# **DESIGNING FOR THE PLANET**









#### **SOME UNSAVOURY FOOD WASTE FACTS**

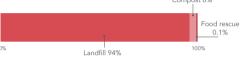
#### Some unsavoury food waste facts

We'd say here are some interesting facts to chew on but we find them quite unpalatable. From the

#### Worldwide

- One third of the world's food is wasted.
- 25% of water used in agriculture is used to grow food that is wasted - throwing away one beef burger wastes the same amount of water as a 90-minute shower! While its vegetarian cousin is certainly better water-wise, chuck out an impossible burger and it still equates to a
- Food waste produces 8% of global greenhouse gas emissions. If food waste was a country, it would be the third largest greenhouse gas emitter, behind
- Food in landfill converts to methane, one of the

#### Australia - Food waste destinations



#### Victoria

- Cafes and restaurants are responsible for 15,500 tonnes of food waste.
- Take-away food shops are responsible for another

#### Melbourne

HUMAN-CENTRED DESIGN — INNOVATIVE SOLUTIONS FOR COMPLEX PROBLEMS

- landfill bin contains 34% food waste.
- could be feeding over 70,000 people a year

Sources: Sustainability Victoria, Fight food Waste Cooperative Research Centre, City of Melbourne, Department of Agriculture, Water and the Environment and the World Economic Forum.

The HCD process involves different phases of

is known as the 'double diamond'.

We'll be working in

Develop

Develop today

Solutions are

created, prototyped,

tested and iterated.

diverging - exploring and widening our thinking

to create choices, and converging - learning and

focusing our thinking to make decisions. This process

To provide you with some background about us, STREAT is a hospitality-based social enterprise that provides supported vocational training and holistic personal support to young people aged 16–24 who really need a hand.

STREAT exists to make a difference to young people who face a range of barriers and disadvantage. We aim to provide a sense of connection, safety and belonging to our young people.

We want our young people to thrive in all parts of their lives. We want them to feel a sense of belonging at STREAT, and know that we're here to help them achieve a healthy self, healthy work and a healthy

But it doesn't end there. STREAT strives to create goodness in the following three areas:

**PEOPLE** - Maximising our social footprint.

PLACES & PLANET - Minimising our enviro footprint.

PERFORMANCE - Standing on our own two feet financially

Today, you are integral in helping us achieve our goal of minimising our environmental footprint.

#### Dear You

I wish I could take you back a decade. STREAT was just a tiny handful of people, with a shitty little food cart, but collectively determined to stop youth homelessness. Fortunately, we've grown up a bit more now, mainly because people like yourself have given us a group hug along the way.

STREAT has a goal to maximise its social footprint whilst minimising its environmental footprint. In short, STREAT = PEOPLE + PLANET.

This Melbourne Knowledge Week we're partnering with MAKE Studios on ways to address food and packaging waste across our cafes. Limiting food waste will make a huge difference to the climate crisis and we're keen to work as hard as we can to create behaviour change and help as many people and organisations go as deeply green on food waste as humanely possible.

Thanks for being a part of STREAT for a couple of hours, whether you're ideating and storyboarding new ideas or helping us test prototypes. We look forward to hearing how you use these skills and ideas in your own organisations and lives.

STREAT's plan for waste: Grow not Throw

STREAT has a large waste stream of over 30 tonnes a

year. We have already done an extraordinary amount

two years. We have 180,000 worker worms chowing

down on select organics while everything they can't eat from our kitchens is sent to compost. We put

thought into menu planning and allow customers to

make changes and leave foods out of dishes if they

However, since all food takes big, sometimes huge,

amounts of energy and nutrients to produce, we're

constantly challenging ourselves across all the parts

of our businesses to find ways to reduce our organic

of work to reduce this waste stream over the last

macro to the micro we've got huge problems with food waste.

- 23-minute shower!
- the USA and China.
- worst greenhouse gases.

Human-Centred Design (HCD) is a creative approach

to problem solving that starts with the people you're

people's needs, hopes and aspirations we can create

**Define** 

Develop a clear

brief that frames

the fundamental

design challenge.

designing for. By gaining a deep understanding of

better and more innovative solutions for them.

DIVERGE

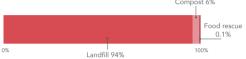
Gather inspiration and

insights. Identify the

problem, opportunity

or customer needs

Discover



33,000 tonnes.

- The average City of Melbourne food business's
- Thrown out food from Melbourne's food businesses

#### **REDUCING WASTE IN HOSPITALITY**

#### Packaging bad news

Australians throw away around 1.9 million tonnes of packaging each year - enough to fill the Melbourne Cricket Ground nine times over. This amount of packaging waste produces the same amount of greenhouse gas as 860,000 cars.

Commercial and industrial sites in the City of Melbourne still send 39% of their used materials to landfill. This needs to change, we want to minimise our waste, turn it into resources and ensure that only the barest minimum of materials become waste

Avoiding packaging altogether is the best thing we can possibly do for the planet. Bringing a lunchbox and a reusable cup might not feel like it will save the world but when you consider the amount of CO<sub>2</sub> created by the packaging from different meals it's actually quite a significant saving for the planet. As designers, our job is to design the useful, usable and engaging solutions that create behaviour change and that people want to use everyday.

NNUAL WASTE EST

know they won't eat them.

waste even further. Sorry worms!

ANNUAL WAST	E (KG)	
Plastic	3,838kg	12%
Paper/Cardboard	6,720kg	22%
Other	524kg	2%
Organics	17,545 kg	57%
Metal	156kg	1%
Glass	2,100kg	7%
Total estimate	30,885 kg	

Source: The Conversation

#### IT'S OUR PLANET, LET'S SAVE IT TOGETHER: STREAT'S PLANET PLAN

Every choice we make has the potential to help the planet that we all share. Working with four Melbourne Uni students in 2017 we created a Planet Plan (https://tinyurl.com/streatplanetplan) to minimise

The key impact areas that we've chosen are the pillars of sustainability and anyone can adapt these principles in their own lives.

**COMMUNITY & CONNECTEDNESS** WATER **TRANSPORT ECO & FOOD SYSTEMS MATERIALS & PRODUCTS ENERGY PLACES** WASTE

By supporting STREAT and contributing to our Planet Plan you are making a difference not only in the lives of young people but to the very planet that we all share. In using these principles we know that one step at a time, we can all help save the planet.

#### DESIGNING FOR THE PLANET — APPLYING HUMAN-CENTRED DESIGN TO FIND INNOVATIVE WAYS TO REDUCE WASTE

In today's workshop, we'll be focusing on the Develop stage of the double-diamond, using tools and approaches to create new concepts, test, learn and iterate.

We'll be building on the work that STREAT has already done in the Planet Plan's Discover and Define phases, and today's outcomes will feed into STREAT's ongoing work to reduce our environmental impact and create positive change.

You can choose to focus on one of three design challenges that all work towards reducing waste, getting hands-on with ideation, storyboarding or design research.

Each challenge will draw on different skills and strengths, and you do not need any experience in the different areas – education, food waste or packaging – to get involved and have an impact.



Deliver

The resulting product

or service is finalised

and launched.

# **IDEATION**

Generate as many ideas as you can! This activity is great for people who love to ask 'what if?' and sharing their ideas to help spark new ones.

#### HCD tools we'll use:

- How Might We...? statements
- Brainstorming
- Idea Ts and sketching

### Challenge focus:

Education and communication



## STORYBOARDING

Develop a concept by considering it from every angle. Use personas to develop a concept in more detail and iterate it based on feedback.

### HCD tools we'll use:

- Customer personas
- Concept storyboards
- Rapid feedback framework

#### Challenge focus:

Motivation and behaviour change



# RESEARCH

Take a prototype into testing and learn from real customer feedback. Design and conduct interviews, identify themes and make recommendations.

### HCD tools we'll use:

- Prototyping
- Customer interviews
- Synthesis of findings

**Challenge focus:** Launching the right product

#### **EDUCATING FOR BEHAVIOUR CHANGE: DIVERT AND CONVERT**

You've read about just how much waste we produce in Australia, and how much of that is food and organics. What you might not know is how much of an impact using the right bin can be. When you throw a banana skin into landfill, it produces a gas called methane, which is 28 times more potent as a greenhouse gas than CO<sub>2</sub>. When the banana skin is allowed to break down in a compost bin, it does so aerobically, which produces the less-potent-but-still-a-greenhouse-gas CO<sub>2</sub>.

Our challenge now is how we can educate our customers in a way that helps them to make choices to reduce their impact on our planet. Can we help customers to make the change to composting their organic waste?

Can we go even further, and help our customers to understand that 'waste' can actually be a resource? Diverting from landfill is one thing, but can we also convert 'waste' into an awesome new thing?

Not everyone can have a compost bin in their yard, but there are lots of things that customers can do to divert organic waste from landfill:



1. Put in your own compost / worm farm



2. Put in council green bin – if your council supports this



3. Find someone nearby who can use your food scraps on sharewaste.com (an online community of composters!)



4. Repurpose food waste e.g. make carrot top pesto, potato skins, coffee grounds directly in garden.

#### DO...

- Participate! You are part of the team and your thoughts and input are valuable.
- Listen to other's points of view.
   Jamming is fun, it works best when there's diversity of thought.
- Use this zine to take notes and add ideas

   it's your record of the process we'll go
   through today
- Tweet, Instagram, Facebook or LinkedIn the day – share what we are doing and the fun you're having. We'll share some hashtags during the day.
- Have fun!

#### AVOID...

- Using any device except if we are doing desktop research or taking photos and posting to social media
- Approaching customers for feedback without first checking with your facilitator and the site manager.



#### **ABOUT IDEATION**

#### **HOW MIGHT WE (HMW)**

Using How Might We (HMW) questions we're able to take challenges and insights and reframe them into actionable provocations.

This is where Post It notes ™ and Sharpies™ get a real workout!

Today's challenge is to come up with ideas in response to the question:

How might we better educate our customers at STREAT about the differences when food waste goes to landfill vs composting and help them take meaningful action to reduce waste?

#### MINDSETS AND PRINCIPLES FOR IDEATION:



#### Be optimistic

Approach things from a place of possibility and ask questions like 'What if?' and 'How might we?'



#### Co-create solutions

Benefit from the multiple perspectives of others and their different backgrounds, experience and skill sets.



#### **Practice empathy**

Put yourself in the shoes of the people you are designing for and see it from their perspective.

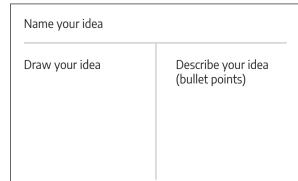
#### LIGHTNING DEMOS

From the examples provided, what stands out to you the most? Why?

Are there other relevant best practice examples you'd like to share?

#### **IDEA** T

The Idea T is a simple template to get your idea onto paper. It can help you think through some of the details of your idea, and can make your idea clear to your team not everyone sees things the same way you do! Grab an A4 piece of paper and copy this framework:





#### Why am I drawing so much?

Sketching helps to draw out (pun absolutely intended) the essentials of your idea. Drawing engages a your brain in a different way, to get those creative juices flowing!

You don't need to be an artist, in fact, stick figures, simple shapes, labels and arrows are often all you need. Give it a try!

#### **USING HMW QUESTIONS**

#### STREAT'S SIPTEMBER CAMPAIGN: FROM 'HOW MIGHT WE' TO REAL CHANGE

In the past, STREAT has used a few different HMW questions to kick start our ideation process, such as:

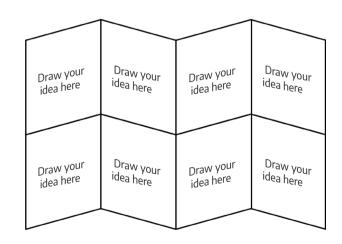
'How Might We help our customers to use reusable coffee cups, and reduce our waste to landfill?'

This kicked off our super successful Siptember campaign, where we implemented a range of nudges, Tiny Habits, education and strategies to increase our customers' use of reusable coffee cups from 25% to over 50% (that's compared to the national average of 3-7%)!



#### **CRAZY 8'S**

The aim is to generate as many ideas as possible within a short timeframe, focusing on quantity of ideas not quality. Grab an A3 piece of paper and fold it 3 times to copy this framework:



#### **REFLECTIONS AND LEARNINGS**

The best thing about today was... The main thing I learned was...

Things that could be improved...

If I could change one thing about today it would be...

How likely would you be to participate in an activity like this again?

Very unlikely Definitely would

How do you feel about your ability to make change, compared to this morning?

A lot less hopeful A lot more hopeful

#### **CHOOSING A ZERO-WASTE MENU OPTION**

Our customers are pretty awesome. They come to STREAT because their values and our values are on a similar wavelength. We're exceptionally lucky to have them. Even then, though, our customers don't always make the most environmentally-friendly choices when they're in our cafes (we're absolutely not judging, neither do we!). To account for that, we've made a real effort to be as low-impact as possible with what we offer, however there are always some options that are better than others.

One reason people don't follow through with climate friendly choices, even if they're a committed environmentalist, is the hot-cold empathy gap. This is where our biology takes over from our intentions, like when we're super hungry but there's a poor choice in easy proximity (which by the way smells delicious). The environment, the temptation, the convenience - there are lots of things that influence our decisions.

#### So what's the challenge?

STREAT wants to start putting zero-waste items on the menu, using produce that might otherwise go to compost or the worms to make delicious food, like carrot top pesto.

How might we encourage our customers to choose zero waste menu items when they come to our café?

#### DO...

- Participate! You are part of the team and your thoughts and input are valuable.
- Listen to other's points of view.
   Jamming is fun, it works best when there's diversity of thought.
- Use this zine to take notes and add ideas

   it's your record of the process we'll go
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- Tweet, Instagram, Facebook or LinkedIn the day – share what we are doing and the fun you're having. We'll share some hashtags during the day.
- Have fun!

#### AVOID...

- Using any device except if we are doing desktop research or taking photos and posting to social media
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#### **ABOUT STORYBOARDING**

#### WHY WE USE STORYBOARDS

A storyboard is a really helpful way to start prototyping a new idea.

The concept storyboard template prompts you to consider who you are designing for, the problem your concept is solving for, the way your customer encounters and interacts with the concept, and the outcome. These prompts may lead you to consider things you hadn't thought of yet and help you to add depth to your idea.

As always, we encourage you to draw your ideas. Sketching helps to draw out (pun absolutely intended) the essentials of your idea. Drawing engages a your brain in a different way, to get those creative juices flowing! You concept storyboard isn't meant to be a graphic novel or a work of art, in fact often all you need is some stick figures, simple shapes, arrows and labels.

#### MINDSETS AND PRINCIPLES FOR Storyboarding:



#### **Practice empathy**

Put yourself in the shoes of the people you are designing for and see it from their perspective.



#### Co-create solutions

Benefit from the multiple perspectives of others and their different backgrounds, experience and skill sets.



#### **Keep iterating**

Revisit, improve and build on ideas based on input from customers, peers and experts.

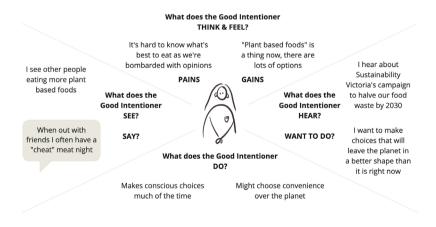
# PERSONAS

# WHAT IS A PERSONA?

A persona is a useful tool to really get into the mindset of your target audience / user group. This insight helps us to design prototypes that actually meet the needs of the people who will be using the design.

# THE PERSONA WE'LL USE TODAY

Meet the 'Good Intentioner.' This persona is our target user group for our challenge - they want to do the right thing, but in the heat of the moment they don't always make the choice that they'd intended!

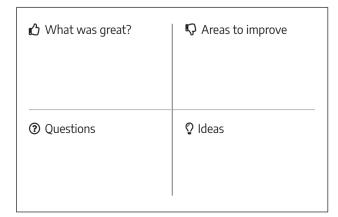


# RAPID FEEDBACK CANVAS

This simple canvas is a useful framework to guide and capture rapid feedback.

When giving feedback, be specific – if you don't like something, what is it you don't like?

When receiving feedback, try to understand and learn, rather than defending your original idea - the goal is to iterate and improve based on feedback.





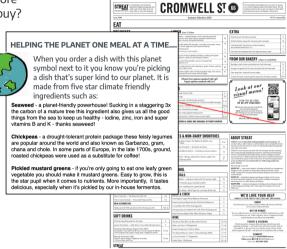
# UNDERSTANDING THE HOT-COLD EMPATHY GAP

Have you ever done your grocery shopping on an empty stomach? Did you buy anything that wasn't on your list, or more than you meant than you intented to buy?

As much as we'd like to believe that we're rational beings, our emotional and physical state, and the environment we're in, have a significant impact on the choices we make.

This is the **hot-cold empathy gap**. It's the difference between what you intended to do, compared to what you'll actually do.

How can we create an environment where we support our customers to stay true to what they want to do – especially if that's choosing more environmentally friendly choices?



#### **CONCEPT STORYBOARD**

Who: Problem:		Solution: Main touchpoin		How does the us interacting?	
	How does it problem?	solve their	What is the	happy result?	

#### **REFLECTIONS AND LEARNINGS**

The best thing about today was	The main thing I learned was	
Things that could be improved	If I could change one thing about today it would be	

How likely would you be to participate in an activity like this again?

Very unlikely	Definitely would
1	

How do you feel about your ability to make change, compared to this morning?

A lot	less hopeful	A lot more hopeful
1 ⊢		

#### REDUCING OUR COFFEE PACKAGING

At STREAT we've been trying to find ways to reduce our packaging. Our current coffee packaging is recyclable but we'd prefer to avoid these packages altogether if possible. Obviously, we can't sell coffee without any packaging at all we need a solution that allows our customers to convey beans from STREAT to their homes. It needs to be easy for our front-of-house staff to fill and an object that people will remember and be happy to carry to STREAT. We don't want to create an energy intensive product that will only be used once!

Therefore, the solution needs to be usable, useful and engaging.

#### What do we know about our customers?

We know our customers love coffee. We know they're often in the middle of their workday when they come to visit us and we know the majority buy their beans whole. The percent of our customers who bring their own coffee cups is well above the industry average and we're hoping this will translate into a desire to use reusable coffee packaging.

#### What do we know about our front of house staff?

They're busy! They may have to fill the packaging during a potentially busy service. They care about the environment (so they are on board to do the extra work!)

#### DO...

- Participate! You are part of the team and your thoughts and input are valuable.
- Listen to other's points of view. lamming is fun. it works best when there's diversity of thought.
- Use this zine to take notes and add ideas – it's your record of the process we'll go through today
- Tweet, Instagram, Facebook or LinkedIn the day – share what we are doing and the fun you're having. We'll share some hashtags during the day.
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#### WHY WE TEST PROTOTYPES

#### WHY WE USE PROTOTYPES

A prototype is a tool to learn from; an experiment to test assumptions.

Prototyping forces us to let go of our ideas and assumptions – the idea the we love might not be the one our customers love. So, rather than making a guess, we test and validate.

Use prototypes to learn through doing building the solution and putting it in front of users gives you immediate feedback.

We're not always going to get it right first go. Testing aims to take some of the risk out before we invest too heavily.

#### MINDSETS AND PRINCIPLES FOR TESTING AND INTERVIEWING:



#### Experiment

Use prototyping to learn from experiments before jumping to solutions.



# Co-create solutions

Benefit from the multiple perspectives of others and their different backgrounds, experience and skill sets.



#### **Keep iterating**

Revisit, improve and build on ideas based on input from customers, peers and experts.

### **OUR PROTOTYPES**

#### Refillable drawstring bag

- can carry up to 500g
- recycled fabric bag
- foldable

### Metal canister · can carry 250g

- coffee is protected from the elements
- · can be written on





#### PREPARING FOR PROTOTYPE TESTING

Once we have designed our prototypes we have to design our research – setting up an interview guide and planning our interviews.

When designing research, there are some key questions to ask, to ensure you capture the most useful information from customers.

# 1. WHAT ARE WE AIMING TO LEARN?

Having clear objectives helps you design the interview and keep the conversation on track. Today, we want to learn:

- Which option our customers are most likely to use
- Why they're more likely to use it
- What barriers would stop them from using the other product
- · What changes would make the product more suitable for them.

# 2. WHAT ARE WE NOT TESTING?

This is also helpful to define before you design and conduct interviews. When you talk to customers they can offer their opinions on all sorts of things, and it's up to you as the interviewer to steer the conversation. Today, we're not testing:

• The visual design – eg. colour, pattern or label design.

### WHO ARE WE TESTING WITH?

Working out who to interview can depend on how specific your customer is. For some ideas, guerrilla testing can be a fast way of testing by talking to people on the street.

Today we'll have customers ready for you to interview, which is ideal if you have a short amount of time or a clear idea of who your customer is (and we have both!)

#### **INTERVIEW TIPS AND TECHNIQUES**

#### **AS THE INTERVIEWER**

- Ask open-ended questions. You'll learn more if your question includes 'why' or 'how', rather than having a simple yes or no answer.
- Ask 'why?' This is the most interesting follow-up question to ask, especially if your customer has given you a short answer (eg. "I don't like it")
- No leading questions! Even if you think one of the prototypes is better, be sure to ask questions in a way that doesn't bias the customer.
- **Be comfortable with pauses.** This can be hard, but it's important to leave space in the conversation for someone to think. If you've asked a question and your customer hasn't immediately answered, silently count to 5 to make sure you've given them some thinking time.

#### **AS THE NOTE-TAKER**

When you're taking notes in an interview, you're playing an important role, capturing the data that will be used to draw conclusions and insight from the research.

Here are some tips

- Record direct quotes. You don't have to write the whole interview out in full, but a great quote can bring the customers' perspective to life in your recommendations
- Read body language and non-verbal cues. Your customer may hesitate, seem unconvinced, or even use sarcasm in their responses. Make sure vou're observing and recording this important information.
- · Ask clarifying questions, if you need to. If you didn't hear or understand what the customer said, it's ok to ask them to repeat themselves or explain what they meant.

#### **SYNTHESIS**

Synthesis involves bringing together the notes from all of your interviews, and finding themes and patterns in what people say.

It's about going beyond simple numbers (eg. half of the people we spoke to prefer the canister) and digging into the reasons why – remember that word from the interviews? - to understand motivations, needs or other insights about our customers.

'Affinity clustering' is the HCD term for grouping notes together that share a theme or sentiment. Clustering by topics (eq. 'price') is not as useful as what people are saying about the topic (eg. 'I would expect to pay for it')

Label your clusters as the theme emerges, to help your team members easily identify the sentiment and add their notes.



# REFLECTIONS AND LEARNINGS

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The main thing I learned was...

Things that could be improved...

If I could change one thing about today it would be...

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