



# WastePlacer

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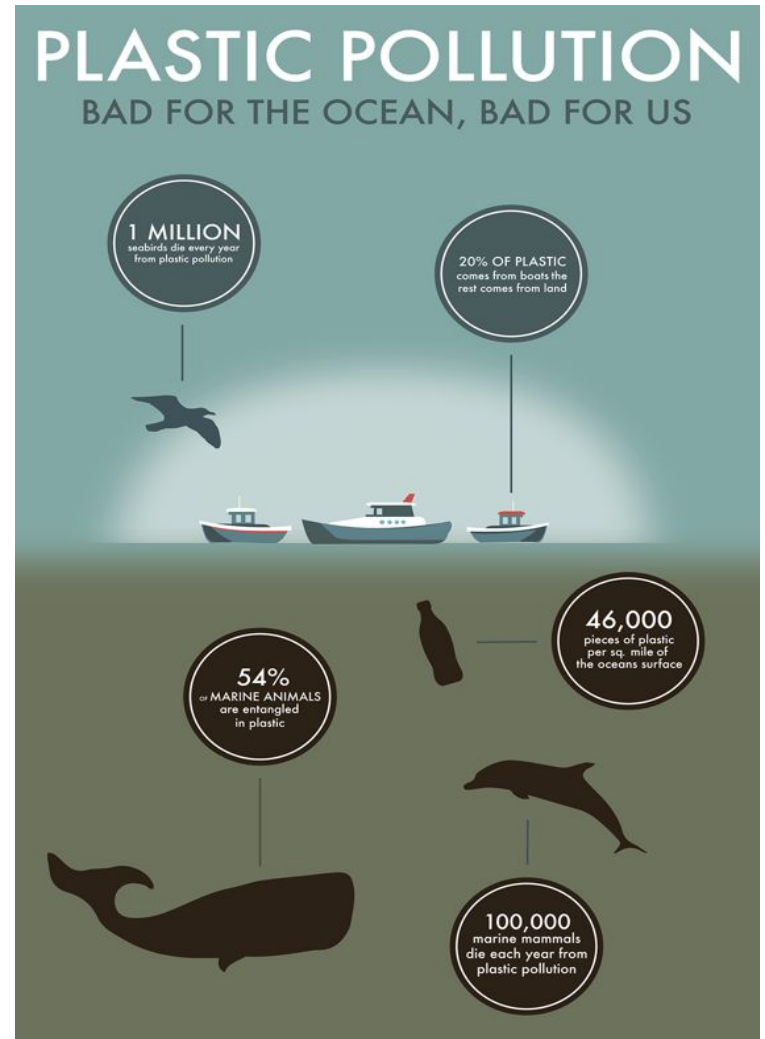
# Problem

- People don't know where to throw what
  - Don't think much about it because they never see it again
- People don't know the impact of their actions
  - If one non-recyclable is found in a bag of recyclables, whole bag gets thrown out
  - Food thrown in landfill generates large amounts of greenhouse gases



# Problem

- Plastic never fully breaks down (even the recyclables)
  - Strangles and poisons animals, contaminates water, ingested by humans
- 40% of all food produced in US is thrown out
  - Wastes numerous resources
  - Produces greenhouse gases



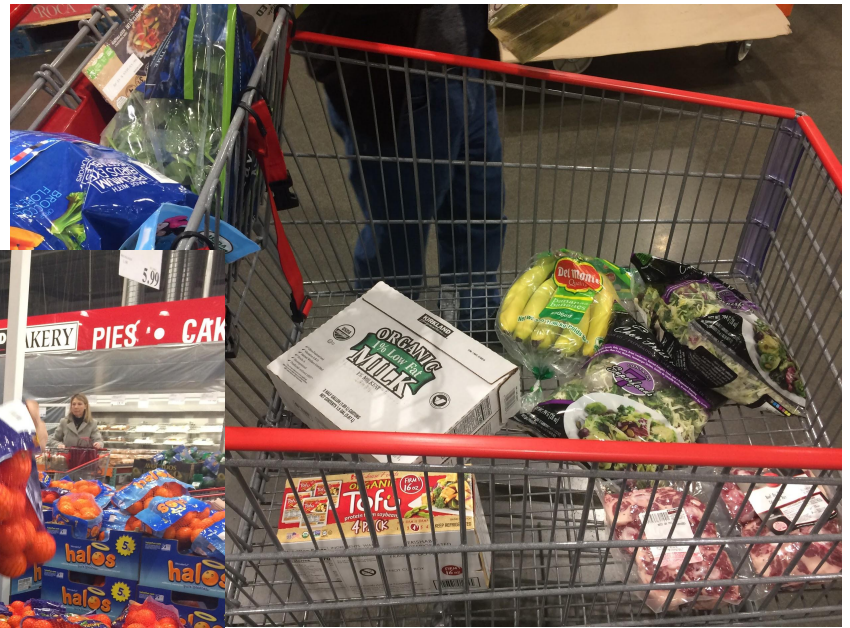
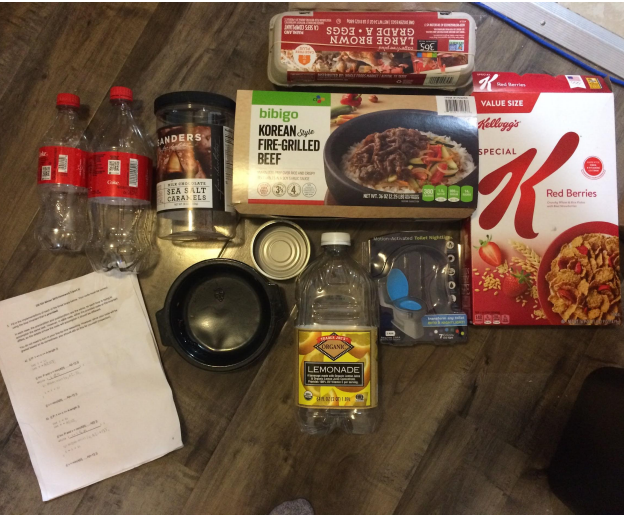
# Design Research

- Diary Studies - 3 Days
  - All 11 participants tracked:
    - What they purchased
    - What and Where they disposed of their waste
- Contextual Inquiry
  - Observation of shopping and cleaning out a fridge/pantry
  - In their own home
- Pre + Post study interview questions



# Design Research

Observation of  
Participant shopping +  
picture of waste



# Design Research - Participants

- Young adults (college students)
  - Individual consumers
  - Communal waste bins - Trash, Recycling, Compost
  - Knew recent times they didn't properly dispose of something
- Family homes (Mom/Dad in a household)
  - Buys and disposes for more than 1 person
  - Personal Waste bins - Trash, Recycling, Compost\*
    - \*One participant did not have a Compost bin



# Design Research - Themes

- Food would spoil and be wasted most often
- Idea their waste habits were better than most people
  - Still know they have bad habits
  - Content with being better than most
  - No clear external incentive to go above and beyond
- Lack of understanding of sorting
  - Hard to know specifics
  - Logic to guess where something goes
  - Don't want to spend too much time



# Task 1

**Sorting waste** into the appropriate bin (Trash, Compost, Recycling)



# Task 2

**Tracking the amount of waste** for each category disposed over time, highlighting and comparing trends

# Task 3

**Providing real-world context** for the environmental impact of an individual's disposal habits

# Task 4

**Providing tips** for reducing waste based on the individual's tracked waste habits

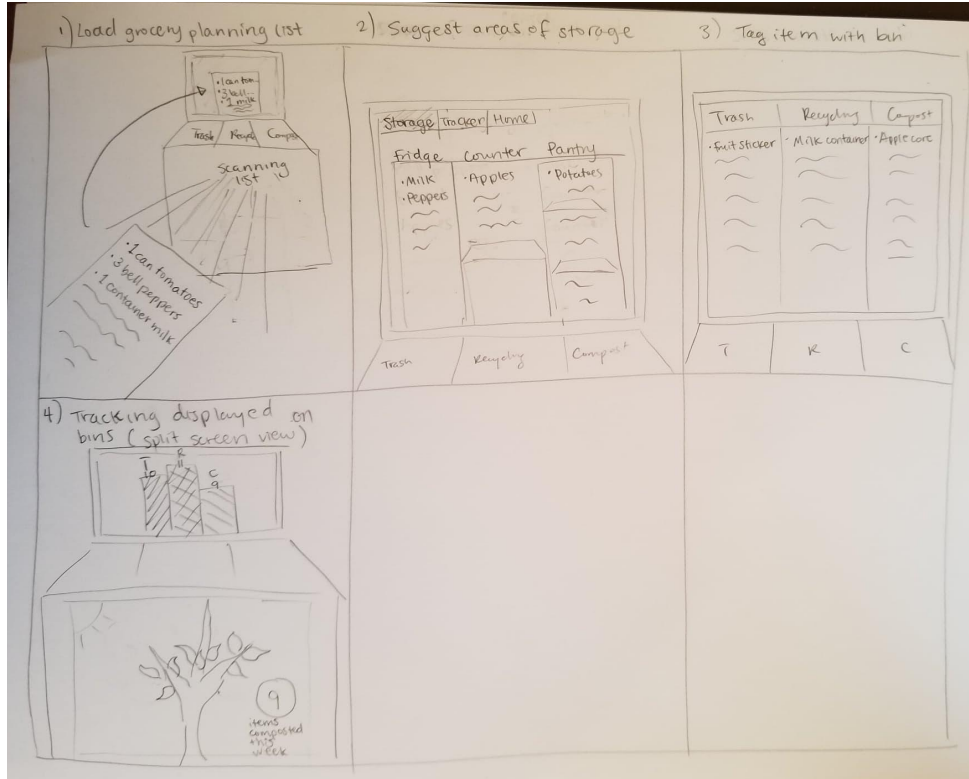
# Task 5

**Planning purchases** so people know exactly what they need to buy and won't purchase things that will eventually be thrown away

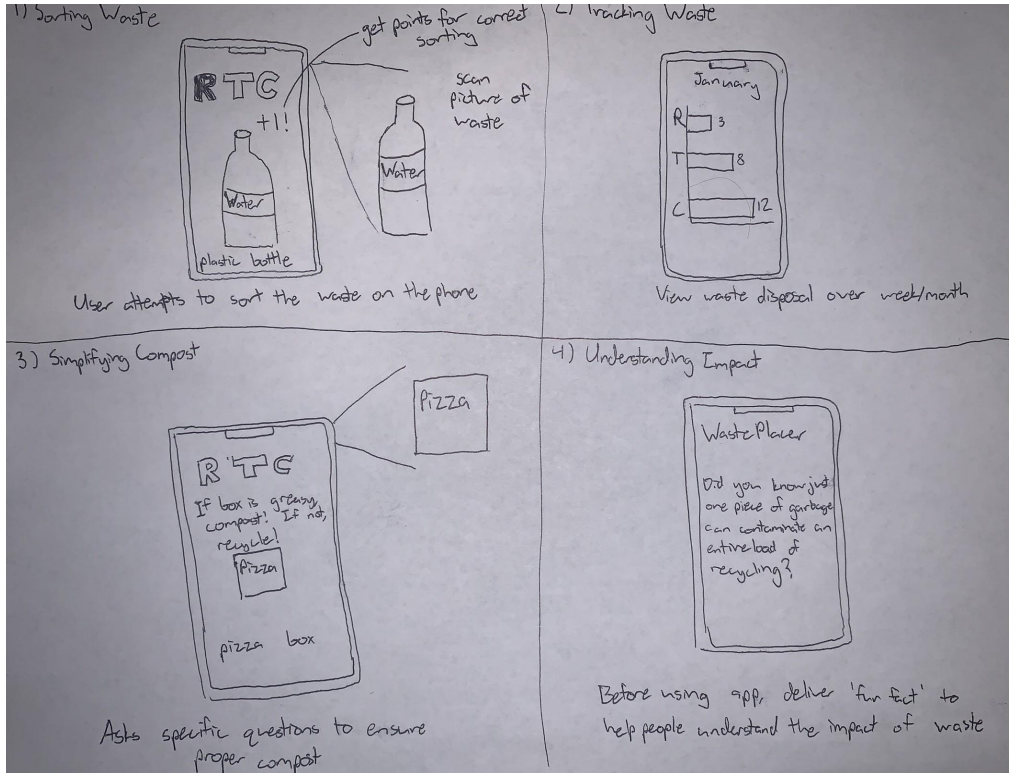
# Task 6

**Preserving foods** by arranging/storing them in a manner so they don't go bad as quickly

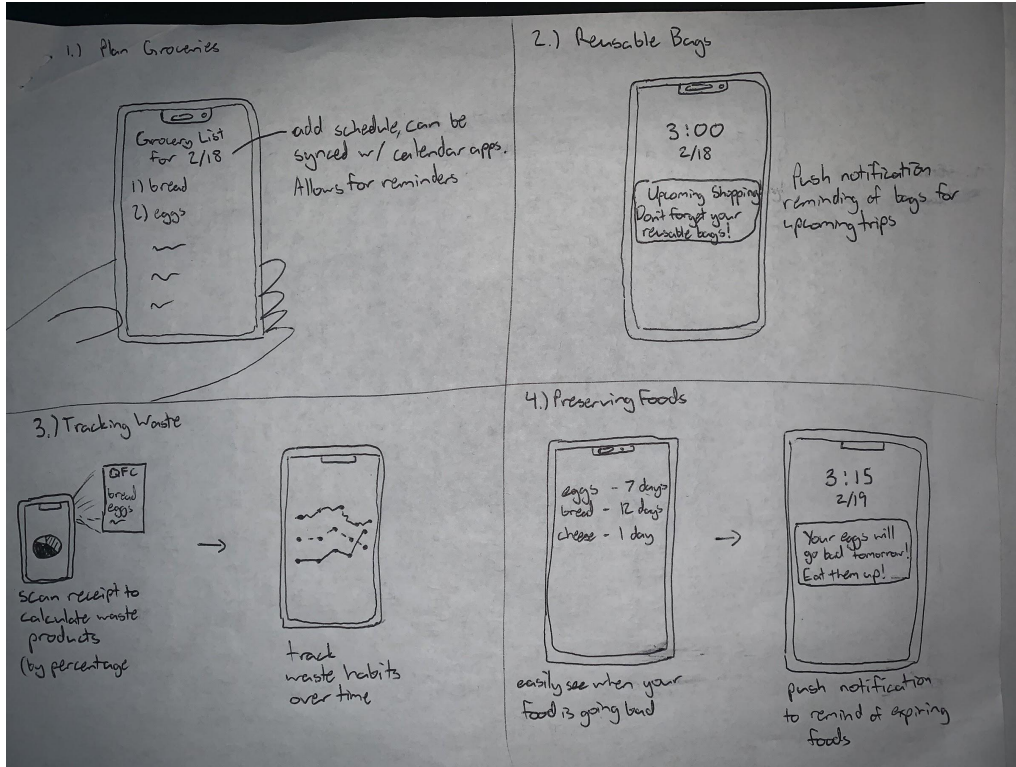
# Design 1: Smart Bins



# Design 2: WastePlacer



# Design 3: Smart Shopping List

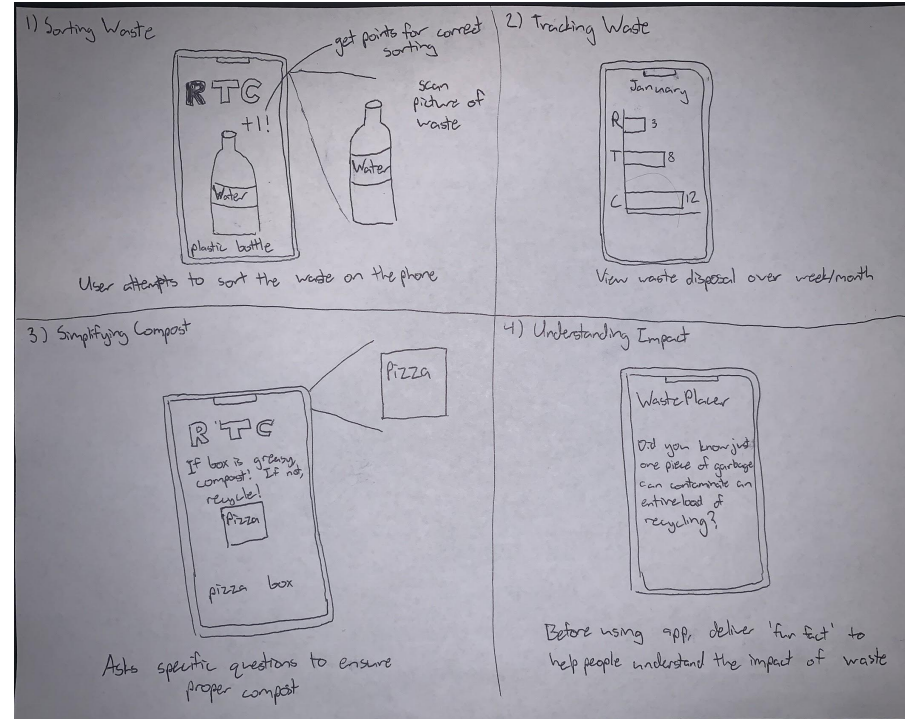




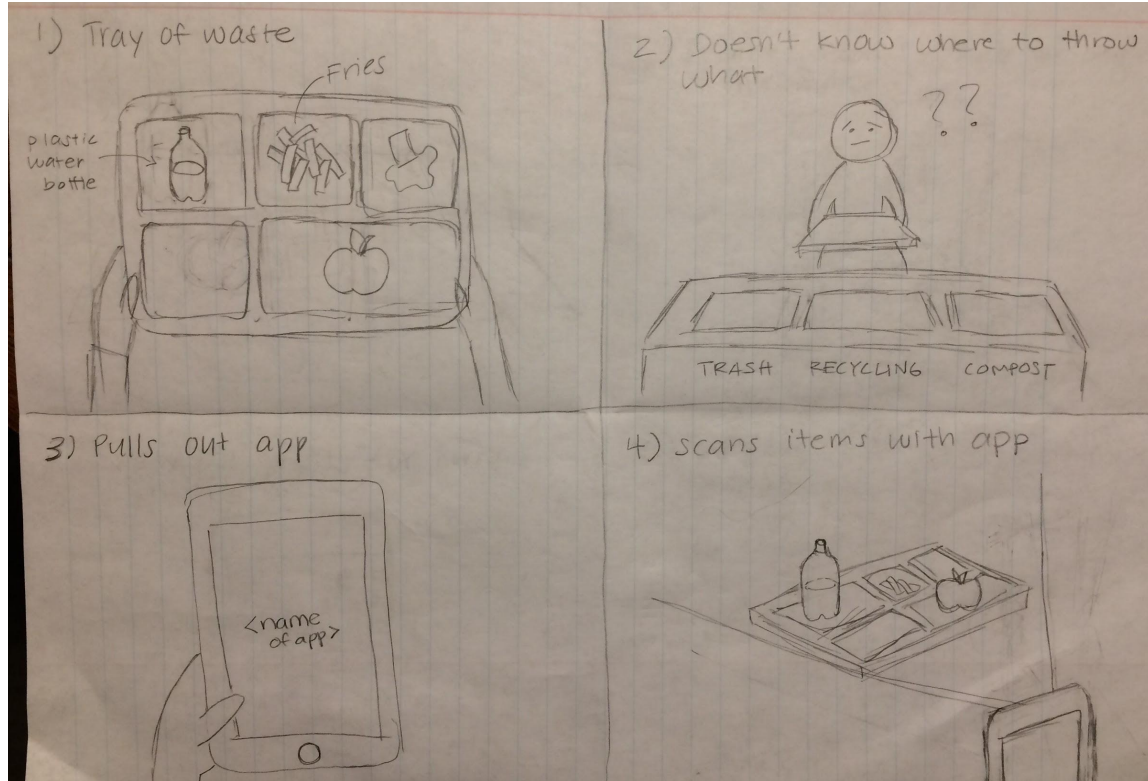
# Our Chosen Design

We decided to further our WastePlacer design, as it focuses critical tasks based on our research.

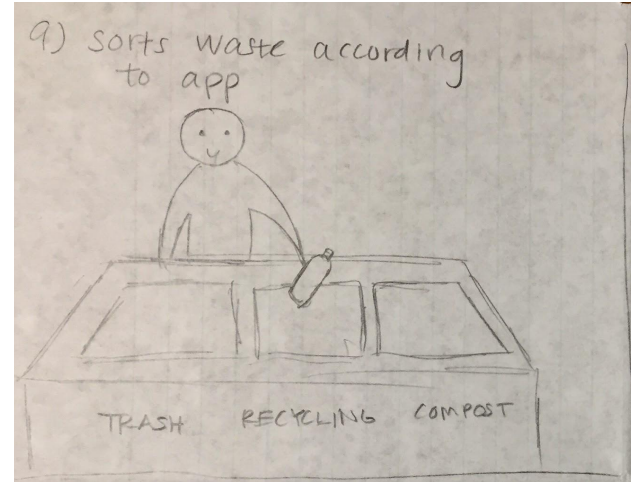
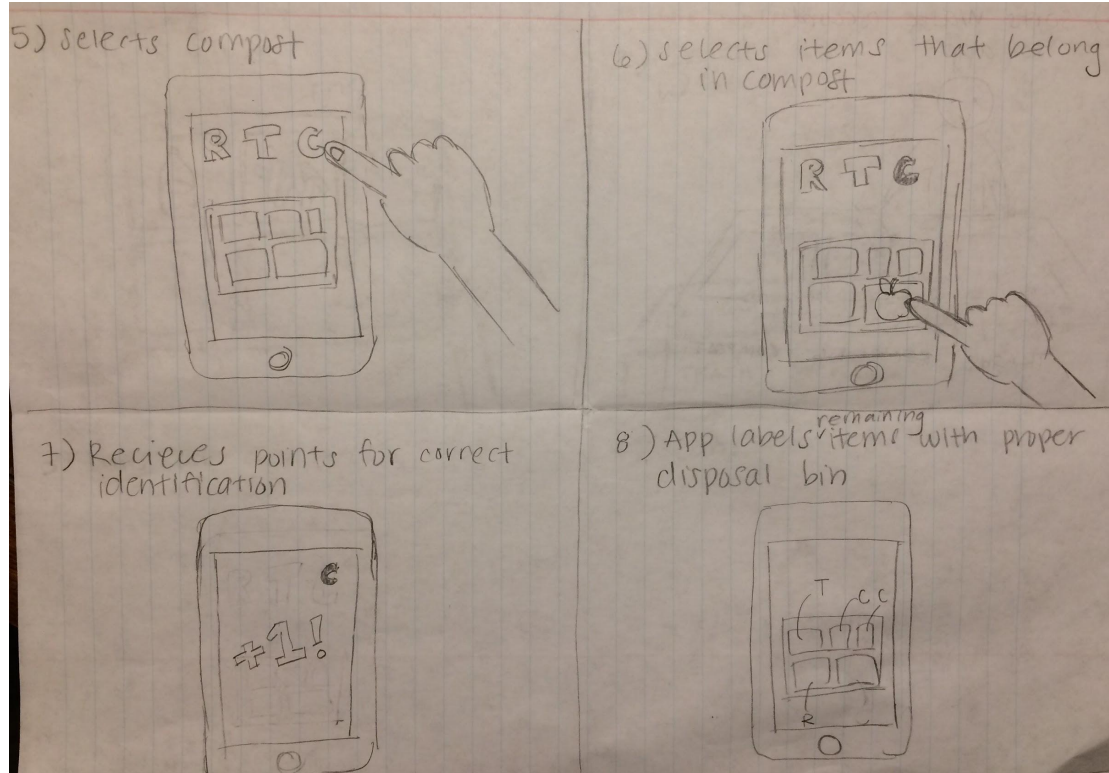
- Sorting Waste: has the biggest environmental footprint
- Tracking Waste: good to see how habits have changed over time



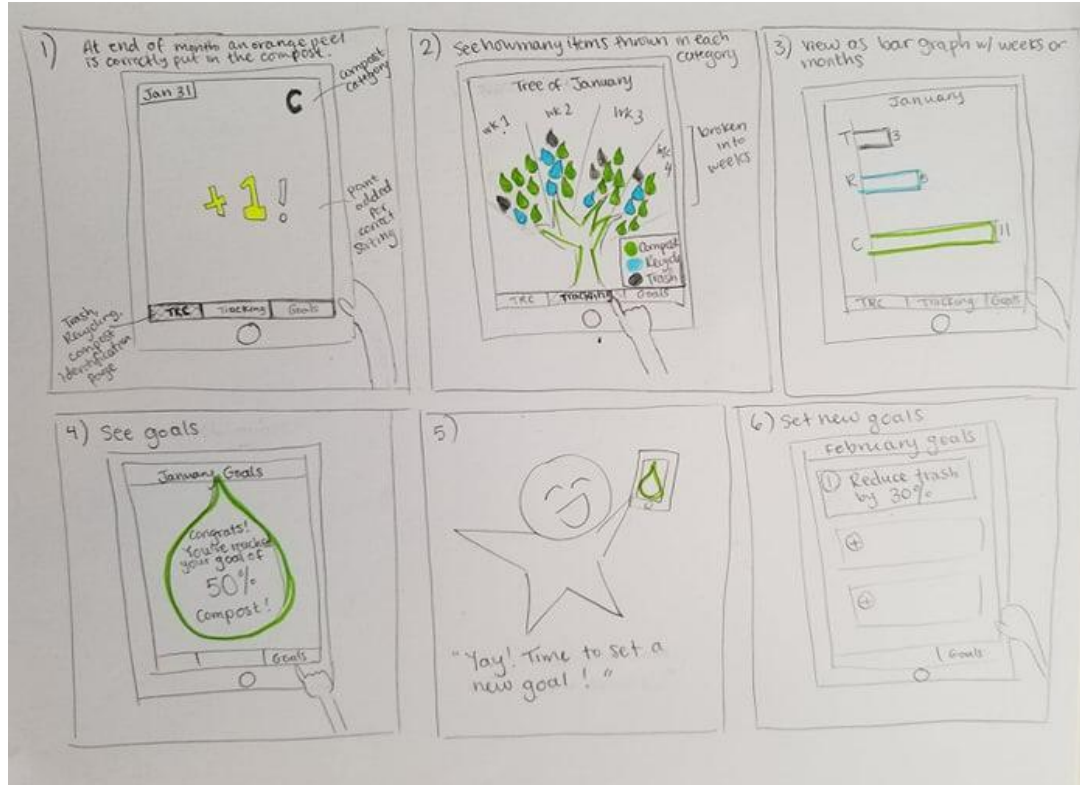
# WastePlacer - Sorting Storyboard



# Sorting Storyboard Cont.



# WastePlacer - Tracking Storyboard



# Learnings

- Speed is a key element
- Everyone thinks that they are an above average sorter although sorting quality varies widely
- People need to understand their environmental footprint
- Small, easily implemented changes could make a big difference

Thank you!

