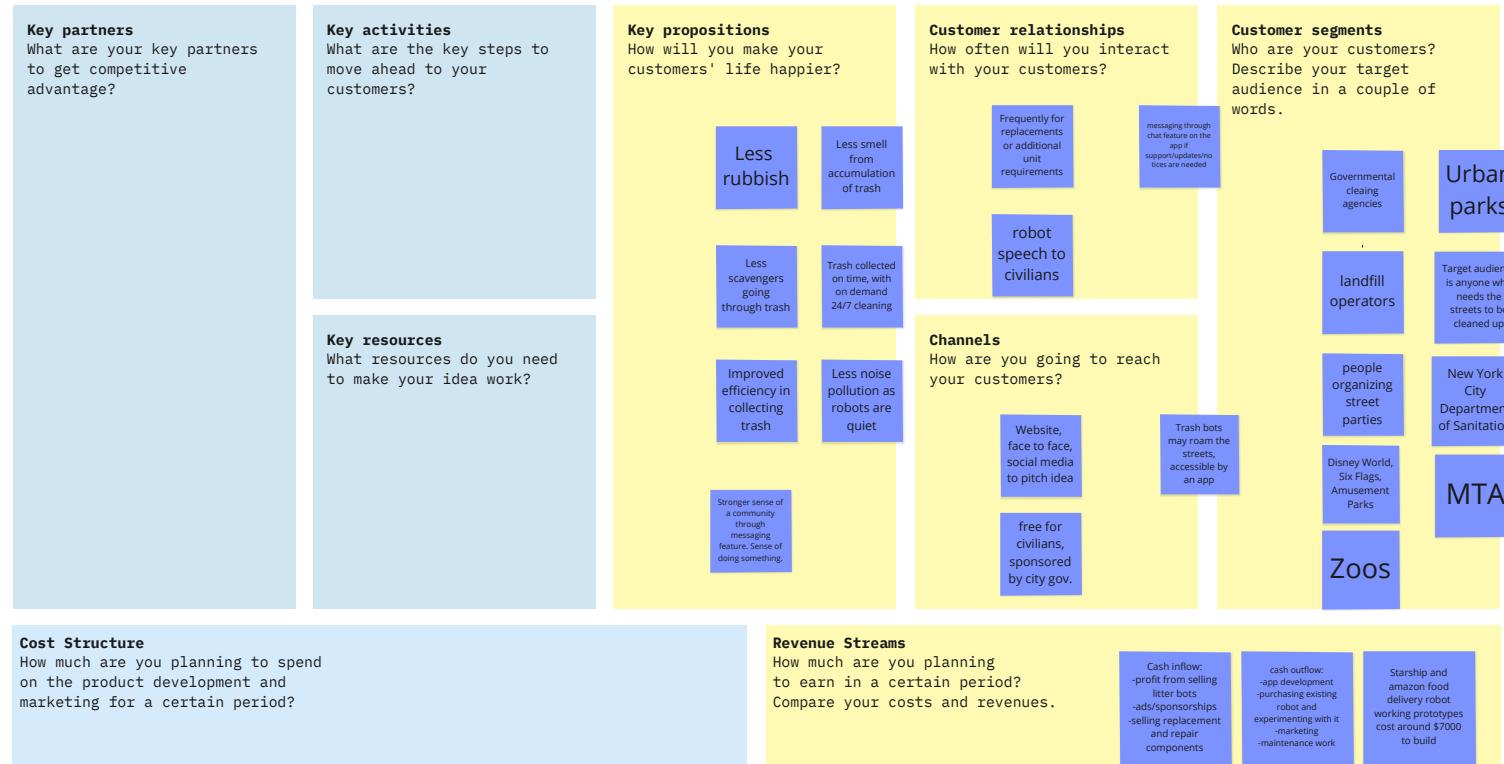


## The Business Model Canvas



Source: [Strategyzer.com](http://Strategyzer.com)

	Week 1	Week 2	Week 3	Week 4	Week 5
Joseph	-1 interview minimum brainstorm design possibly onenote: Sunday	work on app lightly; CAD slightly; interviews Research			
Peter	interview (1min) -design brainstorm	-light CAD -interviews -research, patents			
Vlad	1 interview min. brainstorm design: Sunday	work on app lightly; CAD slightly; interviews Research			
Weeks work	patent research design brainstorming , light cad	Start website & app write up prototype stuff Interviewz powerpoint	Finish up Cad Finish up App Interviews Solidworks	Descriptive writing peer review Cad and App (powerpoint)	Put everything together Celebrate Do all the interviewz you push off doing until now -physical cardboar4d prototype

## Epic Statement

With Litter Bots, we'll clean streets of waste, building a cleaner environment for local residents.

## Sub Statements

As a resident of Brooklyn, I'd like to have cleaner streets with less litter to revitalize neighborhoods and live a higher quality life.

As a local garbageman, I can't keep up with the growing waste of the city, so Litter Bots provide the needed extra help.

# Week 1&2:

M. patent research

M. design the litter bot

S. brainstorming ideas

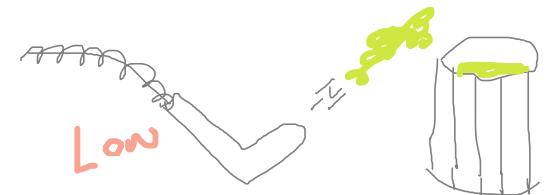
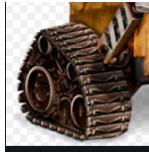
M. light cad

L. Start website & app

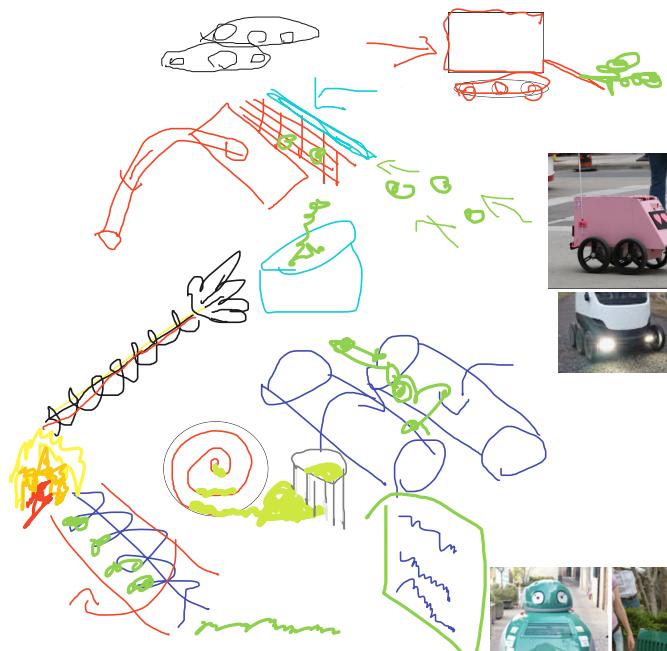
M. write up prototype stuff

S(normal ppl) . Interviews

- litter bots can be altered to pick up snow
- advertisements on the side of litter bots
- moving trashcan
- lights on front if working in the dark
- use light colors for good vibes



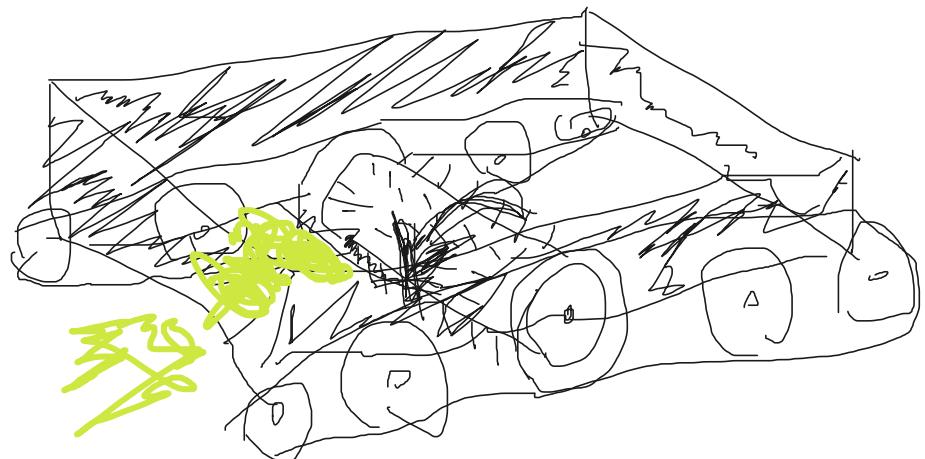
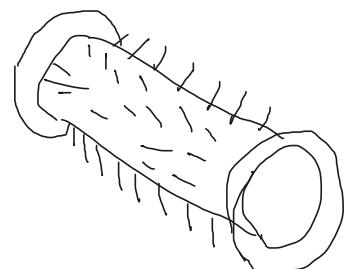
Light  
colors



Wheels:



wheels on the sides of the spoke power the rotational motion and stabilize it.



Interview with stranger who plans garage sales and suburban community events:  
Q: what does "litter robots mean to you?" (indicates clarity of title for us)  
A: first thing that came to mind were robots that pick up litter, second thought was litter from discarded robots.

Q: Sold to the government to be handled or to a private firm if not sold to consumers? (to get a sense of who customer would be from consumer's perspective)  
A: Government or a private firm will try making profit and cleaning of streets should be a public service, so robots = public good.  
-by making it government property, and vandalizing is destruction of government property and so sentencing is harsh and responsibility is allocated to government rather than us or private firm.

Q: Would you see something like this becoming a reality/feasible?  
A: Yes, as long as there is the technology for it it can be a reality. Like the robots move

Q: Any obstacles that pop into your head?  
A: How does it identify what's rubbish and what's not? Water (puddles) and weather resistance. Must not look like a robot and more natural so it isn't intimidating

Q: Key features you think are necessary and a must?  
A: Should be able to cover multiple terrain, not pollute the planet or damage the environment with spike wheels for example.

Q: How does litter in your neighborhood (Brooklyn) affect you  
A: I think it is disgusting, notable example kings highway and ocean avenue. I feel that it takes away the property value of the neighborhoods  
Q: If you had an app that you can use to get rid of trash you see on the street, would A: Would get it, nobody likes to walk on trash. I would definitely more readily click a button to get rid of trash then go and clean someone else's litter manually  
Q: do you think it would be effective if it was government run or just by people who'd like to see their neighborhood get cleaned up?  
A: Government run stuff people complain about, and are skeptical, but if its personal people may care more.

Q: would you mind having robots randomly walking about the neighborhood.  
A: Yes, it would be weird, unnatural, may disturb neighborhood dynamic  
Q: What kind of litter is worse, big chunks or small scattered pieces?  
A: big chunks, look worse.

Interview with individual fitting potential customer segment: resident  
Q: what does "litter robots mean to you?" (indicates clarity of title for us)  
A: Roomba, little round robots that get stuck in places.

Q: Sold to the government to be handled or to a private firm if not sold to consumers? (to get a sense of who customer should be from others perspective)  
A: Government since property owned by them, chance of an industrial vacuum

Q: How much would you be willing to pay for its service if it wasn't free?  
A: At most \$50, wouldn't mind giving it as I see my dad's strenuous work. Cleaning snow from driveways would be cost since no one wants to be outside doing that in the cold - Chicago has lots of snow during winter.

Q: Would you see something like this becoming a reality/feasible?  
A: Yes, as long as there is the technology for it it can be a reality. Like the robots move

Q: Any obstacles that pop into your head?  
A: How does it identify what's rubbish and what's not? Water (puddles) and weather resistance. Must not look like a robot and more natural so it isn't intimidating

Q: Any potential obstacles?  
A: People's interest in a clean environment, lots of questions that need to be answered: what cities are you planning on cleaning, what exactly is it cleaning?

Vlad's interview:

What do you think about our litter bots idea?

Vlad's 2nd interview:  
Very good idea, but I like when humans clean and do this job. Humans should rely on themselves, this is where people live, robots shouldn't do everything, they have to hold people responsible.

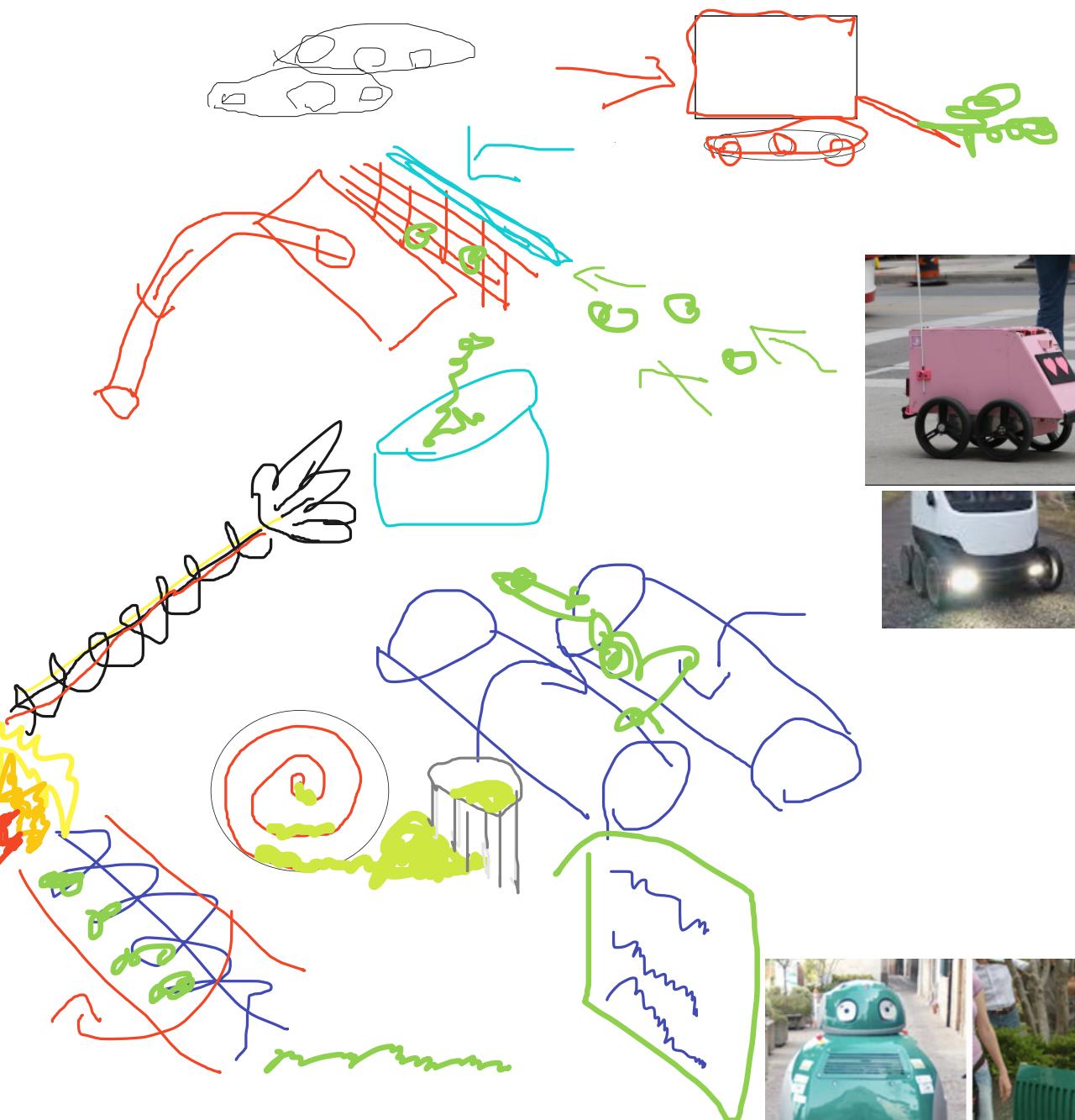
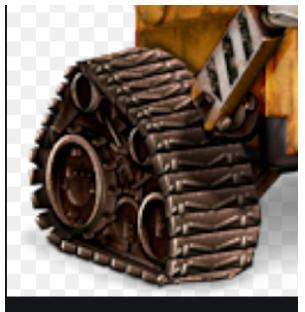
If we sold it to the city what do you think could happen?  
They buy services and companies sometimes, but a large part of city government is corrupt and not in our best interest.

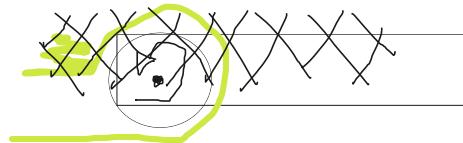
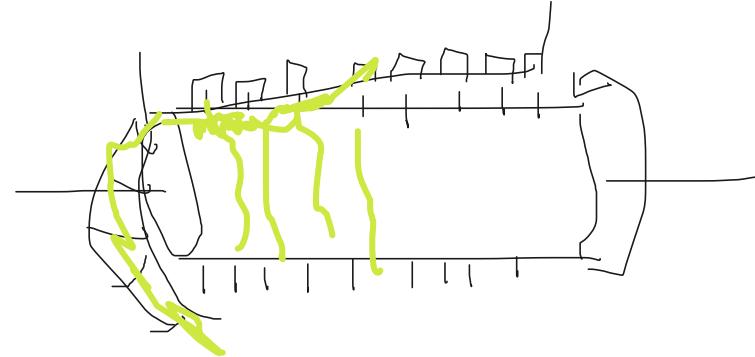
What are some obstacles?

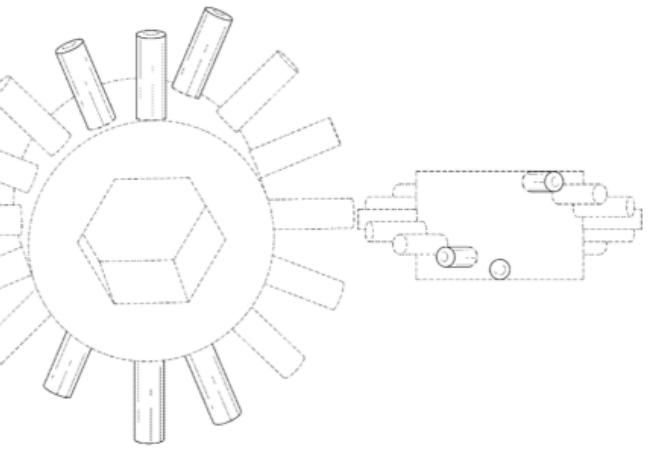
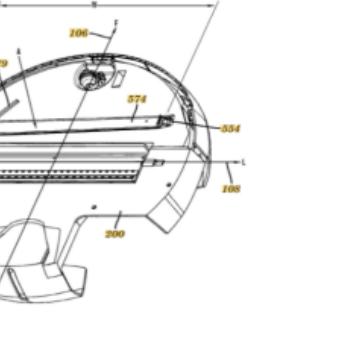
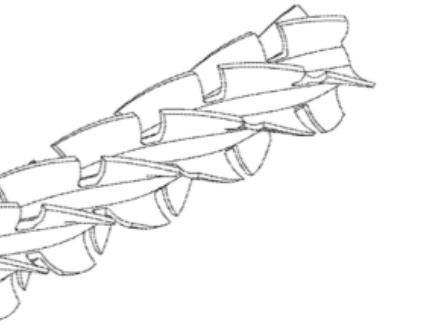
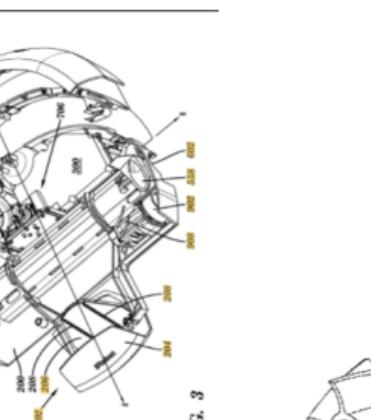
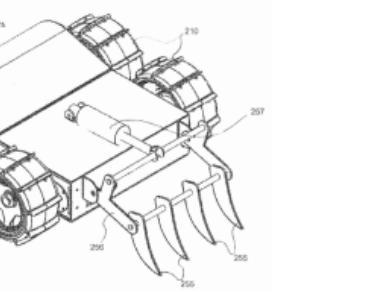
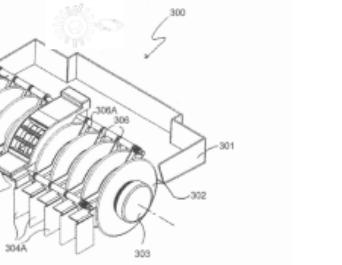
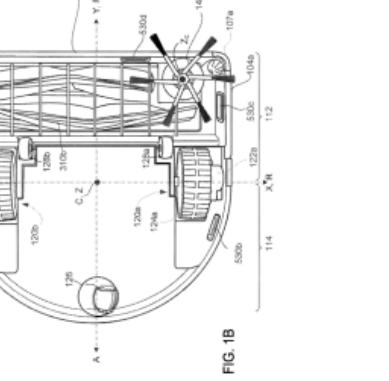
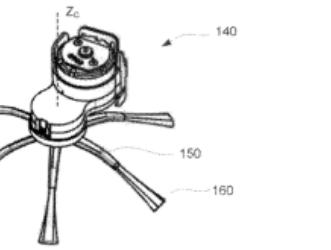
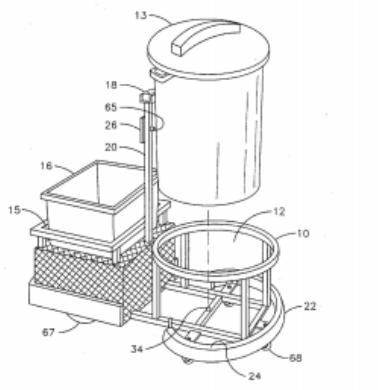
Will it make profit? If the robots themselves are not too expensive? Where will stuff be disposed? (maybe put this in profile)

Would you use it?  
Yes, to save time for myself doing it.

Do you want to live in a clean neighborhood?  
Yes, I'd love to. I get upset seeing litter outside, but when I see clean I'm happy.  
Maybe it's some sort of psychological effect.







MVP-small scale prototype RC that could potentially pick up trash in the air. Shows principles of collecting trash and how it would work

1. **Feasibility:** Does the preliminary MVP design do what it claims to? How will you prove the feasibility of your product? 3D-printed prototypes? CAD designs? Smoke tests? etc.
2. **Viability:** What is your Business Model Canvas (Customer segment, Value Proposition, Revenue Model, Channels, and Customer Relationships) that makes this solution scalable in the real world?
3. **Desirability:** Who wants to use this product, and why will they want to use it? Who did you talk to in order to validate your hypotheses? Note: Minimum of 5 *interviews* required over the course of idea development.



For each of these components, we expect you to discuss:

- a. **Tests:** How will you prove to us that your claims are true? What are the important metrics? What evidence exists that the product would advance these metrics?
- b. **Changes:** How did interviews & tests change your business model canvas over time? We don't expect (and would be surprised if) every aspect of your design was initially perfect, so how did you move closer to success?

Review of exercises we've done this semester:

Feasibility	Viability	Desirability	Tests & Changes
- MVP - Patent Search / Prior Art - Experiments / Prototypes	- Business Model Canvas - Metrics & Measures	- User Interviews - Empathy Maps - Epics / User Stories	- Experiments (1 Hour?) - Storytelling