



# THE TENZ 2020 TECHNO CHALLENGE



# How to research into a brief

# Types of research



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On each slide is an example of a type of research you could do to help you to develop your brief.

You need to choose the research which will be the most helpful.

You may find that further along the design process you need to come back and do some more research to help you.



# My initial brief



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## TECHNO CHALLENGE

From my initial brainstorm and observations at home I discovered that my cats have been causing an unhygienic problem in our house. The young cats eat so quickly they end up upsetting their tummies and vomiting on the floor...

I need to design and make a product to slow down their eating habits so it takes time for them to eat their food.



# Mood board

A **mood board** is a collection of images and materials that can help designers to be inspired when they are designing.

Images can include:

- Products
- Users
- Colours
- Materials, etc

Here is an example mood board for my cat food brief:



# Product Analysis

**Product Analysis** is when you look at a range of products that are currently in use or being sold. It helps to find great ideas, see what doesn't work (and if you could improve) and if there are any gaps in the market.

Analyse the features, good and bad points.

Are there any inspiring features that you may be able to use?

Here is an example of product analysis for my cat food brief:

**Features:** A plastic bottle with biscuits inserted into the bottle. Lid to hold biscuits in.

**Bad points:** biscuits cannot get out so cat cannot be fed.

**Good points:** Entertains the cat, transparent so the biscuits can be seen easily, recycles materials at home.

**What could I take from this idea?** Reusing packaging that would normally be thrown away, transparent materials so the cat can easily see the biscuits, cylindrical shape allows the toy to move - exercise while feeding?





# Environment

**Environment exploration** is researching where the product will be used.

It helps to spot any problems that need to be taken into consideration.

Or identify things in the area that may help.

Here is an example of environment research for my cat feeder brief:

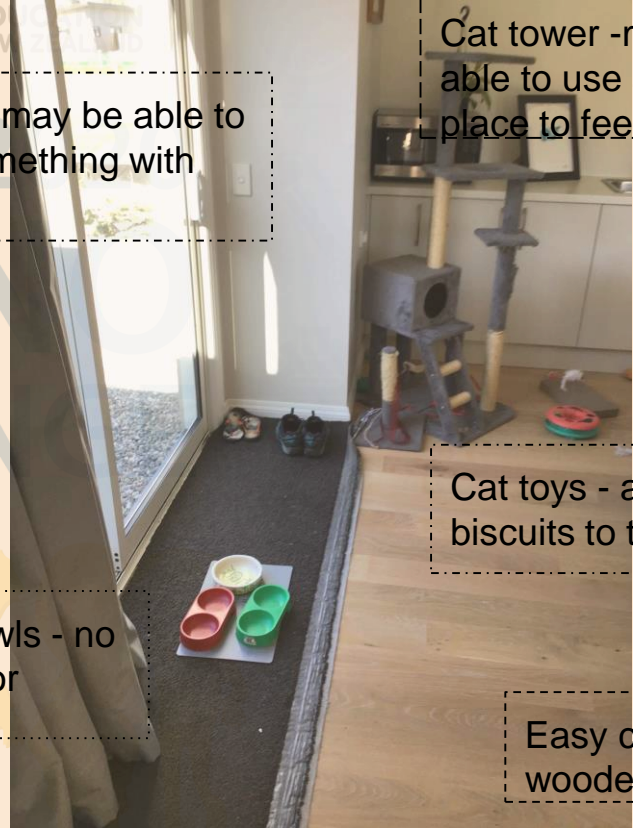
Window - may be able to attach something with suckers

Cat tower - may be able to use as a place to feed?

Cat toys - add biscuits to them?

Open feeding bowls - no quantity control for feeding cats

Easy clean wooden floor



# Stakeholder

**Stakeholder research** involves finding out about the main users of the outcome you will design.

You could prepare some questions and interview them or get stakeholders to complete a survey.

Stakeholder research can help to find out what the stakeholder needs and wants.

For the cat feeding project I would interview the owner.  
Question examples could be:

What type of cat food does your cat eat?

How often does the cat get fed?

How much food does the cat need?

Would you like the product to link to.....(themes, room decoration, hobbies, favourite colours, etc)

How does your cat like to eat their food normally?

Where do you feed your cat?

What is the problem you would like me to solve?

# Observations

**Observation** involves watching what happens in the environment.

You could record a video of someone/something in action - highlighting the problem or take photographs.

You could write down observation notes - what have you noticed?

For the cat feeding project I would create a video of the life of the cat. This would tell me more about the animal and what they like/dislike, how they eat, how they play etc.





# Ergonomics

**Ergonomics** is the study of the environment and the users in the environment.

To research ergonomics you could take photographs of the environment, measure items linked to the project and measure user sizes (this is known as *anthropometrics*).

For the cat feeding project I measured the cat bowls to see how large they are for feeding and I measured my cats paws!

Length 225mm  
Width 115mm  
Bowl diameter  
100mm



Length of cat paw to first joint 50mm

Width of paw 30mm

# Material Investigation

**Material Investigation** is where you research the materials you have available to you, e.g. what have you got in your home now?

Material testing can also be helpful. Test the *material properties* to help you to choose the best material, for example strength, durable, water resistant, washable, etc.

An example of testing material properties:

Material	Test One: <i>Strength</i>	Test Two: <i>Easy to clean (water resistant)</i>	Summary
Cardboard (cereal box)	<i>Easy to cut, can be flimsy, could be ripped easily.</i>	<i>Can be wiped down with a damp cloth. Turns soggy in water.</i>	<i>May be easy to cut and shape but not easy to clean after feeding.</i>
Plastic (bottle)			
Card tube			
Towelling (an old towel)			

# Summary of research

TENZ TECHNOLOGY  
EDUCATION  
NEW ZEALAND

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After you have completed your initial research it helps to **summarise** the key things you have learned.

For example:

- Observations: The cats eat biscuits in a wide open bowl, twice a day. As there are two cats they eat food quickly so that they don't fight over the last mouthfuls. Both cats love to play with toys and scratch on the tower. One favourite toy is the one where the cats put their paws in a hole and attack a ball. Could I take this idea and combine a toy with feeding to slow down how fast the cats eat?
- Materials I have at home: cardboard, plastic bottles, yoghurt pots, paper, cellotape, card tubes.
- Stakeholder: Needs to be easy to clean and durable as the cats can play quite fiercely!