Project Lighthouse and stuff we learnt along the way

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Mozilla Connected Devices
About us

• We’re Mozilla Connected Devices.
• Internal non-profit startups.
• We care about users.
• … and we’re trying to ship products.
Step 1.
Idea to prototype
Sometimes, a solution...

- Cheap Cameras + CPU + ? = cool
- Cheap Cameras + CPU + surveillance ≠ cool
...meets a problem

• ~285 million visually impaired people (source: WHO);

• many need help to shop/recognise household items;

• need a device to help you live independently? rake $2,000+.

• can we do something cheap, open source, open hardware?
Let’s help vision-impaired people recognise household items
Ingredients

+ Raspberry Pi
+ Camera Module
+ Raspbian

+ OpenCV
+ Python
+ User x2
Ingredients (2)

Full disclosure: These are not our real users.

If it hasn’t been tested by users, it doesn’t work!
Results of step 1

- This device will definitely fill a need
- ...if it remains cheap;
- ...and simple;
- ...and has a good form factor.
Step 2.
Prototype to product

It can’t be hard, can it?
Ingredients
Ingredients
Process!

YES, MUCH HARDER AND MORE COMPLEX

Source: https://medium.com/koobeglobal/choosing-a-manufacturing-service-model-what-every-startup-should-know-197e0e11201d#m0e4qze1z
Process!

YES, MUCH HARDER AND MORE COMPLEX

Estimate: 6+ months

Source: https://medium.com/koobeglobal/choosing-a-manufacturing-service-model-what-every-startup-should-know-197e0e11201d#m0e4qze1z
How do you iterate without devices?

• Use hardware *that people already own* (smartphone, tablet, tv, ...).

• Find out which hardware *your users* have!
Ingredients

- iPhones
- OpenCV
- buddybuild
- TestFlight Beta Testing

x5
Our next steps
Soft prototype

• Iterate on Computer Vision, with real use cases.
• Iterate on Usability/Accessibility, with real users.
• Iterate on Features, with real users.
• Make it social: Connected Device doesn’t need to be Big Brother-only!
Hard prototype

• Custom devices are expensive, avoid bankruptcy!
• Iterate on form factors with “fake” devices.
• Negotiate prices down.
And lots more!

• Insurances.

• Lawyers.

• Non-profit associations.

• Kickstarter?
To be continued

Maybe at FOSDEM 2018

https://github.com/project-lighthouse

https://discourse.mozilla-community.org/c/connected-devices/project-lighthouse