

## INNOVATION CHALLENGE 2016

DATE: 1/14/2016, SOLUTIONS ON 1/21/2016

MEETING: GROUP MET WITH MENTORS, JACK, QUINCE, DENNY, JESSICA WAS PRESENT

### Notes

#### Agenda/problem

First off, ideas generated below highlighted are the best of :

- Urinals overused by overflushing.
- Storage of water in a cheap, efficient way.
- Chemical runoff pollution (industrial byproducts being dumped)
- Using salt to prevent roads from freezing has adverse effects to wildlife/environment
- Bacteria love to live in water, adds difficulty to storage
- Sewage system overflows due to rainfall.
  - Very important to the young population, i.e. infants, to not get sick
- Detection of bacteria in water
- Heating water uses a lot of energy.
- Large cities have to bring in water.
- Developed nations have existing infrastructure but water is not sanitary.
- Parking lots fill up with water
- Unused rain water
- Fracking causes pollution
- Human's effect on freshwater based populations.
- Droughts and prevention of droughts.
- Lawns and water usage; lawns use a lot of water.
- Draining of wetlands
- Farm fishing pollution
- Invasive freshwater species
- Gasoline pollution from recreational
  - Ground runoff

#### Discussion/solution

- Storage of rainwater: secondary idea
  - Rain Barrels
  - use rainwater for uses that does not need clean water
  - water allowance device, has a timer.
  - Also could limit water
- How do people living in snowy/icy areas deal with the snow/ice?

- Alternative to salt

- Make app that has a tree, use less water then tree grows: **main idea**
  - Use less
  - Sensor in main water pipe
  - Have a physical device in home
    - Connected to phone through app
- Replace urinals in america with waterless
- Model of fracking

#### Questions to be researched

These are the topics that were considered the best:

- Urinals overused by overflushing.
- Storage of water in a cheap, efficient way.
- Using salt to prevent roads from freezing has adverse effects to wildlife/environment
- Unused rain water
- Fracking causes pollution
- Mostly the conservation of water

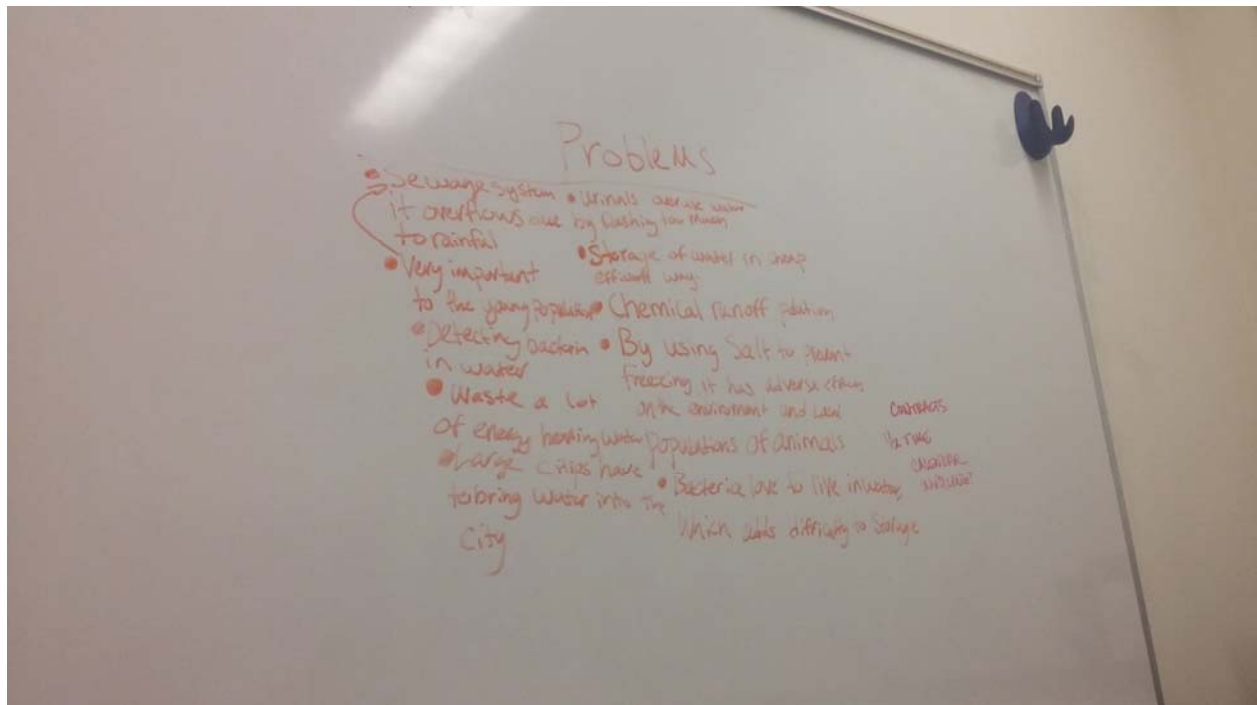


Fig 1. List of problems

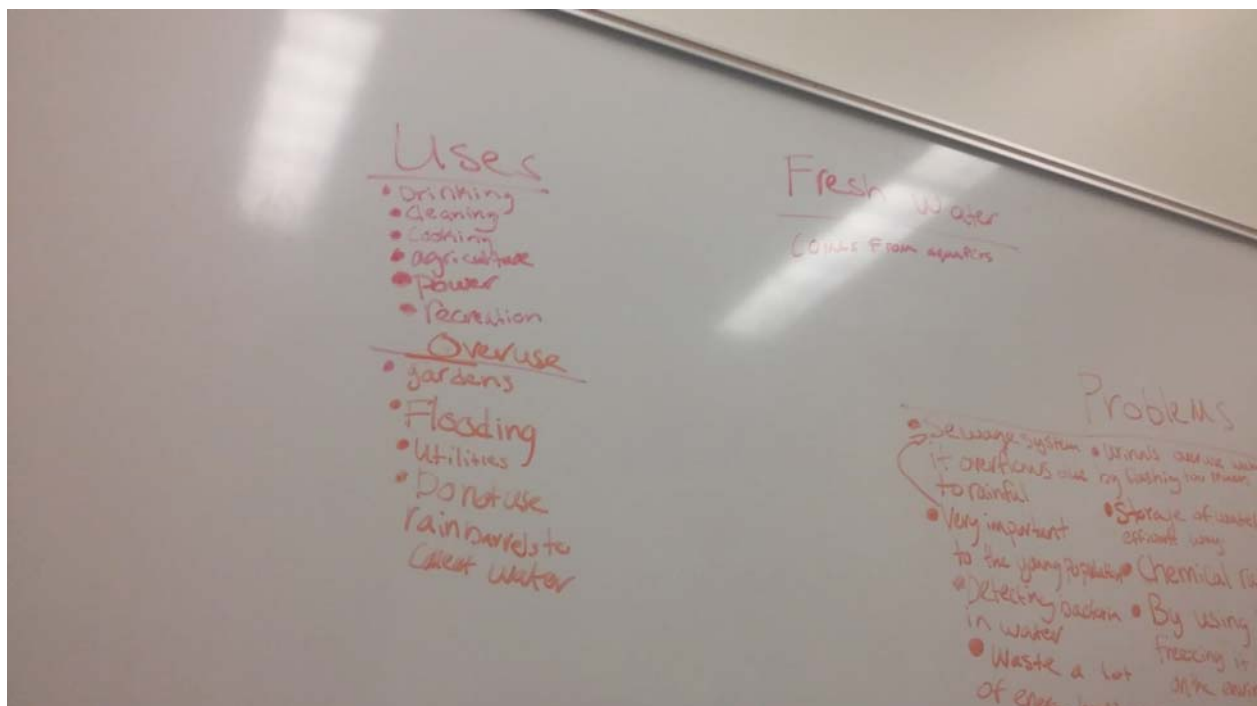


Fig 2. Usage and overuse of water

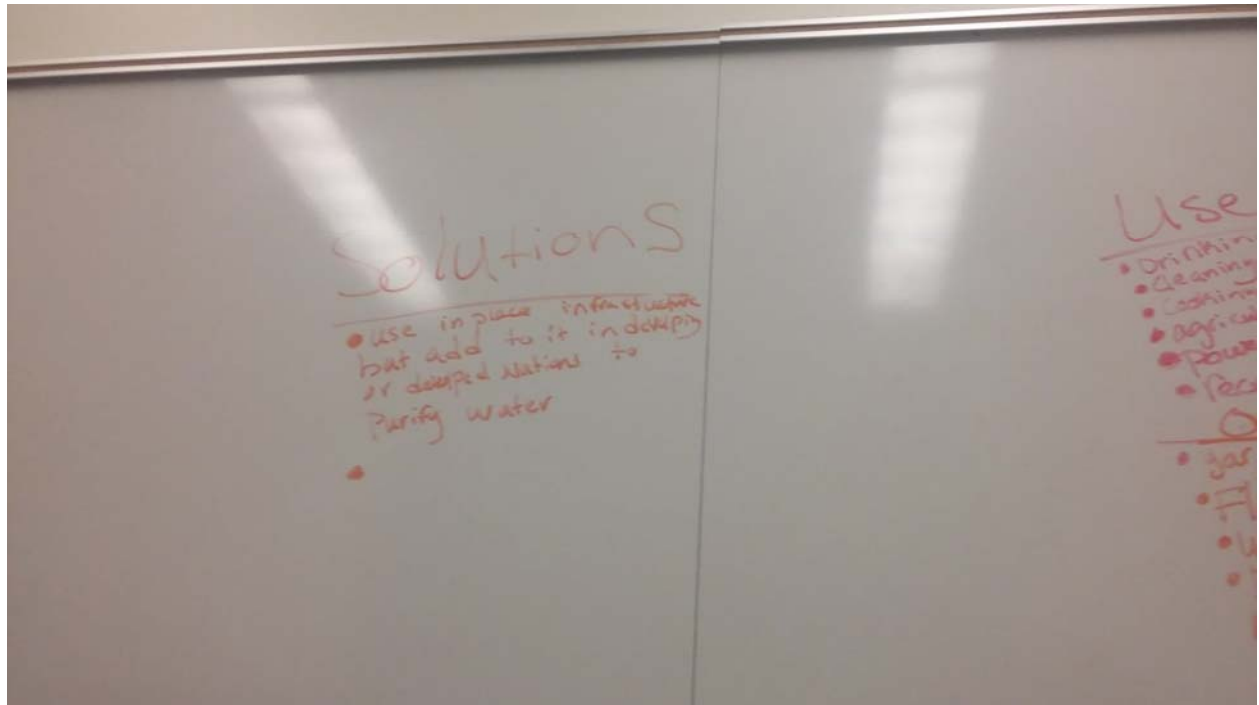


Fig 3. Some already given solution

## INNOVATION CHALLENGE 2016

**DATE: 1/28/2016**

**MEETING: QUINCE, JACK, MIGUEL, DEEDEE, JESSICA, AND DENNY WERE PRESENT**

### Notes

#### Agenda/problem

Solutions narrowed down to two major options (one primary one as a secondary option). What is left is to build list of details and do paperwork for field work.

#### Discussion/solution

The Ideas:

Water barrel/storage vs. Water conservation (through app)

##### Water Conservation

- Physically limit water?
- Make app/display to urge less water usage
  - Tree that grows with water saved, dies with water wasted

We have spent the time filling out the field work sheet as it needs to be turned in by Sunday, 1/31/2016. In addition, we have a few more people come over today for this meeting. Our plan is to create an application or a physical display with the gamification, involving the tree, mentioned above to conserve water in a household. Although the meeting started slightly late, we were able to finish the field work plans in time and will be reviewed afterwards, by both the team members and the mentors, before it needs to be fully submitted.

### Questions to be researched

Field work needs to be done, after submitting the form we should head out and get that done. The Portland Water Bureau is definitely the ideal organization to speak to.

# INNOVATION CHALLENGE 2016

**DATE 2/04/2016**

**MEETING**

## Notes

### Agenda/problem

- Expand upon fieldwork
- Watch TED Talk on games and the world world
- Decide how to do research (background information)

### Discussion/solution

- TED Talk
  - To solve social problems with the massive amount of gamers
  - How would we make a game to encourage people to save water
  - Uses gratification to keep users engage
    - Social aspect to help users problem solve together; collaboration
  - Motivation to keep on going
  - “Epic Wins” a very close win against all odds
    - The feeling of (immediately) deleting your problem
  - People competing against yourself or against others
  - What milestone (final stretch) could we use to make people save water?

### Questions to be researched

#### “Homework”

Find out an aspect or examples in a game that we like and try to implement it in this app.

Also finds ways to measure water for the app



# INNOVATION CHALLENGE 2016

DATE 2/11/2016  
MEETING

## Notes

### Agenda/problem

Give ideas from “homework” last week

Discuss ideas

???

### Discussion/solution

Focus on more of a game than app or an app or a game.

A town in which one person (you) is the mayor and the town has a bunch of water taking resources (ex: trees, river, fountains, etc.)

Game/app should be free, but there’s should be an option for donating to a water based charity.

- On a similar note, if we were to make a physical product, some of that money of paying for it should go to charity, other half is production.

Keep in consideration of complexity and simplicity of the game.

Similar to wii fit, like make sure to check in

What makes the people actually \*get\* the game/app?

- Keep it very simple?

Have forums/chat to discuss ways to save water

The middle ground

- Not necessarily have a game, but rather a place to check and a “dynamic painting” village that grows and prospers when you save water.

### Questions to be researched

Do research on simplicity/complexity of an app.

How much water does an average american household consume?

Are there already apps similar to this already existing?

What appliance uses the most water in a house? (i.e. sink, faucet, hose)

How much detail can the water bureau break down the water usage in house (as in can it do per appliance or certain areas)

Water should be based on what a household already used?

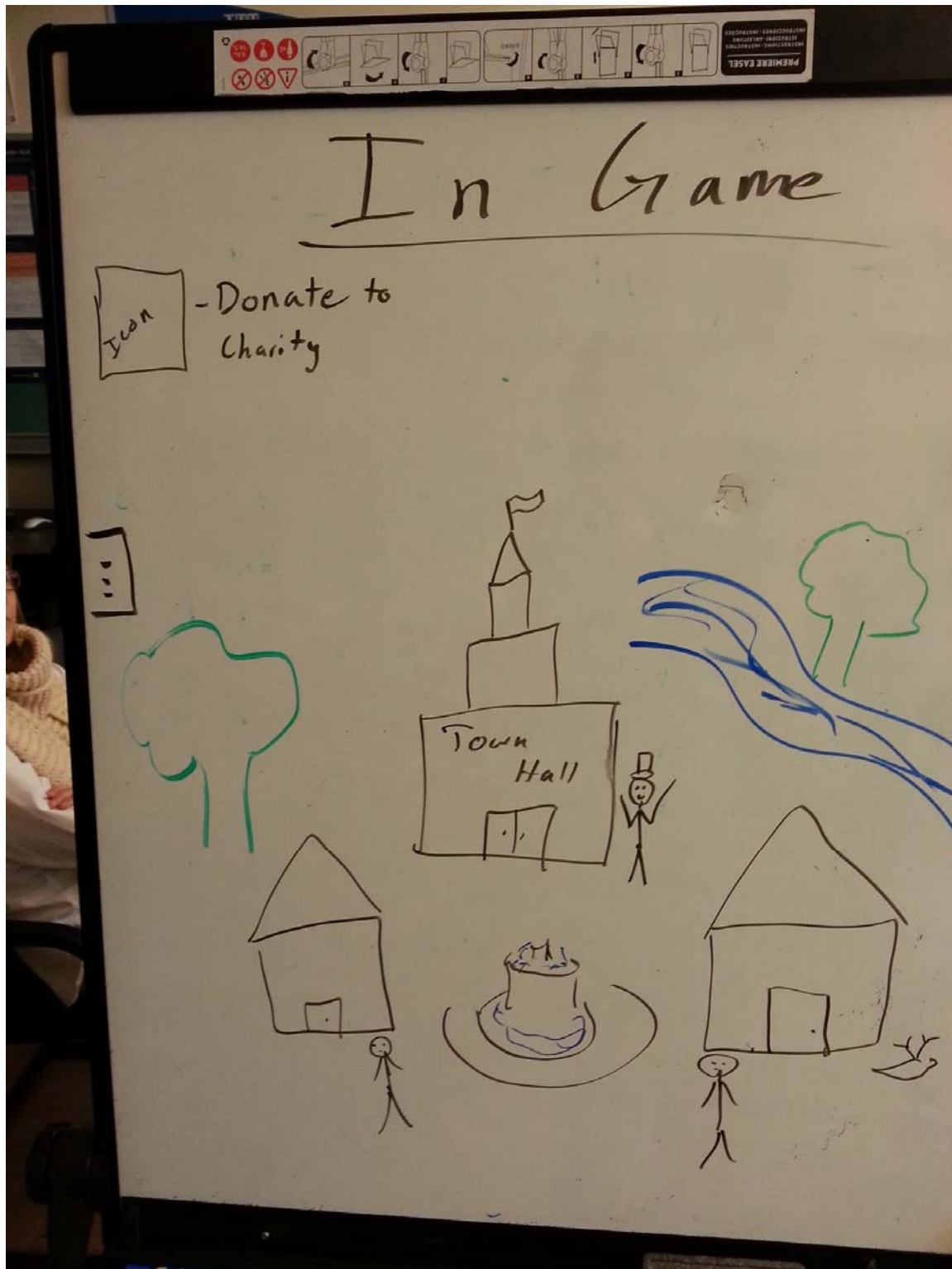


Fig 4. Concept of in game screen

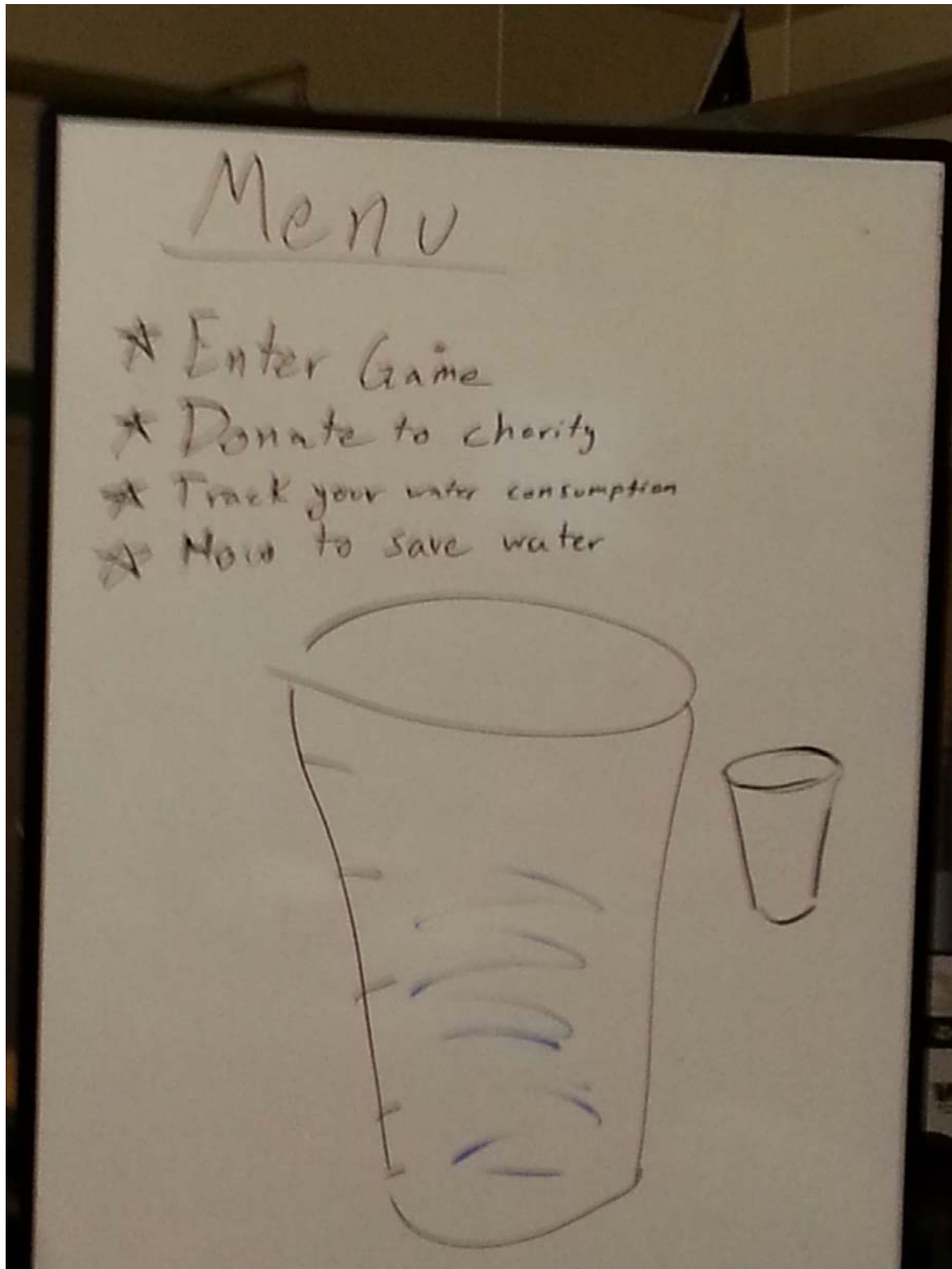


Fig 5. Concept of menu screen

# INNOVATION CHALLENGE 2016

**DATE 2/25/2016**

**MEETING**

## Notes

### Agenda/problem

- Decide on the field work to take (water conservation or a app field work)
- Fill out a proposal for an idea which is due sunday.

### Discussion/solution

In order to settle the debate of complex "Game" or simple "app", we're doing storyboarding in order to give the ideas that we have and perhaps find some middle ground?

Overall, the concept is similar, an app which has a dynamic background which changes and/or upgrades when one saves water. In addition, the use of a cup of water is used to signify water save, emptying as one uses more water and filling as one saves water.

As for the proposal, the guidelines are given, just we need to fill it out. Denny has after-school theatre so that leaves Jack and Quince to write the proposal. Jessica needs to make up work while Miguel has work.

Questions to be researched



Fig 6. Concepts drawn



# INNOVATION CHALLENGE 2016

**DATE 3/3/2016**  
**MEETING**

## Notes

### Agenda/problem

- Figure out fieldwork plans
  - + Citizen
  - Catherine at PSU
- Discuss the proposal feedback
- Discuss the presentations

### Discussion/solution

After discussing everyone's schedules, the overall plan to do extra fieldwork is a meeting at PSU on Monday the 7th at around 3:30 ~ 3:45 at the main lobby. The other is with + Citizen on Thursday the 11th at around 2:45.

As for the presentation, we were discussing how to do it, what to do during the presentation, and started to create an outline for the final event.

- Human impact:
  - Ted Talk about video games
  - Talk to Catherine about human impact of saving water.
  - Is there any pollution in cleaning water?
    - Statistics
    - Numbers = credibility

As for the the tips...

- Could have a loading screen for each of the tips.
- Have options for all the tips (for each category of appliances)

As for the presentation:

- Introductions
  - Our names and school
  - Then have some motivation for the problem
    - Have a sound of water in the background
- Problems: Overuse of water



- Problems that arrive from overuse of water
  - Ecological impact (can be twisted into human's directly)
- Solution, a fun, interactive platform to help users save water.
  - The power of gamification (Ted Talk). This is also a road to solution (transition).
  - Key points of solution
  - What the app does and how it is going to solve it.
- Lasting impact
  - Even if users use app for a while, their habits will change even if not using app.
  - App provides motivation to carry through with the habits.
  - Steps to make this a reality.
- Conclusion
  - Brush up on everything else, recap

Questions to be researched

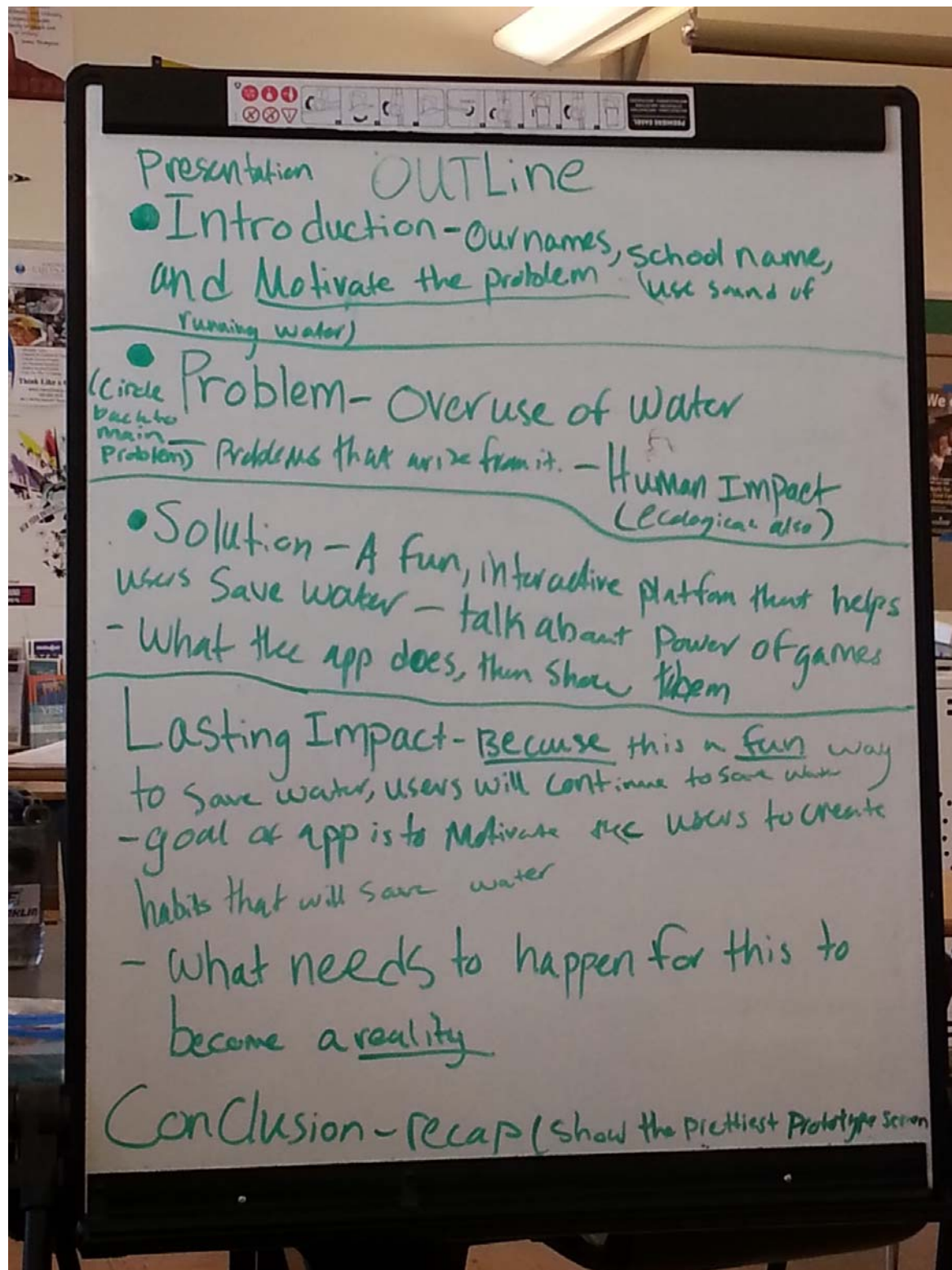


Fig 7. Outline of presentation

Below is a series of images related to a meeting during 3/10/2016 in which the rest of the time remaining is schedules and tasks left delegated to other members. A week after, around 3/18/2016, the group did more fieldwork with +Citizen.

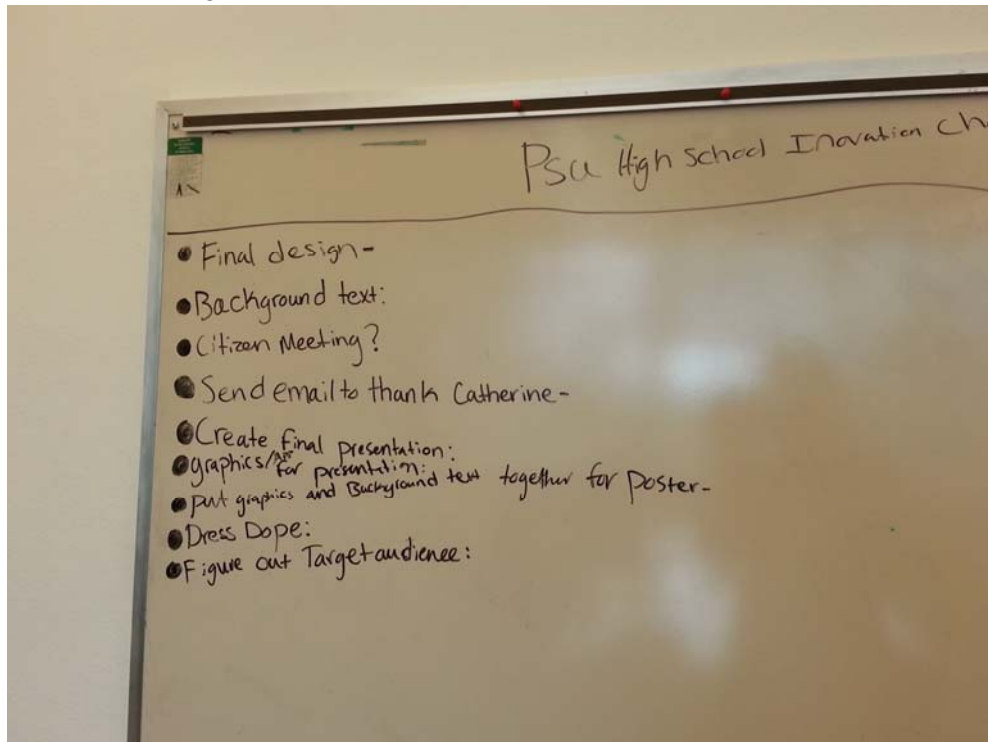


Fig 8. List of Tasks to do

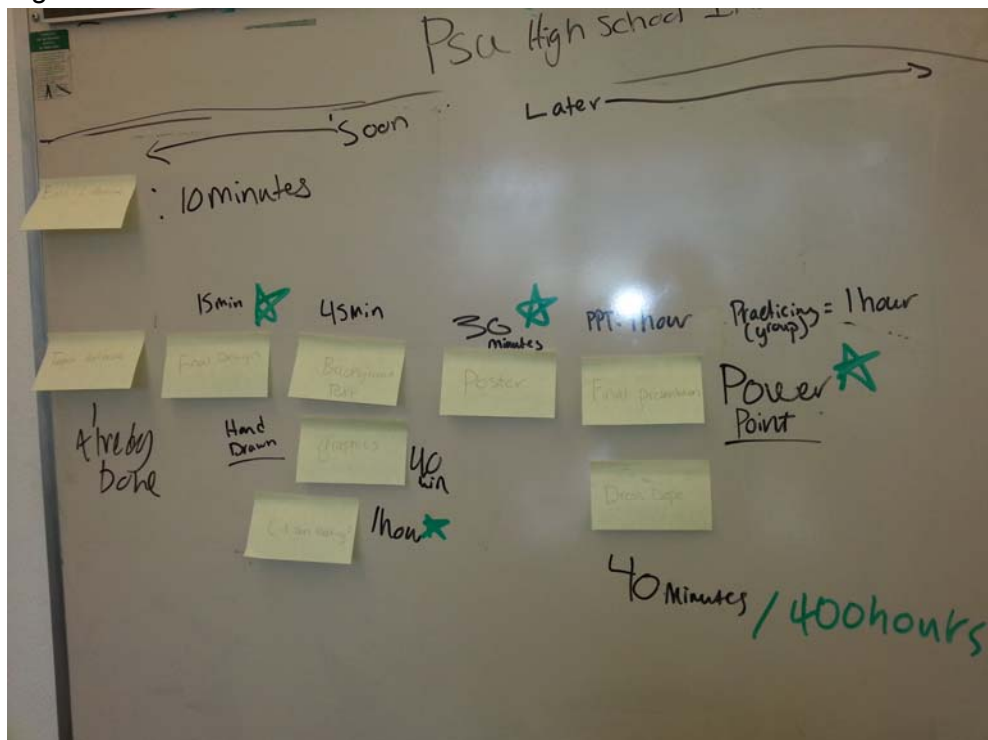


Fig 9. Delegated tasks to each person



Fig 10. Team is hard at work



Fig. 11: Meeting and discussion



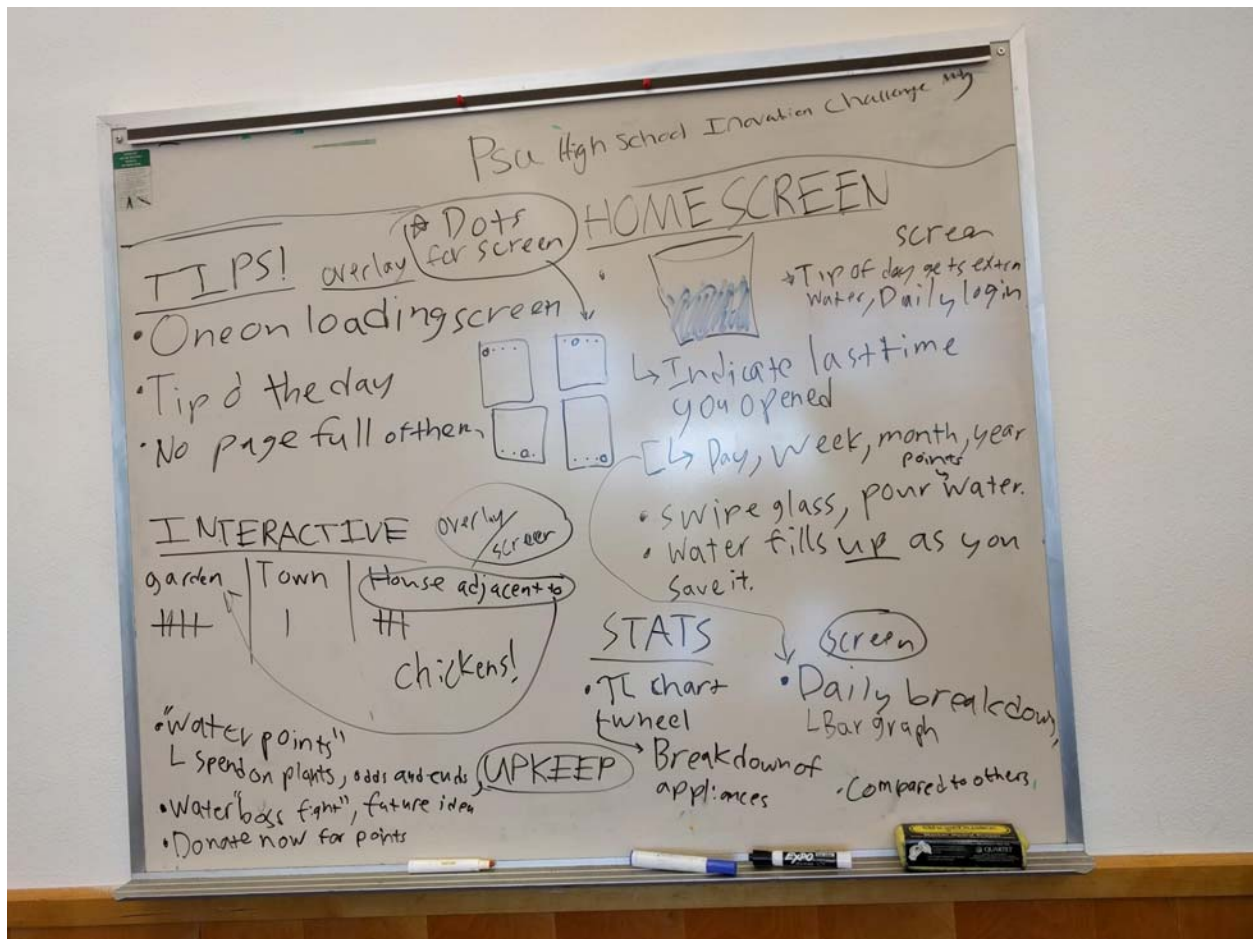


Fig. 12: Ideas of the application

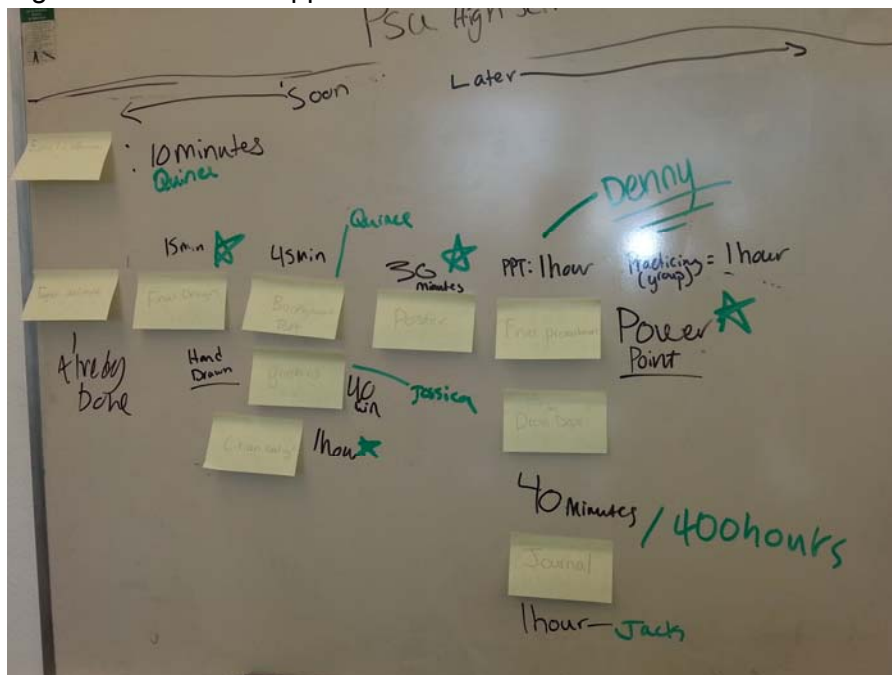


Fig. 13: Delegated tasks

## INNOVATION CHALLENGE 2016

**DATE 3/31/2016**

**MEETING**

### Notes

#### Agenda/problem

Prepare Journals and Final Poster and turn it by the night of tomorrow.

Figure out name of the app

#### Discussion/solution

Jack is preparing the Journal entries while Denny, both later on the week and today, and, at the moment, the group is reviewing the background information that Quince wrote the last two weeks. Jessica created some art work last week for concepts/prototype of the app.

We had a debrief of the +Citizen fieldwork two weeks ago as a full group due to only 2 people had the time to meet with them. What we had taken away from that meeting was the question, why are people coming back? How are we going to get seen? What is our main target audience?

As for the name of the app, after some brainstorming and voting, is puddl (all lowercase).

Questions to be researched