Frisk

Using Location Data to Aid Recovery of Stolen Property

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97,071

That's how many cases of robbery and burglary were reported in London during the year 2014-2015.

Stolen Bike Study

Last Updated July 2014

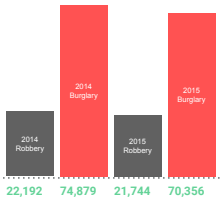
[1]

The problem

Millions of items are stolen in the UK every year. The graph shows a fraction of the reported cases of theft and burglary.

This figure rises significantly when we start considering lost property.

It's likely one of us has been a victim of this...



Recovery

What are the chances?

Despite all the efforts, only in a small number of cases the items are recovered by the police.

Often stolen items are sold to innocent buyers - If these are recovered then the buyer loses out.

What can you do?

CheckMEND IMMOBILISE

But...

It's not for everyone.

Immobilise: Anyone can register belongings, but only the police can perform checkups.

CheckMEND: Every check costs £1.99, even if it returns no results.

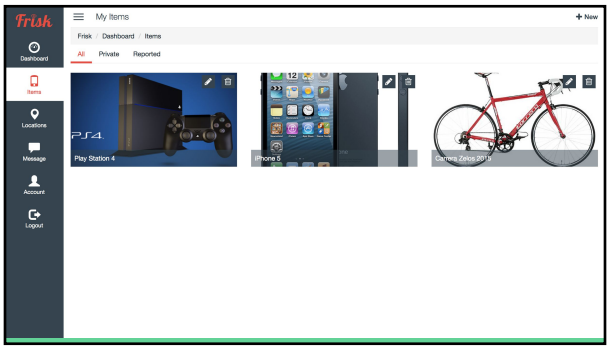
HOW FAR WOULD YOU GO TO RECOVER YOUR STOLEN PHONE?

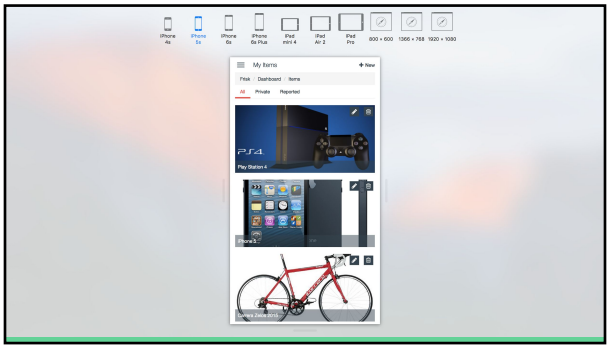
While vigilantism is never smart, **71% of victims** would put themselves in some amount of danger to retrieve their phone and data.

[2]

The Solution

Frisk, a property register with geo tagging.





User Types

There are three different types of potential users for this system.

- Someone who contributes by saving items.
- Someone who just explores around them.
- Someone who searches before buying.

Contributor

Explorer

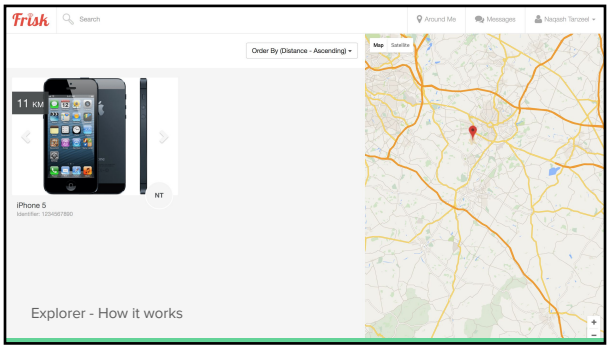
Buyer

Contributor - How it works

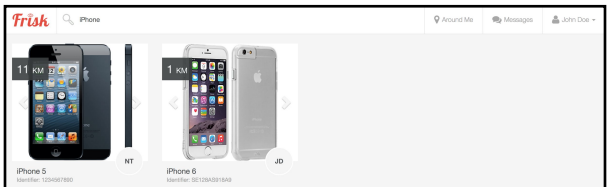
Step 1
Sign up and register any addresses you're likely to keep your items at.

Step 2
Every time you make a purchase, click add new item and register it.

Step 3
If an item gets stolen, simply click mark as stolen and tag the location it was stolen at.



Explorer - How it works



Buyer - How it works

Demo

Prerequisites

Requirements and limitations

A web server and database server is required. This can be costly depending on performance requirements.

The system may be limited by the storage space for images and resources.

Scalability

How well does it scale?

Start off with a small server.

Once user base grows, simply upgrade the server.

3rd Party options, such as Amazon.

Custom server, however expanding may result in bottlenecks.

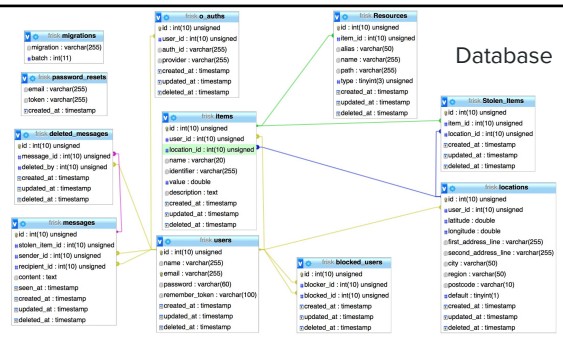
Technologies

JS CSS PHP HTML laravel

METROPOLITAN POLICE Working together for a safer London

MySQL jQuery write less, do more.

Database



Testing

Unit Testing

Testing was carried out throughout the development process where each component was tested as developed.

Validation Testing

This form of testing involved submitting empty forms and testing their validation errors.

Permissions

After development of a component, permission testing was carried to check if only appropriate users were given access.

User Testing

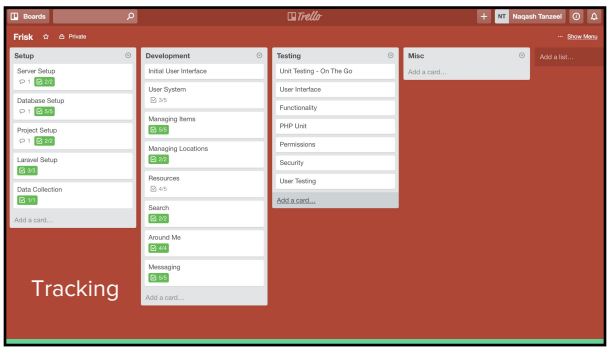
Several users were asked to carry out tasks without any guidance and feedback was collected (still ongoing).

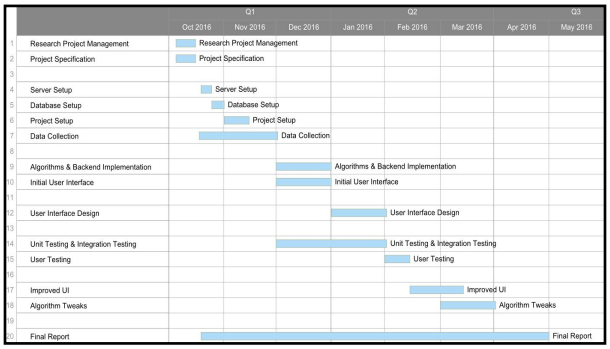
Comparison with Existing Solutions

Frisk	CheckMEND	IMMOBILISE
Search by name	Search by serial number	No user search, only police
Search by serial	Paid service	Private vault, until stolen
Search around area		Free for submitting data, but not querying
Private vault, until stolen.		
Free service		
Geo Tagging		

Project Management

Tracking





Progress

Actual timeline in comparison to the planned timeline

October 2015
Server, database and framework setup

November 2015
Research, data and API collection for development.

January 2016
Backend functionality and implementation.

February 2016
Front end design for dashboard and pages.

March 2016
Testing & fine tuning a working prototype.

Oct | Nov | Dec | Jan | Feb | Mar | Apr

Future Work

How can the project be extended?

- Live crime maps
- Notify users when a robbery is reported in their area
- Matching stolen items with police records based on coordinates.
- Mobile App

Conclusion

Have the goals been met?

- Overall project goals were met in terms of functionality.
- The project timeline ran over a little so project management could be improved, mainly due to not leaving time for contingencies.
- A usable solution which is comparable to the competition.

References

[1] https://stolen-bikes.co.uk/statistics/

[2] https://www.lookout.com/resources/reports/phone-theft-in-UK

[3] https://www.immobilise.co.uk/

[4] https://www.checkmend.com/uk/

Questions