

# @Home

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## Value Proposition

@Home is a fast and easy way to connect great home service providers to everyone who needs help at home.

## Problem and Solution Overview

The garbage disposal is clogged. You've just chipped a bathroom tile. Your apartment is a mess. The leg on your chair snapped. These are just some of the many problems that we face in the home. While we'd all love to take out the time to make sure our homes are up to spec, the pace of life today and perhaps general laziness holds us back. For many of these problems, we need the expertise of a plumber or electrician and the efficiency of a handyman or cleaner. However, finding someone nearby with the skill, time, and willingness to do the job is time intensive enough to postpone the task to take care of more immediate concerns. @Home is our solution to this problem. It's a platform that helps people access home service providers while helping service providers establish a market for their product. A customer can open the app, select a service, add some relevant details, and be matched with service providers near them. A service provider is notified when they are being matched and provide a price for the customer's review. When the customer requests the service, the provider knows where to go and proceeds to the location in order to provide the service. People need a faster, easier, and more reliable way to solve problems at home. People need @Home.

## Contextual Inquiry Approach and Customers

In order to conduct our contextual inquiry, we ran our volunteers through a scenario where they discovered a home problem and now had to deal with that problem in some way. By making them go through the motions of identifying the problem, figuring whether they can fix it themselves, and finding a person to call, we hope to gain some insight about how people deal with these problems. We then asked them some general questions about this problem set after the scenario to wrap up and dive deeper into some of the comments they've made. We selected people who we thought would a) want to use the product and b) be somewhat representative of our expected user base (by age and experience).

**A.R.** is a 21 year old Stanford senior, majoring in Civil Engineering. He's busy with the demands of his degree and lives off campus with two other seniors. He has lived on his own previously in summer internships and has had experience with maintaining a home, but is relatively new at it. He has some coding experience (CS 106A/B) and is fairly up to date with the latest tech tools. He's useful target audience because: 1) he is young and lives a fast-paced life, 2) he is tech-savvy, which means he will likely find the fastest status quo solution, 3) he's unlikely to have an existing relationship with a home service provider, and 4) his internship experience will be a good use case to study for understanding the problem through the lens of people who are temporarily living in a new place.



Interview Location

**Y.P.** is a 21 year old Stanford senior, majoring in Economics. He is similar to A.R. in that he also lives off-campus and has a similar pace and place in life. Y.P. has the same four important characteristics as A.R. except he is not as technical or savvy when it comes to technology. He also has not lived alone yet in his own place until now, which is a position that many young people find themselves. These differences are important for exploring the heterogeneity in the “yuppy” category of people, which will be an important early and long-term demographic for @Home.



Interview Location

**J.B.** is a Stanford Resident Fellow, the director of the Architectural Design program at Stanford as well as a lecturer for civil and environmental engineering. J.B. has some important differences from A.R. and Y.P. in that he had been a Palo Alto homeowner for 22 years until he moved into Stanford RF housing last year. J.B. had some interesting information from his homeowner experience that provided important data for @Home. He said he raised two sons in the house and said there were quite a few incidents where he was calling for home repair help due to his boys being boys and the occasional baseball going through a



Interview Location

window. He was an interesting candidate to gather data from due to his long experience being a homeowner and dealing with calling for services that @Home would help provide him with and being an older demographic to examine from our previous two interviews.

## **Contextual Inquiry Results**

Despite the differences between our interviewees, there were several common themes that emerged from our contextual inquiry. Across the board, everyone cared about speed. Solving a home problem quickly was a such priority that we did not even have to ask our interviewees for them to mention that it was important. They desired efficiency improvements end-to-end, from identifying the problem to solving the problem. However, the importance of speed varied with the tasks. Plumbing, electric, and other more immediate work demanded speed, while general repair problems such as a broken shelf in the case of Y.P. was deferred to later. For such tasks, respondents either delayed the remedy or chose to not do one at all. This was the case especially for A.R. and Y.P., you lead young and busy lives.

Another important similarity was in the method of finding and requesting a service provider. All participants started on the Internet. They opened browser and conducted either a Google search or Yelp search to find a relevant service provider. Some browsing led them to a number that they would try to call. Having all undergone the same process, each participant underscored the need for a simpler solution thought there was significant scope for one.

There were also some significant differences in the results of the CI on issues such as price sensitivity, technology fluency, and existing relationships with service providers. A.R. and Y.P. indicated that price was very important and often a differentiator when deciding whether or not to request home services. Our older participant, J.B., thought the price was important, but he would be willing to pay more for pace and quality. Income and age seem to be main drivers of that difference. Additionally, J.B. has a plumber friend that he can call on for immediate problems at home. That kind of relationship circumvents the iterative service request system, so it's important to note that people do have such connections that they can rely on. A final difference that A.R. pointed out was that some apartment complexes, like one he previously lived in, had dedicated home service providers in-house. Clearly, using that service, if the price was right, would be ideal.

### **1. Who is going to use @Home?**

Since @Home provides an in home service in an iPhone application, we are targeting people who live on their own and own iPhones. This precludes people who live in an environment where someone else deals with their home

maintenance, such as on a college campus or a service apartment. As an example, our interviewee AR is part of our target audience despite being a college student, since he lives in Oak Creek apartments and currently has to deal with

Due to the relative scarcity of skilled labor in the areas we are targeting (plumbers, electricians), it would be difficult to find on demand matches for users unless they are in a very populated area. For this reason, our target users live in big cities where it would be possible to find multiple options for a good match to their demand, although the service would be available to users in all parts of the US.

## **2. What tasks do they now perform?**

The results from our Contextual Inquiry show that our target customers contact companies and request to be sent help, but usually that help isn't available right away. When given a cell phone and asked to call a plumber, our interviewee JB tried three companies that were closed before reaching one that was open. Most people have one trusted company that they'll contact to see if someone can be sent, and if that doesn't work right away then they book an appointment for later instead of going through the yellow pages and checking with every company in the area.

What this means is that many people spend time on WikiHow trying to fix their own problems; issues like a clogged drain are usually somewhat time sensitive, and people don't want to wait a few days for it to be fixed so they try to fix it themselves.

Our target customers often forget to do less important tasks altogether. For instance, YP mentioned a broken shelf that he has not even bothered fixing as it didn't occur to him to look online. Since he has other storage, this shelf was not necessary, so YP neglected to fix it.

## **3. What tasks are desired?**

An on demand service that could send reliable, intelligent workers their way is desired. People want the ability to be presented with any and all options in their vicinity with just the touch of a finger, instead of being limited to workers from only one company and their schedules.

We also gathered from our CI that our target audience is interested in a way to compare and contrast the level of skills and prices across different companies. JB specifically mentioned that a way of comparing the ratings of different companies and their employees would be amazing as he wouldn't just hire from the few companies he already knew of.

#### **4. How are the tasks learned?**

Most of the tasks are learned by trial and error; our target customers will try certain companies and then, based on their experiences, contact the same or different companies the next time they find themselves in such a situation.

#### **5. Where are the tasks performed?**

These tasks are performed from the home of the user, or wherever the help is needed. This is because when a user “pings” the app looking for help, the app needs to get his address and see if appropriate help is nearby. For instance, if someone had a clog in his kitchen at home, but he only decided to ping the app once he was at work, then the app will search around the wrong address and mess up the search results. Since this is an on demand and in home service, we can’t employ Uber’s method of allowing the user to manually enter an address that isn’t within the vicinity of the address picked up by the app – we need to make sure the user is home before we send someone his way. Note that the user can manually enter addresses, but it will have to be within a certain distance of whatever address our maps have picked up. This is to control for imprecision within the addresses noted by maps; we don’t want the guy accidentally going to your neighbors’ house.

#### **6. What’s the relationship between customer and data?**

The app has access to all the data about different companies, the workers they have employed and their locations and availabilities. The customer, after he/she sends a request, will only be presented with what the app believes are the three best options for people who might fit the job well. Other than information about the people who are suggested by the app based on the search requirements, the customer does not interact with the data or have access to it at all.

#### **7. What other tools does the customer have?**

Most importantly, the customers have search engines like Google. When faced with a leaky faucet or a broken switchboard, it is simple to search “plumbers near zip code 94305” or “electricians in my area” to come up with options. However, search engines will only come up with individual options for companies to call, and as we discussed earlier, it can be tiresome to go through a whole list of companies before finding one that can send help your way.

#### **8. How do users communicate with each other?**

At the end of each appointment, the user will give the worker an “electricity bolt” rating of 1 – 5 bolts, and that rating will be visible to all future users who get that worker as a suggestion. This is the only way in which users can communicate with each other; though it isn’t direct communication, it gets the important points across.

## **9. How often are the tasks performed?**

Our interviewee YP estimated that he needs such services 4 – 5 times a year, whereas AR gave an estimate of 3 – 4 times. JB, who had raised two sons in his house, said he called for help once or twice a year.

## **10. What are the time constraints on the tasks?**

Time constraints clearly depend on the importance of the task being performed; people would be more likely to spend time waiting for a faucet to be fixed if that was the only faucet they could wash their hands with, but if it was one of many faucets they had they might not think it worth the time to fix the issue. JB mentioned that how much he valued the time was directly related to how urgent his problem was. YP estimated that he’d be willing to wait about 6 – 7 hours for an average house task to take place, but that it absolutely must not go over 12 hours. AR mentioned another type of time constraint; that on the length of time spent looking for a person. He said that he wouldn’t think it’s worth it to spend more than 55 seconds looking for someone who could fix your problem. This places a pretty strict requirement on the app that the algorithm must be able to know the results in a short amount of time.

JB mentioned that time is the most important factor to him; he would much rather hire someone who could come quickly than wait for someone who would come later, provided that the price was in a reasonable range.

## **11. What happens when things go wrong?**

In an app such as @Home, there is plenty of opportunity for things to go wrong. For starters, people are inviting strangers into their homes, which could introduce the threat of crime in many ways. In such a situation, @Home and the company who the worker was found through shall both be liable; @Home for trusting the company, and the company for trusting the worker.

On a less serious and hopefully more plausible note, we will probably run into some unhappy customers at some point. We deal with this issue by implementing payment as follows:

- Payment does not depend on an hourly rate
- After a task is done, the worker “charges” the app for the amount he has done

- Only if the user “accepts” the charge does the payment go through

By giving users some power over the payment, combined with the rating system we established earlier, we are hoping to keep the quality of work done by workers at @Home high.

## Task Examples

### 1. Sign-up (very low frequency, high importance)

- @Home will support the ability to sign up and create an account and profile so the user can leave ratings and review and are able to store their payment info. This will only be done once when the user first starts using @Home.

### 2. Finding a Service (moderate frequency, high importance)

- One of the core services @Home provides is the ability to find a work service. Instead of having to go through the trouble of looking up a company that is open and calling to discuss time and pay only to find out they don't the bill, @Home streamlines that process by conducting the search for you and presenting all the information up front. This will be done every time a user wants to hire someone from @Home.

### 3. Requesting a Service (moderate frequency, high importance)

- Once the user has found a service and a person they like, @Home provides the ability to view times of when the person can come and set up a request for their assistance. This will be done every time the user finds a suitable worker to hire for their task.

### 4. Finalizing Transaction (moderate frequency, moderate importance)

- Once the job is done the user is able to make a payment through @Home and leave a star rating and a review of the job for other consumers to see.

## Application Ideas

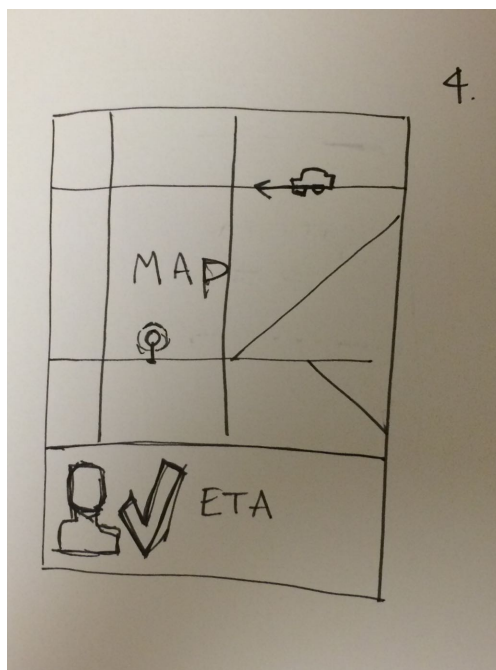
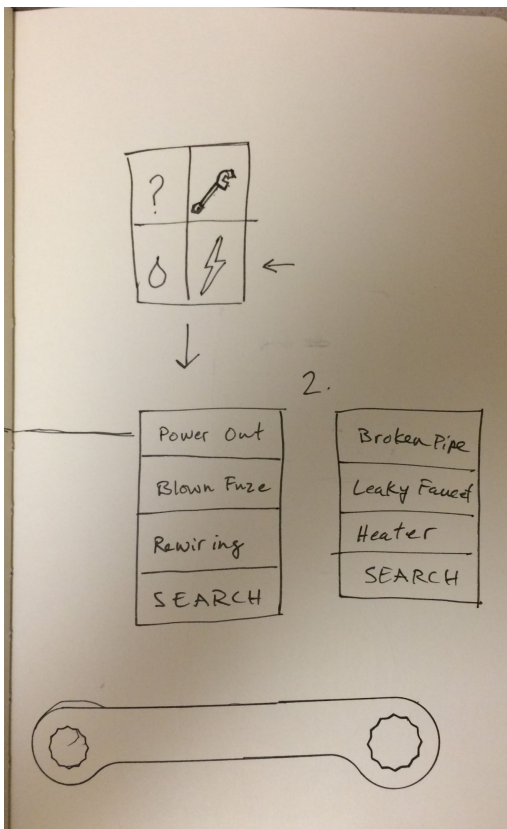
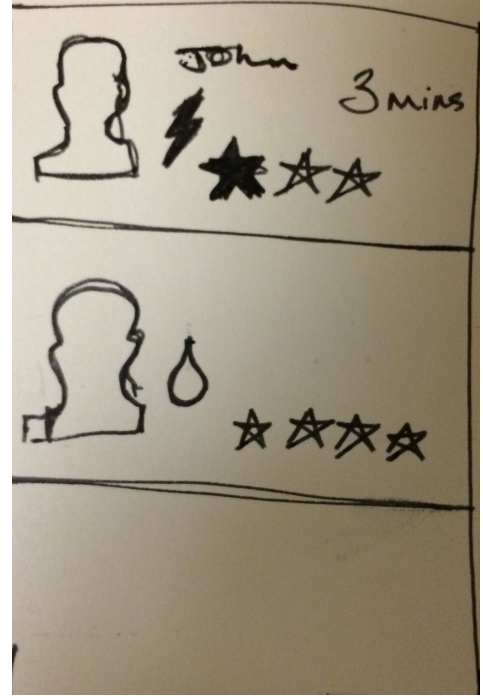
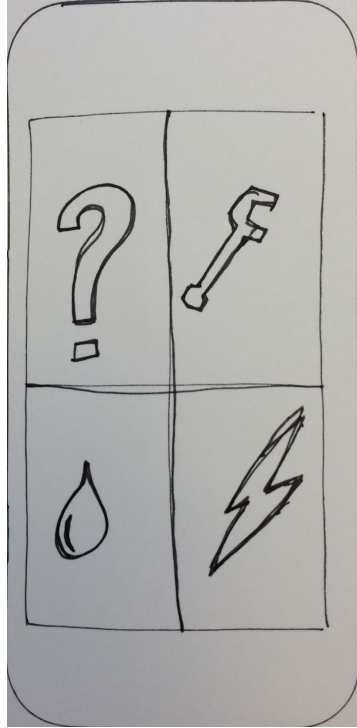
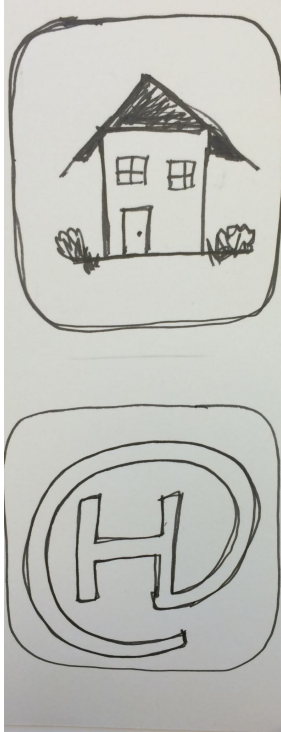
- A mobile app that connects people with home service providers to help them solve problems at home by matching a person's need with an individual who is free and trained to solve the problem.
- More than the other ideas we came up with, this application addresses the problem end-to-end. People need a fast, simple, and reliable way to access home services. In order to ensure this, you need to exert some degree of control over the entire system. Finding a service provider and requesting them needs to be incredibly simple and fast. The service providers need to be pre-vetted so that you don't need to worry about whether they can do the job. Payments must be easy and transparent. All of this needs to be done quickly so that people don't delay in fixing their homes and can get on with their lives. This can only be achieved if you have an app that deals with each of these components, which this idea does.

- A search product for home services and problems. Helps people find tutorials for problems at home and find people/organizations nearby that can be hired to solve those problems.
- A social network for home services. Uses your social network to find people who can help solve problems at home, or helps you find people in your network who need home services that you can provide.

<b>App Idea</b>	<b>Significance</b>	<b>Feasibility</b>	<b>Interest</b>
<b>Mobile Home Service Market</b>	<b>High</b>	<b>Moderate</b>	<b>High</b>
Search Product	Low	High	Low
Social Network	Moderate	Moderate/High	Moderate



# Sketches



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