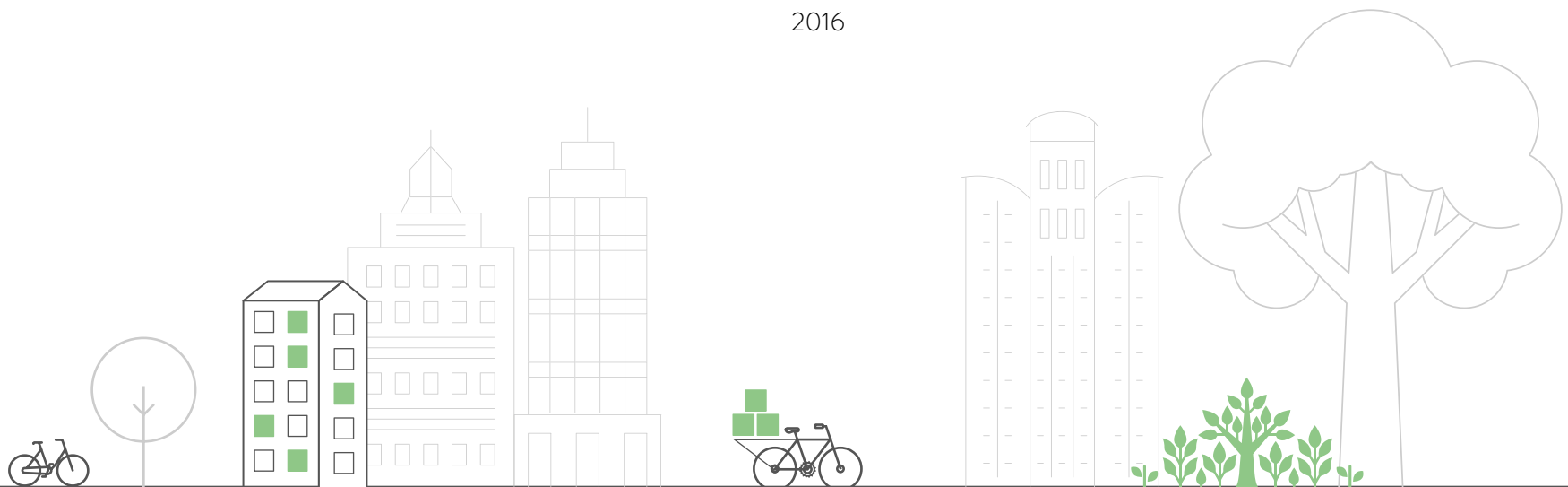


compostal scraps to soil

Kyle Calian & Amer Jandali

Archie Lee Coates IV

2016



⚙️ We, **Amer Jandali and Kyle Calian** are creating a **bike operated compost pickup service** for **people living in urban areas** in order to **reduce the amount of food waste** going to the landfill **reducing their impact on climate change.**

WHAT

FOR WHO

WHY





why this work and why now

the context

OUR JOURNEY

What started as a conversation in a cafe about our own discomfort with living our values, has taken us on a journey over the last year and a half. This preliminary conversation revolved around how the systems around us everyday don't lend themselves to the actions we want to take.

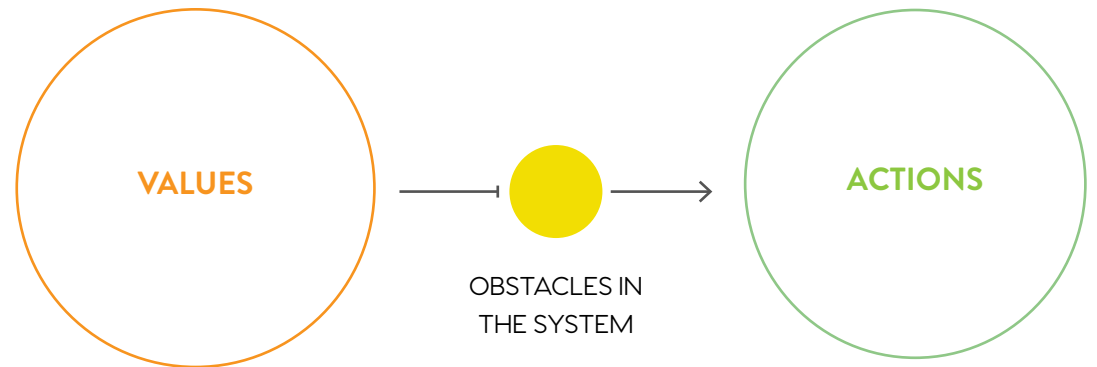
As it is with most projects, designers want to try and do everything – in our case we wanted to foster a paradigm shift for people to act upon what they truly believe, especially when it comes to the environment.

Most people we know and talk to here in New York City are on the same page when it comes to climate change – they agree that the rate of human consumption of the earth's resources is creating a massive amount of pollution and causing climate irregularity. But most of them feel helpless or bound by social norms and other physical limitations by the choices they are faced with every day.

We needed to consistently check that we weren't assigning our values to others. So throughout the process we've made sure to ask again and again – why are the participants choosing to do something to address their motivations for making changes in their habits, not ours.

In order to do this work, to redesign these systems, we had to really put on our empathy hats. We've had to truly embody that the systems we live in are the cause of inaction, not inherent malice or negligence.

Why is it so hard to do anything about climate change?



3 in 4

Americans believe in Climate Change

WHY IT MATTERS

As humans have moved from rural settlements into more concentrated urban living spaces, we have become more and more disconnected from our natural world. We're are facing a plethora of environmental issues that stem from that disconnect including deforestation, pollution, and climate change. Everything we do in the city seems linear – trash goes “away” and we're done with it. But the reality is there is no such thing as waste in nature. The trash will go to the landfill and become methane and chemical runoff which will continue to contribute to the problems we collectively face.

We decided that we needed to design something that would expose these problems by avoiding the same doom and gloom rhetoric that shrouds the environmental movement. We wanted to design a fun, interesting and engaging way for people to make a positive difference.

What humanity needs now are ways to reconnect with more cyclical natural systems and less linear ones.

So the major focus throughout our process was to design something that would change the perspective or relationship an individual had with either objects or systems that would empower them to take action from a genuine place. In this way, by giving users all the tools necessary to take action themselves, we would be able to test different ways of overcoming the different obstacle: in the system.

So, we began by defining the urban population we we're addressing as “edge-walkers” – friends and colleagues who are informed about the problems we face but haven't been given a clear alternative to changing their current behaviors. We wanted to address our throw-away culture and how in nature there is no such thing as packaging.

Based on our passion for food and our mutual confusion with how its disposal is handled in cities we focused in on the disconnect we collectively have with this system. Our research and our own experiences led us to look into ways we could avoid making waste on a day to day basis.

Which led us to ask...

Why is it that every time we eat we make trash?

Edge Walker

/ej wôker/

noun

someone who knows something is true but chooses not to act upon it.

Questions to ask:

What information is missing?

What else do they need?

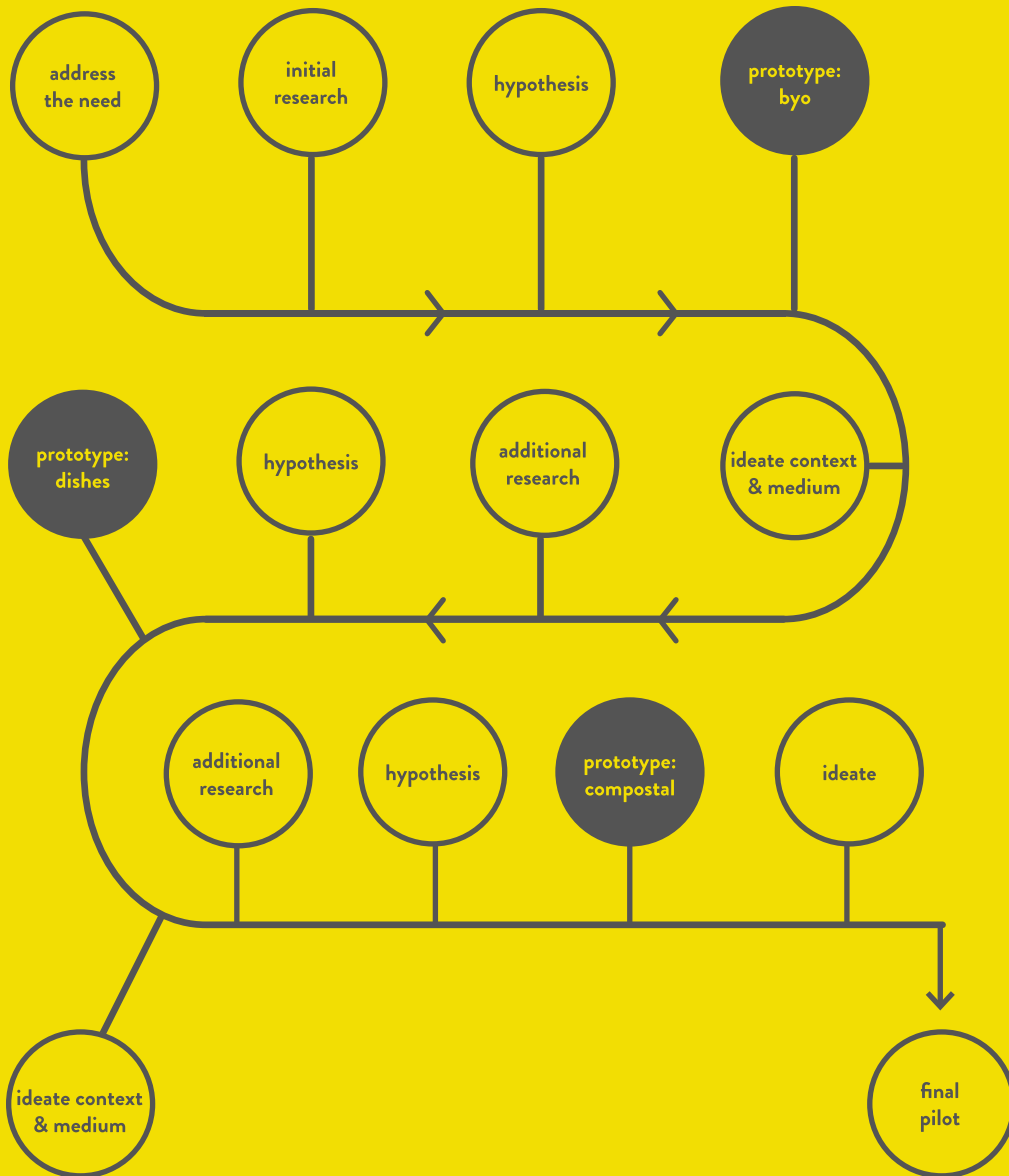
How can we reduce our waste?





there is nothing linear about design

our process



PROTOTYPE: BYO BRING YOUR OWN

A guide designed to teach people how to reduce their disposable food impact, by giving them the tools and information to use reusable containers incrementally. Our intention was to inform the transition over the course of 4 weeks.



PROTOTYPE: DISHES DON'T DISH IT

A mobile dish lending service that would raise awareness about disposable food culture by giving customers the option of opting out of trash by using a reusable plate. In this way we were equipping customers with the tools at the door and the businesses savings in packaging and trash costs.



PROTOTYPE: COMPOSTAL COMPOST PICKUP

A bike operated compost pickup service that enables those already sorting their food waste and those who wish to start with a cheap, easy to use alternative to dragging their food scraps to the farmers market.



prototype #1

bring your own

By the Numbers

27 Total Participants
4 Weeks • 30 Days
6 Items

INITIAL RESEARCH

80% of the waste we produce is single use disposable products, specifically food related packaging and cups.

The average American office worker uses about 500 disposable cups every year.

Americans throw away 25 billion styrofoam coffee cups every year, and 2.5 million plastic beverage bottles every hour.

We toss out enough paper bags and plastic cups, forks and spoons every year to circle the equator 300 times.

Trash is for Tossers

We we're inspired by Lauren Singer, who runs the blog, Trash is For Tossers, who lives a zero-waste lifestyle by buying bulk, creating her own cosmetics and always bringing her own container. How does she define **zero waste**?



“To me, Zero Waste means that I do not produce any garbage. No sending anything to landfill, no throwing anything in a trash can, nothing. However, I do recycle and I do compost.”

Documentaries

Thrive

We learned that wicked problems are symptoms of internal systemic imbalances. A lot of subconscious behavior has to do with oppressive systems that don't facilitate question asking or internal reflection on behavior in a context outside the self.

Fair Food

It's always important to remember that there are people picking our food. Often when we go to the grocery store to buy food we are deeply disconnected from our food system. It's a parallel mental disconnection to our disposable waste problem.

Waking Life

Honed in on a lot of the philosophical systems we commonly toss around but in context.

Bagit

Every consumer interaction makes a huge impact.

Field Testing Zero Waste

After realizing that packaging and containers account for a significant portion (23 percent) of the municipal solid waste stream in the United States, equal to about 39 million tons per year (as of 2010) – we decided to take matters into our own hands and do some field testing.

We spent hours observing and testing the waters of zero waste at the Union Square Farmers market and Shmorgasburg. We've participated in countless interactions using reusable containers at major chains like Starbucks, PretAManger and Chipotle, as well as small mom & pop stores to see if there were any stigmas or hesitation about using containers.

We found it to be inconsistent, but frequently once the manager is involved, customer service comes first. We also found that it helps to be extremely clear from the get go that you would like to produce no waste in the interaction, otherwise they tend to be insistent on bags etc. as protocol.



INITIAL APPROACH

Hypothesis: How can we reduce the waste from single use food packaging?

We began the process by naming this internal conflict “Disposable Dilemma,” then designed a guide called that teaches people how to fight this conflict, by giving them the the tools and information, slowly over time. Our intention was to inform the transition to reusables over the course of 4 weeks.

We reached out to our friends and social networks and got people to get on board by texting or calling them to ask if they were interested in participating in a 4-week experiment where they would be reducing their waste. Then every week we would distribute on part of the guide via email to the participants.



The guide opens with a general information page which starts with the quote “Human beings are the only species on earth that create waste.” We wanted to give participants context so they understood why participating was important and to let them choose what would motivate them.

From the start we also chose words that would avoid the traditional language when talking about environmentalism. We wanted to get people excited about doing something different and new, while also doing good.

We had to set some ground rules as well to make sure participants were getting the most out of it and we we’re learning from the process. The goal was for people to try their best – not to drive themselves crazy. The rules we also meant to be broken; we encouraged experimentation because we wanted to see how the participants would find new and intuitive ways of reducing their waste.

DISPOSABLE DILEMMA
GENERAL INFORMATION

HI THERE!
Thank you for participating & thank yourself for taking action!

WHY ARE WE HERE
Human beings are the only species on earth that creates waste. It's not entirely our fault (though), as the systems we have in place don't offer many ways to eat, drink, shop without creating waste.

We are offered our coffee in disposable cups, groceries in disposable bags, and food in disposable packaging.

All of this trash is resource intensive and becomes a burden on other species and future generations.

The purpose of this lifestyle experiment is to regain control of our waste. It's not about depriving ourselves of the things we want, rather, finding new ways of doing things. To peg old habits and methods of consumption that no longer work for us as a species, against new habits that do.

PROJECT DETAILS
During this 4-week, 4-stage project we will introduce a new reusable per week, eliminating our need for single-use disposables like (cups, bags, containers, silverware, etc)

DISPOSABLE DILEMMA
GUIDELINES

- 1. NO ONE IS PERFECT.** The goal here is to do your best and learn from the experience. The idea is to use your experiences to try and improve this process for others and yourself. As you go through resist the urge to judge yourself and others – instead offer friendly suggestions.
- 2. RECORD EVERYTHING.** try your best to send us as much information about your interactions with food & Waste as possible. If you're feeling particularly proud of a meal with no-waste – show us! If you're feeling guilty about throwing something out – show us (this is a no judgment zone – a constant learning process)
- 3. DO YOUR BEST!** If you forget your reusable at home – don't freak out. Just do your best.
- 4. EXPERIMENT.** If you're not sure about procedures or what to use, don't worry. Trial and error is your friend. It never hurts to ask. You might have 2 different cups for water or coffee or a sandwich tin and one for Indian food. All this stuff is in beta. Everyone is doing his or her own thing. Do you.
- 5. REDUCE.** Ask yourself: Do you really need that bag of chips? Is there an alternative option? Can I make it myself? Can I return this? Reduce is the first line of defense against waste. Recycling comes after.

BILL NYE YO



TARGET AUDIENCE

Our friends who we're interested and somewhat environmentally conscious. Those that recognize the environmental impacts of disposable waste, and are willing to do something about it, but have no practical options. We believed people would adopt this lifestyle if they were given more information and easier access to solutions.



Cris & Sophie having a picnic on a frisbee.



Hannah getting a smoothie in a reusable cup.



Ellison drinking out of her water bottle.



Nick who went to the brewery to fill up his growler.

WHAT IT LOOKED LIKE

Each week was structured with a theme, a job, a how to, and some statistics that would help motivate participants and give them some of the reasoning behind why it mattered.

The three themes were:

1. Beverage Containers
2. Napkins, Silverware & Bags
3. Reusable Containers

The jobs we're phrased as assignments such as: "carry around your mason jar, water bottle, etc and take a picture each time you use it. Send us a little reflection at the end of each day (text or email is totally cool)."

At the end of the day we would collect photographs sent in and check in for a quick text on how the day went.

DISPOSABLE DILEMMA WEEK 1 (AUG 3-9)

WEEK 1 - BEVERAGE CONTAINERS

YOUR JOB: Carry around your mason jar, water bottle, etc and take a picture each time you use it. Send us a little reflection at the end of each day (text or email is totally cool). We will check in with you periodically, and we'll be introducing a new reusable each week.

HOW TO DO IT: If you already have a mug / water bottle you're already half way there. If you don't have one get one drinking container by Sunday. Find something that works for your daily routine.

THE BAD:
Americans throw away 25 billion styrofoam coffee cups every year, and 2.5 million plastic beverage bottles every hour.
Bottled water can cost up to 10,000 times as much per gallon as tap water.
The average American office worker uses about 500 disposable cups every year.
Bottles used to package water take over 1,000 years to bio-degrade and if incinerated, they produce toxic fumes. It is estimated that over 80% of all single-use water bottles used in the U.S. simply become "leak."
It is estimated that actually 3 liters of water is used to package 1 liter of bottled water.

STATISTICS

The average water pitcher filters 240 gallons of water a year for about 19 cents a day. Put in perspective, to get the same amount of water from bottled water would require 1.818 16.9-ounce water bottles a year - at an average cost of a dollar a bottle, that's \$4.98 a day.
In 2009, Starbucks found that coffee drinkers used reusable cups an estimated 13.5 million times, which kept 586,800 pounds of garbage out of landfills. In 2006, this number increased to 17 million and an estimated 674,000 pounds of wasted waste.

DISPOSABLE DILEMMA WEEK 2 (AUG 10-16)

WEEK 2 - NAPKINS, SILVERWARE, & PLASTIC BAGS

YOUR JOB: Continue to carry around your mason jar, water bottle, etc. Maybe keep all your stuff in a tote but make sure to keep a bag with you. You never know when you'll need it. Grab a bandana or hanky and keep it with you to avoid using single use napkins.

Keep a utensil set, foldable metal spoon or chopsticks - whatever you prefer to avoid single use silverware.

Lastly say no to the straw. Make sure to be clear whenever you order a drink that you would like to forgo the straw. If you have to have one grab a glass or stainless steel one online.

TOOLS:
Top 10 Reusable Utensil Kits <http://goo.gl/VlIdmM>

Ring Utensils <http://goo.gl/XvrmN6>
Organic Cotton Napkin <http://goo.gl/v3nRqF>

RESPONSES

Please remember to send me something every day. Even if it's just a sentence I need daily feedback. Photos are also really helpful for our research. Just let us know how it went, what difficulties you had if any and what was easy.

Everything you send us is helpful. Always feel free to call or text me with any questions! I appreciate you taking the time to help and want as much feedback as possible to make this program as great as it can be.

STATISTICS

In 2008 alone, it was estimated that 9,500 tons of paper towels or paper napkins are thrown out into landfills daily.
We toss out enough paper bags and plastic cups, forks and spoons every year to circle the equator 300 times.

DISPOSABLE DILEMMA WEEK 3 (AUG 17-23)

WEEK 3 - REUSABLE CONTAINERS (IE BENTO BOXES, TUPPERWARE)

REMEMBER!
1st Line of Defense: REFUSE
2nd Line of Defense: REUSE
Last Line of Defense: RECYCLE

YOUR JOB: Continue to carry around your bag, cup/ water bottle, utensils and hanky. Say no to the straw. Maybe keep all your stuff in a tote or if you're interested use an insulated lunch box. Once you read this email please send a picture of your current tools. We want to see what you're using on a daily basis. Also once you have your lunch container show us that as well. Also, please send a response about how you're feeling so far about the process and what feedback you would give so far. I have the feeling people like to be reminded. The goal is to try as hard as possible to reduce waste, so if you need reminders please let us know.

STATISTICS

Packaging and containers account for a significant portion (23 percent) of the municipal solid waste stream in the United States, equal to about 39 million tons per year (as of 2010).
Polystyrene (Styrofoam) is manufactured from petroleum, making it a non-renewable material. What's worse are the toxic byproducts that result from the disposal of this material. The National Bureau of Standards Center for Fire Research

RESPONSES

Please remember to send me something every day. Even if it's just a sentence I

DISPOSABLE DILEMMA WEEK 4 (AUG 24-30)

THINGS TO CONSIDER WHEN BUYING A LUNCH CONTAINER:

Metal
Great variety of containers, usually plastic free. Not necessarily leak-proof always, but some are better than others. Good for those who like small portions and variety at lunch.

Glass
Good for if you like warmer lunches because you can instantly toss glass in the microwave etc. Pyrex glass is durable but tends to be heavier. Containers tend to be bigger too.

Durable Plastic
The lightest option. Difficult to clean because oil is hard to separate from the walls. Ensure you get something BPA free that doesn't leach.

TOOLS:
Reuseit Lunch Essentials <http://www.reuseit.com/lunch-essentials.htm>
10 Plastic Free Lunchboxes <http://www.thekitchn.com/plastic-free-lunch-boxes-113751>
10 Leak Proof Lunchboxes

ECO Lunchbox Stainless Steel, Large

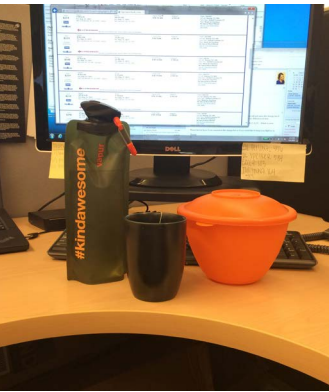
Wean Green Meal Cube, Tempered Glass Container



SUCCESS

Overall, the experiment got people thinking deeply about their relationship with waste. The statistics were helpful and people enjoyed the exercise. Everyone found it fun with a reasonable degree of challenge. The pace at which we were introducing new information seemed to be good.

One of the things that was surprisingly successful is having a group text where people could see each other participate and ask each other questions when they were having trouble. The group exchange helped people trade ideas on where to purchase stuff and what worked.



WHAT WE HOPED TO LEARN

There were three main things we hoped to learn from this low fidelity prototype.

Firstly, if we could do this ourselves.

Secondly, if others could do it, and if so what was the most successful way to translate this knowledge to participants.

Thirdly, what difficulties did participants have in adopting this lifestyle – what obstacles in the systems around us and in our daily lives make reducing our waste difficult?

What are the common factors and habits between successful participants?
Can we leverage reusable savings to businesses to get more benefit to users?

We also wanted to learn about how this process would change participants relationship to waste, how it made them feel and what were some of the things that worked for people.

So what did we learn...

FAILURES

One of the challenges we faced was getting people equipped with the tools at the start. Every weekend was a scramble of timing when I would send them the assignment for the week and they would have to find or purchase a reusable. What made participants more successful is if they already had the object but weren't using it.

If we were to do this again we would give everyone everything from the start so that they have time to add things to their routine as they become comfortable.





prototype #1

bring your own

KEY INSIGHTS

The month had been an arduous learning experience for the both of us as well as for our participants. We learned a lot about the difficult systems and protocols in place that make it incredibly challenging to live a zero-waste lifestyle.

After a series of final interviews with participants we heard a couple major themes:

1

Statistics and tools combined lead to change – why plus how.

When people can explain why they're doing something and have the tools to back it up they are able to stay motivated which reinforces success.

2

Less waste made for a better day. Better day meant less waste.

People felt better when they had days where their values aligned with their actions.

3

Success is easier when others are visibly participating.

Having support helped participants to remember to bring things and didn't make people feel like such a "purple cow."

4

Convenience still trumps environmental worries.

Willingness to give up convenience is a stronger motivator than environmental concerns alone.



USER FEEDBACK

This is a sampling of 3 out of the in depth phone interviews we had after the process was over.

Nick

Are you starting to feel your values align more with your actions?

“Slowly, but surely.”

Is there something you can do to change that guilty pleasure after this project?

“I should probably cook more.”

Cris

What has been the most challenging thing about incorporating reusables into your life?

“Convenience thing – it requires that you’ll always have a bag on you to carry all of it.”

Are you starting to feel your values align more with your actions?

“‘You can talk all this shit but what are you actually doing?’ now I can back it up.”

Eric

How are you feeling after the last month?

“There’s always room for improvement on my end. In general being more aware is the biggest takeaway from it – now I’m always kind of thinking about it. Looking at businesses with a more keen eye.”

NEXT STEPS & MOVING ON

Considering the things we had learned about inconvenience, happiness from waste reduction and confusion from restaurants we set out to find an opportunity gap.

We wanted to find restaurants that would let people bring them find a restaurant that will let us use reusables or one that would be interested in changing their dish system.

Instead of an educational tool, we wanted to create a service that adds value to the business and gets people excited through a unique experience.

We also wanted to focus on a high traffic lunch place with consistent containers for most of their food.

Other questions to explore moving forward:

Explore deeper into the psychology of decision making. What are the common factors between people that consciously reduce their creation of trash? Are they the same as people that care about the environment and the future? Or is it a matter of accountability and regaining control?

How do we help to scale the city and their GreeNYC BYO initiative? How can we leverage the visual impact of trash? How do we reconcile the challenges of scaling reusable containers for those constantly on the go? Can we remove the stigma around mugs being cleaner than food containers?

A couple areas we we looked to iterate:

1

Round Two Disposable Dilemma

Run another waste reduction and collection exercise.

2

Restaurant Participation

Design a system of reusables that can be readily implemented in any participating take-out restaurants.

3

Kit or Product Design

Design a carry-all reusable toolkit with bag, silverware, beverage holder, food container, napkin.





prototype #2

don't dish it

By the Numbers

4 In-Depth Interviews
1 Panel Attendance
67 Plates / Participants
2 Restaurants

INITIAL RESEARCH

Episode 613:
Trash
NPR

No one is recycling and its expensive. All of our plastic is sent to China to become toothbrushes and all our paper is sent to Mexico to become toilet paper

The Long Tail
by Chris Anderson

Adding up the little things is what really matters, everything matters.

Laws of Simplicity
by John Maeda

Subtract the obvious – add the meaningful.

Aichaku: Japanese term for the sense of love for an artifact for what it is, not what it does.



Maggie Clark The New York City Zero Waste Plan

New York City spends over \$1 million dollars a day to dispose of city garbage.

When we export trash, we export dollars and jobs. We need to build industries within the city that will utilize labor here.

Zero waste is an approach: a creative and comprehensive approach that says waste is a by-product of poor planning, bad design and inefficient markets.

Zero waste is not the target, if we don't strive for zero we only do what's minimal.

Toronto uses advertising on their bins to drive their budget.



Brett Mons Department of Sanitation

Beginning July 19, 2016, certain New York City businesses will be required to separate their organic waste. They also must hire a private carter because the city can't handle all the organic waste.

We learned that the Bring Your Own Campaign is just a fun initiative from the mayor's office – nothing official about the rules and sanitation have been established around that.

The Business Integrity Commission is trying to change the standard so that businesses are charged by weight, not a fixed rate.

There is 10,500 Tons of residential waste a day and 80% of NYC live in multi-family buildings.



Jaime E. Perez Jr Owner of Jr's Pizza & Brew

Worked for as an operations manager of a recycling company in New York City and a couple beverage companies.

In regards to the private carting company he uses: "I'm not crazy about them, they're alright. I would prefer the city to do it."

"They don't offer me recycling services. This was the cheapest. I save the bottles and take them to get the refund myself."

"It might be more expensive for customers. For restaurants it's easier but for a place like me I can't put a dishwasher in here."

"People come here to eat and drink. You grab and you go."





Justin Wood
 NY Lawyers for Public Interest &
 Transform Don't Trash NYC

Businesses are tired of being taken advantage of by haulers. Restaurants do not need to recycle or compost by mandate. Many carters are not transparent about fees.

Trash transfer centers are being moved into low income communities where people hear trucks all day and night. The trucks then take the trash to landfills in other states.

Commercial restaurant pickups cost around \$1k a month up to \$3k. There's no bonus in the reduction of pickups.

95% percent of small businesses receive no discount for separating recyclables.

“There needs to be incentives for everyone down the line to make these changes.”

“The private waste industry recycles far too little (only about 25% of material collected)...90% of NYC small businesses pay a flat rate for waste collection, a rate disconnected from the amount of waste they generate.”

“Few businesses separate recyclables for collection by their hauler, even as 75% of businesses want the city to require more recycling.”



Helen Rosenthal
 City Council Member

Spoke at the panel about the OneNYC city zero waste goals – pausing to note that these are not policies or mandates.

1. Organics pickup program by 2018
2. Enhance curbside recycling to all single stream
3. Reduce plastic bags and non-compostable materials
4. Every New Yorker should be able to recycle – including low income housing
5. All schools to become zero-waste schools
6. Capture more textiles and electronic waste
7. Equitable save as you throw program for residents and businesses
8. Reduce commercial waste by 90%



INITIAL APPROACH

Hypothesis: How can we eliminate a single waste stream from a select restaurant?

We believed that by using reusables we could save restaurants money and avoid the trash in the process by not making it an option in fast casual restaurants. Our assumption was the customers would prefer reusable objects and consider the benefits of waste reduction.

We wanted to use a fast food or fast casual restaurant where there is a high generation of trash from only serving food in to-go containers or on disposable objects.

We focused our research on lunchtime, brand loyalty and discount models. We wondered about the possibility of a mobile dishwashing station or a dish hub for a block where small businesses without the capability of washing could pick up dishes and customers could drop them off.

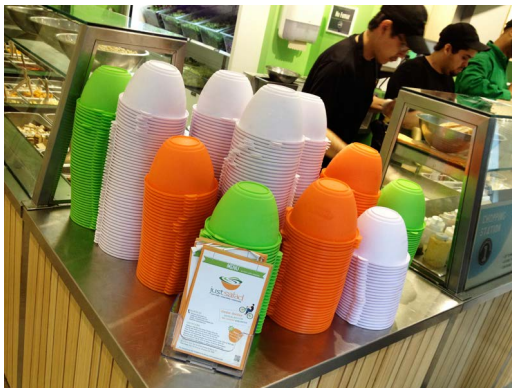
We had seen businesses such as Just Salad implement a successful bowl model where customers could purchase a reusable bowl in return for a discount on toppings. We had also seen it done at Whole Foods, where you have the option of the to-go containers or the bowls. We started to look into other ways and businesses that could possibly implement a model like this.

Rethinking the habit loop we thought about a new way of considering where customers chose to go to lunch, as well by triggering actions by having branded containers that customers could keep at their offices. This way upon seeing or remembering they wanted to go out to get lunch – they would bring that specific container in order to receive a reward.

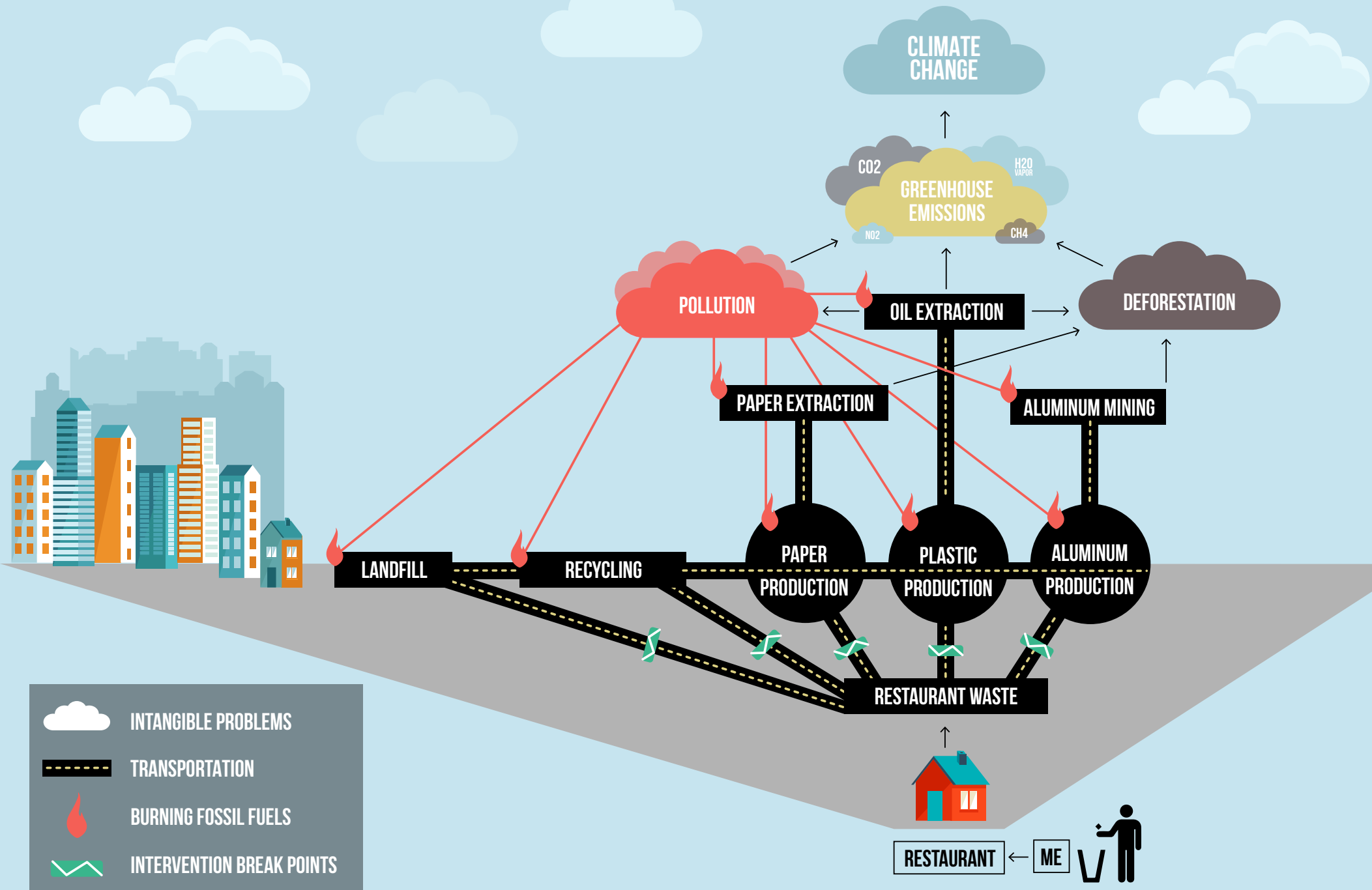
We wanted to create a service, instead of an educational tool that would add value to businesses and possibly involve some aspect of brand loyalty.

CASE STUDY JUST SALAD

Their reusable bowl program saves 75,000 lbs of plastic per year.



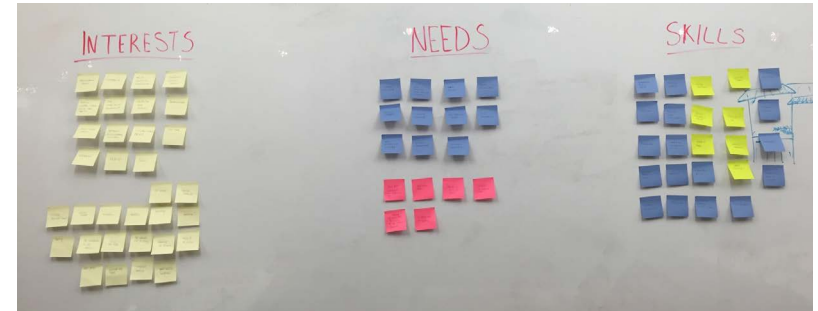
STAKEHOLDER MAP
FULL SCALE



WORKSHOP 100 IDEAS

INCLUDING

- Serve food on washable hemp or cloth napkins.
 - Edible dishware.
 - Reusable station at events
 - Serve food on scrap wood as contrast to paper plates
 - Bring back bandanas as a symbol of sustainability
 - Visual campaign of what people have eaten on over time –from fancy china to paper plates.
 - Typography on dishes that thanks people.
 - Bring Your Own reward card.
 - Map of all BYO places in NYC.
- Dish rental on the street...*



So we set up a dish rental on the street to see what would happen...

WHAT IT LOOKED LIKE

The goal was to get anyone who was coming in off the street before they went inside and have them ask for the pizza to be served on the plate instead of it being on the disposable paper plate.

We set up a foldable table outside of Jr.'s Pizza and Brew at around lunch time to try and catch customers as they were coming in on a Saturday afternoon. We purchased washable bamboo leaf plates and asked customers right before they went inside if they'd like to reduce trash today by borrowing a plate.

We made sure to emphasize that it was free and that the plates service was something we felt like volunteering to do.



TARGET AUDIENCE

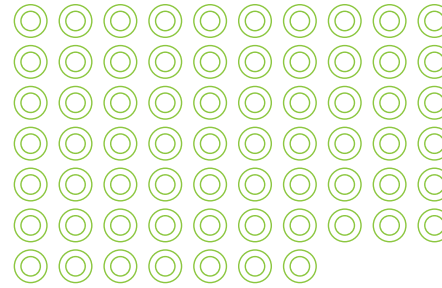
Anyone who was on their way into the pizza place.



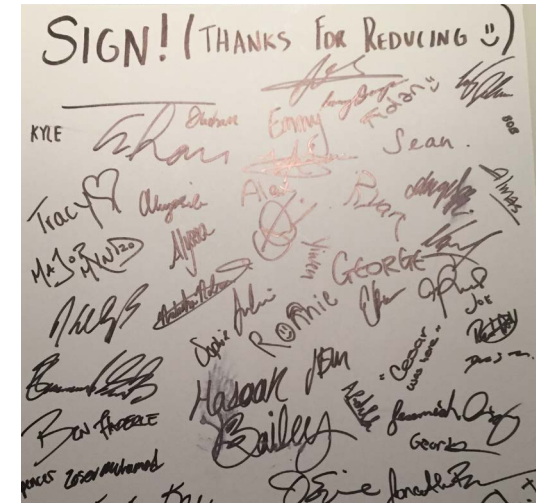
SUCCESS

Getting people to take the plate wasn't too difficult. All we needed to do was ask them "would you like to reduce your trash today by borrowing one of our plates?"

The first pizza place we visited, Jr's Pizza & Brew, was very supportive. The owner Jaime would send customers back out if they turned away one of our plates telling them to reconsider their split second decision. This was really exciting. Although it was on the slower side, having permission and support from Jaime made the process easier and allowed us to be more aggressive grabbing customers before they went inside. We couldn't go inside due to health concerns as well as spatial constraints. But his traffic began to dwindle in the mid afternoon.



67 PLATES



poster participants signed when they returned the plate.

FAILURE

We then we decided to head over to St. Marks to the always busy, Two Bros – a pizza place that is popular with college kids and tourists alike. We received lots of confused looks from the workers inside the shop.

We decided to hand out plates anyway, regardless of permission. People here were a bit more rushed and resistant to being bothered before getting their food because the culture at Two Bros is much higher paced. The girl in the photo to the right here was rushing by so fast she gave us the cold shoulder.



figure a.
the offer



figure b.
the deny

WHAT WE HOPED TO LEARN

We wanted to learn in what way can we move away from the normalcy of disposable culture? What are some ways to reduce waste in a commercial setting with a lot of people?

What impact does this have on the way people think about the problem? Do people even realize they're making trash when they do it?





prototype #2

don't dish it

KEY INSIGHTS

We wanted to see what people thought of this experience – asking someone who is normally serving you fast food on something disposable to instead put the food onto something more durable and permanent.

Our goal was to trigger a change in perspective for people inside of a normally wasteful experience, usually unbeknownst to them.



1

Plates are unfamiliar in the fast food context.

You have to explain to people very quickly why it matters to use a durable plate – people are comfortable going through the motions they are used to at places like this.

2

No one wants to think about extra steps before they eat – easier to coerce after.

When people are hungry they really can't be bothered. Unless there is an incentive involved they want nothing to do with it.

3

People preferred to participate in groups.

If one friend would grab a plate then the rest would surely join in.

4

Difficulty with scale because of restaurant sanitation concerns.

Restaurants are taking a risk every time they accept a foreign container from outside. They don't want this to hurt their sanitation letter grade.



USER FEEDBACK

This facilitation of the “bring your own” experience received mostly positive reviews. We received a lot of inquisitive questions and thoughtful remarks about how important and cool what we were doing was.

One of the things that stood out to us the most was when one gentleman upon returning the plate said, “thanks for making me think twice.”

We also heard “I’d rather not” – at Two Bros, which confirmed a lot of our concerns about whether or not this concept was too foreign for people who are looking for a quick bite to eat and aren’t concerned with any extra steps in the process.

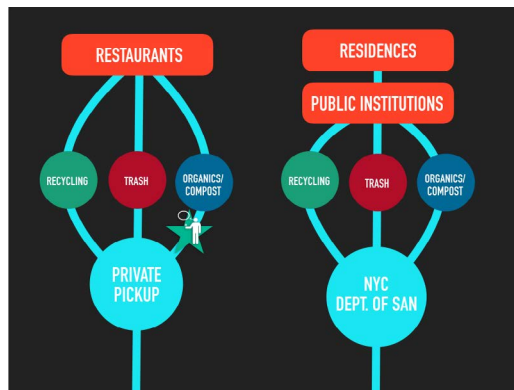
NEXT STEPS & MOVING ON

We began to look at innovative ways to help restaurants compost for cheaper than the current options available from truck carters.

While researching we looked into models from innovative projects like Compost Now, Zero to Go and BK Rot – still looking at ways to work with businesses.

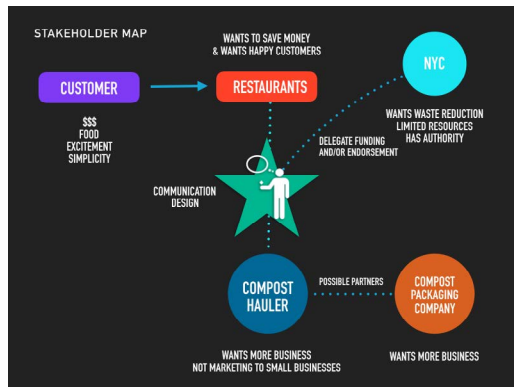
However this is when we realized that the barriers to work with individuals in the home was more accessible audience for the project. Restaurants have tighter margins and cost considerations which makes them more difficult to work with. If we instead considered helping individuals reduce their waste at home we would have much easier access.

STAKEHOLDER MAPS



Taking a closer look at the different types of waste removal and our potential roles within this ecosystem.

We considered a role as a small scale, low emission compost operation for businesses that would be cheaper than the big haulers.



A couple areas we we looked to iterate:



Compost Haulers Gain Need More Business

Help compost haulers communicate better to businesses the advantages of composting.



Compost in the Home is Still Confusing

Design a user friendly composting experience that facilitates ease for new and existing composters



Start a Bike Operated Compost Pickup

Help bring down costs for businesses and in the home – it would also be zero emissions.





prototype #3

compostal

INITIAL RESEARCH

1 million tons of organic waste are disposed a year in NYC.

For the typical New York City household this figure translates to 11 pounds of organic material every week.

Citywide curbside organics collection would add new annual costs ranging from \$177 million to \$251 million.

In order for the city to collect all of the organic waste from one year, 88,000 trucks would need to be routed.

There are 200,000 bikes riding on NYC streets each day.

The city's goal - reduce landfill waste by 90% by 2030

Our pivot towards working with compost in homes was based on the bureaucratic barriers that exist when working with businesses. Although the city has rolled out a BYO campaign to encourage New Yorkers to bring their own cups, bags, mugs, etc, restaurants were still overtly cautious about allowing outside plates. Plus, some people were skeptical that we were trying to sell them something.

We figured, if we can't design low-waste solutions in restaurants, maybe we can look at waste created in the home; specifically food waste.

1 million tons of organic waste is disposed a year in NYC. This is a tremendous loss of a valuable resource, as wasted food still contains loads of vitamins and minerals that can be turned into soil to grow new food- aka, composting.

Compost
/kom-pohst/
noun

a mixture of various decaying organic substances, as dead leaves or manure, used for fertilizing soil.

By the Numbers

29 Total Registered
3 Active Bikers • 10 Registered
10 Bags of Compost Averted from Landfill

“Mayor Bill de Blasio proposes expanding residential organic recycling to all residents by 2018. Municipal leaders should understand that unless residential trash collection costs are reduced by fundamentally altering collection routes and practices, new program costs will greatly overwhelm any potential savings from landfill reduction.”

Average Weekly Organic Waste per Household (Pounds)

Burrough	Average Weekly Organic Waste per Household (Pounds)
BRONX	12.0
BROOKLYN	11.6
MANHATTAN	7.7
QUEENS	12.4
STATEN ISLAND	15.3
CITYWIDE	11.2



Citizens Budget Committee NYC 2016



INITIAL APPROACH

Hypothesis: How can we give New Yorkers access to composting programs and make it as easy as possible to use?

Before designing any solution to wasted food waste at home, we decided to begin composting at our house. Keeping our food scraps in the freezer became an easy routine, and we had no problems dropping it off at the farmer's market, where it would be sent off to be turned into soil.

As new composters we learned there are no residential pick-up services in New York. The City municipality is piloting a curbside pick-up, but it won't be fully rolled out for at least 4 more years. So we decided to intervene in this space by creating a pickup service powered by bicycles. There are 200,000 bikes on NYC streets each day. This is an abundant resource that can be tapped.

We created a short google survey that had general questions about composting. It would help us gauge the relative understanding of composting among the people in our network. It would also tell us if people even wanted this service, and how much they would pay for it.

TARGET AUDIENCE

Our target audience is people in NYC that already compost. We realized that this service had the best chance of sustainability and growth if we targeted the group of people that would be most quick to adopt it. So rather than educating non-composters and then signing them up, we opted to focus on people that would immediately see the value this would have in their lives.

We spent hours at the park talking to groups of people doing intercepts and approached each group with the intention of finding people that were already familiar with composting. We did not approach them saying things like, "hi, we want to

The image shows a screenshot of a Google Survey titled "Composting Survey". The survey contains the following questions and options:

- Please tell us what you know about composting.** (Text input field)
- Do you compost, or know people that do? If so, do you use compostable bags?** (Text input field)
- If you do, about how many bags a week?**
 - 0
 - 1
 - 2
 - 3
 - 4+
- Do you know where to drop off compost?** (Text input field)
- Do you know of any compost pick up services?** (Text input field)
- Would you use one, or know someone that would?** (Text input field)
- Would you be willing to pay for someone to pick it up?** (Text input field)
- How much would you be willing to pay per bag?**
 - \$5
 - \$10
 - \$15

google survey

know if you compost" or "hey, we'd like to talk to you about composting." Rather, "hi, we're working on a project that makes it easy to compost."

At that point at least one person's ears would shoot up. We'd follow up saying "so if you do, we pick it up and take it to the farmers market for you." At that point an organic conversation would emerge. We also gave out our flyers and educated other group members about composting.



WHAT IT LOOKED LIKE

The first thing we did was send an electronic survey throughout our online networks. Of those who responded, 40 out of 47 surveyed wanted this service and would pay at least \$5 for a pickup.

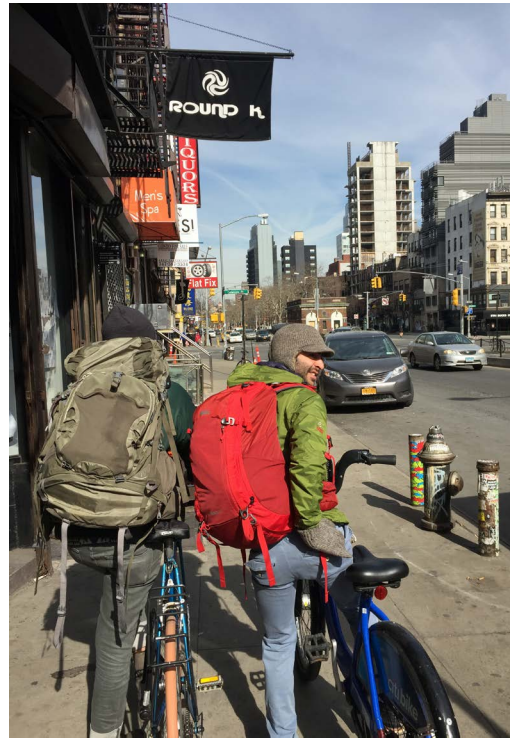
Here's how we set it up from here. We put up a splash website and shared it on our social media as well as to those surveyed so that people could sign up for either a compost pickup or to volunteer as a biker. Then we create a schedule based on the availability of the bikers. Following that, we contact the composters to confirm a time that matches the bikers' availability.

At that point we provide the bikers with the time, date, and location of the pickup and drop off point. Then the bikers pick up the compost and drop it off to the community garden or farmers market (whichever is closer).

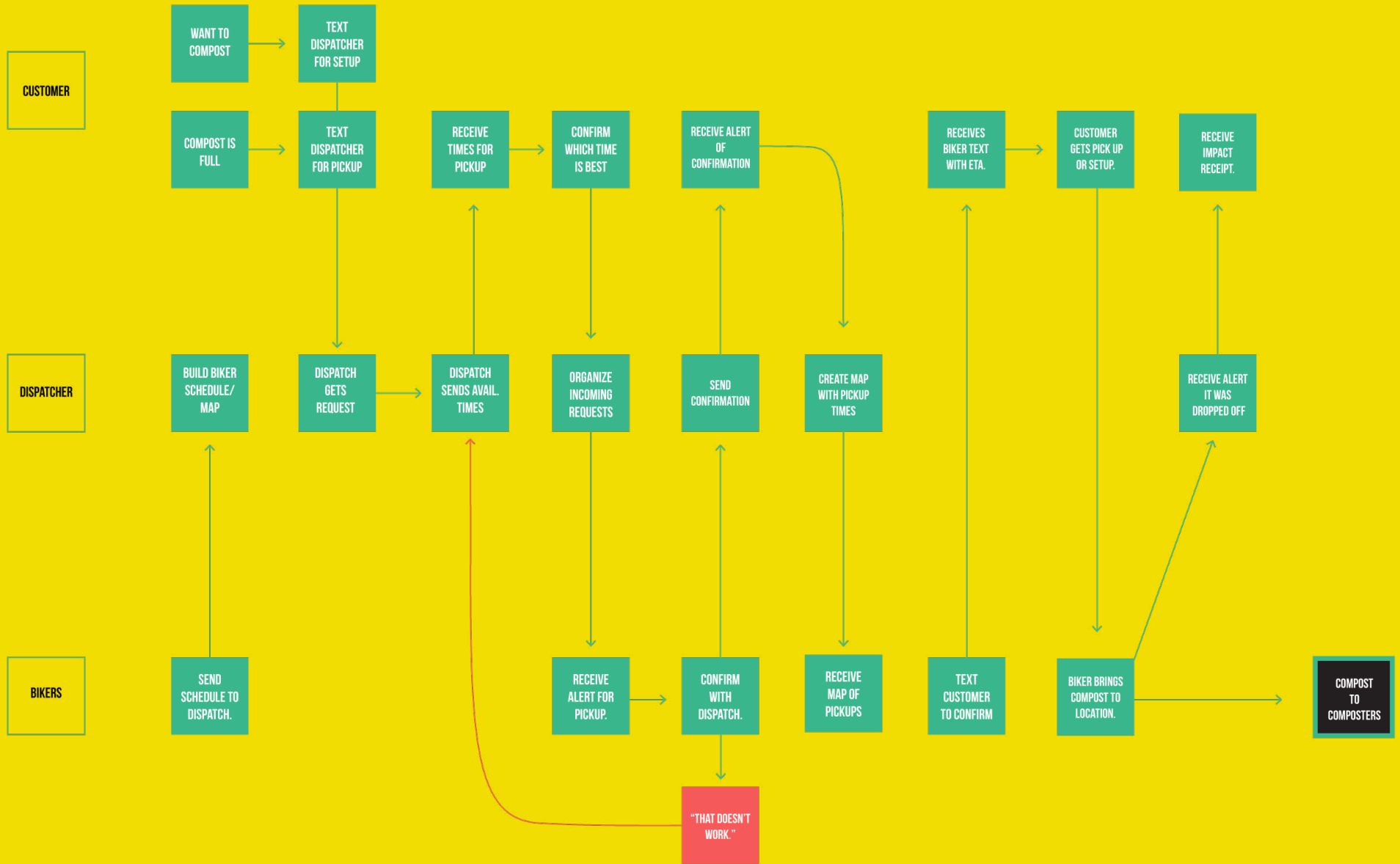
We then did the first test run ourselves. We identified 3 composters from our survey and website that lived in our neighborhood, scheduled a time for a pickup, and collected bags of compost from each. We learned that the pickup and drop off was easy and rewarding.

Armed with this momentum we posted flyers and door hangers around our neighborhood to recruit composters and bikers. We also circulated an email shot throughout the Centre for Social Innovatio – a network of socially minded businesses and entrepreneurs. We've also been using regular social media posts to spread the word about the project and sharing the times we are running pickups.

The site is up as of April 2016 at www.compost.al

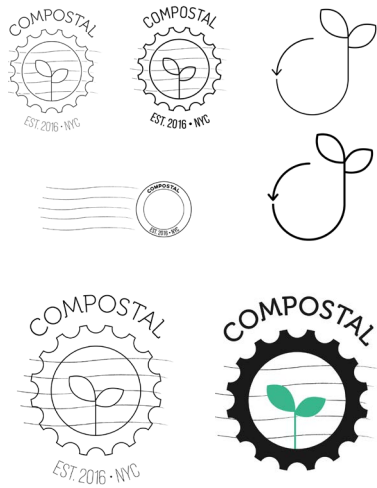


JOURNEY MAP



LOGO DESIGNS

Initial Sketches & Working Logo



Final Logo Design



Colors & Typefaces



#87a38e



#545454

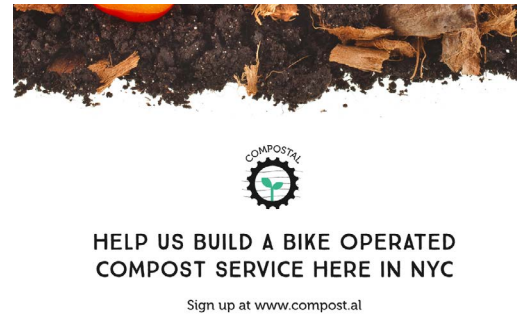
Venti CF • Medium

Brandon Grotesque • Regular

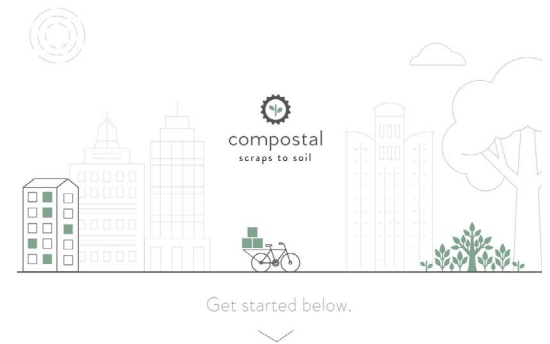
SPLASH PAGES



version 1.0



version 2.0



version 3.0



SUCCESS

The success has come from a successful pilot that required no direct participation from us. This was in the form of a biker signed up picking up from a composter who also registered through the site. We have taken the idea from concept to actual execution. We also have garnered genuine interest from others in the ecosystem and have formed relationships with Lower East Side Ecology Center, GrowNYC, and Vocashi commercial compost pickup service.

We successfully completed two pilot runs that diverted the equivalent of 30 pounds of food (10 bags at 3 pounds a bag). We have attractive and friendly branding, a catchy name, and 29 people signed up on our website for either a pickup or to bike. To date the page on Facebook has over 120 followers.

FAILURES

We've failed in establishing repeating pickups. One of our main goals was to have at least three bikers that are making weekly runs, when instead we only completed one drop off. Another thing we imagined was creating a community of bikers that would meet together occasionally- almost like a meetup. This would have created a culture of members where the vision of the future of food waste in NYC could evolve.

WHAT WE HOPED TO LEARN

For two years we've been learning the various disciplines involved in change making. From communication design, mapping, and research, we hoped to experience a project that would bring everything together.

We also hoped to learn how to design our communication in a way that would attract composters as well as converting non-composters.

WHAT WE'VE LEARNED

We learned a lot about the composting ecosystem in New York City, such as the locations of every community garden and farmers market below 23rd street. We learned that composting has been practiced by many New Yorkers for years.

We learned the value in rapid prototyping. Instead of spending an excessive time planning, we started by sending out a google survey to gauge relative understanding of composting. Sending the survey was the first snowball tossed down the hill. Following that, we did some guerilla marketing and posted flyers all around the LES. We eventually redesigned the flyers, and rebranded until we both felt it was right based on peer feedback.

We learned that this is possible. Granted the service is not fully functioning and sustainable yet, we learned how to build out the system enough to accomplish our goal, which was to complete one facilitated drop off.

In the week leading up to our pilot pickup we had been using email as our main communication method. The responses between us and composters and bikers were sporadic. That's because an email doesn't convey the same sense of personal connection that texting does. Email works great as an initial point of contact for new users, but we noticed a quicker response rate when we switched to texting our bikers and composters directly. We learned that some things are done best through direct and more personal communication through texting. This could be scaled in the future by using a "texting app" like burner or textfree.



Marketing Card

Printed on 5x7 and distributed in coffee shops and other local neighborhood shops.



FAQ Card

Printed out 4.25x11, these vertical cards are meant to be placed above the compost bin or on the fridge to help new composters learn the system.

Compost Kit

Available on our website – the compost kit comes with a bin, 25 biodegradable bags and an FAQ guide (can be seen on the right)



good to compost

store compost in freezer or refrigerator to reduce odors.



fruit & vegetable scraps



non greasy food scraps (rice, pasta, bread, cereal, etc.)



coffee grounds & filters



tea bags



egg shells



pits



cut or dried flowers, houseplants, & potting soil

do not compost

meat, fish, bones, greasy food scraps, fat, oil, dairy, dog or cat waste, kitty litter, coal or charcoal, coconuts, diseased and/or insect infested houseplants / soil or biodegradable / compostable plastics.

www.compost.al • scraps to soil





prototype #3

compostal

KEY INSIGHTS

We learned after running a couple pilots that some things are done best through texting. Any extra steps in the process like having to dig through emails to sign up makes the process more of a chore.

In the week leading up to our pilot pickup we had been using email as our main communication method. The responses between us and composters and bikers were sporadic. That's because an email doesn't convey the same sense of personal connection that texting does. Email works great as an initial point of contact for new users, but we noticed a quicker response rate when we switched to texting our bikers and composters directly.

1

Keep lowering the barriers of entry.

Don't make the sign up and pickup service any more complicated than it has to be – keep the steps to a minimum and integrate it into communication they already use.

2

Be personal when communicating.

It was really important to translate to the bikers to be personable, flexible and helpful to the customers. We think training bikers on compost basics will be key in the next steps.

3

Don't micro-manage the process.

We needed to learn to stop micro managing the process and let the incentives motivate the bikers. Facilitation is more important.





final thoughts

learnings & conclusions

LEARNINGS

As a whole, we learned that we, as low-waste consumers, environmentalists, and designers can influence change. It begins with our own actions, and aligning them with our values. Considering our first thesis idea of encouraging people to avoid disposables, there's no way we could have gained any participation had we not already been living low-waste lifestyles.

We learned a lot about meeting people where they are. We began by trying to transfer our habits of carrying reusables to other people- when in fact this is not meeting people where they are, it's meeting people where we are. This was not the best solution in reducing waste so we pivoted to restaurants, meeting people at the door. That had the potential to work, but there were too many regulations preventing us from developing that system within the scope of thesis.

So we pivoted again, to meet people where they are – in their homes. Picking up residential compost was an obvious value to those that couldn't or didn't want to drop it off at the market. We're offering access and convenience where people value it most.

The more we talked about our project the more people wanted to connect us with others.

We learned that beliefs expressed through work attracts like minded people. The more we talked about our project the more people wanted to connect us with others. In this process we gained the attention of Lia from the LES Ecology center, and she connected us with a woman who runs a CSA who became interested in partnering in the future. This is one of a few similar instances.

Most importantly, we learned that it can be done. We have bikers, we have composters, we've tested a successful run, and now we're improving our communications. It can be done, and we will



NEXT STEPS AND MOVING FORWARD

Building on our latest insight about the value of texting, we will continue to accumulate bikers and composters, and we'll base most of our communication on texting vs emailing.

At first we were open to testing pickups in whichever borough most people responded from, but for now, to stay focused we will work exclusively on lower Manhattan, specifically below 23rd street.

We will experiment with different communications on flyers. Maybe things that are neighborhood specific like, "Compost pickup service in the LES" and "Bikers wanted for compost pickup in the LES."

We believe we're experiencing a cultural shift towards sustainability. Oil is a finite resource that will deplete in our lifetimes. The human species will have to adapt to renewable energy sources, and this will catalyze sustainable systems of all sorts- including waste management.

Looking forward, we foresee composting becoming as normal as recycling. In past decades recycling was not available in most cities. Yet as consumer awareness of environmental issues increases, so follows the demand for more environmental services.

Now recycling is not only normal in most cities, but it's a mandate. And as we've understood from our research, unless the routes and practices of compost pickup are fundamentally altered, the cost of the amount of trucks and new routes needed to service the city will vastly outway the benefit.

With that being said, we believe we're planting the seeds of a compost service that could marvelously supplement other systems in the city and help in the transition to a more environmentally sustainable future.





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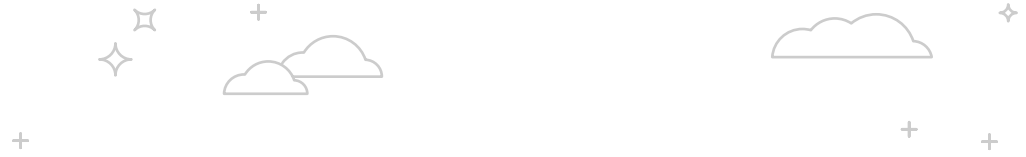
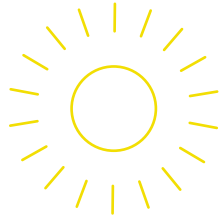
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Thank you to everyone who
helped us and taught us
something along the way.

Kyle Calian & Amer Jandali

MFA Design for Social Innovation
The School of Visual Arts
2016

