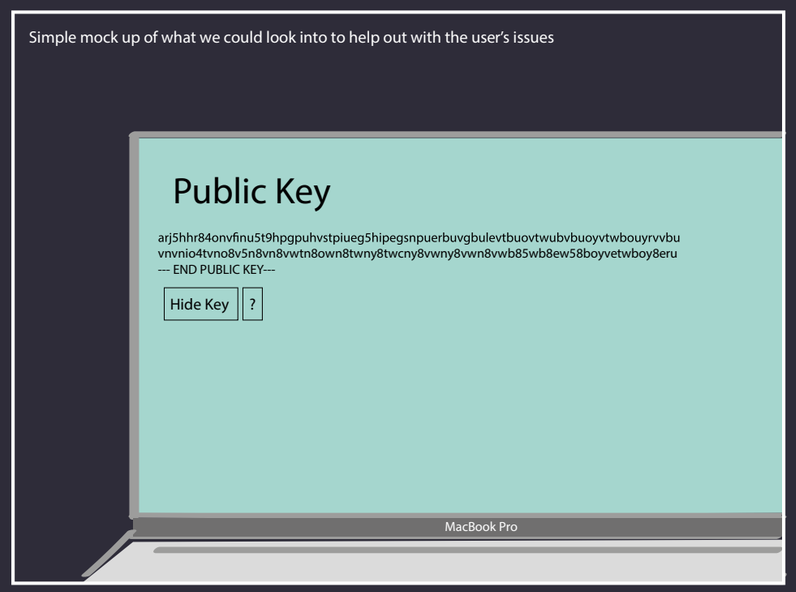
- Clara wakes up in 7.45am every weekdays, she brush her teeth and change her uniform. She had a cup of coffee before she left her house.
- Clara arrives at Barclay Bank, Mosley Street at 9am morning, she punch cards and greets to her peers and subordinates before she back to her office.
- Before Clara employing an employee, she needs to acknowledge that the person is able to fill in the position, so she needs to check the certificate of the candidate wisely.

Day in the life

7:45	Wake up
7:50	Brush teeth, shower, change uniform
8:20	Drink a cup of coffee
8:30	Leave her house
9:00	Arrives her office
13:00	Lunch time
17:00	Finish work and back home
18:00	Start cooking dinner
18:45	Having dinner
19:30	Wash dish
20:00	Check email, suft internet
20:20	Watch tv
21:00	Bed

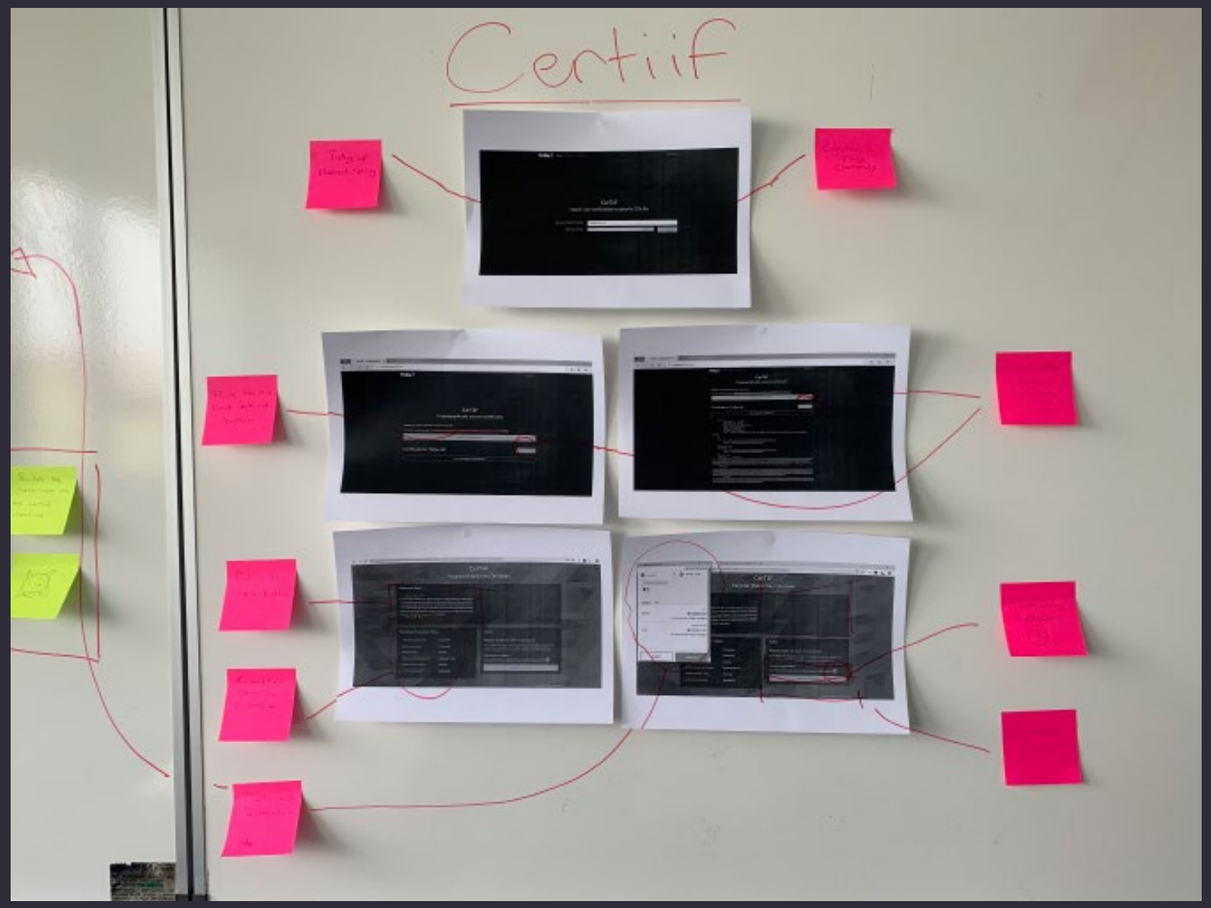
Storyboard

Quickly creating a storyboard to demonstrate how we could help the user with a simple design change involving the public key

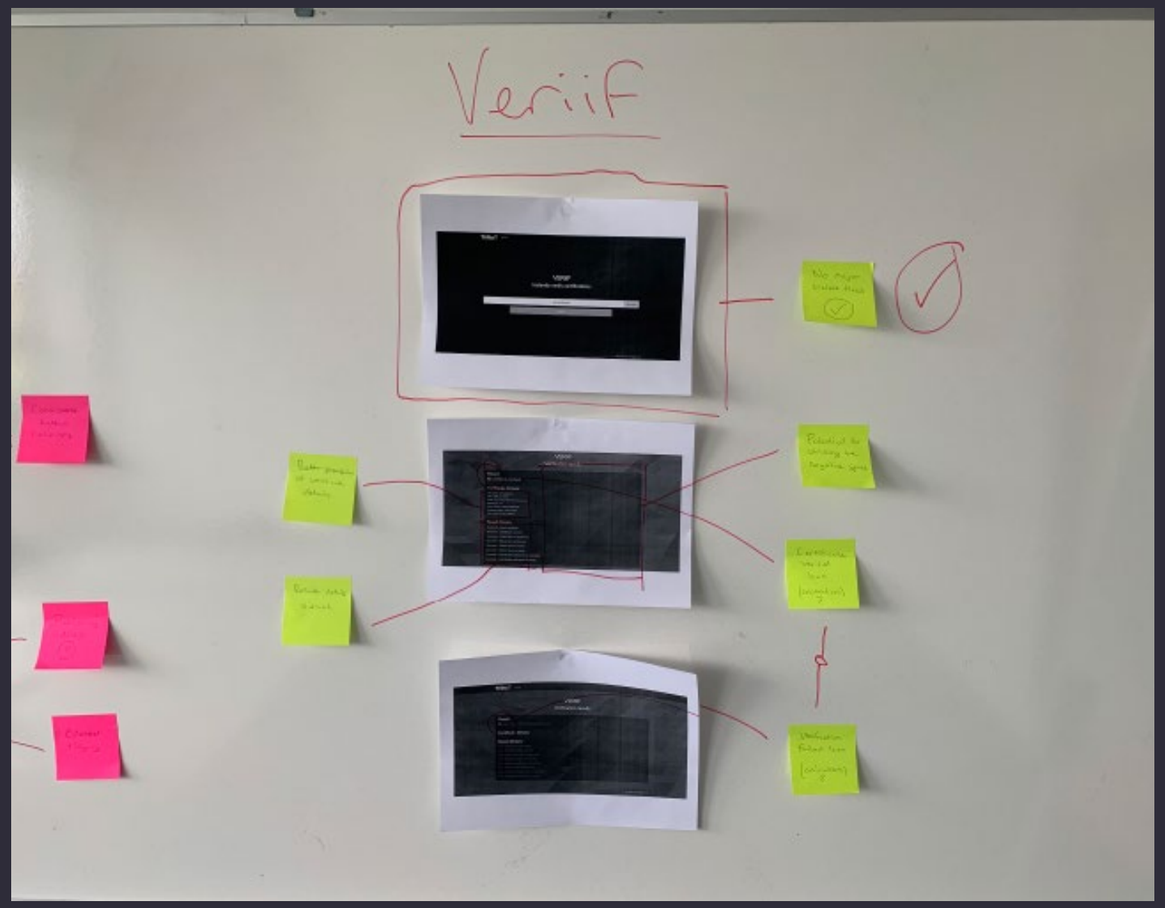


Screen Analysis

Going through all the sections of Certiff and Veriif. Looking at what we could do to furthur improve the two areas.



- Metamask Integration
- Connection status visual progress bar
- Public Key copy button
- Hide the merkle root behind the button
- Tidy up element spacing
- Centralise page elements
- Consistent button colours
- Publishing address
- Element Spacing

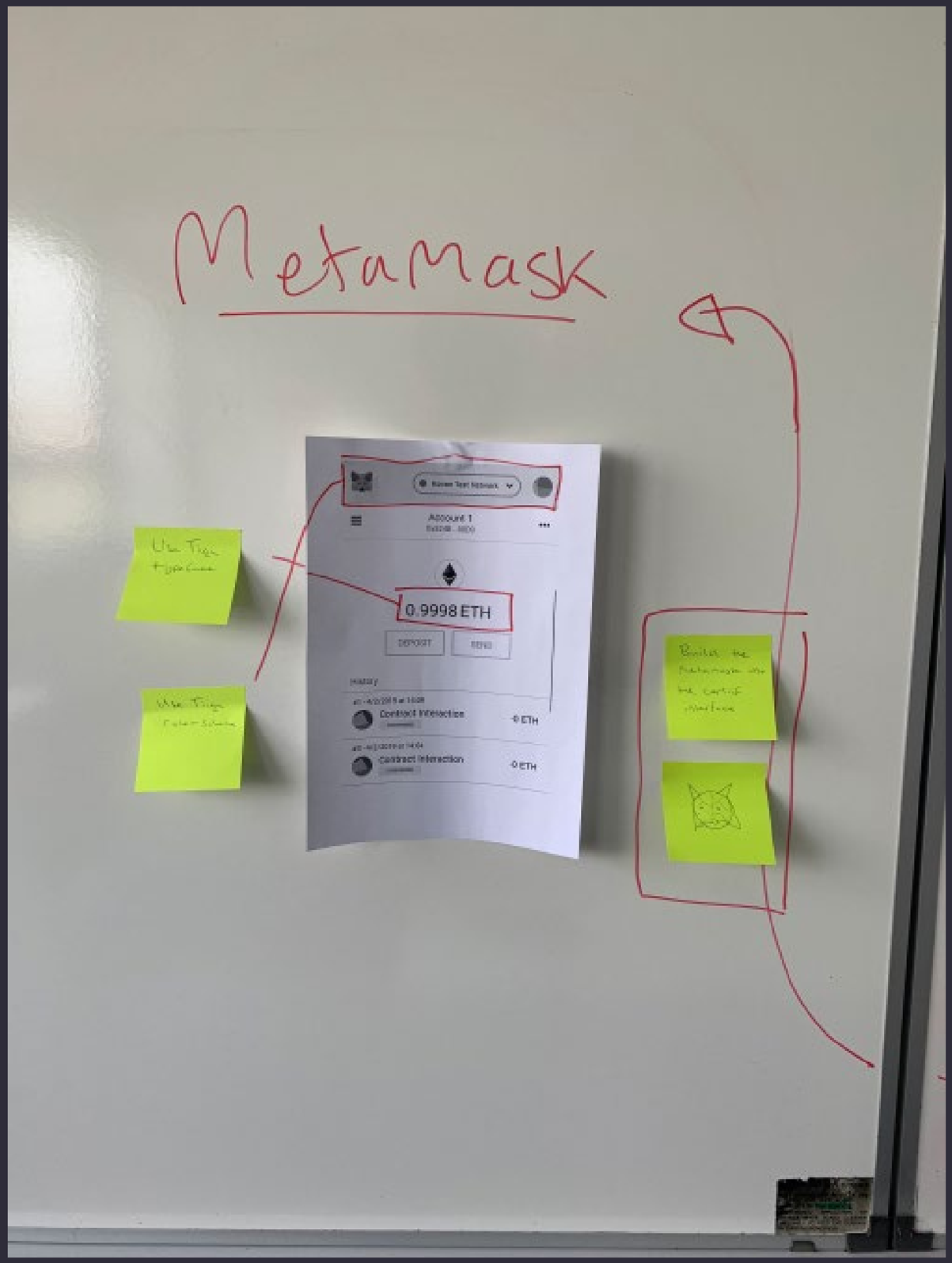


- Result details visual
- Better presentation of certificate details
- No major visible flaws (top sheet)
- Potential for utilising the negative space
- Looking at icons

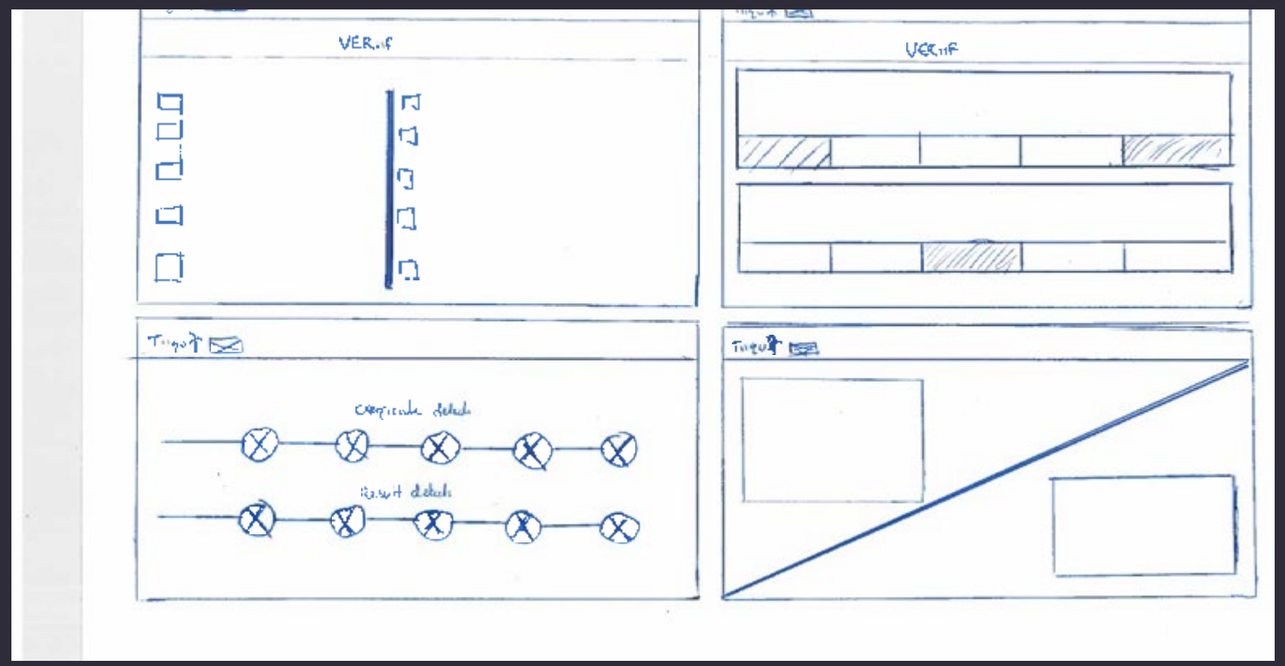
Screen Analysis

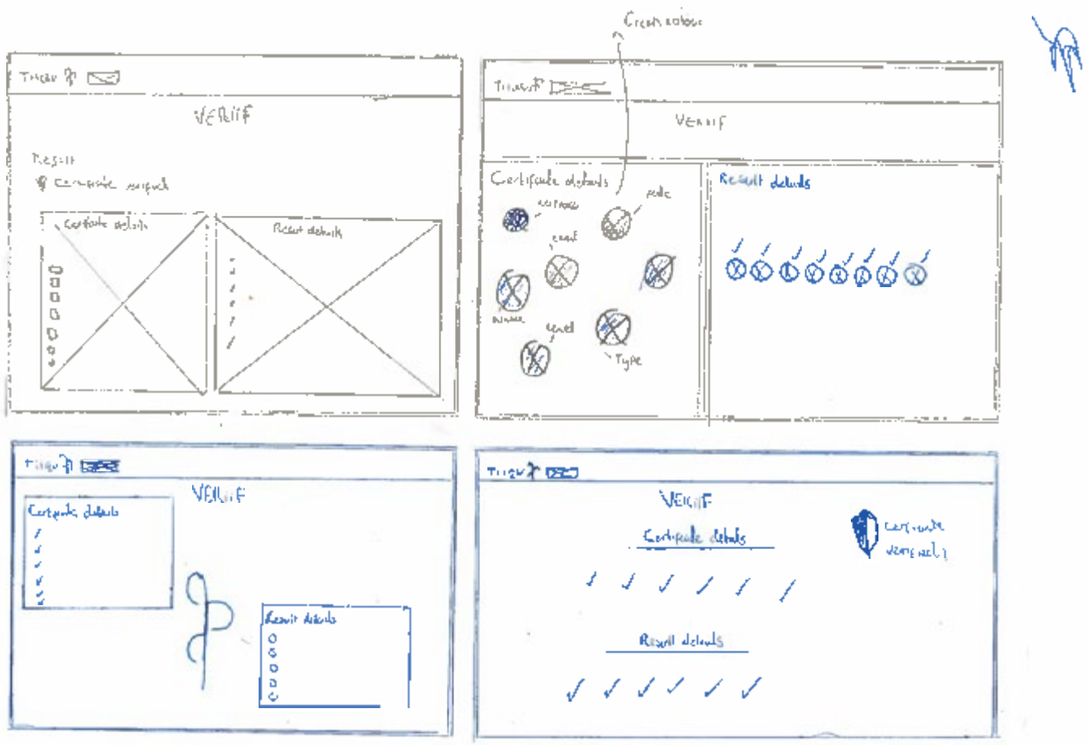
TiiQu uses an extension called MetaMask to let user upload the data to the Blockchain by using the currency called Ethereum.
MetaMask uses the parity on-chain registry of function signatures to display method names on the confirm screen. For many common method names, like token methods, this allows MetaMask to successfully look up the method names by their method signature.

- Using TiiQu interface
- Using TiiQu colour scheme
- Build metamask into the colour scheme



Wireframes





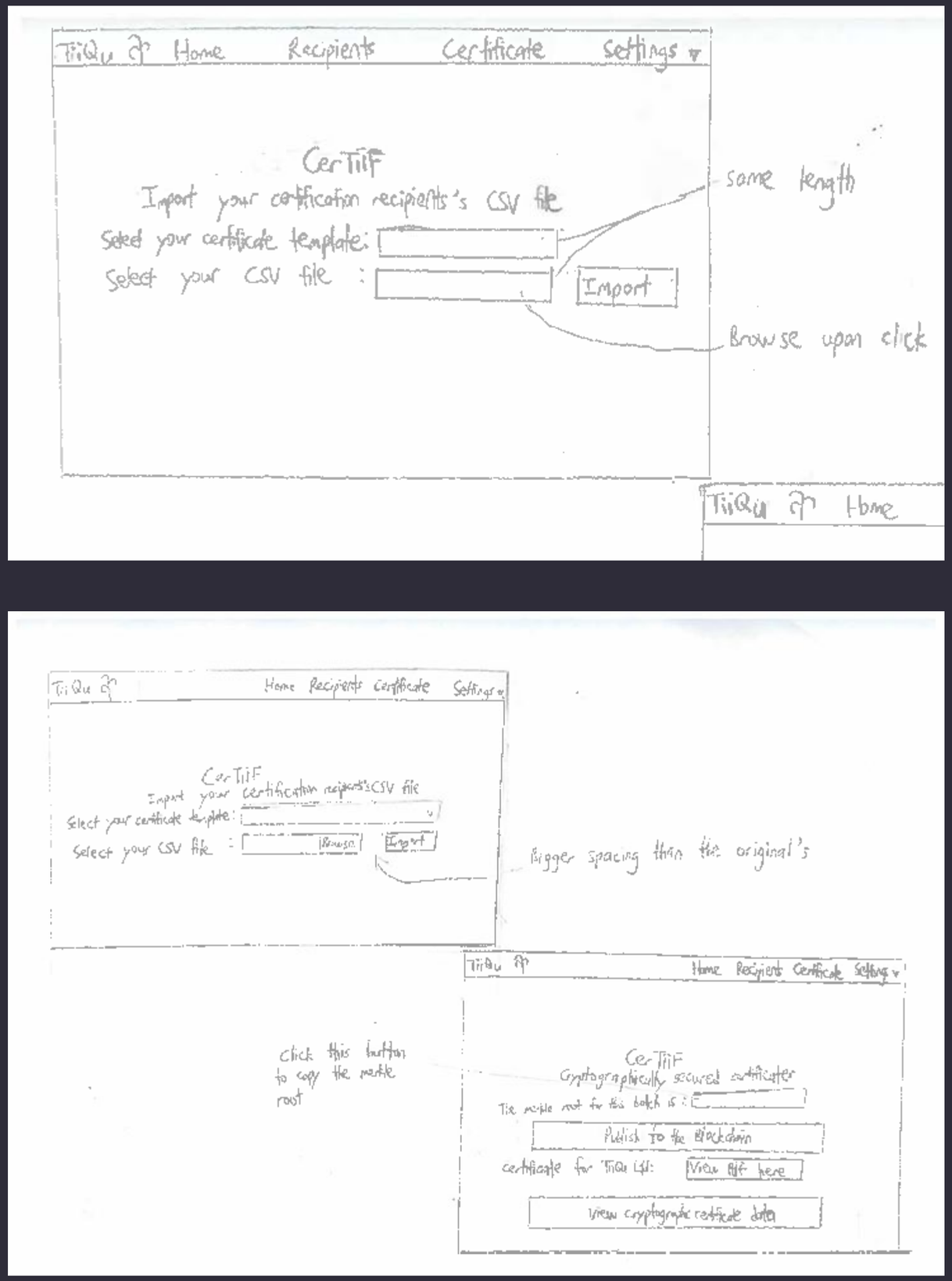
Images at the left are the wire-frame of the redesign for the interface of VERiiF's page.

For VeRiiF page, we changed a little bit for the "certificate selection" page's buttons and flows.

While at the "Verification Results Pass" page, we focus more on the:

1. Utilise negative space
2. Better presentation of certificate details
3. Result details visual
4. Certificate verified animation

Therefore, we sketch a few wire-frames for each pages of VERiiF to decide which one to select and proceed to the next step.



Images at the left are the wireframe of the redesign for the interface of CerTiiF's "Selection" page.

"Selection" page is the page that allows user to select the CSV file of the certificate and import it from his/her computer.

In the Selection page, the aspect we focus on are:

1. Centralise page elements
2. Tidy up element spacing

Selection page and "Cryptographically secured certificates" page

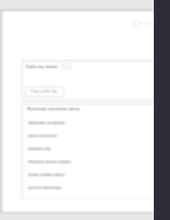
"Cryptographically secured certificates" page allows user to preview the files that he/she is going to publish to the block-chain in PDF format and enable the user to see the merkle root of the file. Merkle root is important because if there is any changes in the files, the codes of the merkle root will change subsequently.

In this page, things that we will change are:

1. Hide merkle root, alternatively use a button that can copy the root upon Clicking on it.
2. Add more consistent colours

Low Fidelity Mock Ups

Before our meeting with Laura we created some low fidelity mock ups on Adobe XD to give Laura a better of where we hope to steer the project in the coming weeks based on the original wireframes we had developed



CerTiF
Import your certification recipients CSV file
Select your certification template:
Select your CSV file:
IMPORT

CerTiF
Cryptographically secured certificates
Success! The below certificates have been generated.
View merkle root
Publish to blockchain
Certificate for TAQa List
View pdf here
View cryptographic certificate data

CerTiF
Register public key on-chain
Public key details
Copy public key
0.0000 ETH
DEPOSIT
SEND
Register public key hash on blockchain
Register public key
Blockchain connection status
Metamask connection
Node connection
Network type
Ethereum account present
Smart contract status
Account authorised

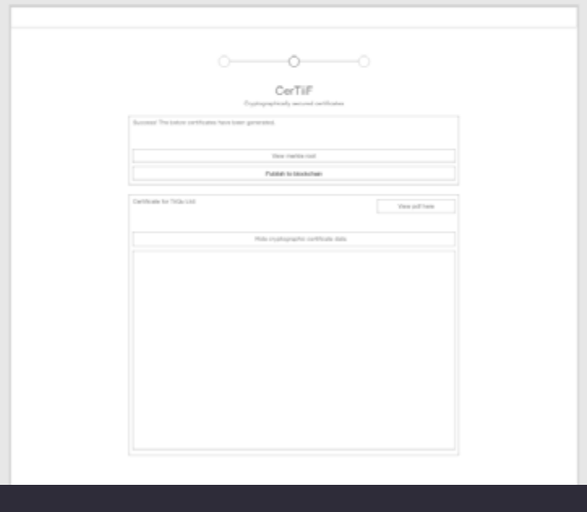
CerTiF
Metamask Ethereum account
Connect to metamask.
Step 1. Download and install metamask. Download link: https://metamask.io
Step 2. Transfer funds to ethereum account.
Step 3. Publish certificate to blockchain.
Download

CerTiF
Cryptographically secured certificates
Success! The below certificates have been generated.
Hide merkle root
Publish to blockchain
Certificate for TAQa List
View pdf here
Hide cryptographic certificate data

CerTiF
Register public key on-chain
Public key details
Public key
Copy public key
0.0000 ETH
DEPOSIT
SEND
Register public key hash on blockchain
Register public key
Blockchain connection status
Metamask connection
Node connection
Network type
Ethereum account present
Smart contract status
Account authorised

CerTiF
Cryptographically secured certificates
Success! The below certificates have been generated.
Hide merkle root
Publish to blockchain
Certificate for TAQa List
View pdf here
View cryptographic certificate data

CerTiF
Register public key on-chain
Public key details
Copy public key
0.0000 ETH
DEPOSIT
SEND
Register public key hash on blockchain
Register public key
Blockchain connection status
Metamask connection
Node connection
Network type
Ethereum account present
Smart contract status
Account authorised


CerTiF
Cryptographically secured certificates
Success! The below certificates have been generated.
View merkle root
Publish to blockchain
Certificate for TAQa List
View pdf here
Hide cryptographic certificate data

CerTiF
Register public key on-chain
Public key details
Public key
Copy public key
0.0000 ETH
DEPOSIT
SEND
Register public key hash on blockchain
Register public key
Blockchain connection status
Metamask connection
Node connection
Network type
Ethereum account present
Smart contract status
Account authorised

CerTiiF
Public key details:
Copy public key
0.0000 ETH
DEPOSIT
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Register public key hash on blockchain
Register public key
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Smart contract status
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Register public key hash on blockchain
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Node connection
Network type
Ethereum account present
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Meeting Review

Meeting Review

We held a meeting with Laura to give her updates on how we were getting on. we set up a presentation to display what we had achieved so far.

Overall we have learned from areas where we could improve from and we gained better insight into the software and how they want it to be used by the user.

Notes Taken:

Make it easy
Not priority to see the merkle root - Simple explanation
"The priority is the customer"

View PDF sent from Laura

Does the user care about block-chain connection status?
Add progress bar (red to green)
Look to include the fox logo to link meta-mask

The customer must "enjoy" the process
The customer must feel that is it fast using the software

VERiiF information is valuable to the user, must include more information in that sector

"Information must reach to the customer in the eye"

Try not to include too much information about Block-chain, customer doesn't need to know about that

Moving forward after gaining advice from Laura, we are go to back to the drawing with redesigning new wire frames taking on-board what we have told to alter or make better to make it suit what TiiQu are looking for.

Import License key

Generete Private Key

Meta Mask transaction and confirmation

Certifcate Selection

Import Certifcation

View PDF publish to blockchain

Main Page

Metamask Transaction

User flow completion

User Flow - CERTiiF

Choose Certificate/verify

Verifcation Screen Progress

Verication Success

(VERiiF)

(CERiiF)

Suspend Certificate (Settings)

Suspend Certifcation Button

Meta Mask confirmation

Verifcation Results suspension

User Flow - VERiiF

Updated Wireframes

After hearing feedback from what we received from Laura and the TiiQu team we looked into the user flow and developed new wire frames to meet with Laura's advice.

We drew a few ideas before putting them in Adobe Illustrator to gage a better of what designs we wanted to put through to the prototyping stage

More info VERiiF success page

Certificate Details

Result Details

More info VERiiF fail page

Certificate Details

Result Details

Certificate Published

Infomation for VERiiF recipient

Certificate Published Success!

Home

CERTiiF

Success!

PDF

Publish Securely

Success!

PDF

Publish Securely

Success!

More Data

Publish

PDF

CERTiiF Suspension

Action

Suspend

Certificate Details

Result Details

Result

Certificate Verified

Result

Certificate Verified

Results

Results

Done

Results

Verified!

Results: Verified

Results

Results

Done

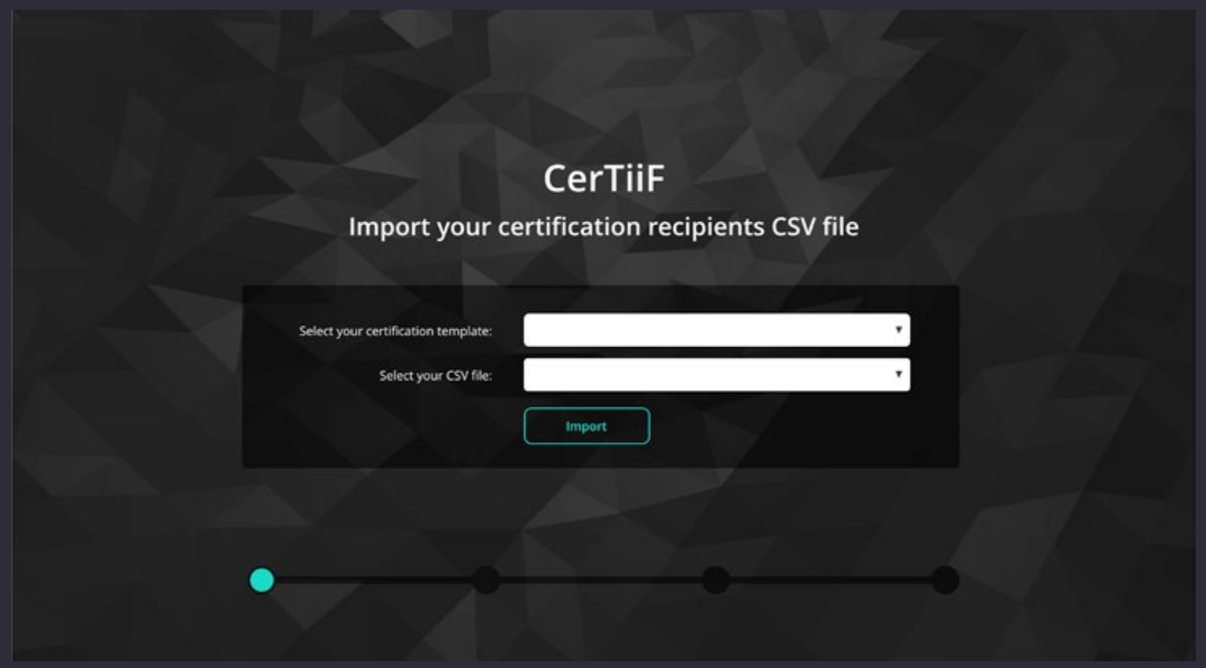
Results

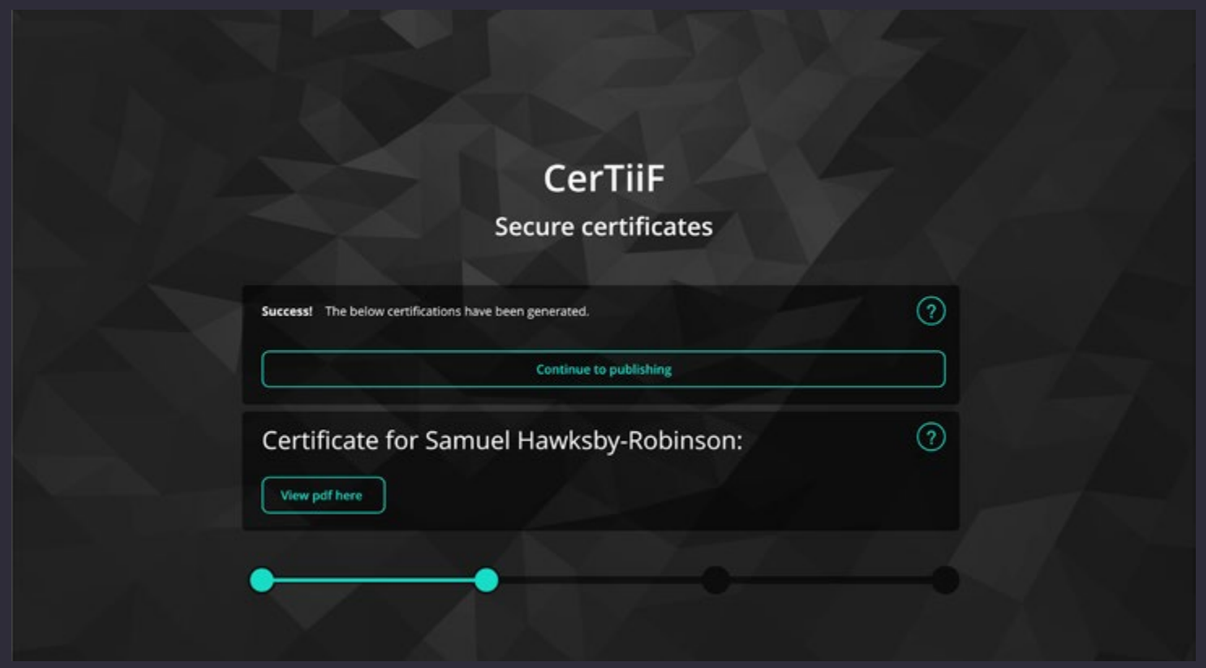
Verified!

Results: Verified

High Fidelity Final Mock Ups

Putting together the final product after going through the necessary steps to make it everything the client wanted it to be.


CerTiiF
Import your certification recipients CSV file
Select your certification template:
Select your CSV file:
Import


CerTiiF
Secure certificates
Success! The below certifications have been generated.
Continue to publishing
Certificate for Samuel Hawksby-Robinson:
View pdf here

CerTiiF
Publish certification proofs
Action
Publish certification proof.
To complete the certificate publishing process please confirm your Metamask transaction.
Publish certificate
Kovan Test Network
Account 1
0x6De3...b96E
[UNDEFINED]
0
DETAILS
DATA
EDIT
GAS FEE
0.000855
No Conversion Rate Available
AMOUNT + GAS FEE
TOTAL
0.000855
No Conversion Rate Available
Reject
Confirm

CerTiiF
Publish certification proofs
Action
Publish certification proof.
To complete the certificate publishing process please confirm your Metamask transaction.
Publish certificate

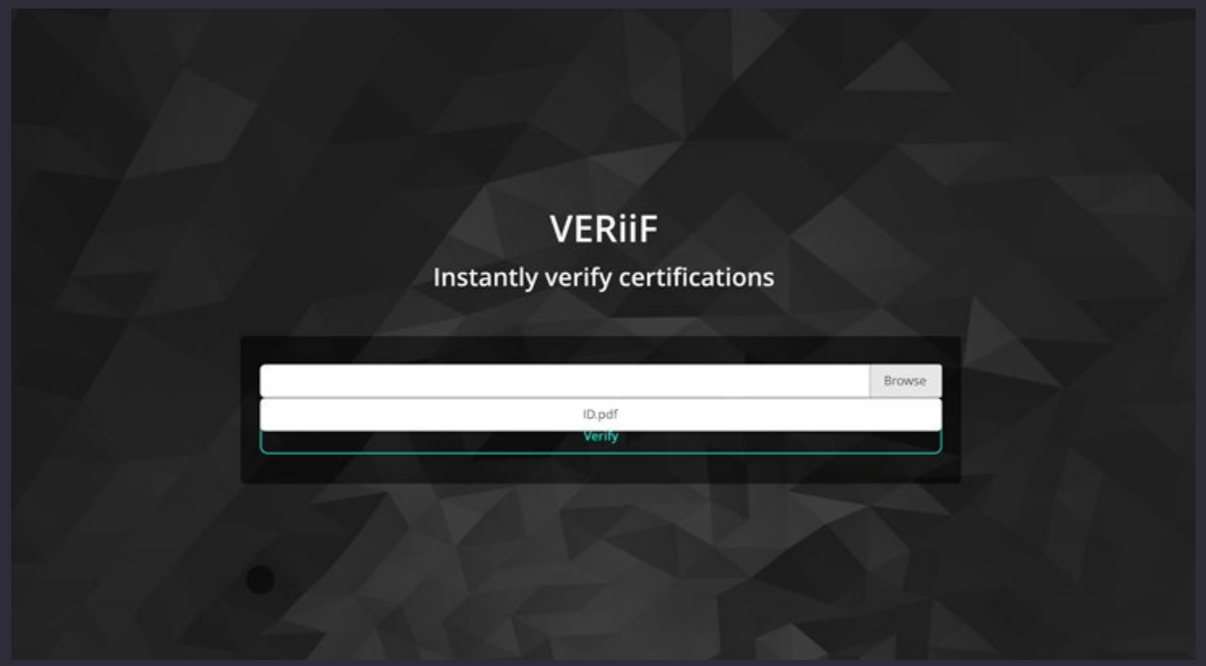
CerTiiF

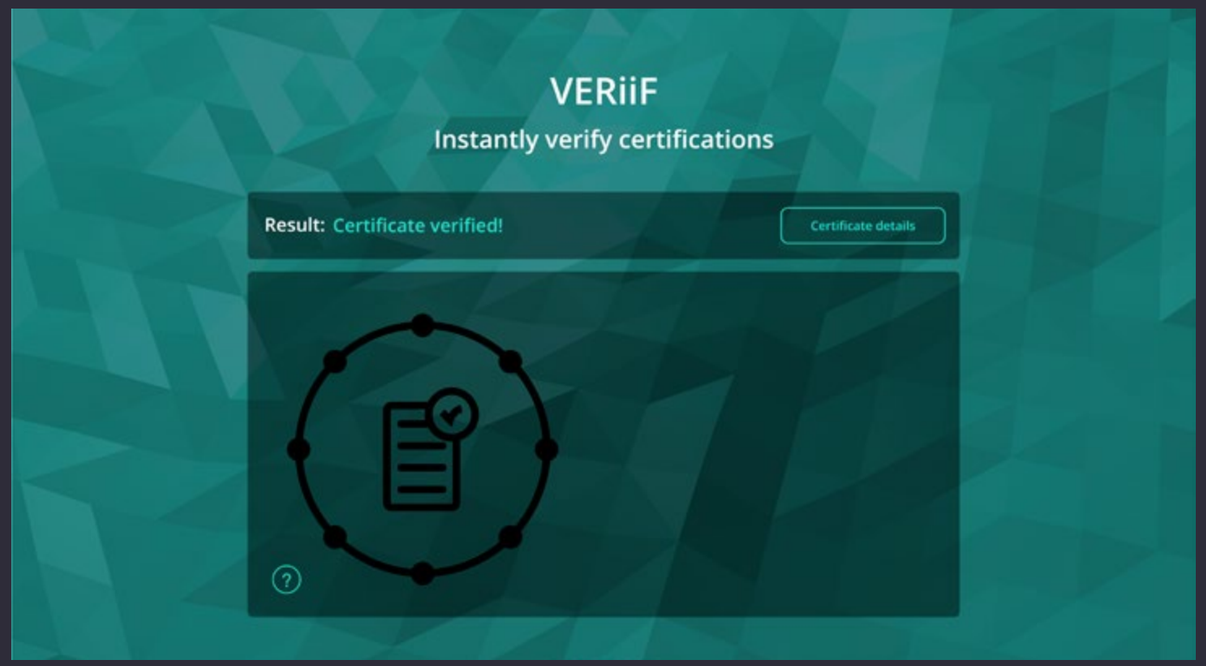
You’re done!

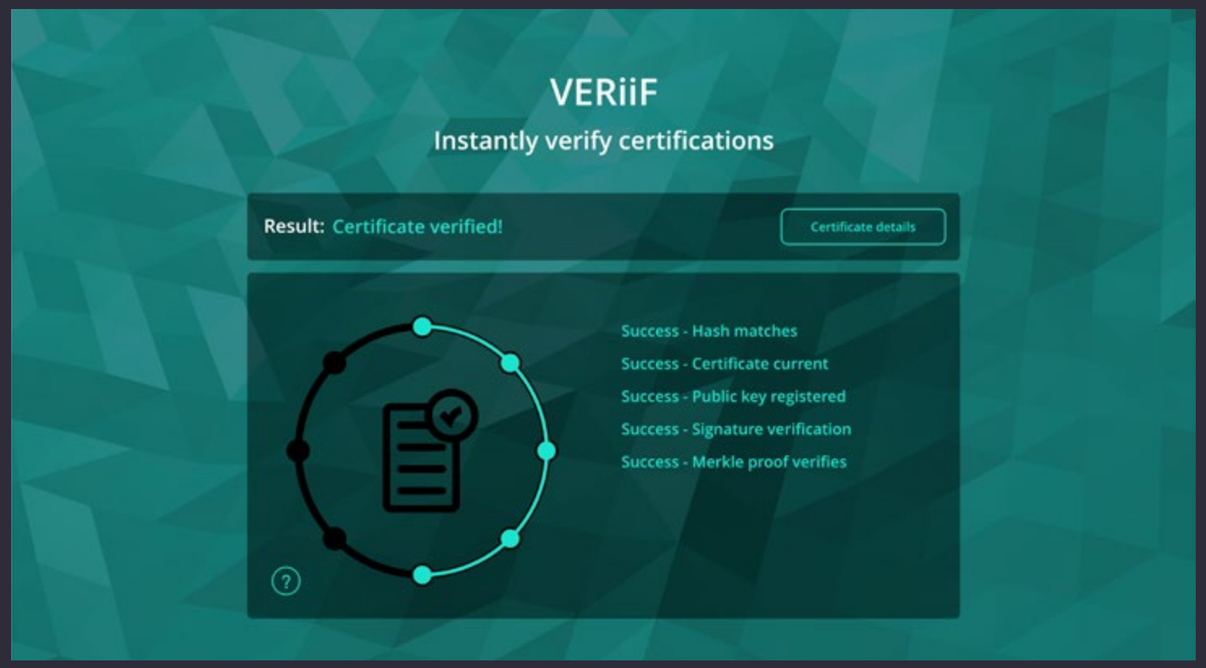
Success! Your certificate(s) has been published!

Use VERiiF to check your secure document.

Home


VERiiF
Instantly verify certifications
Browse
ID.pdf
Verify


VERiiF
Instantly verify certifications
Result: Certificate verified!
Certificate details


VERiiF
Instantly verify certifications
Result: Certificate verified!
Certificate details
Success - Hash matches
Success - Certificate current
Success - Public key registered
Success - Signature verification
Success - Merkle proof verifies

VERiiF
Instantly verify certifications
Result: Certificate verified!
Certificate details
Certificate details:
Certificate name : Astrophysics
Date : 18th July 2025
Email : juan.joughin@northumbria.ac.uk
Expires on : Nil
Level : FIRST CLASS HONOURS
Recipient name : Juan Joughin
Type : MASTER of SCIENCE
Success - Hash matches
Success - Certificate current
Success - Public key registered
Success - Signature verification