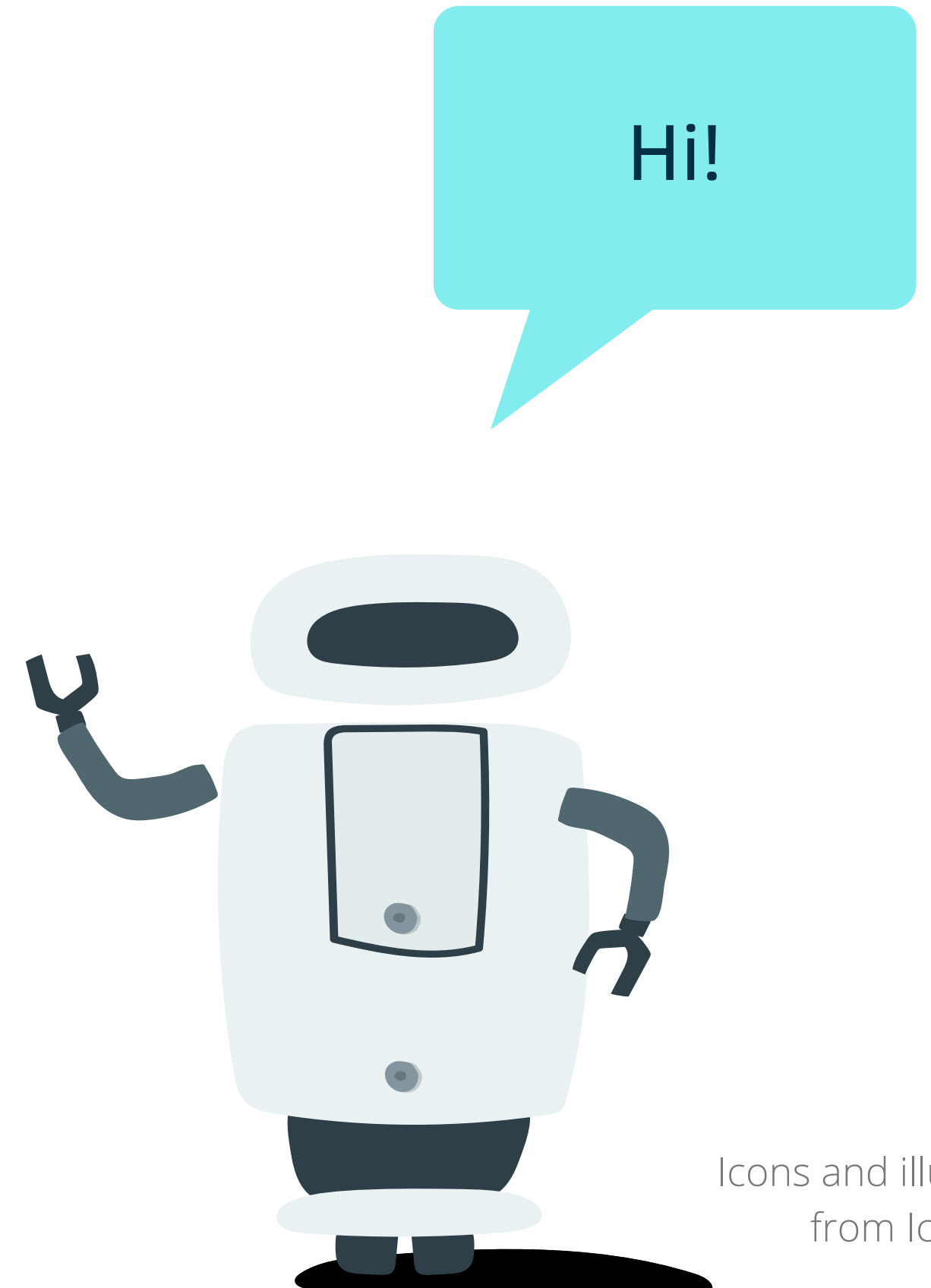


# Using Gamification to Teach Youth About E-waste

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ERIK TOBIAS LEIRVIK



Icons and illustrations  
from Icons8

# Welcome!

I'm Tobias, a full-time Informatics and design student at the University of Oslo and a part-time developer. Our group Zero consists of me, Rameen Khan and Synne Gåseidnes Thorsen. Together we are creating a game to teach youth about e-waste.

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# Nordic International Support Foundation

We are working with NIS  
to create an interactive  
installation which will  
feature at an exhibition in  
Norway

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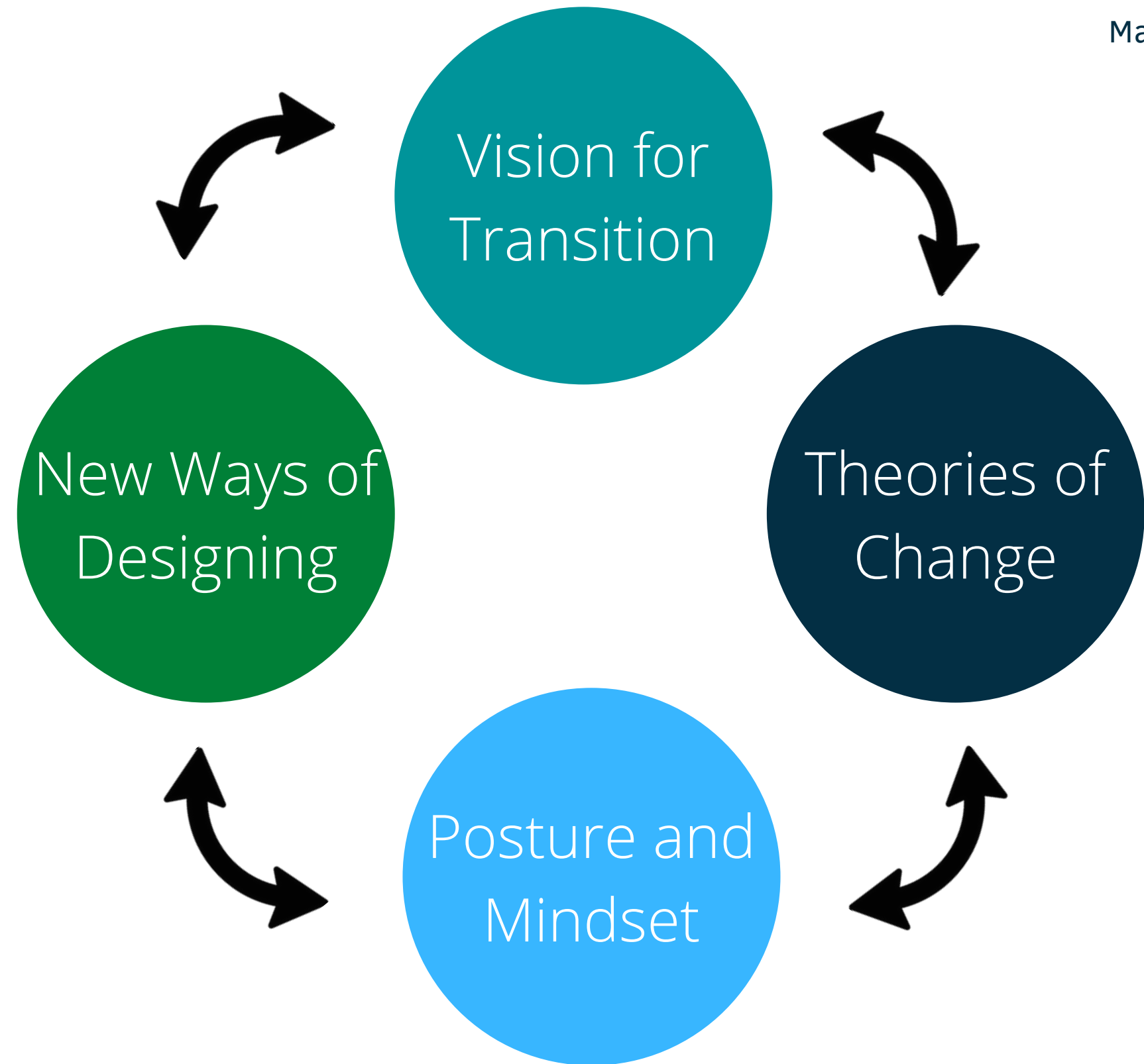
# Our Vision

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Our project aims to use **gamification to teach youth about e-waste**. The goal is to inspire and engage social, economic, industrial and technological stakeholders towards **sustainable change in behaviour**. The project will be displayed as a part of an exhibition in Norway, but we hope that it may live on beyond the scope of the exhibition and **start a broader conversation about e-waste amongst youth**.

# How Does This Relate to Transition Design?

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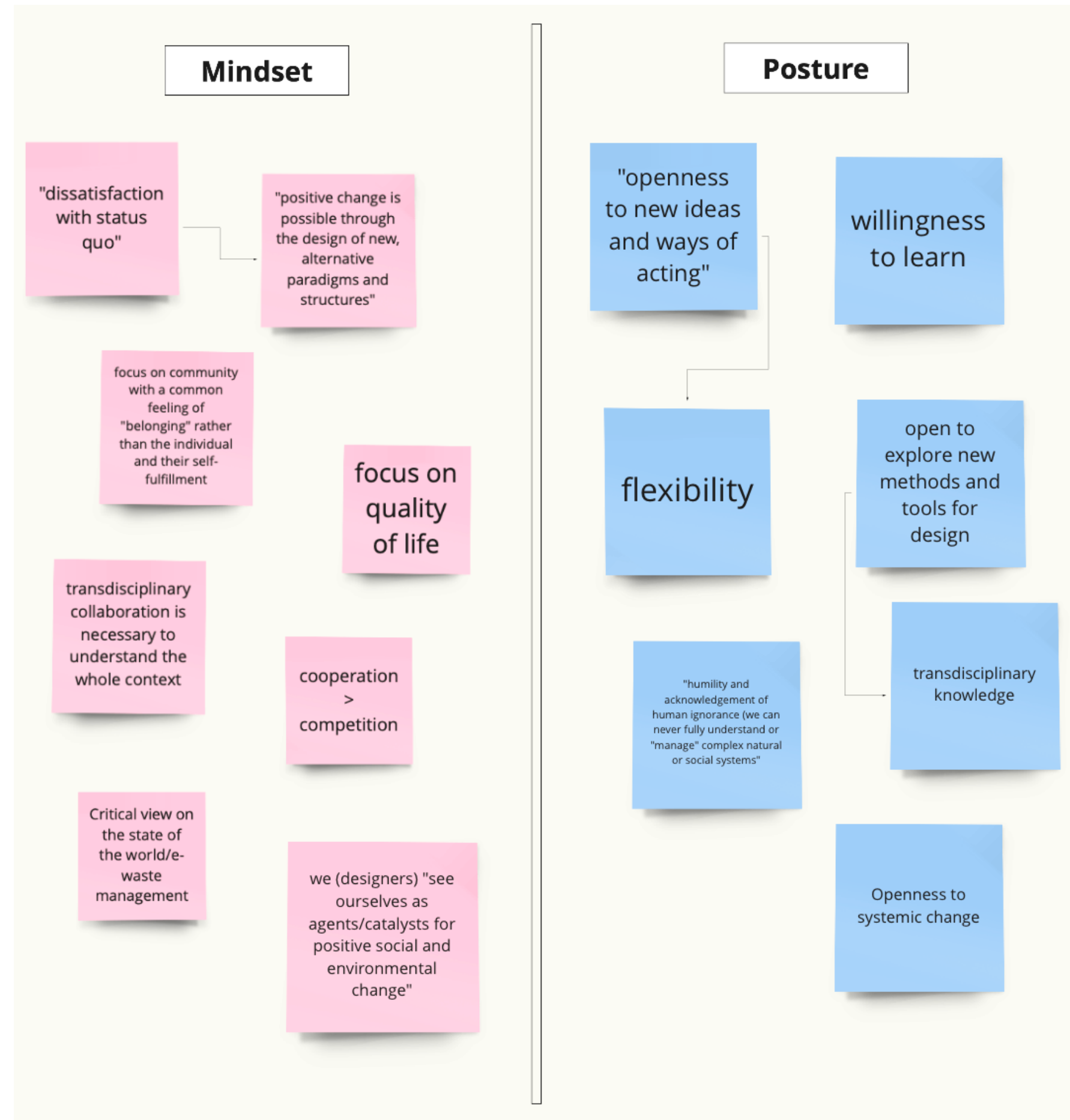


Transition design framework

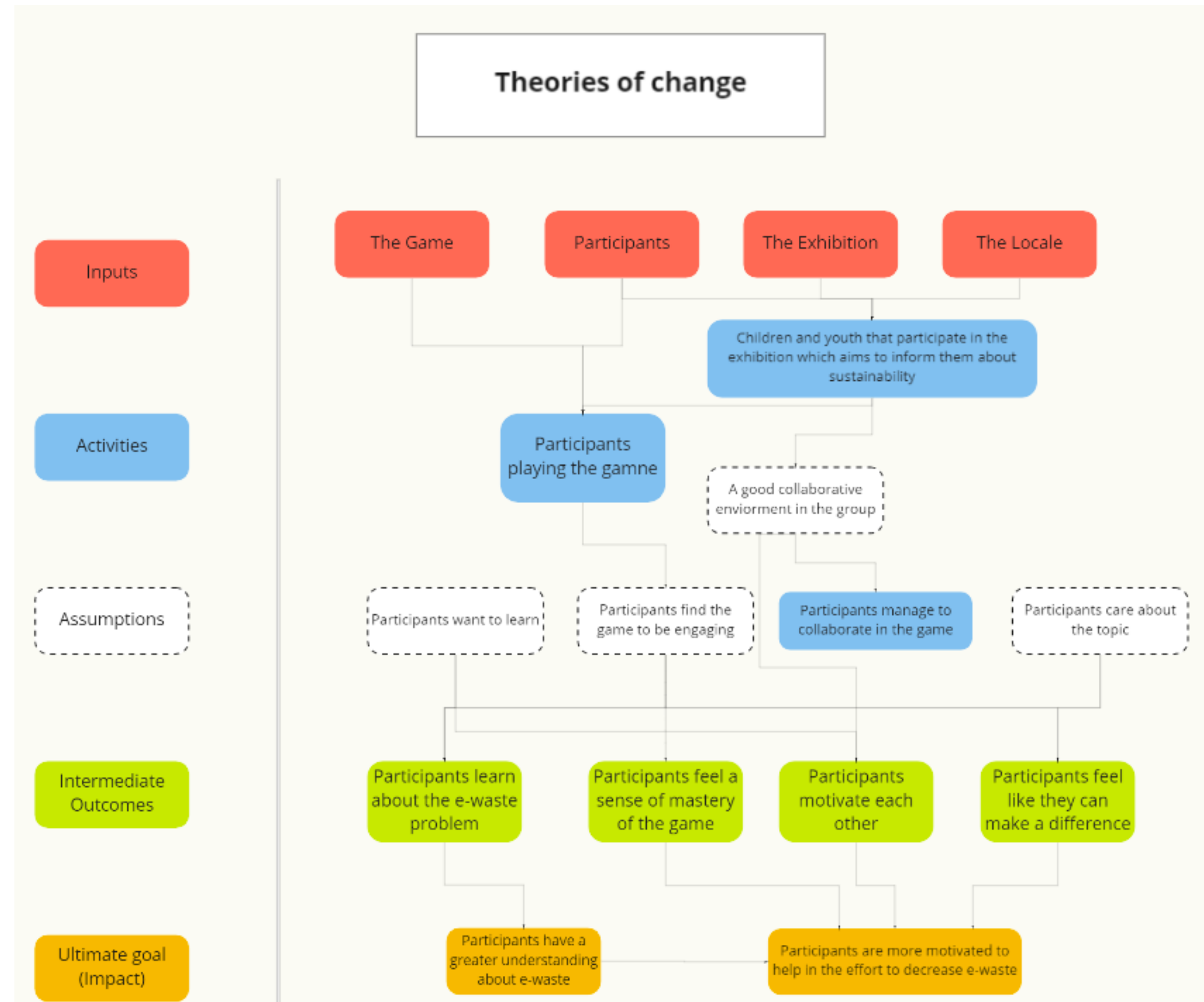




# Mindset and Posture



# Defining Our Theory of Change





# Speculative Design

How might **be**  
instead of  
How might **we**

## Double Diamond of Speculative Design



# Workshops



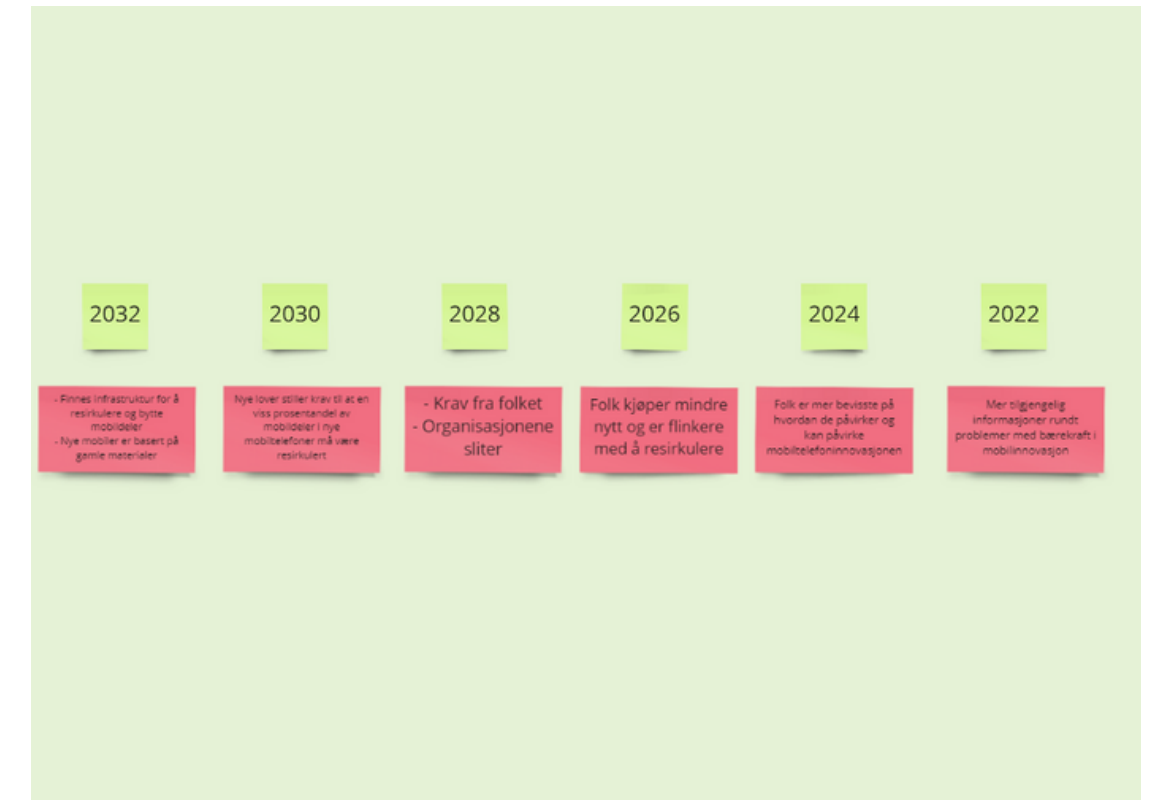
## Tarot Cards

- possible impacts and outcomes of what we create
- Specific open questions



## Future Wheel

- Direct and indirect future consequences of future development
- The bigger picture



## Backcasting

- "planning the future"
- strategic steps and necessary actions

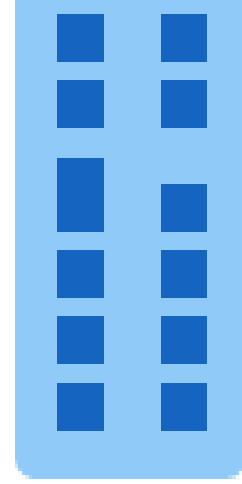
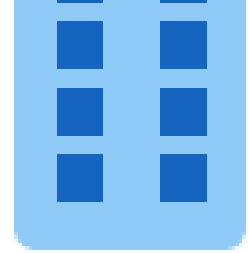
# Expert Interview

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Through an interview with an expert and researching within the field of e-waste we came to a handful of conclusions.

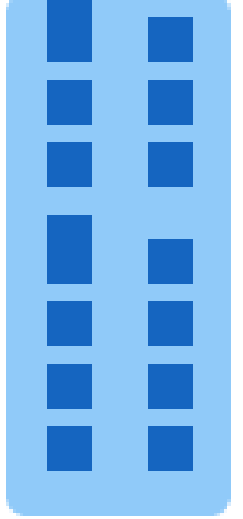
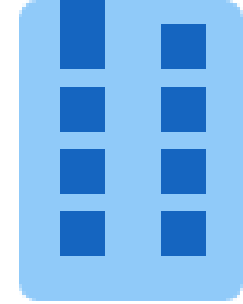
- The most sustainable phone you own, is **the one in your pocket**
- Recycling should only happen **once reuse and repair are no longer possible** (for optimal sustainability)
- A lot of energy is used in the **assembly of mobile phones**
- Only the **most valuable parts** of the phone (like gold) are usually recycled
- Companies conduct a lot of **greenwashing**

3 Years



Informing youth about how much **Co2** is produced from mobile phones

3 Years



ZERO

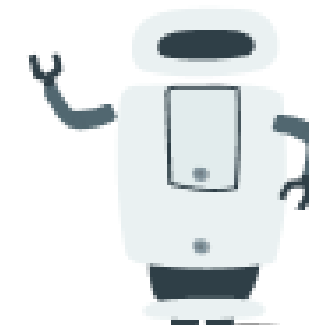
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70 kg

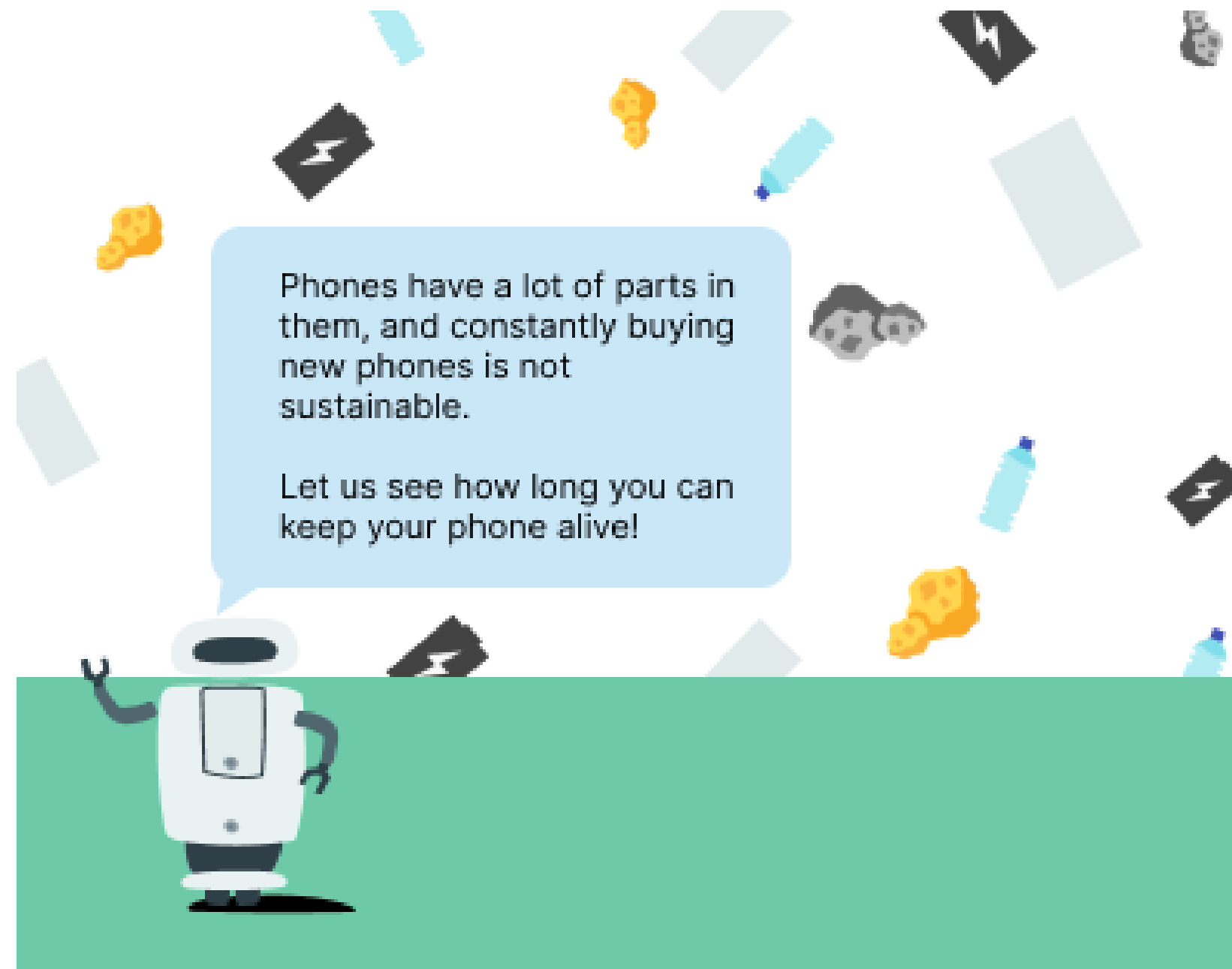


Producing one phone creates 70kg CO2 emissions.



Gamification through a known format to **combine learning with play**

**Visualising e-waste** and making it a gameplay mechanic



Phones have a lot of parts in them, and constantly buying new phones is not sustainable.

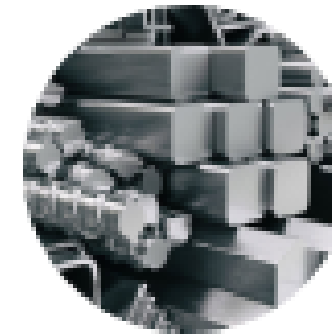
Let us see how long you can keep your phone alive!

## Zero The Robot

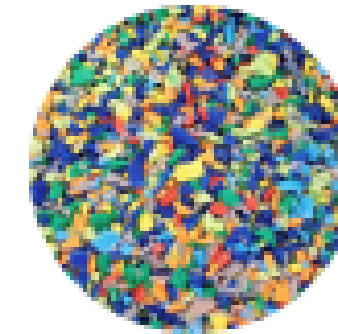
Your friendly neighbourhood sustainability robot. **Zero** guides players through the game, and serves them with some facts along the way

ZERO

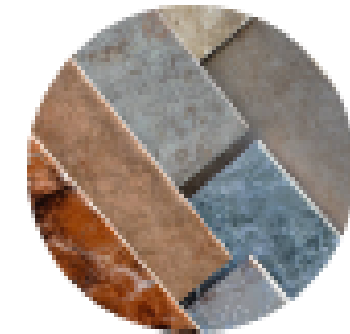
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Metal  
ca. 40%

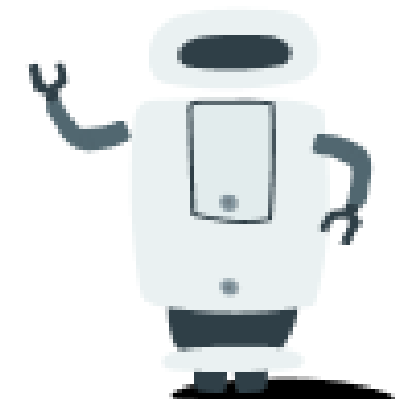


Plastic  
ca 40%



Ceramics  
ca.20%

Phones are mostly made up of these three materials. Some are more valuable than others. Some are recycled and some are unfortunately not



## Teaching

Our goal is to use **gamification** to teach youth how they may through changing their habits contribute to a more **sustainable society**

# Starting a Broader Conversation About E-waste

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Through our game we want to **start a conversation**. We hope that our game will make our players talk amongst themselves and others about e-waste, and reflect on how they may **contribute to a more sustainable world** through their phones.



# Thank You For Listening!

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