



# ON WATER

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semiotics explorations unit









## **IN THIS SECTION:**

Semiotics is a complex topic embedded in our day-to-day lives. In this section, explore the theories behind semiotics and how they signs are part of a universal and non-verbal language.



# WHAT IS SEMIOTICS?

## THE BASICS

Semiotics is the study of signs and symbols, as well as how they work.

Signs, both visual and linguistic, create meaning on many different levels, and are individual to every person, which makes them extremely powerful in design and communications.

## SIGNS AND SIGNIFIERS

Swiss professor Ferdinand de Saussure taught that there are two parts of a sign: the signifier, or the word, and the signified, or the concept.

Later, Charles Sanders Peirce introduced the concept of the representamen, the object, and the interpretant. The representamen is the form of the symbol, the object is what the sign refers to, and the interpretant is how the audience thinks about it.

## IMAGES

1. While the word for "cat" is different in every language, the concept of a cat stays the same. Language is arbitrary, and concepts are cross-cultural.

2. One and Three Chairs by artist Joseph Kosuth shows the breakdown of a symbol: the mental image of a chair and the definition combine to make the object itself.

SIGN

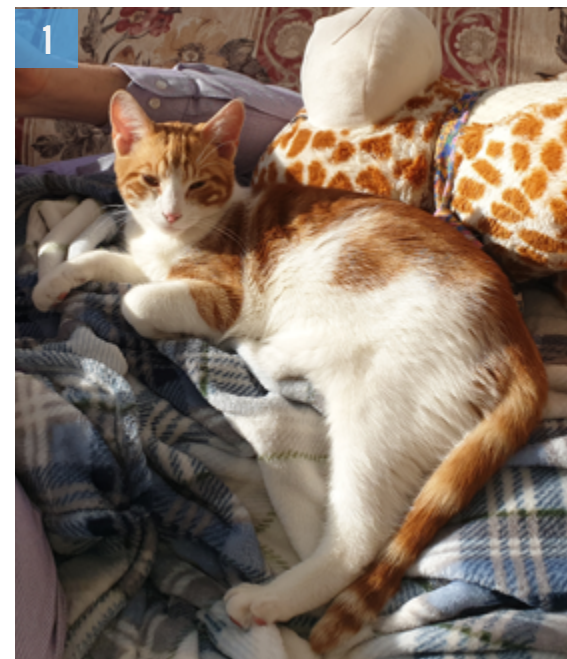
REPRESENTAMEN



OBJECT



INTERPRETANT



CAT



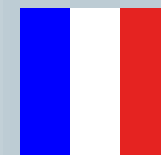
KATZE



GATO



CHAT





# DIFFERENT KINDS OF SIGNS

## THE BASICS

There are three main subcategories of signs and symbols, defined by the American pragmatist Charles Sanders Pierce.

### ICONIC:

Even if they are abstracted, iconic symbols like this bear a strong similarity to an object, and literally reference that object.

### INDEXICAL:

Indexical symbols also depict an object, but the meaning of the symbol is not literal.

### SYMBOLIC:

These signs are abstractions and mean nothing on their own. They are given meaning through culture and society.

### COMBINED:

Most signs are not one of these, but a combination of them. Each element of the sign belongs to a different category.

## ICONIC



**Top:** A sign allowing bicycles on a path. The sign is iconic of a bicycle.

**Bottom:** A warning sign which is iconic of a kangaroo in motion.

## INDEXICAL



**Top:** UN initiative for peace and justice icon; the dove and gavel reference peace and justice respectively.

**Bottom:** This skull and crossbones references death, not literal skeletons.

## SYMBOLIC



**Top:** The simple peace sign only means peace in a societal context.

**Bottom:** A symbolic biohazard warning symbol representing danger.

## COMBINED



**Top:** This sign is indexical for a maternity ward using an iconic stork, which is in turn symbolic of a story.

**Bottom:** The iconic child and bag with a symbolic cross form a suffocation icon.





# DE/CON -NOTATION

## THE BASICS

How viewers perceive symbols is just as important as the symbols themselves. These three key concepts, developed by French semiotician Roland Barthes, surround the perception of symbols:

### DENOTATION:

Denotation is the literal meaning of a sign or symbol. It is the objective way in which the symbol is viewed.

### CONNOTATION:

Connotation is the perceived meaning of a symbol. This can be highly individual, and is based on a cultural database which a society shares.

### MYTHOLOGY:

Mythology is a collection of connotations which are placed in discourse. They are truths which are created when perceptions are perpetuated among people, as in brands, stories, and politics.

## SYMBOL



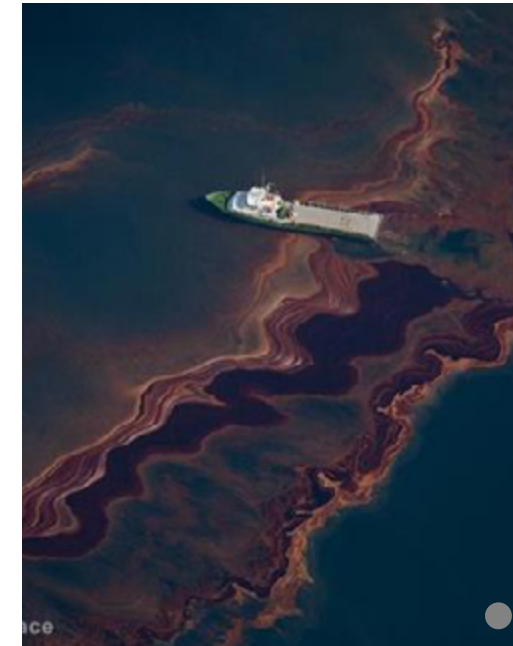
The British Petroleum (BP) logo. This is the current version of the logo, representing bright energy in all for

## DENOTATION



This logo is part of a company identity and was based off of a sunflower.

## CONNOTATION



BP was responsible for the Deepwater Horizon oil spill, which caused severe damage and wounded the company's image.

## MYTHOLOGY



A BP ad promoting the London Olympics, pushing the company's belief in a green and progressive future.

## THE CONCEPT BEHIND MYTHOLOGY

“As the famous French philosopher Roland Barthes said myth is, in its most basic form, a special type of speech. What he meant was that a myth isn't just a genre of stories, its a way of saying something. According to Barthes, the special trick of myth is to present an ethos, ideology or set of values as if it were a natural condition of the world, when in fact its no more than another limited, man-made perspective. A myth doesn't describe the natural state of the world, but expresses the intentions of its teller, be that a storyteller, priest, artist, journalist, filmmaker, designer or politician.”



# A GLOBAL LANGUAGE

## INTERNATIONAL TRAVEL

On a recent trip to Portugal, signs and symbols became very important to me. With symbols, I was able to navigate and understand my surroundings in a place I did not know and a language I do not speak.

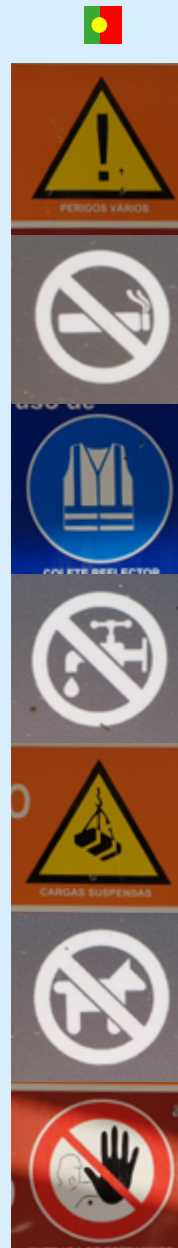
On the right, I took pictures of symbolic signs from where I live in the UK and signs with the same meaning in Portugal. The signs from the UK are denoted as such:



And the signs from Portugal are denoted as such:



While perhaps drawn differently, these symbols have no distinct differences in their depictions or language. They are universally understood as part of the human visual dictionary, and to me, highlight the importance of signs.







# REAL WORLD SEMIOTICS

## SIGNS IN MODERN LIFE

1. Religions use semiotics as symbols of the religion, symbols of traditions, and symbols of individuals. The latter was especially important in historical eras where many were illiterate, and therefore recognised saints and other marks of a religion by their symbols.

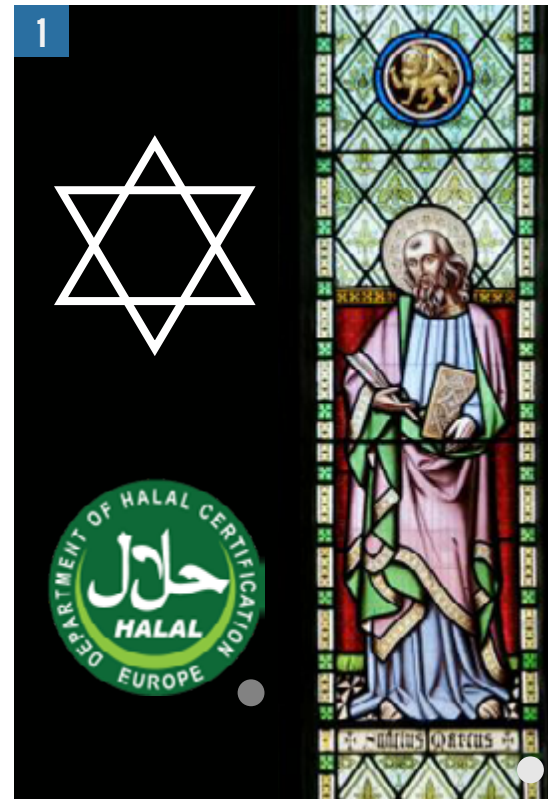
2. Phone operating systems use symbols and anchorage to effectively help users navigate.

3. Margaret Calvert's signage system for traffic communicates quickly to motorists in a universally understood language.

4. Sign Salad, a semiotics agency, helps companies communicate effectively with their audiences, like in this redesigned letter for TV Licensing.

5. Electronic Passport symbols allow the holder to quickly pass through immigration via machines and does not require words to be understood; this is especially important for the airport, where dozens of languages may be spoken.

6. Semiotics is key in ads. This car key is shaped like a gun, which creates a connotation of death.



# IN PROGRESS





## **IN THIS SECTION:**

Making icons is all well and good, but where do you start? This section explores the initial research involved in this project, in-class analysis charts, visual research, and the very beginnings of visualising the concept.

# All life on land is ultimately dependant on fresh water.

This quote from David Attenborough's Planet Earth inspired this project. After looking at vision, children's safety, and other topics, water and water safety became fascinating to me. The tipping point was when I walked home in the rain and saw people huddled under a bus shelter; individuals standing together who would normally be metres apart. Water connects us like nothing else does. And access to it is beyond important.



# VISUAL RESEARCH: WHAT IS WATER?

## BASICS

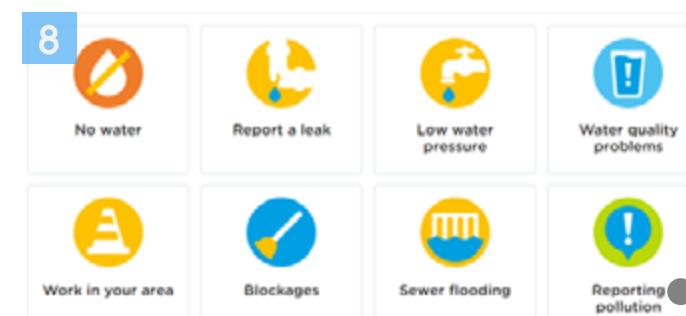
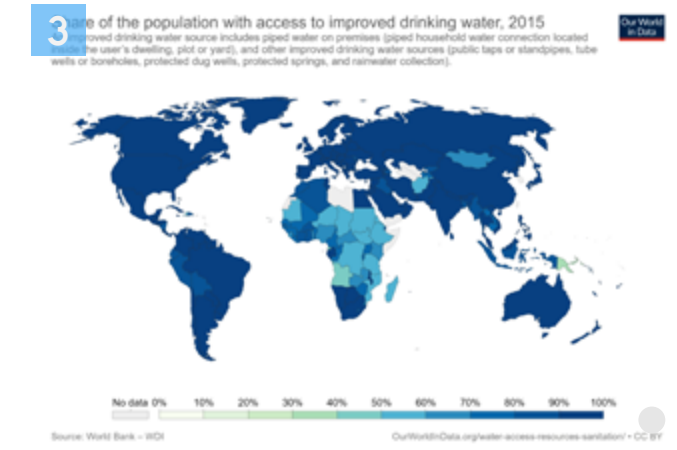
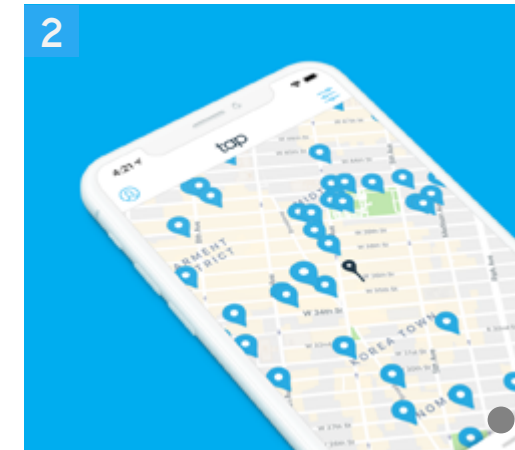
Dihydrogen oxide is everywhere around us. It is one of the staples of life on Earth, covers over 75% of the planet, and can also be as dangerous as it is life-giving.

However, the depiction of water is highly varied by culture and geography, and is used in many different contexts. Some of these include classic “do not drink” signs, while others are aimed at travelling safety and international world development. Here, I aimed to show a group of images which encompasses this range to get a clearer sense of what water means.

## STATISTICS

The statistics surrounding water cleanliness and disease are staggering. Safe water and hygiene are serious global concerns, as the following statistics from the WaterAid foundation show:

- ♦ Diarrhoea caused by dirty water and poor toilets kills a child under 5 every 2 minutes.
- ♦ Every minute a newborn dies from infection caused by lack of safe water and an unclear environment.
- ♦ 844 million people don't have clean water close to home.
- ♦ Around the world up to 443 million school days are lost every year because of water-related illnesses.



## IMAGES

1. The UN Sustainable Development Goals and their icons.
2. The Tap app, which aims to remove plastic water bottles by making it easier for people to locate safe drinking fountains.
3. A WHO map describing worldwide access to safe drinking water.
4. An alpine glacier and lake with clear, safe water.
5. A man drinking from a cup in India. The practice of not touching lips to the cup prevents illness.
6. An impoverished girl drinking from a tap with her hands.
7. A travel guide to drinking water in Mexico.
8. Online icons for Thames Water.
9. A man prays in the Holy Ganges river.



# ANALYSIS CHART

News Articles	<ul style="list-style-type: none"><li>• Online</li><li>• Newspapers</li><li>• Social Media</li><li>• Reuters</li></ul>	Images: <ul style="list-style-type: none"><li>• Dramatic Photos</li><li>• Infographics</li></ul>	Newspaper Readers News Viewers	Clear, but even more so with captions.	These images give a shock value with vivid detail.	A picture is worth 1000 words. Start with the most relevant image.		
WHO Maps	<ul style="list-style-type: none"><li>• Official Reports</li><li>• Statistics Sites</li><li>• Blogs</li><li>• Aid Organisations</li></ul>	Maps: <ul style="list-style-type: none"><li>• Coloured</li><li>• Sometimes Cartograms</li></ul>	Researchers Social Activists Aid Workers	Can be boring. Cartograms are clear if you know how to read them.	Works by showing gradients and colours in a cided system.	Involve symbols to make it clear and less bureaucratic.		
Sustainability & Health	<ul style="list-style-type: none"><li>• Online</li><li>• Official Reports</li><li>• Company Websites</li><li>• Aid Organisations</li></ul>	Dramatic Images Icons: <ul style="list-style-type: none"><li>• Simple</li><li>• Bold Colours</li></ul>	Businesses Governments Organisations <ul style="list-style-type: none"><li>• UN made rules not to use for fundraising</li></ul>	VERY: They include text, images and generally make sense. *from a Western Context	They symbolise the adoption of UN standards and are clear indications of goals.	Make these icons and their meaning more widespread and recognisable.	6 CLEAN WATER AND SANITATION 	
Fountains and Taps	<ul style="list-style-type: none"><li>• Bathrooms</li><li>• Outdoors and Parks</li><li>• Tourist Areas</li><li>• Hotels</li><li>• Non-Residential</li></ul>	Signs: <ul style="list-style-type: none"><li>• Simple</li><li>• Conspicuous</li></ul>	People Who Drink There <ul style="list-style-type: none"><li>• Kids and Teens</li><li>• Kids may not know or care until told</li></ul> Tourists	Usually clear, but is occasionally difficult because if there is no sign, it is unclear whether it is or is not safe.	They work with clear symbols and colours and serve to keep people safe.	Institute a system of common symbols or make sure that "no sign" means "safe".		
Travel	<ul style="list-style-type: none"><li>• Online</li><li>• Blogs</li><li>• Travel Guide Books</li></ul>	Photos Infographic	Travellers <ul style="list-style-type: none"><li>• Parents</li><li>• Lone Travellers</li></ul>	Usually clear, especially in writing; all you need is "no, you can't drink that."	They only work if you look for it; this should be obvious, especially when the symbols are designed for safety.	Make universal icons; this would make it easier to understand travel risks, especially on Google Maps.		
General Culture	<ul style="list-style-type: none"><li>• Travel Blogs</li><li>• Journalism</li><li>• Cultural Norms</li><li>• Cultural Education</li></ul>	Photographs Type Just Looking	Travellers Blog Audiences People Who Live There	Clear if you know about it. Can be a culture shock or misinterpreted for visitors and travellers.	It serves to identify a culture and cultural values.	Create cultural icons and try to convey this in a globalized world.		
Pollution & Location	<ul style="list-style-type: none"><li>• Beaches</li><li>• London Water Maps</li><li>• Aid Organisations</li></ul>	Signs: <ul style="list-style-type: none"><li>• Bold</li><li>• Red/Black/White</li></ul>	Swimmers Visitors to the Area	Clear, but there is no visual element for pollution in swimming signs or otherwise.	It serves to tell people not to swin using colour and bold signage.	Add pollution symbols and different languages. However, no swimming signs are very clear.		

I designed all icons for the columns at the top to reflect what we did in class. However, all images in the "images" column are external research.



## INITIAL PERSONAL BRIEF

### BACKGROUND

Water is, by its very nature, fluid. It transcends boundaries, and is constantly in motion. It is the one universal substance which, in its purest form, has a pH of neutral 7, three universally known states of matter, and is necessary for all life on Earth.

Water connects communities, humanity, and nature on a massive scale; it is what we base our mythologies on, how we see our world, and how we survive.

Yet a large majority of the world does not have access to good, clean, drinking water.

This project aims to create a series of icons to denote safe versus unsafe water, and prevent avoidable illnesses spread by unsafe water sources.

### VISUAL LANGUAGE

The visual language for this icon will include a specific colour set, primarily blue for water. It will also be very clear and reminiscent of Google Maps icons.

### INDEX

This set of icons will go under the index of safety and human welfare. For this reason, symbols specific to safety and welfare will be more effective when incorporated into this icon set.

# GOALS

.01

Create a set of imagery which can be displayed on Google Maps for travellers journeying to areas with poor conditions.

.02

Use these same icons to improve the understandability of WHO and UN statistical maps about water accessibility and quality.

.03

On a design level, embody the fluid, archaic, and universal nature of drinking water.

.04

Incorporate these icons into a universally recognised and long-lasting system, which can be used both to raise awareness for the water crisis and by people in the societies which need water education to teach and designate safe water sources.





# INITIAL TARGET AUDIENCES AND SETTINGS



## WHO?

Three distinct audiences  
(in order of priority)

### 1. People living in impoverished areas

This will be targeted mainly towards women and children, as they will most likely be collecting water.

### 2. First Aid workers

Must be understandable and clear.

### 3. Travellers journeying worldwide

Will be targeted mainly to adults, as they will most likely be the ones travelling and dictating what to drink.

#### Verdict:

Universally understandable symbols targeted at 18-50 year olds.



## WHEN?

#### Screenlight:

1. Google Maps
2. WHO maps
3. Water filtration machines

#### Daylight:

1. Signposted near water sources
2. Activist Groups Campaigns
3. Engaged into Filtration Methods
4. Books for water education in poor areas
5. DWB and FA workers clothing

#### Nightlight:

1. Signposted near or at water sources (Consider Glow)
2. DWB and FA workers clothing
3. Water filtration machines (LED)

#### Verdict:

Design for ease of legibility on screen, night, and day.



## WHERE?

#### Digital:

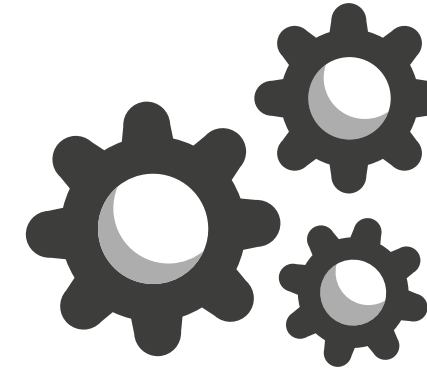
1. Google Maps indicators
2. WHO maps
3. Water filtration machines

#### Print/Physical Media

1. Signposted near water sources
2. Activist Groups Campaigns
3. Engaged into Filtration Methods
4. Books for water education in poor areas
5. DWB and FA workers clothing

#### Verdict:

Symbols which can be used both on small digital screens and large signs; MUST transcend cultural boundaries of understanding



## PSYCHOLOGICAL

What symbols might people interact with?

### 1. People living in impoverished areas

Simplistic road signs  
First aid workers  
Natural signs

### 2. First Aid workers

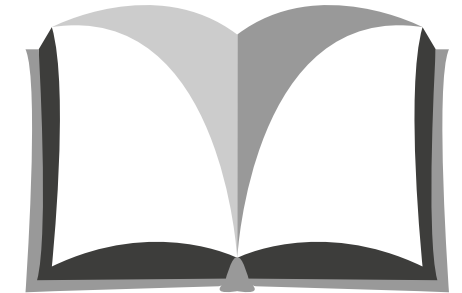
Coloured maps in WHO  
Specific first aid symbols

### 3. Travellers journeying worldwide

Road signs  
Simplistic maps

#### Verdict:

Keep it simple and natural, iconic symbols may be best.



## INFORMATION SOURCES

Where could I find information about my concept?

### 1. People living in impoverished areas

Reading and websites  
Family friend who grew up in India

### 2. First Aid workers

WaterAid Website  
School friend who is currently studying medicine in the U.S.

### 3. Travellers journeying worldwide

Travel sites  
Family and friends travel extensively through Europe

#### Verdict:

Look at several different sources, and interview people personally.



# SYMBOLS OF WATER

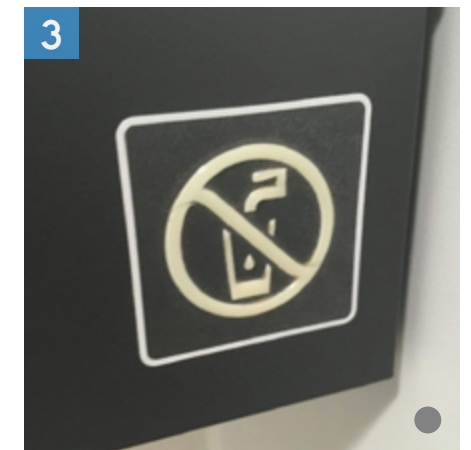
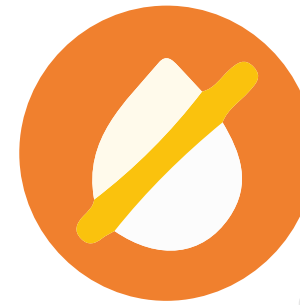
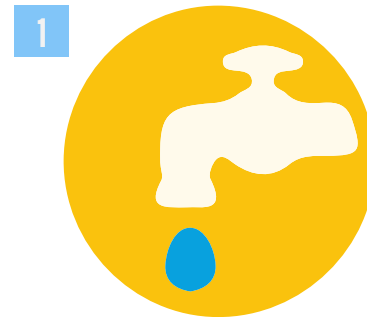
## WATER SYMBOLS

Water symbols are hidden in our daily lives, especially in regards to travel, water sources, and general history. All of these symbols are different, but contain a few key elements:

1. Taps
2. Water Droplets
3. Glasses
4. Water Bottles
4. Mostly iconic representations

## IMAGES

1. Icons on the Thames Water website, which feature taps, droplets, and glasses.
2. A guide to Europe's water safety, featuring a tap.
3. A "do not drink" symbol on a Parisian train.
4. Iconic water safety icons.
5. Public drinking water placard.
6. An infographic using water bottles to form towers.
7. A "do not drink" symbol in a London bathroom.
8. A health warning for water quality in Vancouver.
9. The alchemical element symbols. Water has been an important and even holy element for ages.



● Fire ● Water ● Air ● Earth

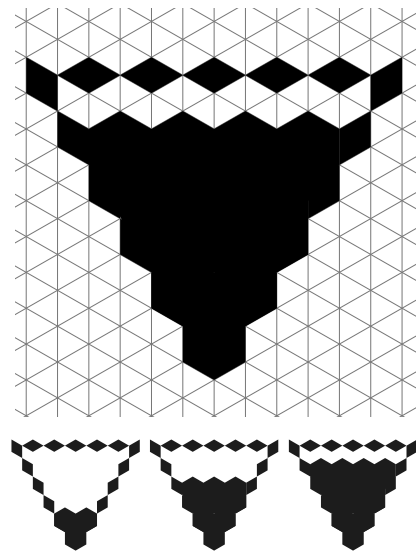


# INITIAL IDEAS

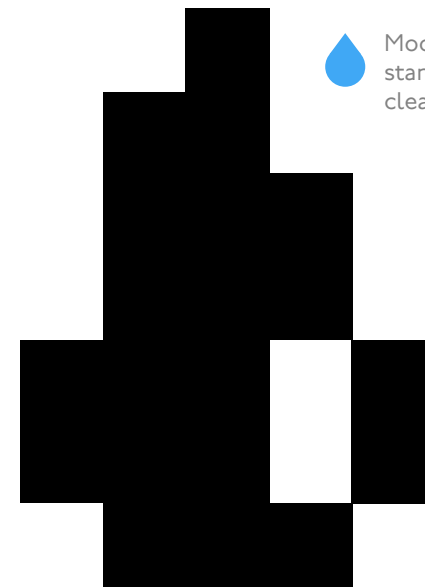
## STEP ONE

For the first set of explorations, I used a modular grid.

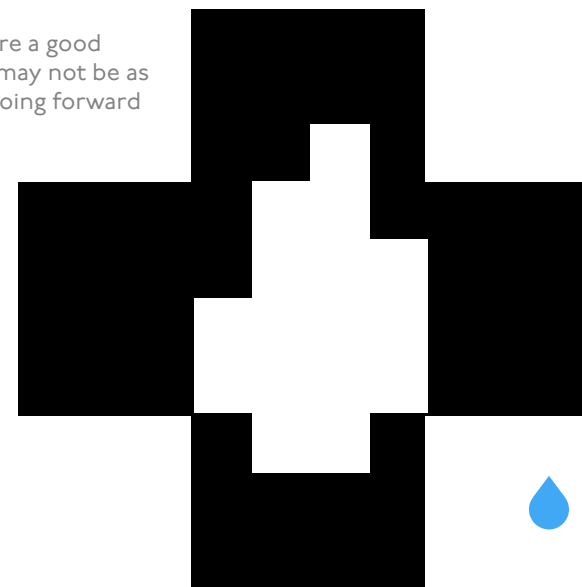
The two left-hand designs on the top left were created with a simplistic square grid, and explore simple depictions of water droplets and their combinations with first aid signs. These grids progressed to the more complex triangular grids, show below:



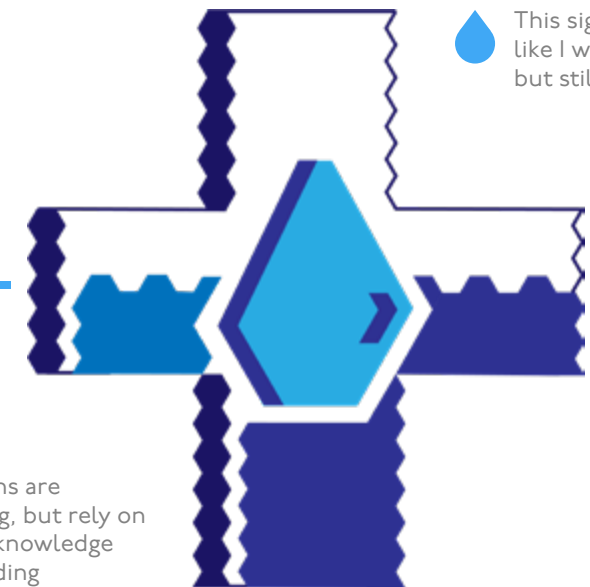
These gridded sketches and that in the far left hand corner were then turned into organic shapes independent of the grid's restrictions.



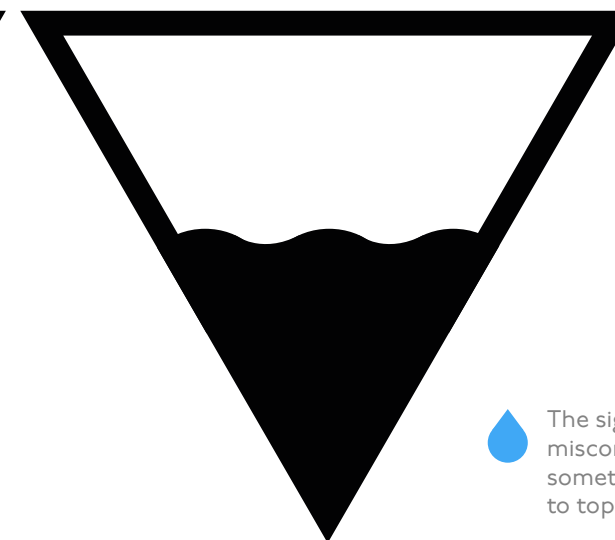
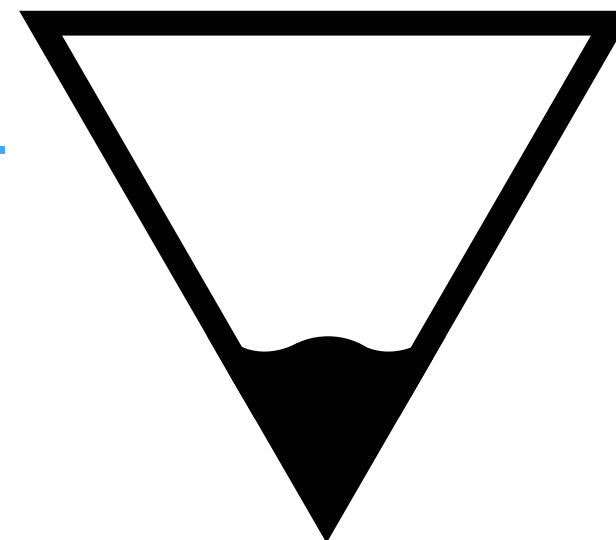
Modular designs are a good starting point, but may not be as clear as possible going forward



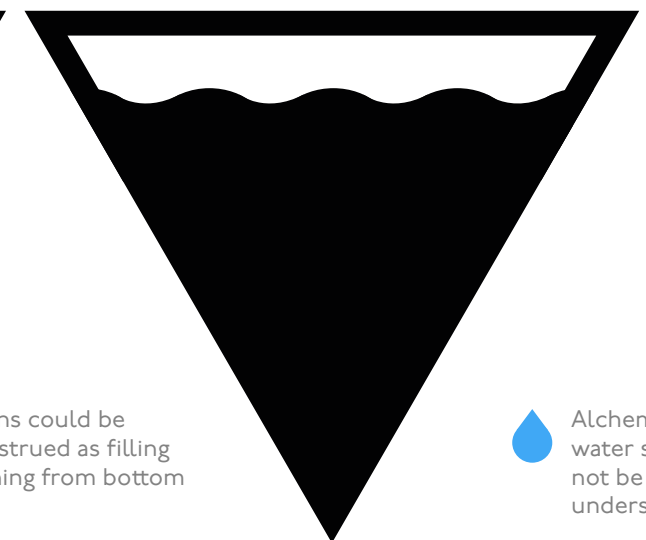
These signs are interesting, but rely on previous knowledge and decoding



This sign is fluid, like I want it to be, but still rigid



The signs could be misconstrued as filling something from bottom to top.



Alchemical water signs may not be widely understood.





# WHAT EVEN IS BAD WATER?

## EXPLORATION

We often think of “good water” as clear, spring-like liquid, and “bad water” as dark and murky.

### But what makes water bad?

Firstly, “bad water” can mean many different things, like water unfit to cook, unfit to swim in, or unfit to drink, and all of these have different levels of cleanliness.

Specifically in regards to drinking water, pollution, chemical contamination, and biological agents make water undrinkable.

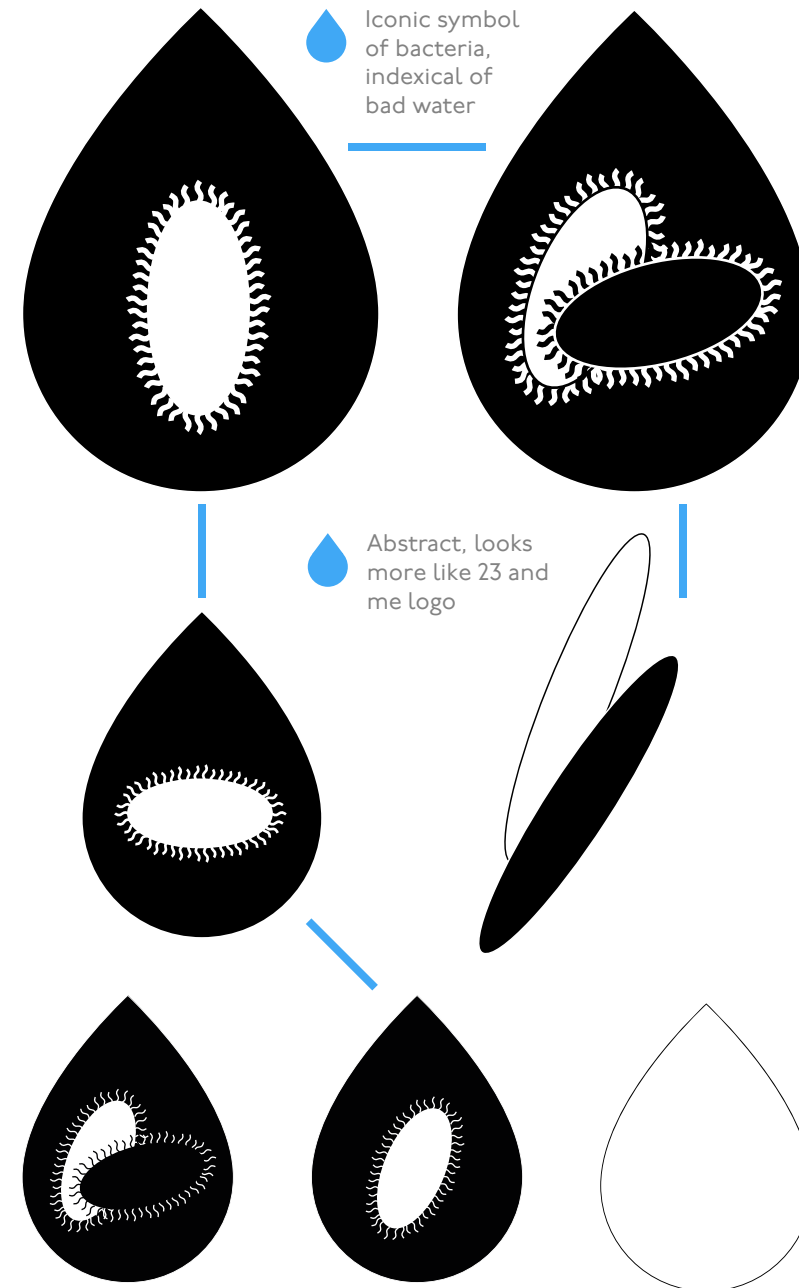
According to NPR, “...by far the greatest cause of contamination — above cholera, dysentery, typhoid and polio, E. coli and other bacteria, as well as parasites like worms and snails — is human waste.”

## DIFFERENT FILTERS

1. A video explaining the concept behind the Life Straw, an automatic filtration system for campers and third world countries alike.

2. A set of water filtration tablets, added to water to make it safer for consumption.

3. A tap filter in Shanghai attached to taps themselves.



## FILTERS

Filters are used worldwide to better water quality. They are used for entire nations, like India and China, campers in the US, Europe, and Canada, and rural communities in Africa.

While an extremely important part of drinking water quality, I chose not to pursue this depiction, as the instruments of filtration are visually varied and also not applicable for much of Europe and North America.





# WATER JUGS

## CANISTERS

After going through the initial exploration process and gathering visual research, I realised that there was one iconic symbol which kept coming up: the canister.

I previously thought that the image of a canister was catered more towards rural villages and developing nations, but after some additional research found that canisters are used across many different settings.

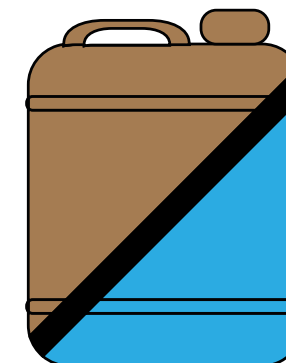
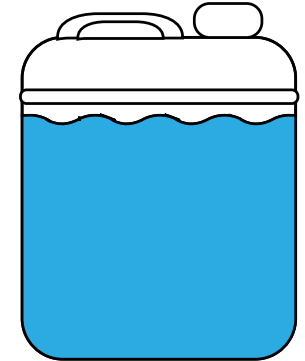
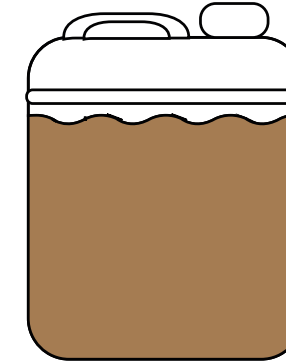
Therefore, I felt this symbol should be included in the proposed icons, not only to appeal to specific rural communities if the icons were widely used, but also to middle class workers in places like the US.

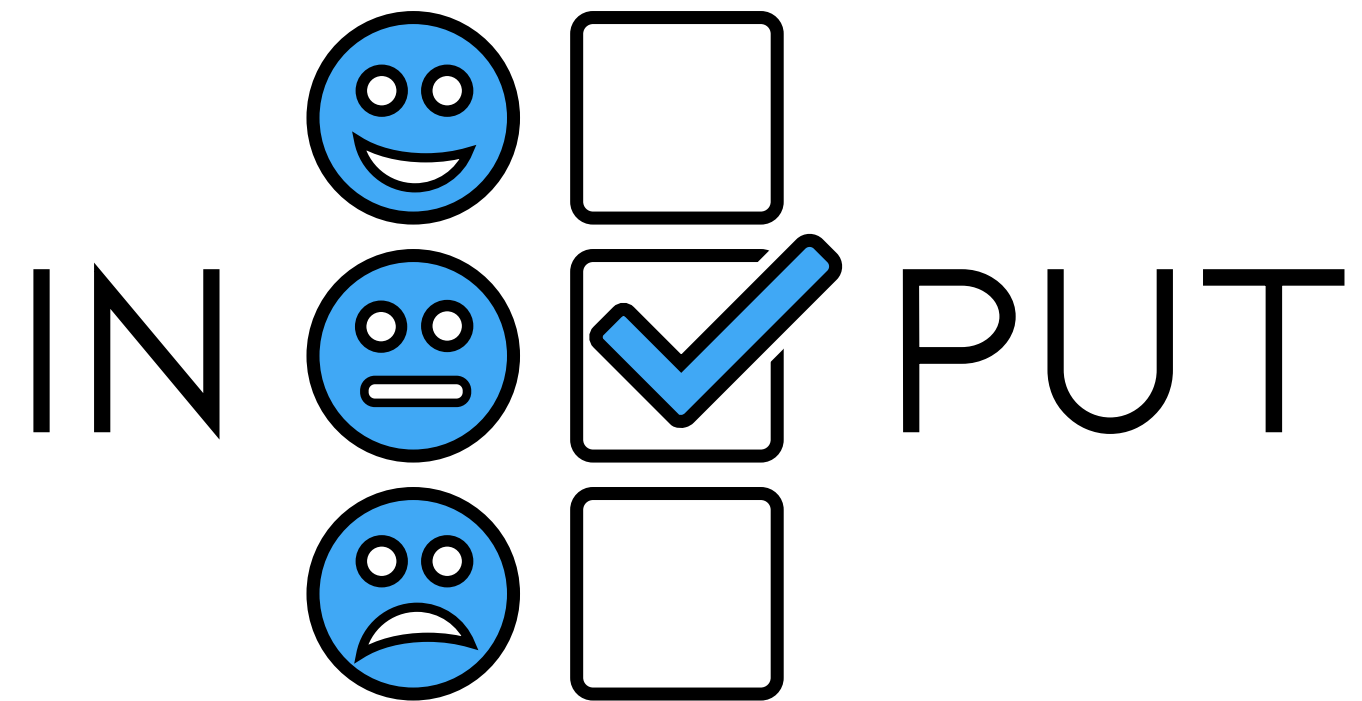
## IMAGES

1. African women collecting water in jugs and canisters.

2. A water jug used for football team practices and individuals.

3. An office water cooler, which provides both water and a place to chat with co-workers.







## **IN THIS SECTION:**

With an idea and a brief in hand, audience input became increasingly important. In this section, follow the several interviews, surveys, and redesigns, that resulted in a re-evaluated brief and two effective sets of icons to explore.





# THE COLOUR OF WATER

## WHAT COLOUR IS WATER?

Almost all people associate good, drinkable water with the colour blue. Contrastingly, the colour of undrinkable water is significantly muddier, no pun intended.

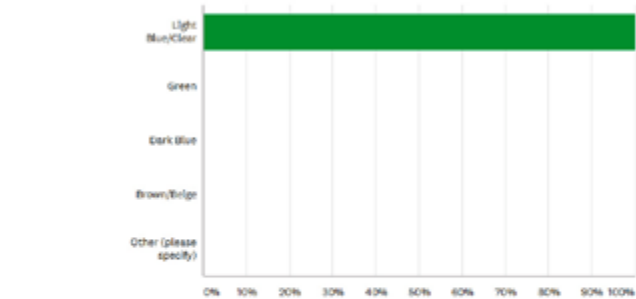
This difference is shown in the GIF on the right, which compares two surveys of the perception of good and bad water in regards to colour.

While most people associate “bad” water with a beige colour, several responded with other variants, such as green for algae, red for warning and possibly for rust, and black for contamination and danger.



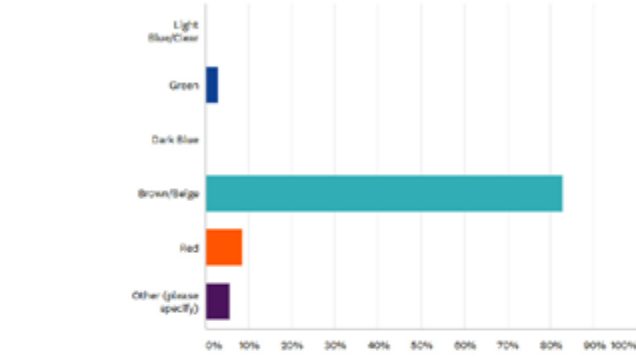
## What colour do you most associate with clean water?

Answered: 35 Skipped: 0



## What colour do you most associate with undrinkable water?

Answered: 35 Skipped: 0



ANSWER CHOICES	RESPONSES
Light Blue/Clear	0.00% 0
Green	2.86% 1
Dark Blue	0.00% 0
Brown/Beige	82.86% 29
Red	8.57% 3
Other (please specify)	Responses 5.71% 2

## WHAT NOW?

All this speaks to a simple truth; depending on geography and situation, any number of factors can make water undrinkable. This makes iconic depictions of the actual contaminants and their colour very difficult.

To test a theory, I had survey-takers enter which country they were resident in and where they were from. I received responses from Europe, the UK, North America, and East Asia, and I believe this is the cause for the varied answers, as every culture and region has its own interpretation of what bad water is.

**This means that there is no clear colour of undrinkable water which can be used for a universal symbol.**

By extension, to differentiate by colour, these symbols have to draw on a different visual code, for example, the traffic system.

**However, an important point to note is that every single person who took the survey associated the colour blue with good water.**



## IMAGES

1. A woman collecting water from a river in South Africa.
2. A canal in Peshawar, Pakistan.
3. Tap water from Flint, Michigan, USA which has been contaminated with lead.
4. The polluted Lujiang river in China.

5/6. Surveys testing the societally perceived colours of good and bad water.



# INTERVENTION!

[klass-ma-t dr-aw-ings] / **NOUN**

.01

In intervention one, I described my concept to a classmate and she drew a series of icons based on that description.

.02

This was the only information she was given: My concept is water safety, and my three proposed icons are a range from drinking water which is unsafe to drinking water which is good and safe to consume.



## ANNOTATED CRITIQUE

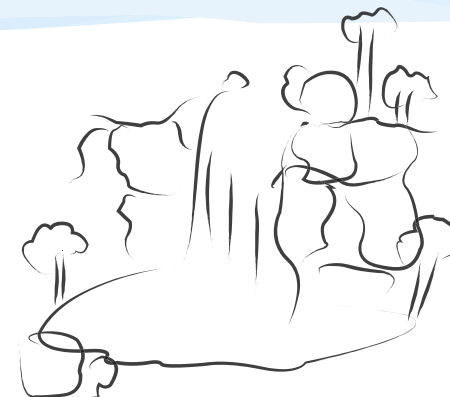
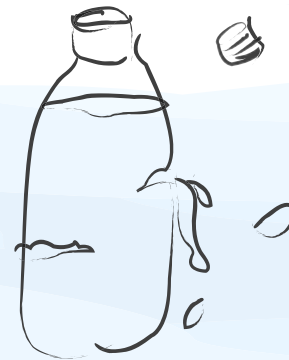
This could be effective, but be aware of the symbolism of the sparkles and if it is understood

I like the inclusion of the levels of contamination defined as particles or dirt, but would it be visible?

Again, sparkles and physical changes to an iconic symbol are indexical of changing water quality

This is the most promising of the three suggestions; I will develop this one in the following exploration

This is too complex for a symbol. It also speaks more for river water quality than drinking water



original sketches by Yuri Na

## DENOTATION CONNOTATION

In previous research, we established that “water” has a very different meaning to each one of us. Case in point; Yuri’s sketches were markedly different from any I had previously done.

### But why are they different?

Apart from individual experiences with water, cultural elements certainly come into play here. Yuri is from South Korea, and, as a flatmate from China explained to me, Asian culture tends to designate cleanliness with sparkles.

While this was a visual language I understood, the symbolic element did not resonate clearly with me or my cultural background in the U.S. & Austria.

**This is an important point to note, and will be taken into consideration when narrowing down and catering to specific target audiences.**





## RESPONSE TO FEEDBACK

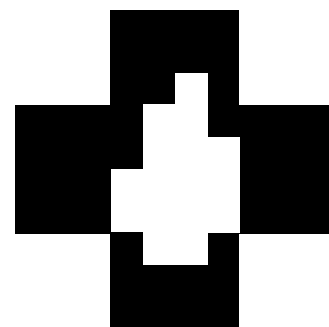
As a response to the drawings on the previous page, I explored two possible paths of representation.

I first used a diamond grid for both 3D and 2D designs, right and left accordingly, which I then transferred into more organic forms.

**These explorations also led to an interesting juxtaposition between hard and soft lines, which in turn gave very different connotations.**

The main exploration behind this set of icons is concept of showing contamination in the iconic forms usually associated with water, i.e. a cup and bottle.

The third exploration in this set has to do with a previous icon design, shown right, and plays on the idea of the first aid cross, as these icons are primarily designed for health and safety.



Sharp edges imply danger throughout; the line quality is too intense here

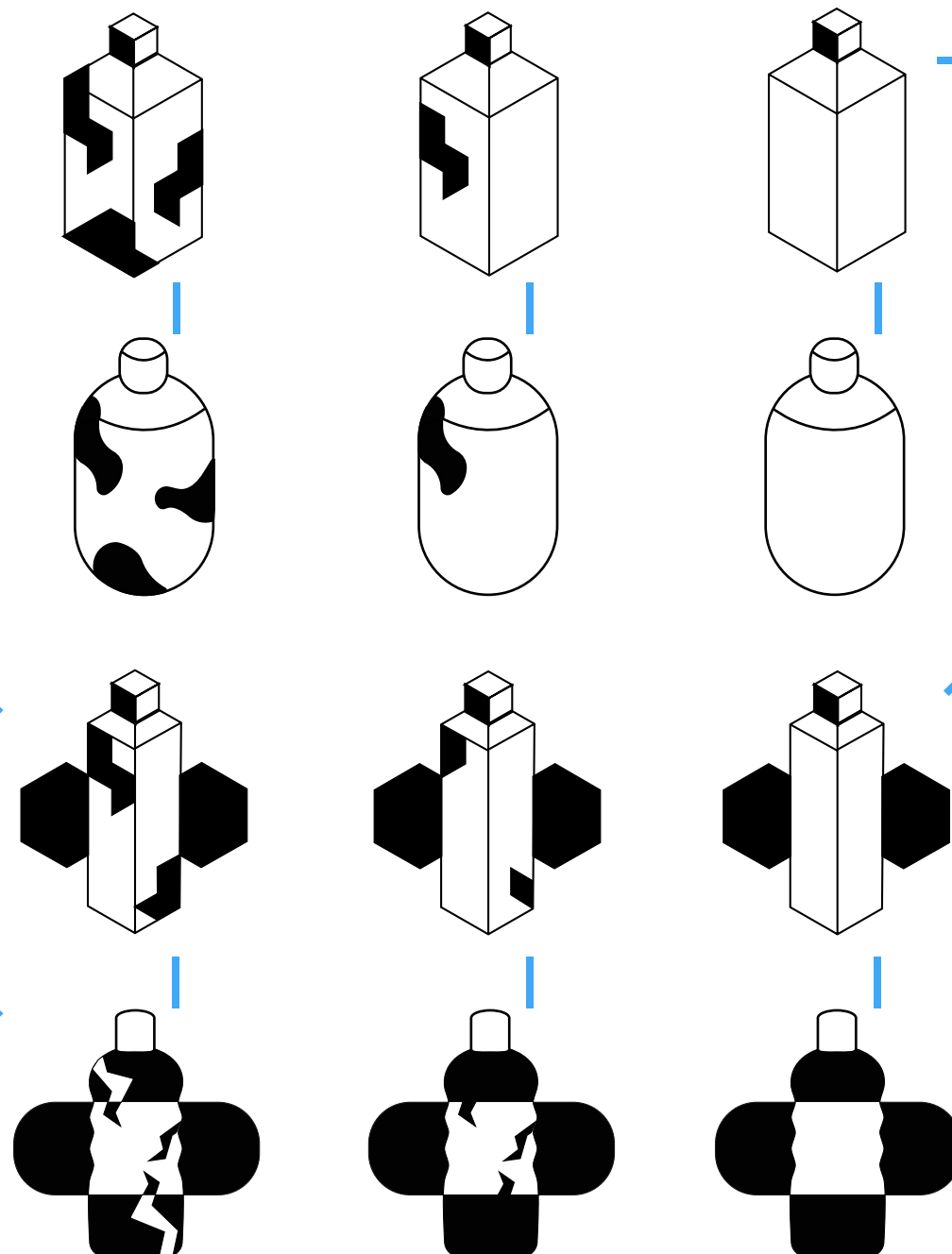
Interesting and eye-catching line quality, but the symbol is unclear, it looks like the icon used for washing machine temperatures

Cracks in the bottles indicate dirt and contamination

All of the symbols on the previous page and these are iconic symbols with indexical meaning

Combination of water bottle with the first aid cross

The first aid sign, while a symbolic play on meaning, requires some additional decoding and may not be clear







I created this short animation to experiment with moving images and to get a feel for what the modular bottle icons might look like when paired with different colours of water.



# INTERVENTION!

[tra-ve-ll-er-s] / **NOUN**

.01

In intervention two, I showed a series of icons to a group of European travellers who were both originally from Europe and originally from North America.

.02

They received the following information and questions: Looking at these icons, which of them are the clearest to you? What do you most associate with water, and what would be a more effective symbol for you?



## TEST GROUP FEEDBACK

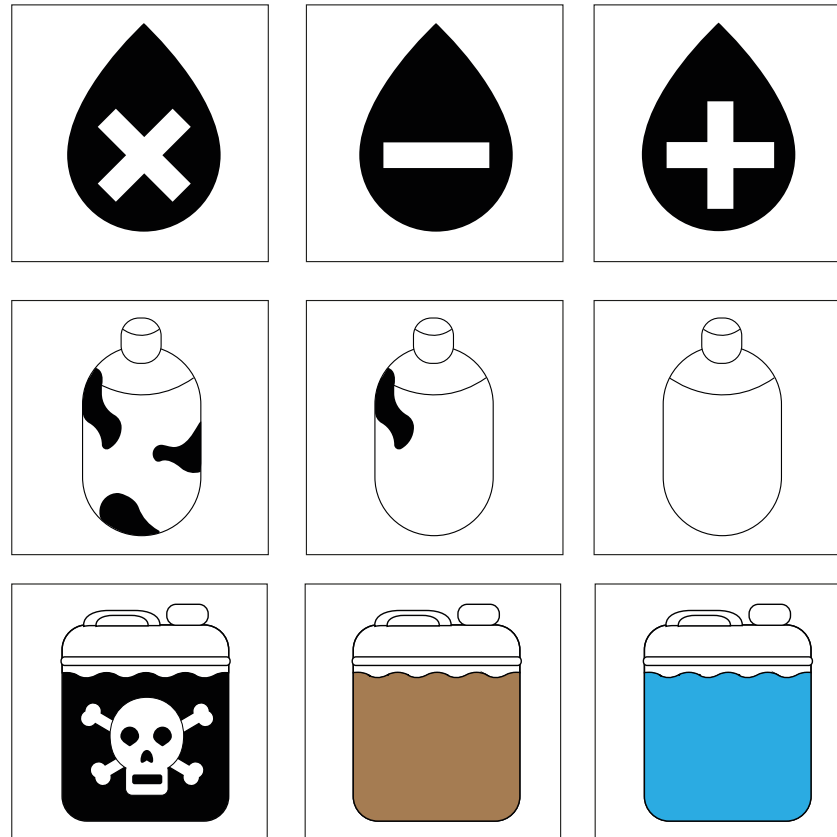
The test group was shown all designs shown up to this point as part of the feedback process. After viewing the images, there were three key feedbacks from individuals in the group. The critiques were:

**1. The shape of the existing water droplets is abnormal, and needs to be elongated.**

**2. Drinking water is associated with water droplets, taps, and glasses, not bottles.**

**3. Canisters cause confusion; some of the test group thought they were for gasoline, some thought they represented water well.**

As part of her feedback, one of the audience drew her version of effective icons, which I scanned and digitized to the right.



## REGIONAL PERCEPTION

The majority of travellers interviewed here were from Austria. Austria, the Alpine regions, and Germany have some of the best water in Europe.

Tap water is pure and safe, and even mountain streams are safe to drink from, as this is the exact same water which makes it to Austrian cities.

Therefore, bottles were strange to see in a symbol depicting drinking water for this audience; they always just took water from the tap growing up.

### AUSTRIA



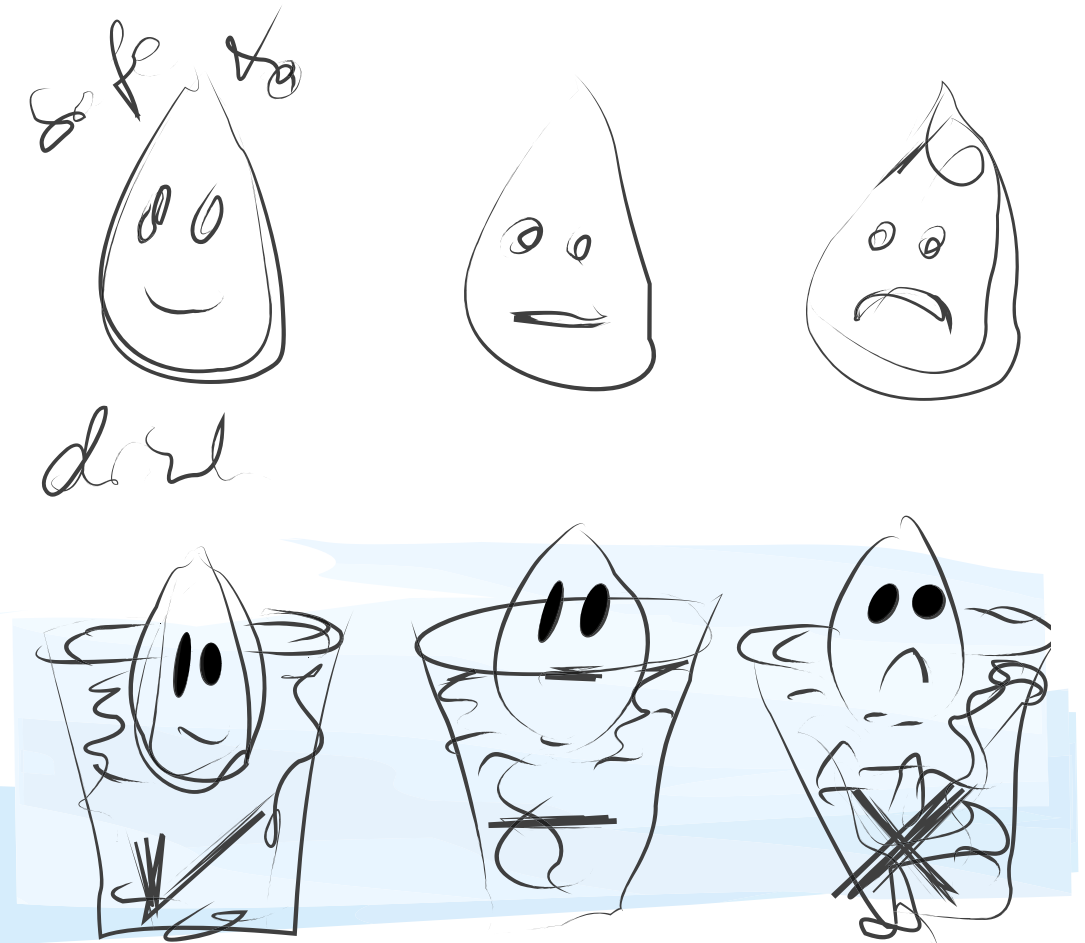
## ANNOTATED CRITIQUE

The inclusion of text may prove difficult for small-scale applications and creates a language barrier

Expressions are usually universal, especially the smile and frown, but again, may have a problem with scale

These symbols are too complex to be understood with five separate elements

These symbols are a mix of iconic, indexical, and symbolic elements; cultural decoding should be taken into account



original sketches by Andrea W.



## RESPONSE TO FEEDBACK

As a response to both interviews and drawings from the traveller focus group, the following four additions were made to the group of initial exploratory icons.

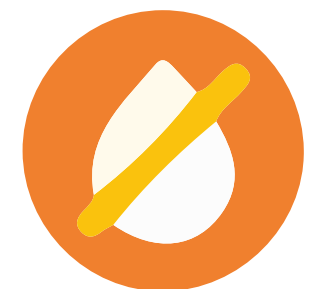
Here, I omitted the faces from the water droplets and minimized the graphic elements involved in order to communicate more effectively.

Some icons were also removed from the consideration list. These icons, for example the bacteria and canisters, received a negative reaction from the audience and were generally ineffective.

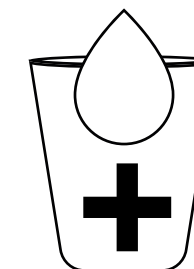
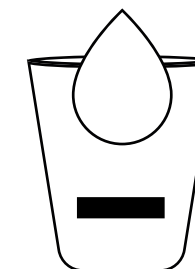
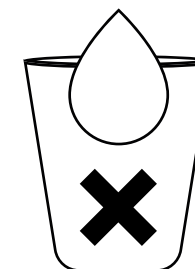
## RESPONDING TO VISUALS

These symbols also drew upon the visual culture already available.

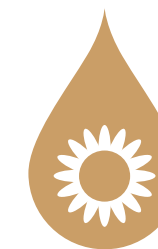
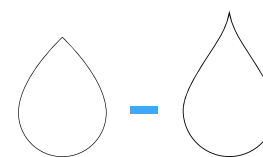
The image on the bottom is the UN Sustainability symbol for Clean Water and Sanitation, and the top three icons are from the Thames Water website, which deals with water quality and issues arising from it.



These are based on Andrea's drawings from the previous page, and feature symbolic crosses and pluses, just like the first aid cross



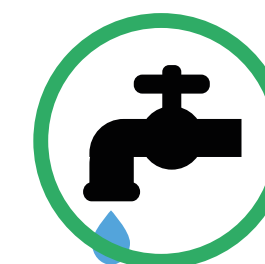
Elongated water droplets look more fluid, but connote a kind of sharpness



These two series of icons are based on the indexical colours of the traffic system, an understood societal symbol



Explicit symbols involving both the iconic tap and symbolic slashes give the symbol an explicit meaning





# INTERVENTION!

[p-oh-r wa-ter a-re-ahs] / **NOUN**

.01

In intervention three, I spoke with individuals who had grown up in or who had connections to areas with unpredictable or poor water quality.

.02

I explained the concept of my project to these individuals and asked them about their experience with drinking water. The overall goal was to get a better idea of how to design and apply my icons for and in different areas.



## INTERVENTION FEEDBACK

In this intervention, I got to see water from a perspective I have never considered before.

Growing up, water bottles have never been a necessity for me, but as the interview excerpts on the far right show, in some areas of the world, they absolutely are.

The image on the left also shows a method of gathering water in India, mainly in rural areas where water bottles are too expensive for the general population.

This too was something I had never before considered, and really opened my view on the subject.



## REGIONAL PERCEPTIONS

Just like with the previous intervention, the native culture of the test group heavily influenced the results of the survey.

In this intervention, I chose to focus on two individuals: one with Indian heritage who grew up in the United States, and one who grew up in the south Indian city of Chennai.



What is the water quality and situation like in India?  
What grades of water exist?

Basically, if you are within the city boundaries, you're lucky. You cannot drink tap water, and if, only boiled or filtered.

Outside the city walls, wells are very popular, but these do not have good water, especially by the coast.

Even in cities, there are often water shortages, and that can be very bad.

Would these water signs be effective? Who could use them in your area?

There is an authentication issue in cities with those icons. I would be very wary. Who certifies this? Is it valid?

"Good water" is also very subjective. There are different grades, you know, bad, worse, and very bad, and water can be good for different things, like drinking and bathing.

What imagery would you like to see on a water sign, and where could those signs be useful?

I would like to see a person drinking water.

While generally ineffective for signs at specific water sources, these icons could be used on wells and water containers.

"[drinking tap water is] something you know not to do, you don't need a sign to tell you that."

-Adrian T.

"Three icons...it's just not enough."

-Anand T.

"Why does a bad water sign exist? Shouldn't that water source be removed?"

-Anand T.



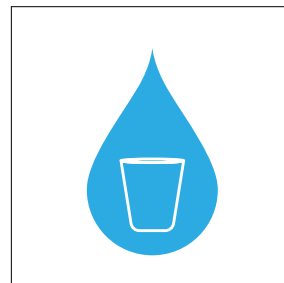
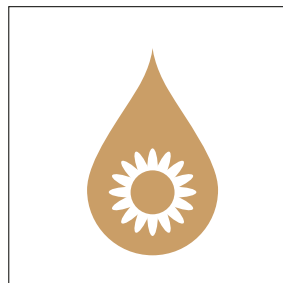
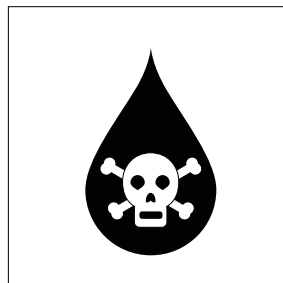
## RESPONSE TO FEEDBACK

The icons on this page dealt primarily with expressing cultural and geographic standards.

Water bottles were a very clear suggestion for representing water, contrary to the previous cultural group interviewed, who hated the water bottle representation.

**However, what was most interesting to me was that specific themes still carried through. For example, the droplets below are from the previous intervention and describe different uses for different qualities of water. Yet the icons directly to the right also do exactly that.**

**They were also both suggested by individuals in the target audience, which might indicate that people respond more to existing comparisons than new definitions of a concept.**



Abstraction of particles is visually interesting. This is a development from designs like those at the bottom of the page, which could be misunderstood as half-full, full, and empty.



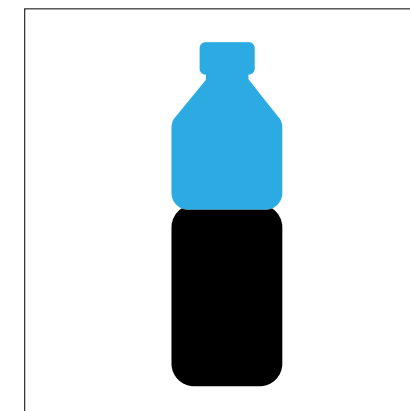
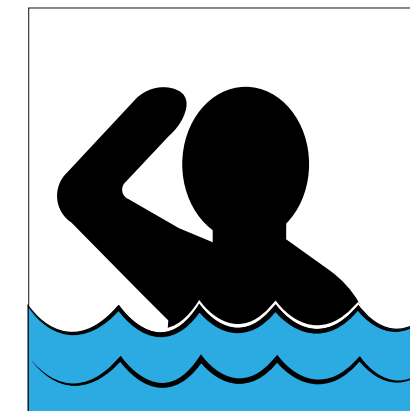
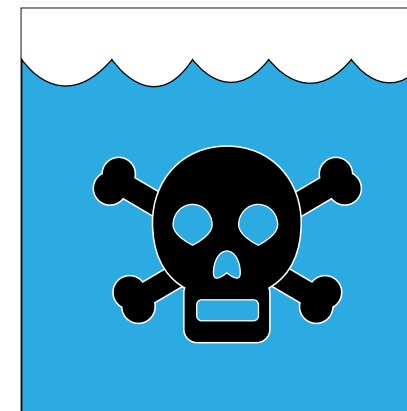
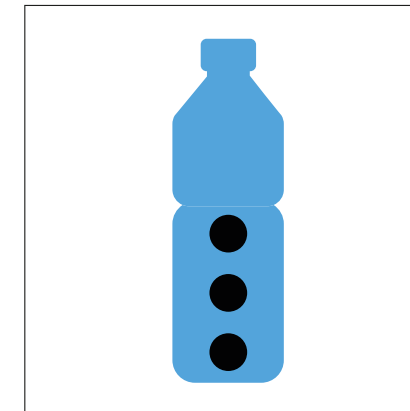
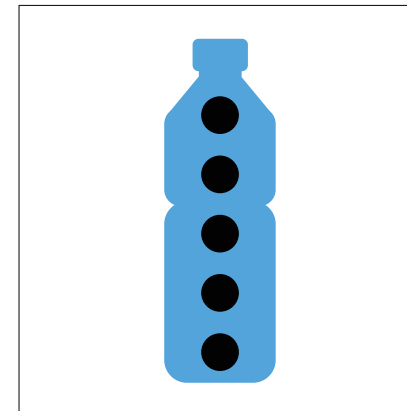
Skull and crossbones are universally associated with death and/or danger



This is more of a classification system based on a specific culture than a universal icon set.



In India, water bottles are far more common and water quality is disputed, not to mention outside city walls, it is anyone's game and dangerous.





# RE-EVALUATE CONCEPT

- .01 In response to the input received by feedback sessions, I will be restricting the target audience to international travellers or workers.
- .02 Three icons are not enough to express all types of water safety, and the cultural connotations around grades of water are difficult to express universally.
- .03 Going forward, the applications of the icons will also be revised. The icons will no longer be applied to everything related to drinking water, but specifically to purification machines, Google Maps and equivalent software, and possibly specific signage.





# SURVEY RESULTS: CONFIRMING USAGE

## OVERVIEW

For the last part of the audience input and experimentation phase, I sent out a survey via Facebook, Messenger, Whatsapp, and Kik.

For this, I asked the audience a number of questions, keeping the intention of a traveller-based icon in mind.

First up was the actual application of the icons. Here are the survey results surrounding the target audience's use of Google Maps.

## INTERPRETING RESULTS

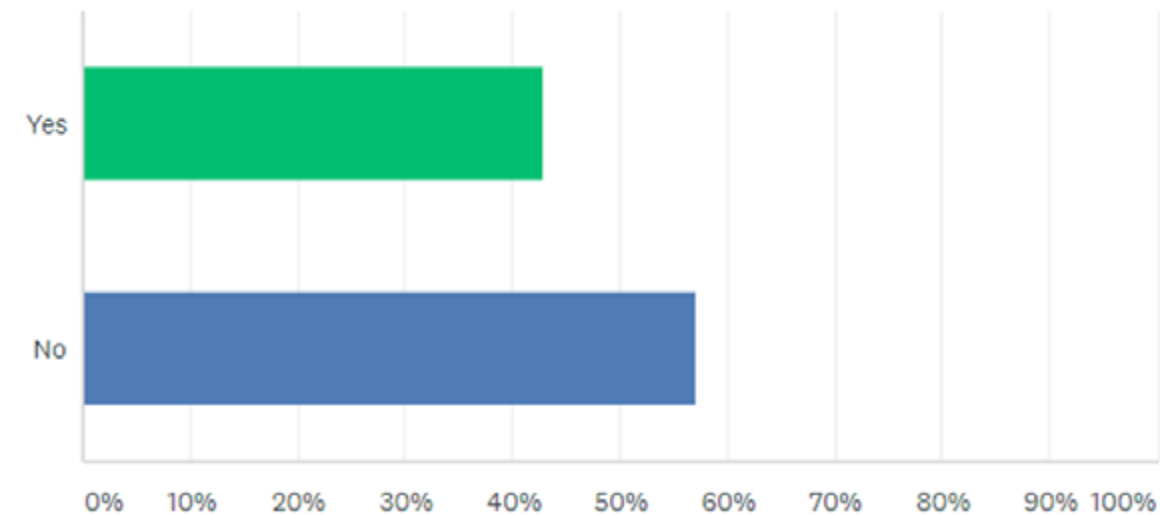
Considering the results of the survey, I feel that these symbols could be very effective.

The entire randomised target group uses Google Maps, and most do travel internationally, so there is definitely a window for the icon to be seen and used.

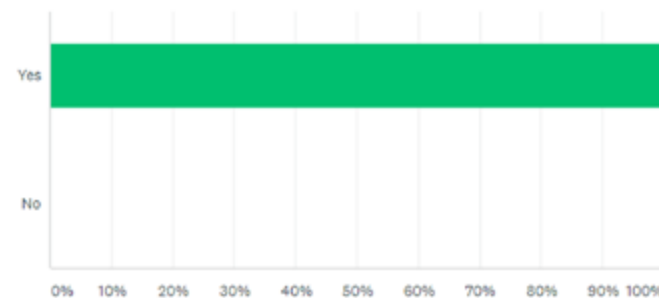
The question at the very top of this page was also key for the project's usage.

Even though a significant number of the group did check the water quality in an area before travelling there, over half did not, giving these icons a true purpose.

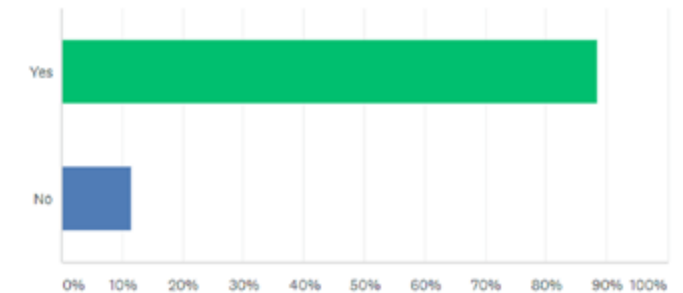
Do you research if you can drink the tap water in an area before you travel there?



Do you use google maps or other mapping apps?



Do you travel internationally?





# SURVEY RESULTS: NARROWING IDEAS

## SYMBOLS OF WATER

For this part of the survey, I asked the target group which symbols they most closely associate with water and which of the four icons on the right are the most effective.

The results of the first question mirrored the explorations I previously did.

**They placed water droplets, taps, drinking glasses, and bottles as the primary identifiers of drinking water.**

## THE SURVEY ICONS

I decided on the four icon sets to the right based on the feedback I received and the re-evaluated brief and target audience.

I wanted to be absolutely sure that my target audience responded more to taps and the traffic light system than the idea of canisters and water bottles.

**The most successful icons by far were indeed the two at the bottom, and these sets will be moving into the next stage of development.**



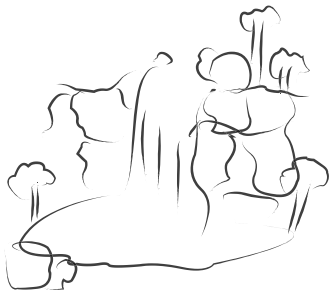
The last question, a picture of river or spring would be the most clean-water like image to me (there was no option for it, but...)

Like · Reply · 3w



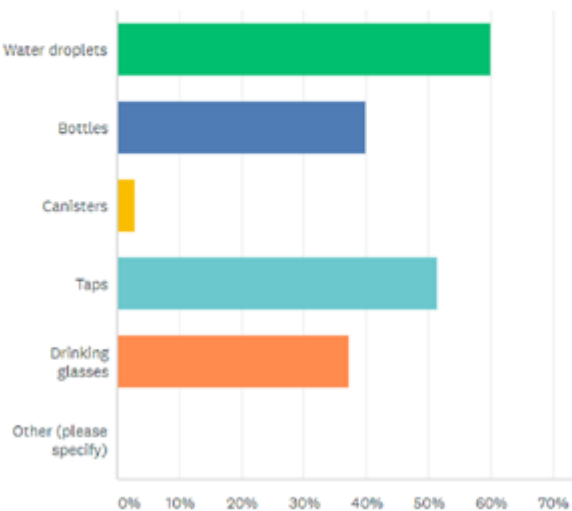
This Facebook comment was left by one of the survey-takers.

The reason I found this so interesting is because this survey-taker is from Japan, and her feedback exactly mirrored that of the Korean student who drew the images from intervention one.



Culture and geography are proving to be a major part of this project, and this is very interesting to me.

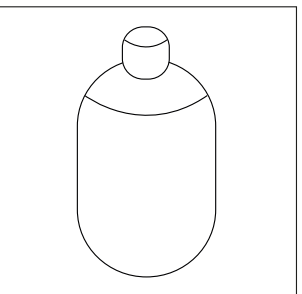
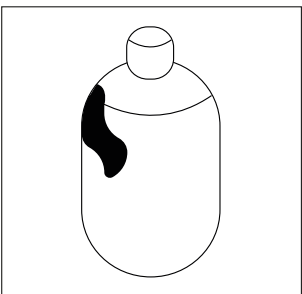
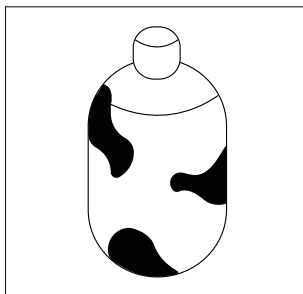
What symbols do you most associate with drinking water?



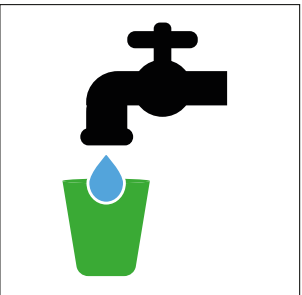
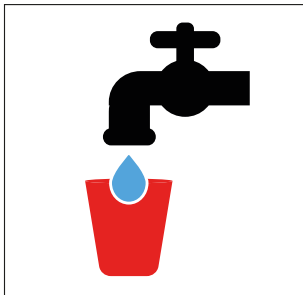
5.71%



5.71%

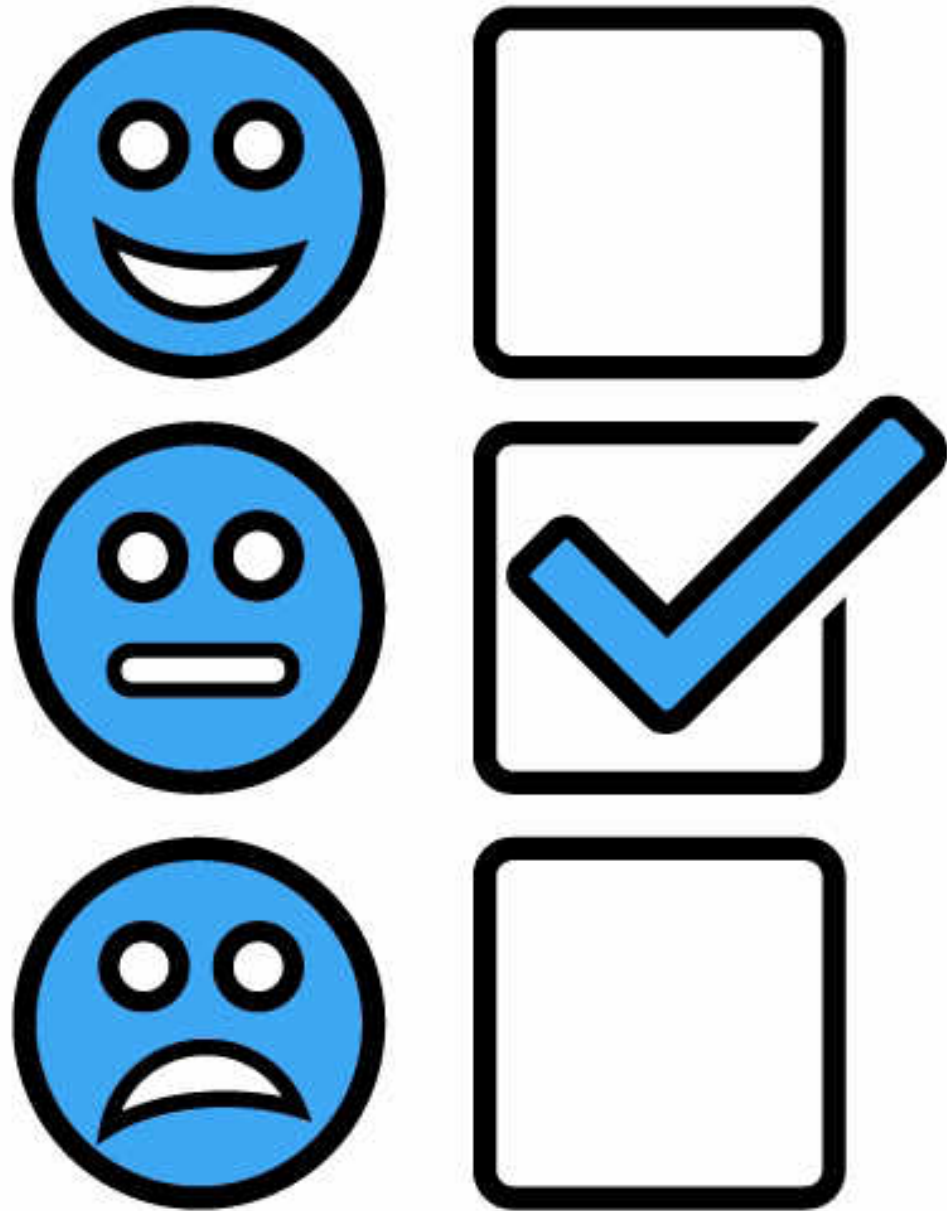


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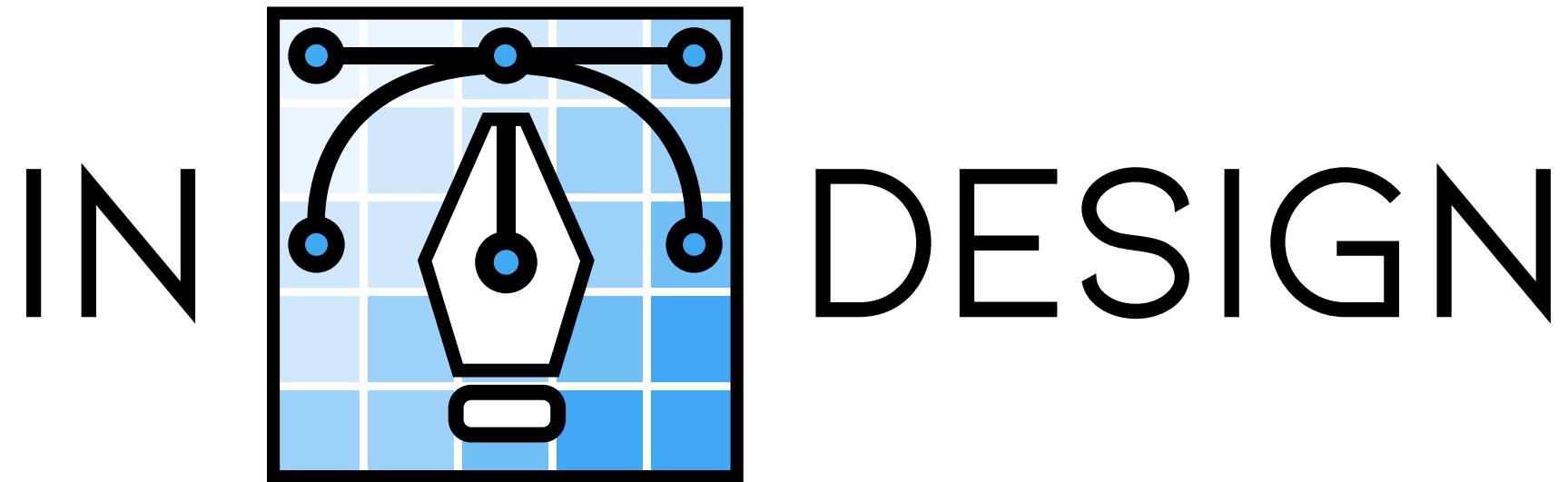




# INPUT

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Summary of Stage One Testing





## **IN THIS SECTION:**

With a solid basis, the next step was to explore the graphic and connotative language of the symbols. In this section, I experimented with graphic representations, completed more visual research, and created the final icons.



# THE GRAPHIC “DO NOT”

## SUMMARY

The slash, by its very nature, is a clear and aggressive symbol of “no”. But what other symbols can be used to clearly express the concept of “forbidden” in this context?

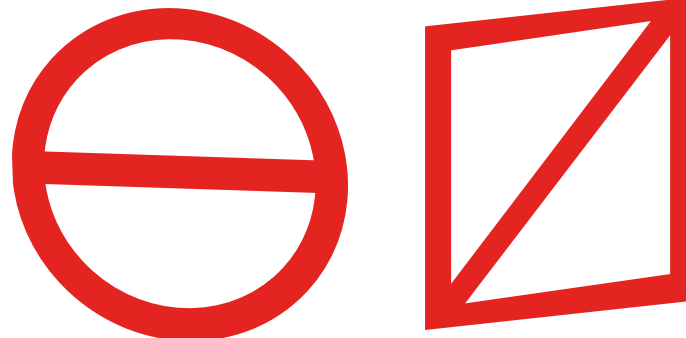
For this, I tested six different devices for the graphic “do not” in relation to water. Most of these, like those on the far right, are circular, and play upon railroad signs, traffic signs, and the circle-and-slash.

The experiments below deal with lines and the connotations of sharp vs. round minus signs; sharp looks significantly more aggressive.



All other symbols on this page are geometric and have nearly perfect symmetry. But what about warping? Slightly “off” shapes may connote that something is not quite right.

However, these shapes may not work for this project, as warped shapes are not well suited for digital applications.







# COLOUR INDEPENDENT

## DESIGNS IN MONOCHROME



### WHY COLOURLESS?

An important aspect of this project for me is to make work in both colour and monochrome. This would be very useful if the symbols were to be sandblasted into concrete by a riverbed, etc.

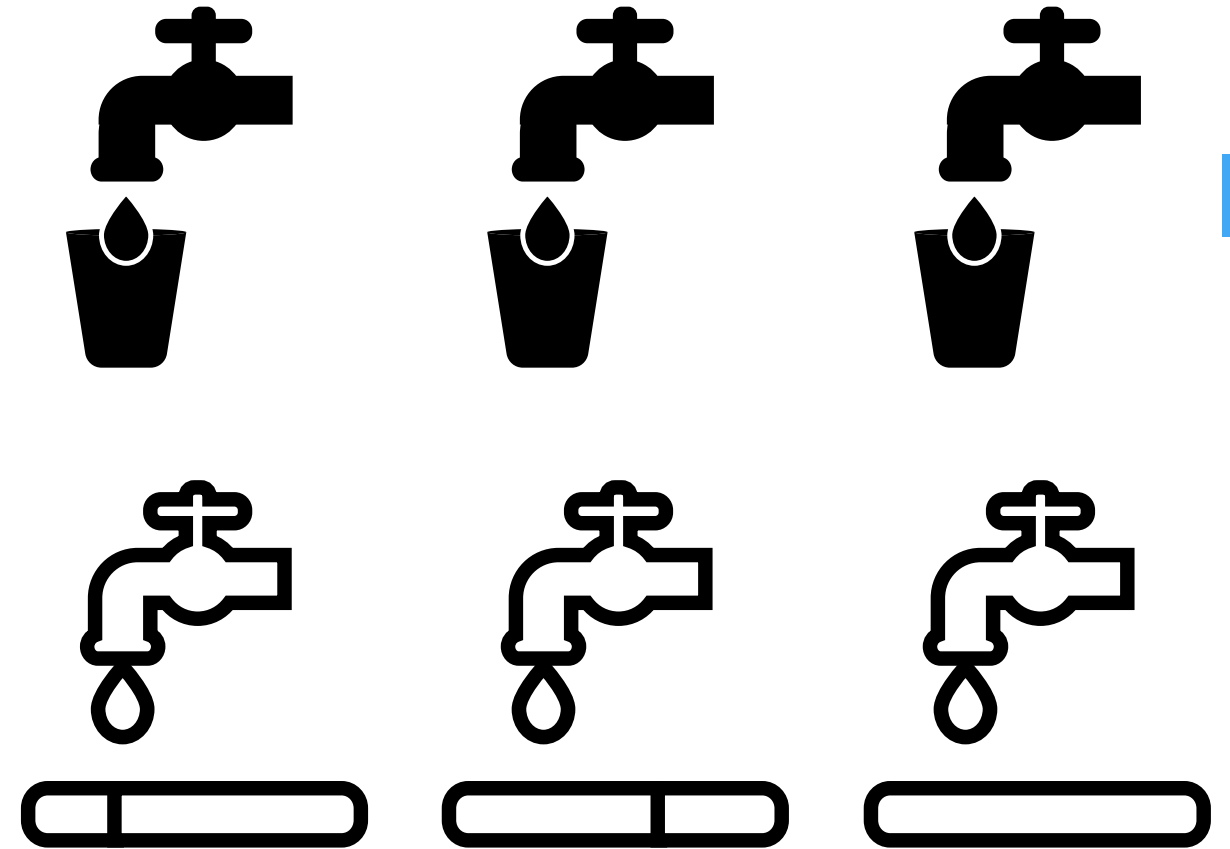


These designs still work in black and white, which to me denotes that this path is more successful.



Lines and white keystrokes especially are very useful in conveying fluidity.

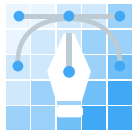
## COLOUR-DEPENDENT DESIGNS



Some designs are completely lost without colour, and this is a major weakness. I will not pursue designs like that at the top which are completely colour-dependent, and designs which are easily misconstrued.



I appreciate the interesting line quality of the bottom icons.



# LINE QUALITY AND THE TRAFFIC SYSTEM

## JUST ADD COLOUR

In these iterations, I explored the different ways colour can denote meaning in context.

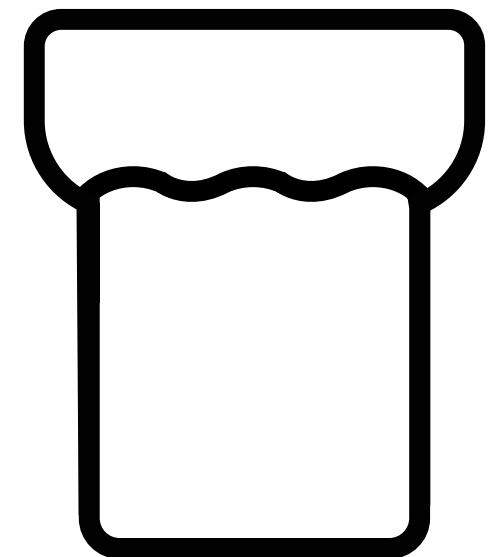
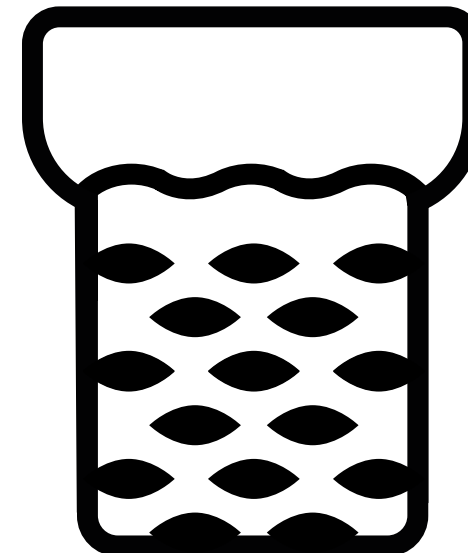
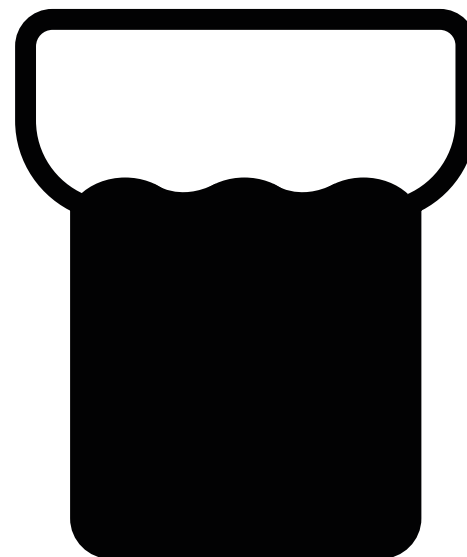
Both of the iterations on the right are based on the traffic system of red, amber, green, but for the second set of icons, I tried a colour scheme based solely on the different colours of “bad water” from surveys.

The two systems are shown below:



💧 In previous explorations, I worked with line and simple geometries. In this exploration, I wanted to use this line quality and explore how that changed the graphic appearance of the symbol.

💧 Black lines make the entire symbol significantly heavier and cartoony. Shapes are well defined, but can be overwhelming.





# POSITIONING OF ELEMENTS

---

Placing the traffic-based signs in front of the water-based elements more clearly denotes that drinking is forbidden, but can hide the tap and droplet.

Placing diagonal lines in the background was a graphic decision to prioritise the water-based elements.

As an icon set, I feel that the signs with the elements in the back effective, as it prioritises what the sign is about. Ideally, the set of signs should both communicate meaning and be visually pleasing.

The inclusion of the tap and water droplet is clear, but the tap + water droplet + cup may be even clearer.

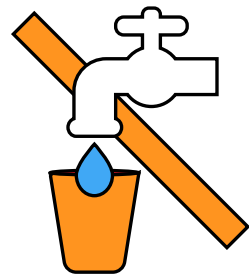




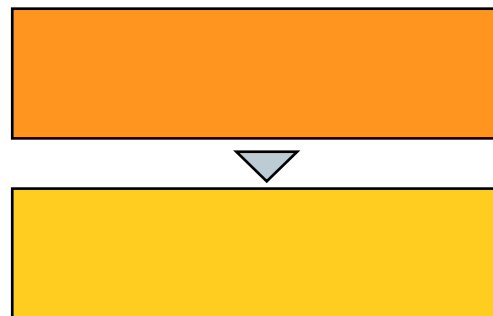
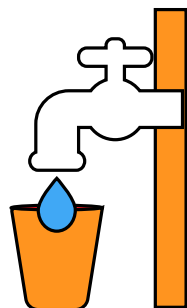
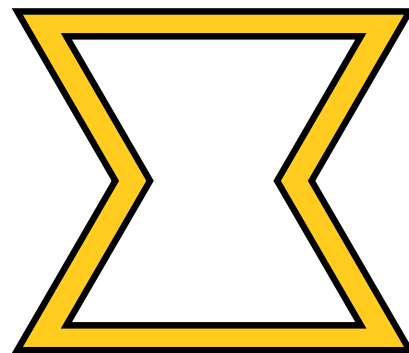
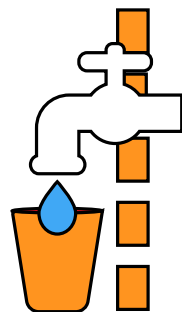
# THE LANGUAGE OF WARNING

## SUMMARY

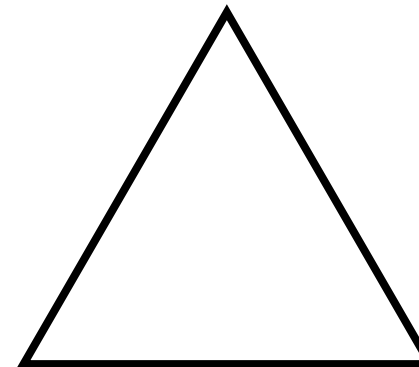
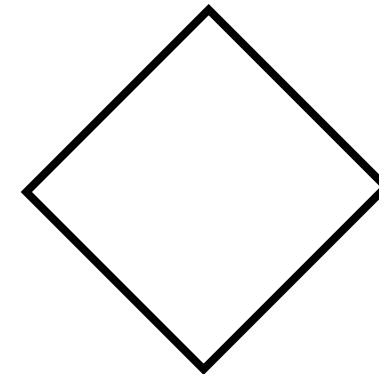
The middle ground was one of the most difficult aspects of this project. How do you show caution without leading the viewer towards a purely negative connotation? How do you choose colours effectively? What kind of symbols are most effective? Here, I tried to isolate the language of warning through shapes to the right and a few different experimentations below.



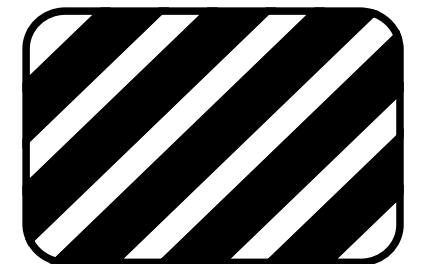
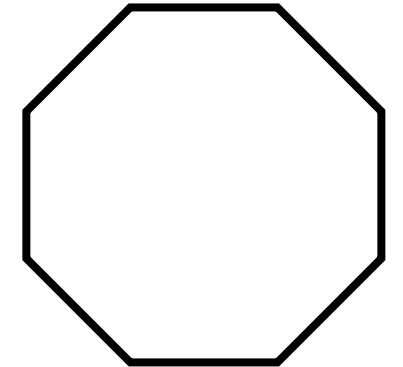
Overall, I noticed that the slash in the original design leans more towards “forbidden” but the triangle shows tentative allowance. Hard lines denote uneasiness, and the crushing symbol below is aggressive. In addition, a more alarming shade of yellow is a staple of an existing caution code.



## COMMON SYMBOLS OF WARNING



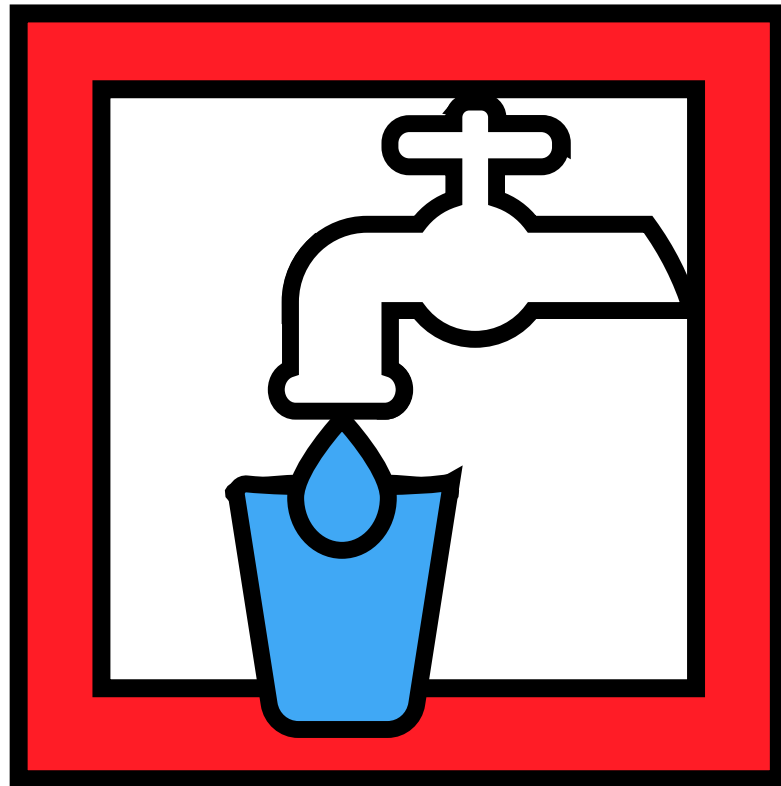
## LESS COMMON SYMBOLS OF WARNING





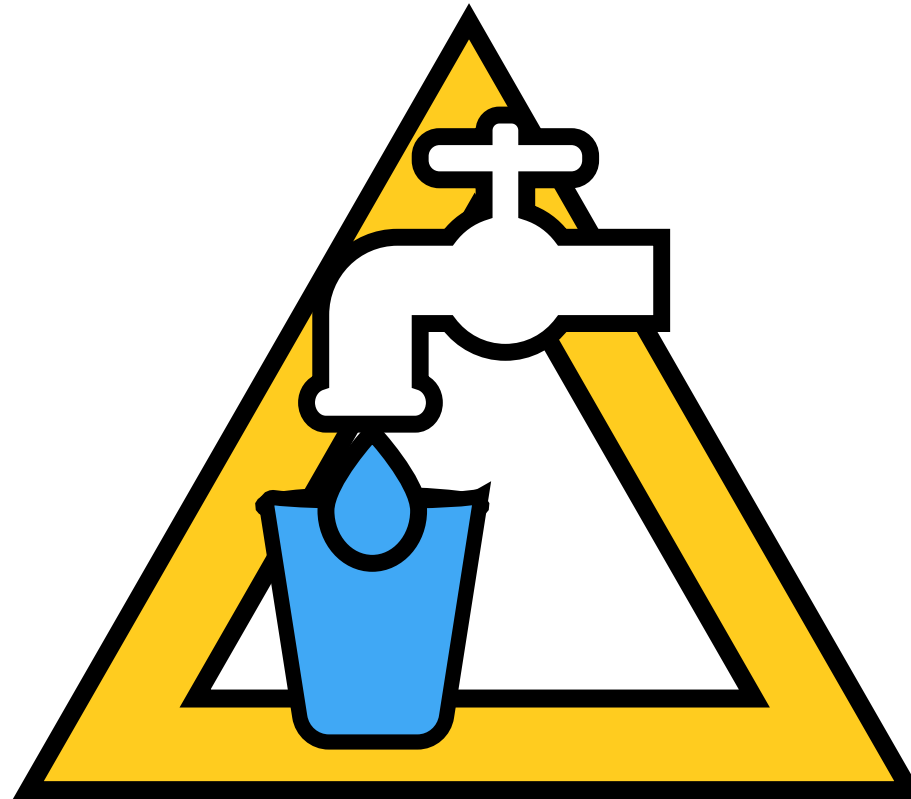
# A NEW SYSTEM OF WARNING

Using euclidean shapes draws on a very established visual language which also provides excellent visuals through geometry



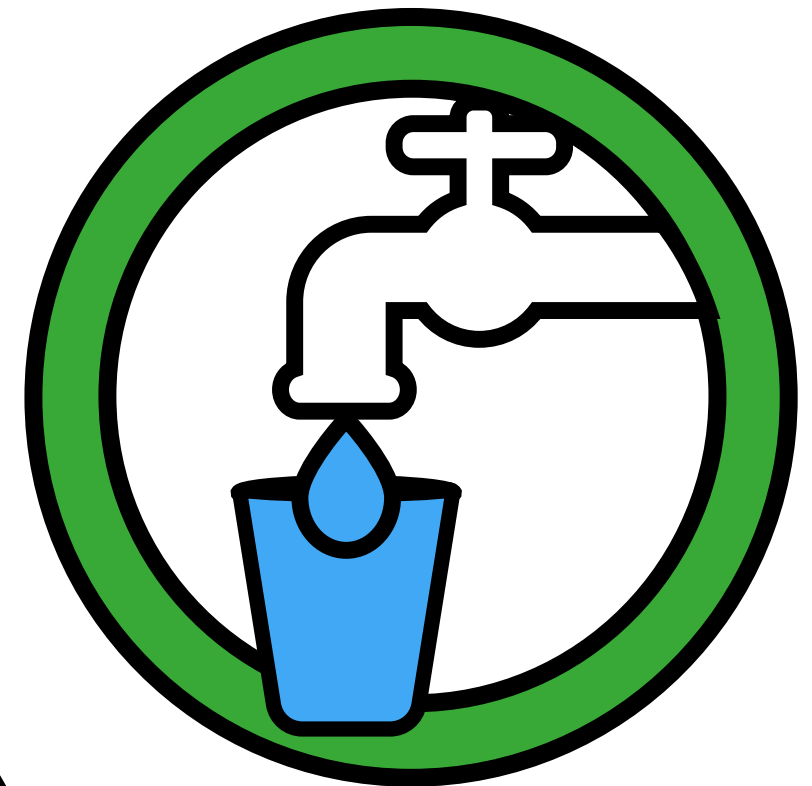
The illustrator quality of these icons needs to be extremely refined

The shift to a more alarming yellow gives a clearer sense of danger and caution than orange



Sharp edges denote danger and an uneasy feeling

This top bit with the tap is awkward, in future designs, integrate this into the actual warning shape.



The circle is clearly a sign for "good" here, and three different shapes impart three distinct grades of meaning well.

This element both demonstrates caution and highlights water-based elements.

This set does a good job of breaking the box, but it looks almost accidental; lines should follow the curve of the shape.

# Once you have understood the problem, simplify until it does not make sense.

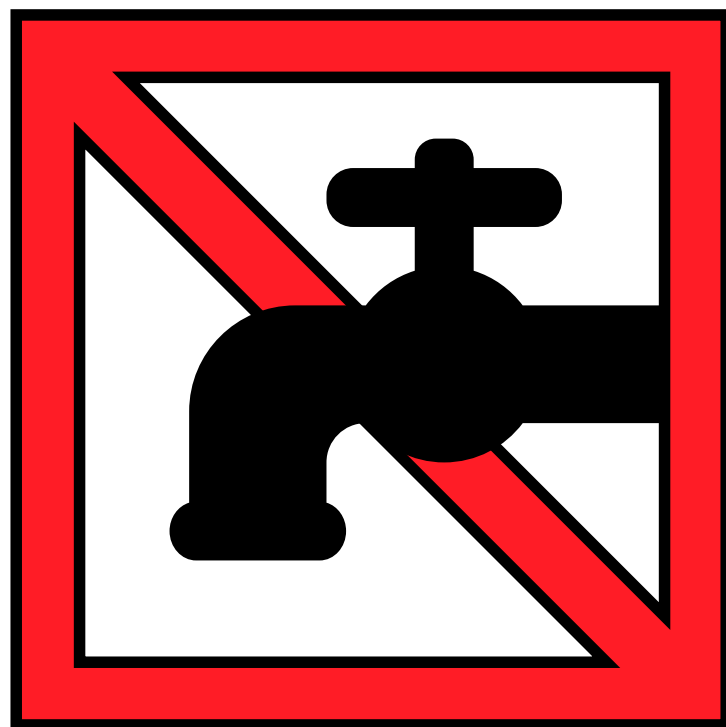
After exploring the two most successful symbols from the first stage of development, input from our in-class feedback sessions suggested that they might be far too complicated. Therefore, I experimented with successively isolating each element of the design and combining them in different ways, literally removing elements until the meaning was lost in simplification.





## BACK TO BASICS: TAPS

The tap on its own turns into an entirely static symbol; it contains no vestige of motion, and does not convey fluidity or drinking water



The colours work incredibly well the more iterations I do; I will continue on this path for the final icon set

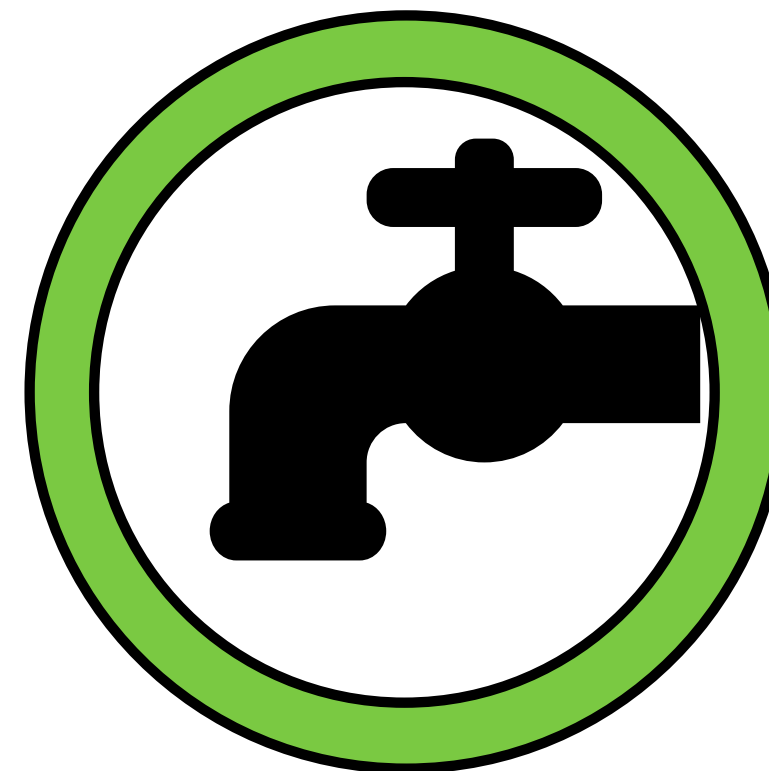
I like the visuals where the tap connects to the frame in this red icon

The visual language of the euclidean shapes combined with colour and the taps in front is very successful visually



Stay away from black lines overall; they create a very heavy visual effect. While this is good for catching attention and warnings, it is too heavy for this project.

These symbols need to be refined and either joined to the external shapes or disappear into them



The connotative meaning of these symbols leans more towards taps working versus not working



# BACK TO BASICS: WATER DROPLETS

## SUMMARY

For this iteration, I isolated the water droplet aspect of the icon, and tested a series of symbols to denote “do not drink”, “drink with caution” and “safe to drink”.



Roll over the icons below to see the devices used to denote good, medium, and bad water.



These icons all have black lines and the water-based elements in the background.

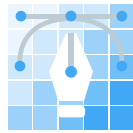


As the rollover on the right shows, these icons also work in monochrome and are very clear in this format.



These icons all have white space between the elements, which gives it more fluidity.





# BACK TO BASICS: CUPS AND GLASSES

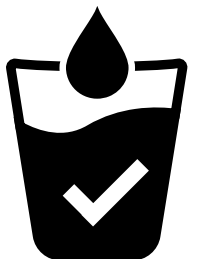
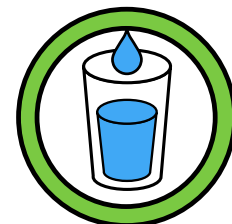
## SUMMARY

Glasses on their own have the same problem as the tap on its own; they are static images and do not convey water.

Therefore, I combined the cup and droplet in iterations which can be both coloured and monochrome.

In addition, I tested different cups and decided on the simple 2D design. This fit best for the Google Maps and visual language.

The two most important things I took from this exploration were that I could “break the box” of the icon boundaries, and that this particular cup really conveyed the image of fluidity through the wave.





# RE-EVALUATE DIRECTION

.01

Based on these icons and the results of the feedback sessions, I have re-evaluated the brief.

.02

The new icons will contain a tap plus another element, to anchor the meaning in place. They will also include the fluidity and graphic language of the filled cup on the previous page and the icons will, at least to some extent, “break the box” like that on the previous page.



# BREAKING THE BOX

## OBJECTIVE

Based off of previous designs, I wanted to experiment with breaking the box in this design.

- These icons are based on the final designs from the first round of designing, but I have removed the centre diagonal.
- The white lines separating elements are good here, but the taps appear very clunky and misplaced when they are placed just outside the boundaries of the frames
- These taps follow the shape of the frame around it, breaking the box but still conforming to visually
- The graphic language of these cups conveys water well, but it may be just too far outside of the frame





# THE FLUIDITY OF WATER

## OBJECTIVE

So the cup from the previous example is fluid. How do I take that visual and apply it to the whole icon?



The water droplet is a prominent feature, and plays on the negative white space



For every icon here, the curve of the water fits very neatly into the negative space between the bottom of the frame and the tap



The taps are a prominent feature here, but they should be more embedded into the form of the frame surrounding them.



In these last two icons, the droplet protrudes just above the water line. It looks like this was a mistake, even though the droplets are at exactly the same height at the one on the far left





# BEAUTIFICATION

## OBJECTIVE

Once I explored this last direction of icons, I wanted to make them as understandable, yet as beautiful as possible

While this icon is personally my favourite, it is verging on the illustrative. For this reason, it may not be the most effective option for small-scale applications like Google Maps, and monochrome versions may be too complicated

These signs are very powerful because they look cohesive, fluid, and attractive

White strokes, continuous lines, and an active swoosh in the background make these active signs

While the inversion of the line and fill on the tap gives prominence to the glass and droplet, the tap is the most important aspect to highlight because of its connection to drinking water

In both sets, the way in which the elements break the boundaries of the box while still being confined by them are smooth and fluid

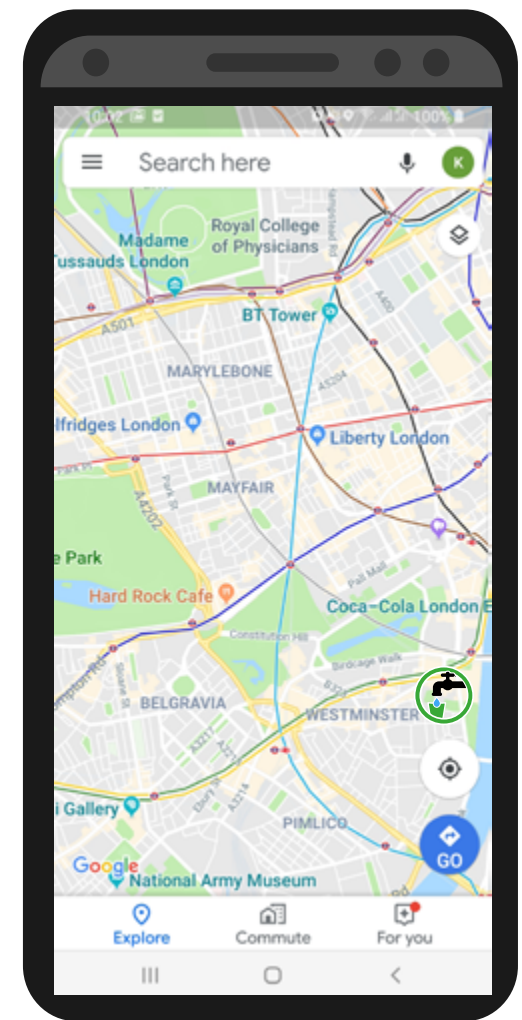
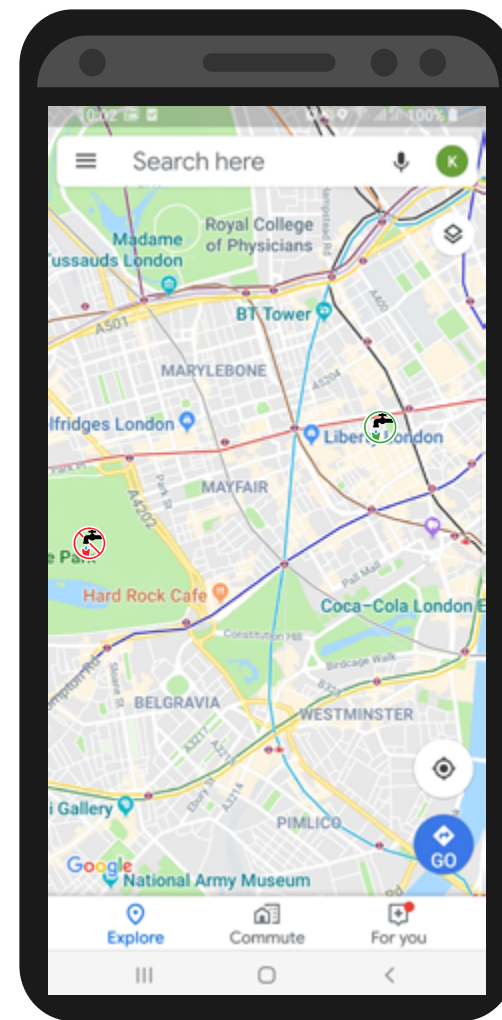
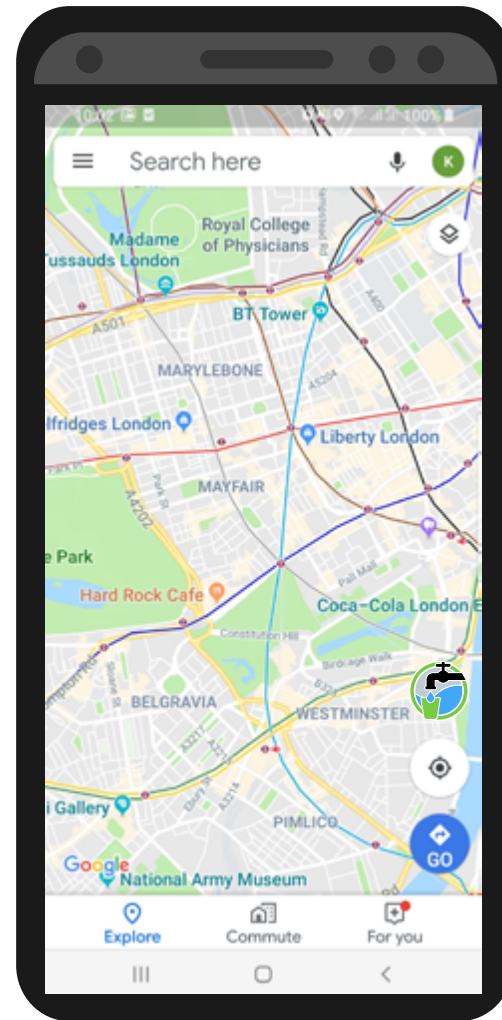
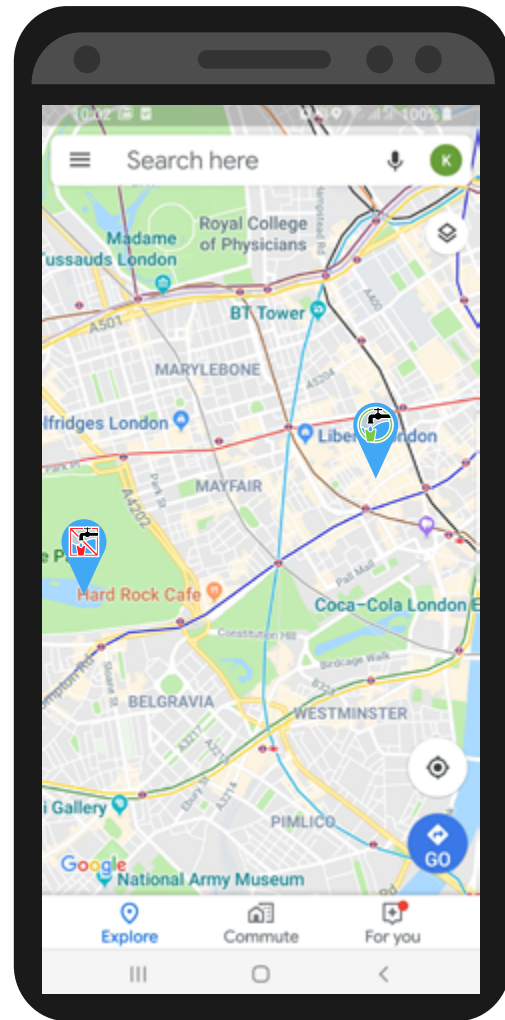


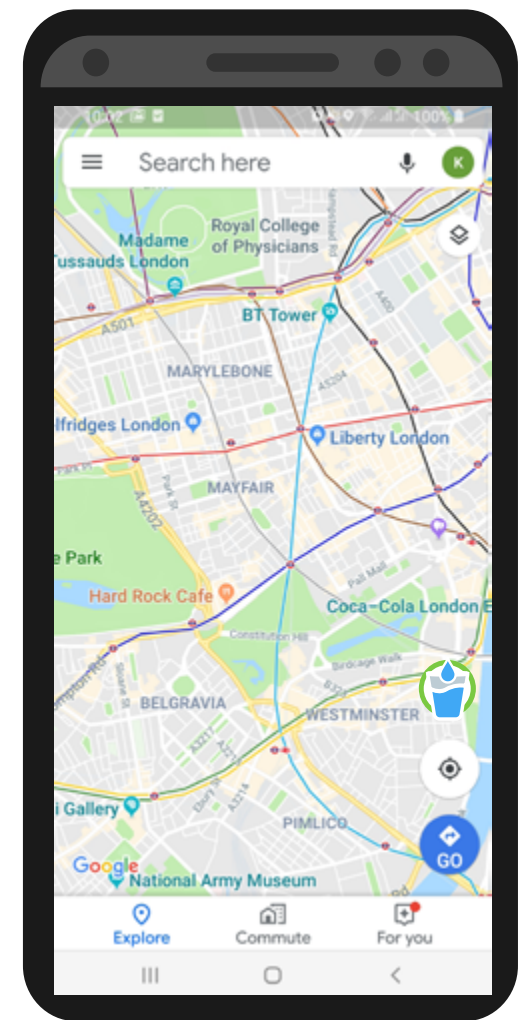
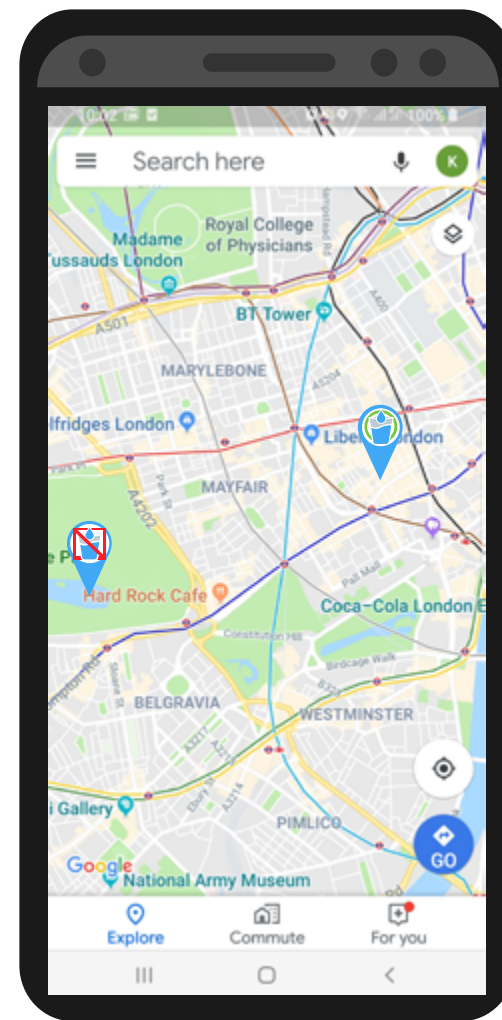
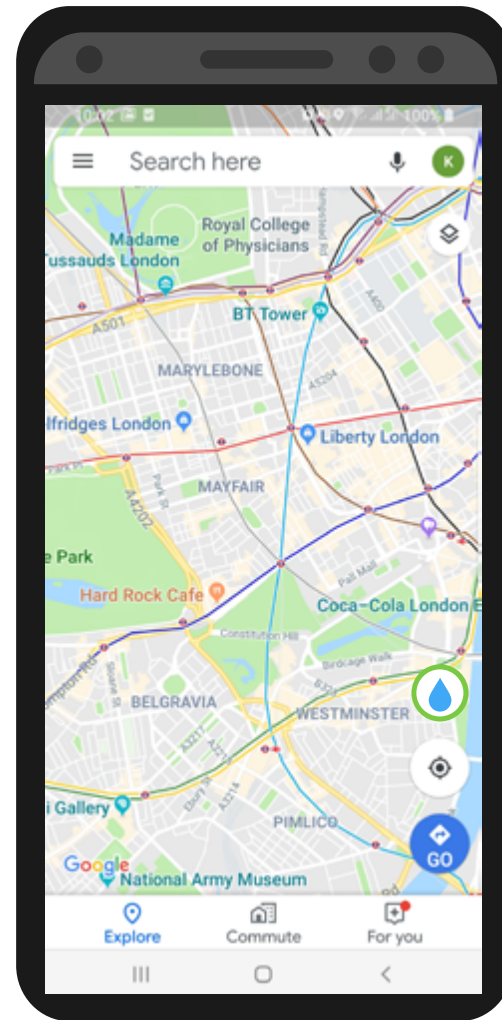
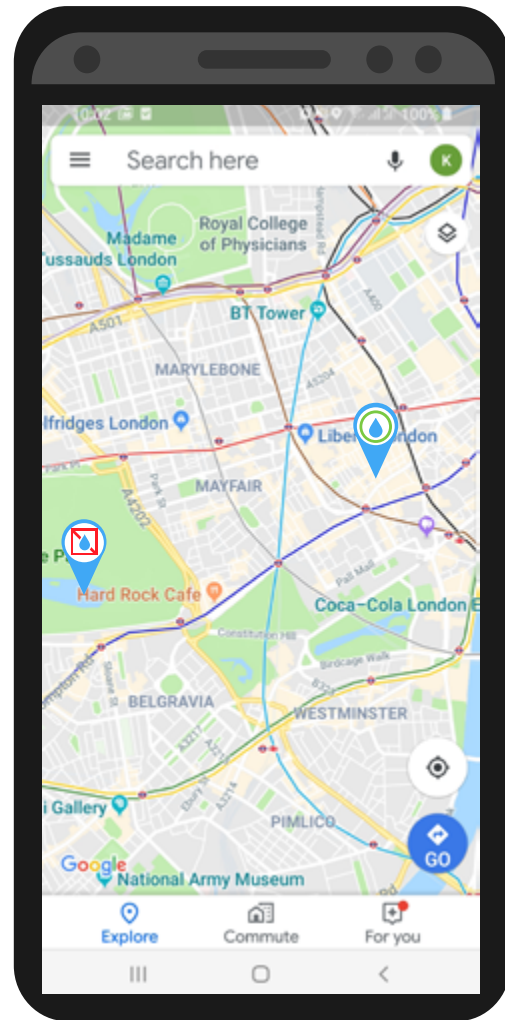


# INTERVENTION!

[app-lie-d suhr-vay] / **NOUN**

- .01 In intervention four, I compiled the four designs which stood out to me in the last round of designing, and placed them in situ on Google Maps.
- .02 I sent these out to the target audience, including the enlarged symbol, the in situ images, and a monochrome version of the symbols to show that they are all colour dependent and have many different uses. However, in retrospect, I should not have included these monochromatic designs, as they were irrelevant to what was being tested.







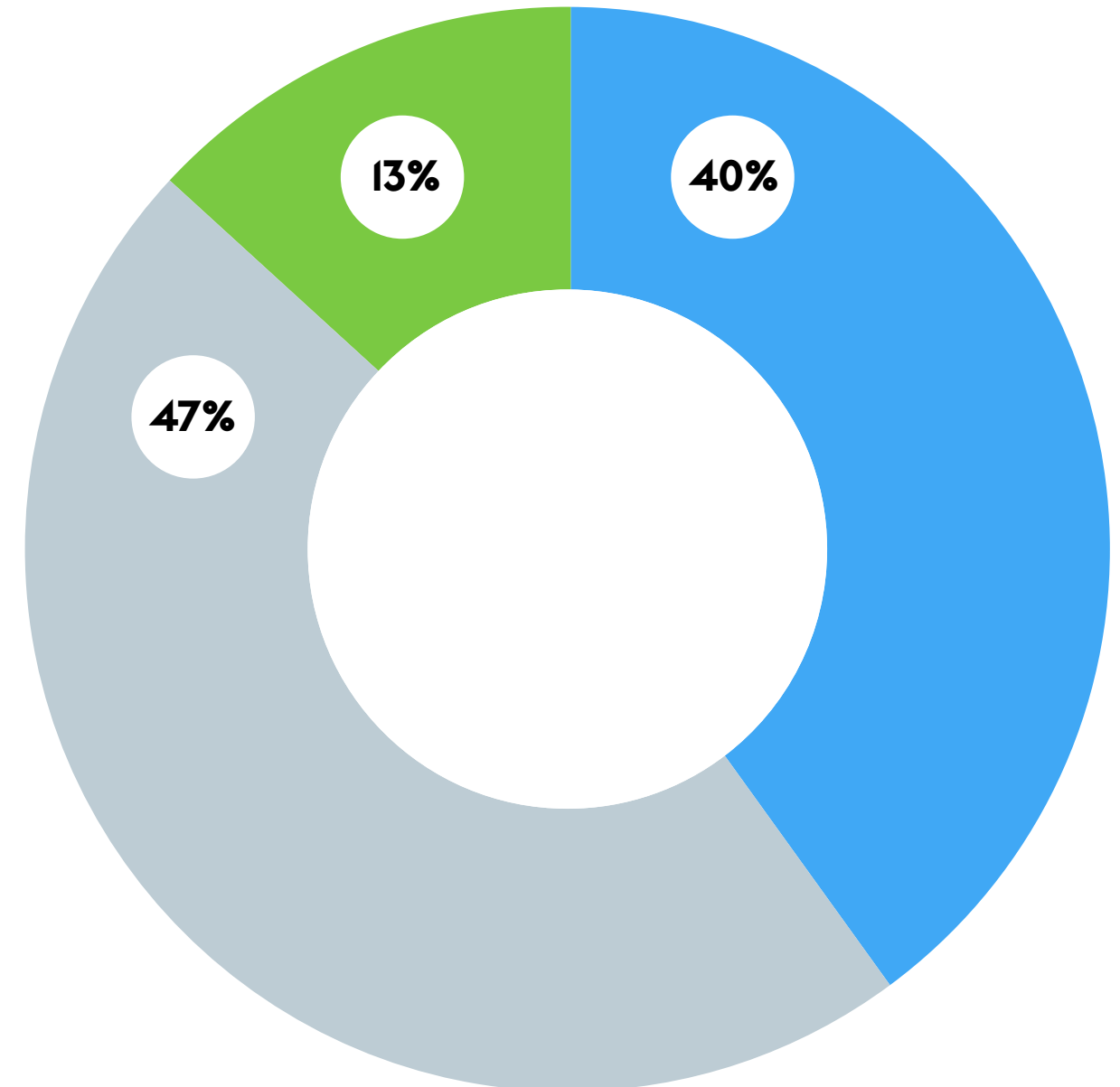
# APPLIED DESIGN SURVEY INPUT

## SUMMARY

The results of this survey were very surprising to me; I expected the first design to win by a landslide, but it seems that the less illustrative set is more successful.

The fact that the third icon set received no votes was also a surprise. I believe this indicates over-simplification. By removing too many elements, the sign becomes abstracted and no longer functional.

From this survey, I learned that I needed a middle ground between the first two designs. The first is verging on illustrative, while the second is not as effective in the middle ground, as discussed in previous explorations.





# The audience is important, but ultimately, you are still the designer.

Through this entire process, I emphasised testing to get a clearer idea of where I was going, especially because there was a lot of connotative and cultural research involved. However, the one point that came up in studio multiple times was that ultimately, regardless of what the audience says, you are still the designer. Audiences may sometimes favour bad designs, and even when the audience chooses one answer, the designer may build upon that to make it, simply said, good design. This was an important point for me to understand, and to forge that link between research and design.



I chose these icons for my final submission after testing on Google Maps. I believe that the fluidity of these icons fully addresses the very first brief that I set myself, to make these icons mimic the fluidity of water, and that they work both in colour and in black and white. The change of colour scheme from orange to yellow was an appropriate change to convey caution, and the use of Euclidean shapes gives priority to water-based elements while still imparting meaning on the viewer.





## **IN THIS SECTION:**

Key to this project was the use of icons in their intended spaces - putting them in situ. This section explores two in situ demonstrations of the final icons.

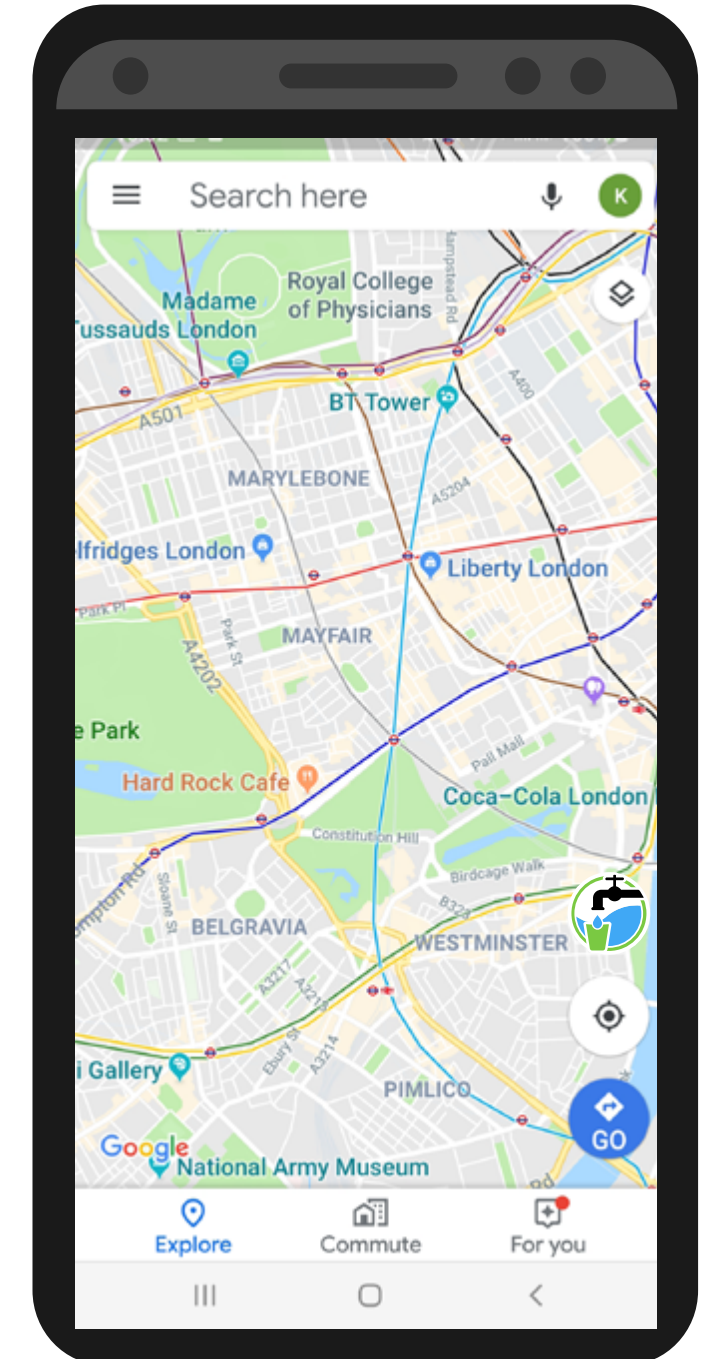
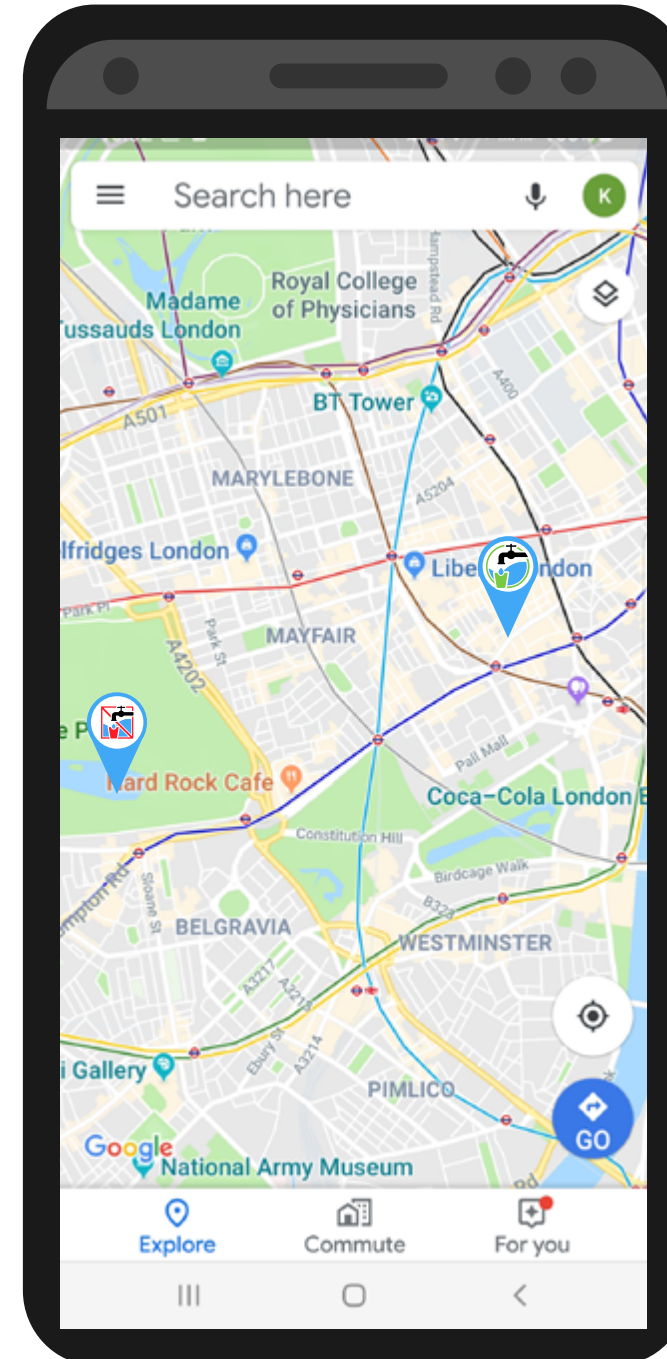
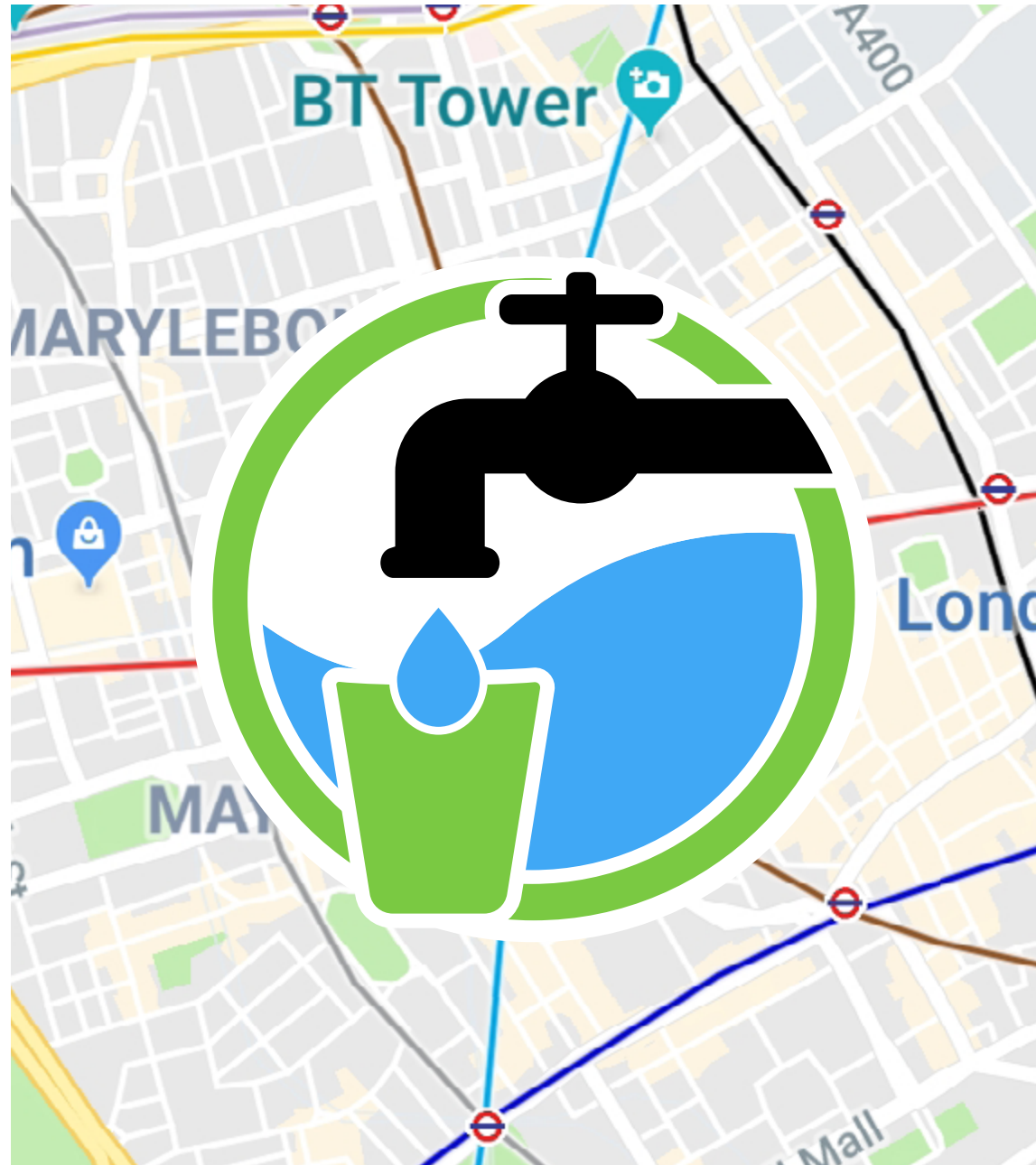


## FINAL ICONS





# GOOGLE MAPS







## NEAR WATER SOURCES



