

# Sustainable future in battery sector

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# Agenda

- Introduction
  - Principles of Circular Economy
  - CE Business Model Canvas
- Workshop instructions
- Discussion



# Warm-up



In year 2023, **75 milj.** on new cars sold in globally

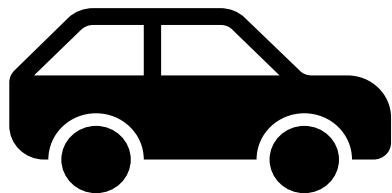
Beginning of year 2024, there was **1 475 milj.** cars in globally

## Think



Huge amount of new batteries needed in every year

Old batteries - self life



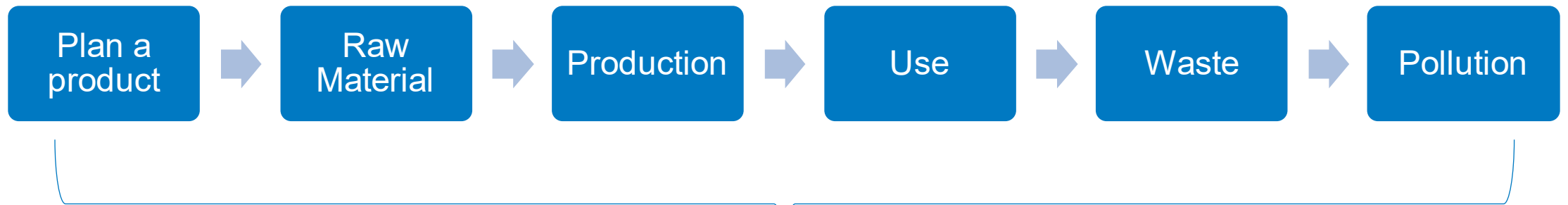
And usage of electronic cars....more batteries are needed!

Batteries are used also in other applications

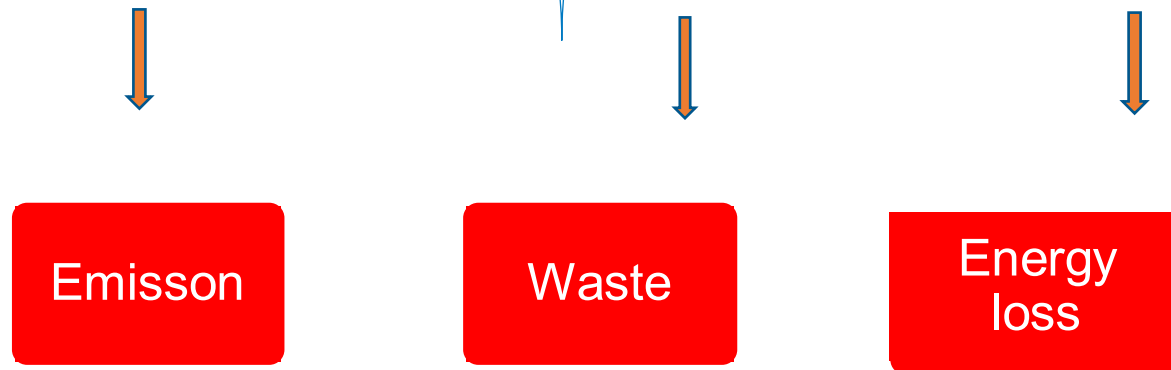
**Where can we get all needed raw materials?**

# Principles of Circular Economy

# Linear system – old school



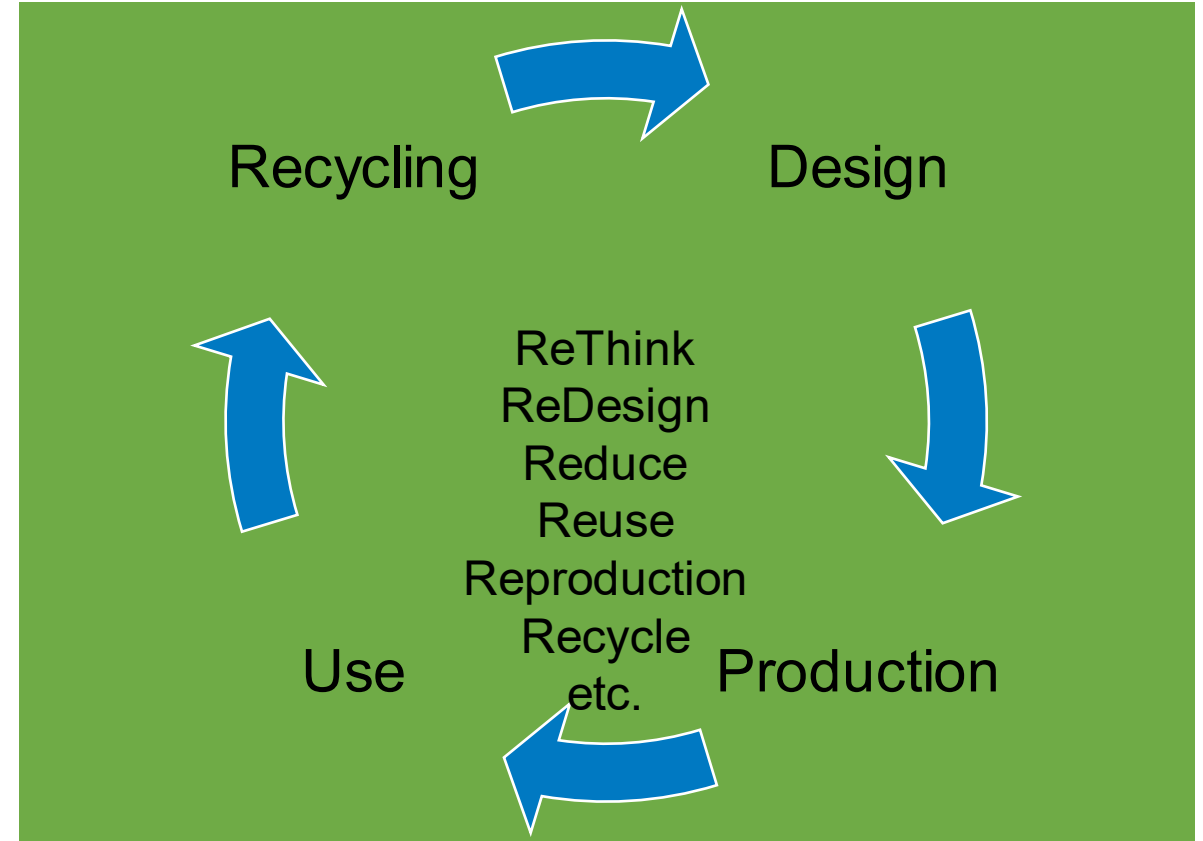
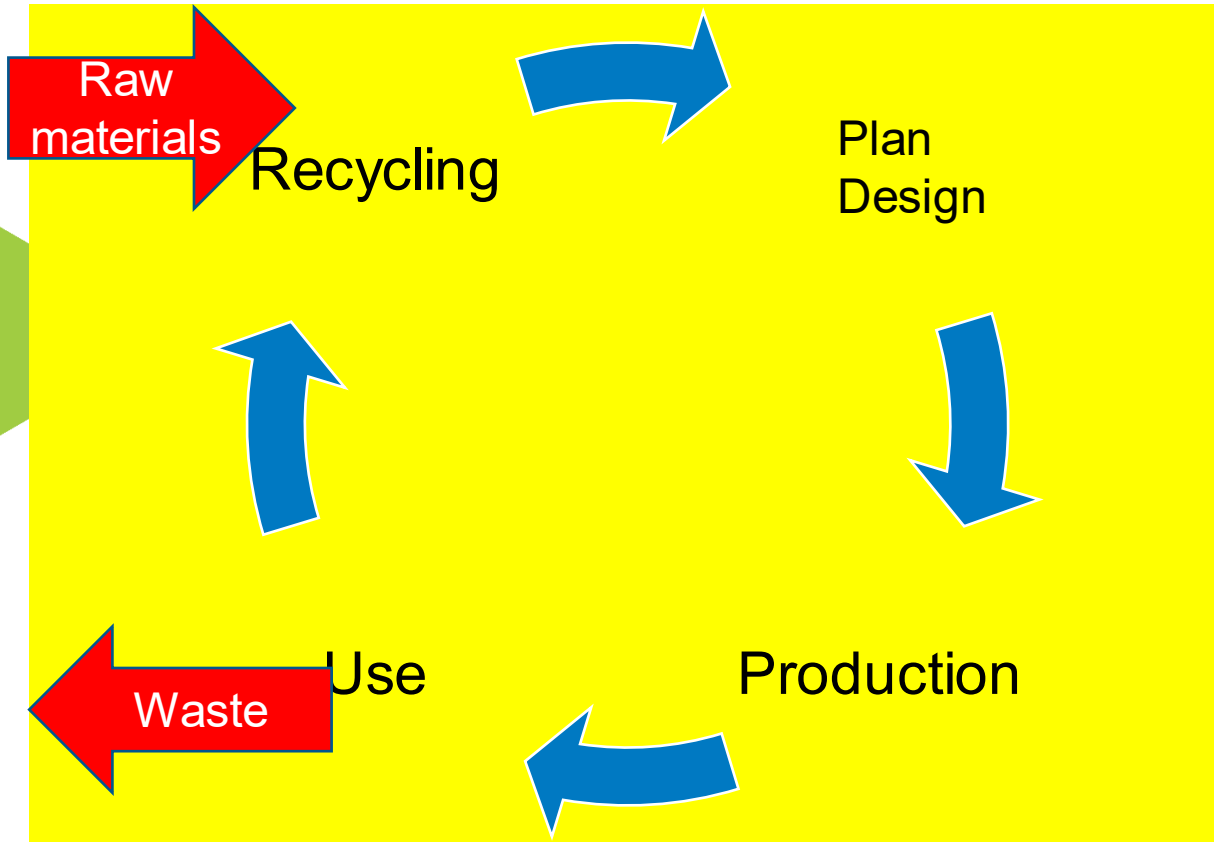
Linear system causes 60% greenhouse gas emissions!



# Recycling economy



# Circular Economy

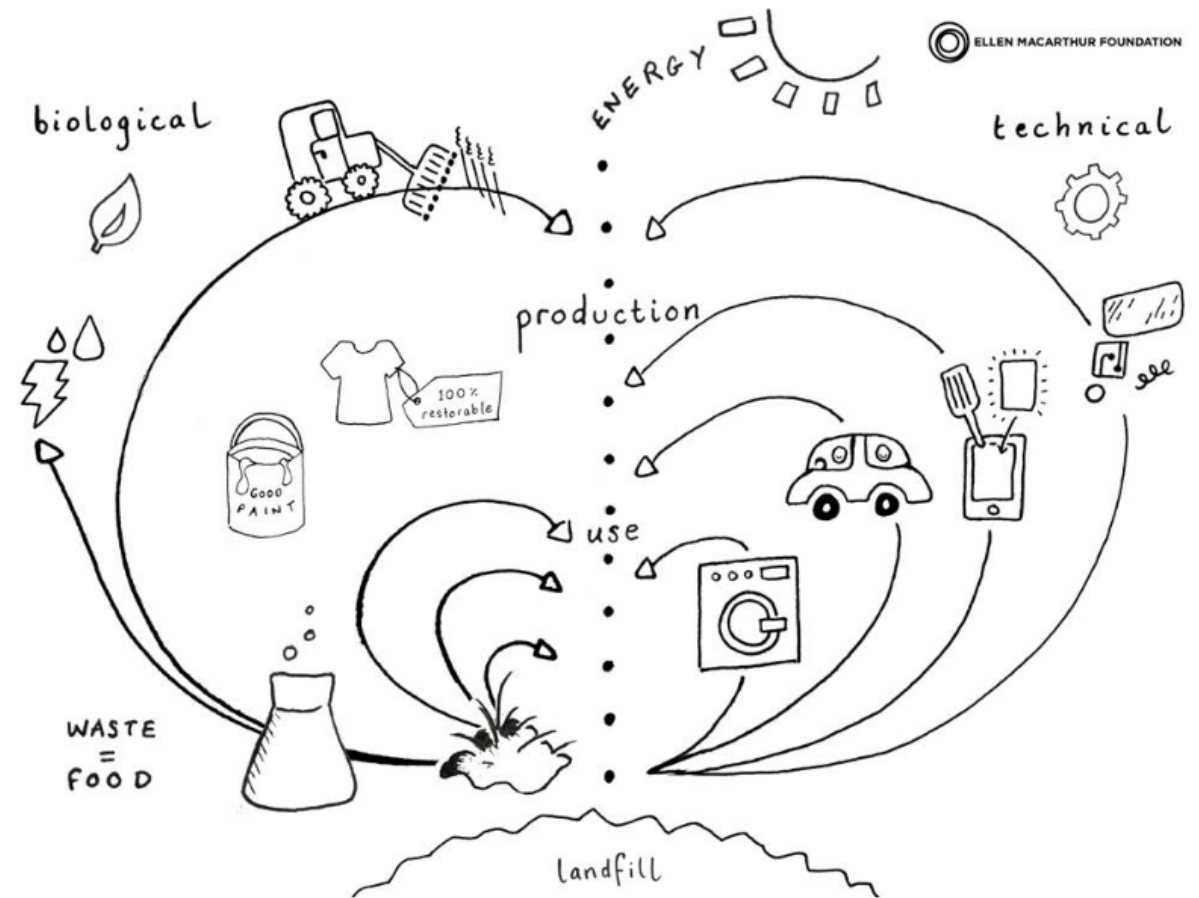


# Circular Economy - biological and technical cycles

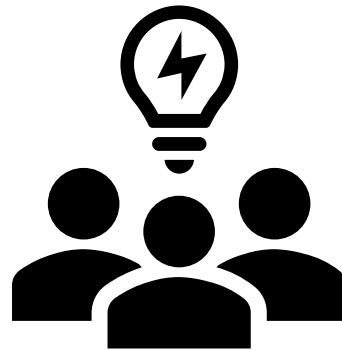
## Three Basic Principles by Ellen MacArthur Foundation

1. Eliminate waste and pollution
2. Keep products and materials in use
3. Regenerate natural system

Source Ellen MacArthur Foundation The Circular Economy (Three principals) (2:21 min)

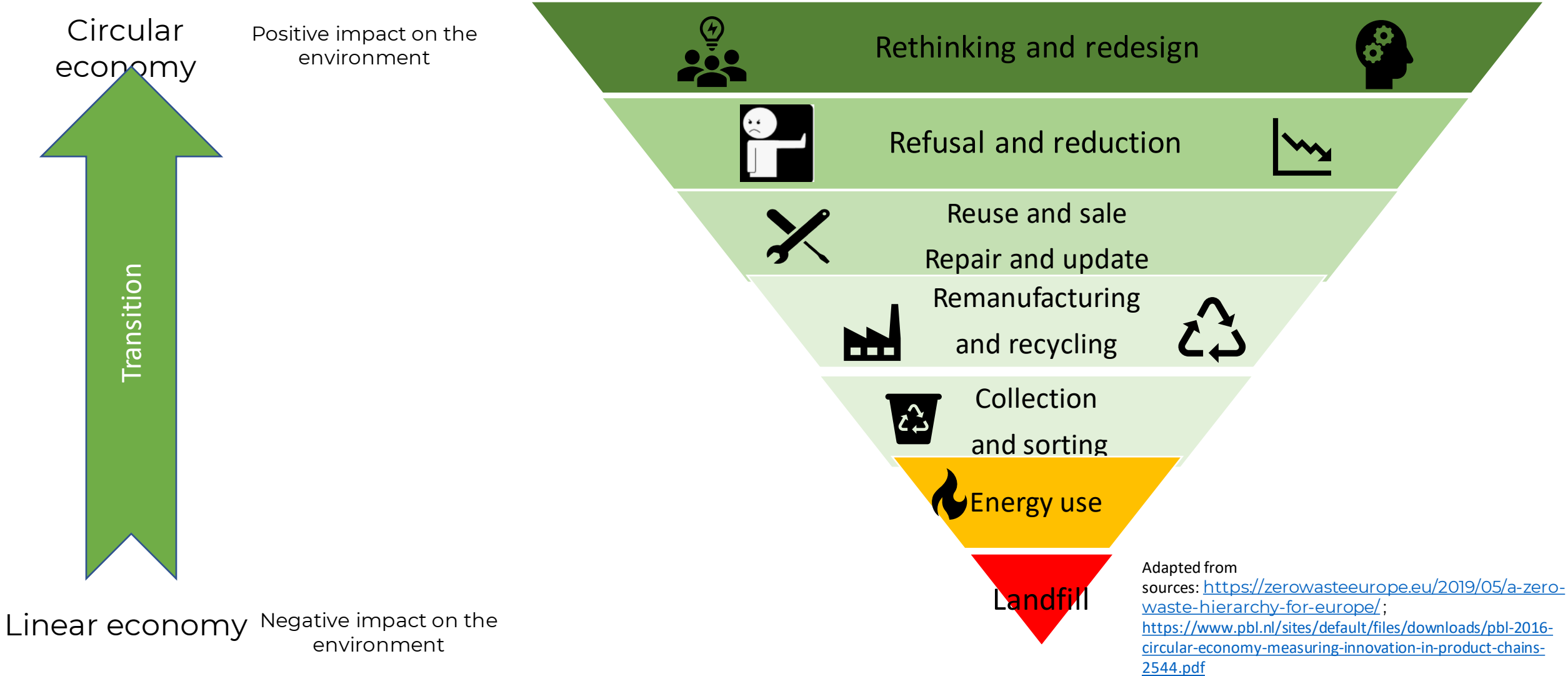


# Circular Economy methods



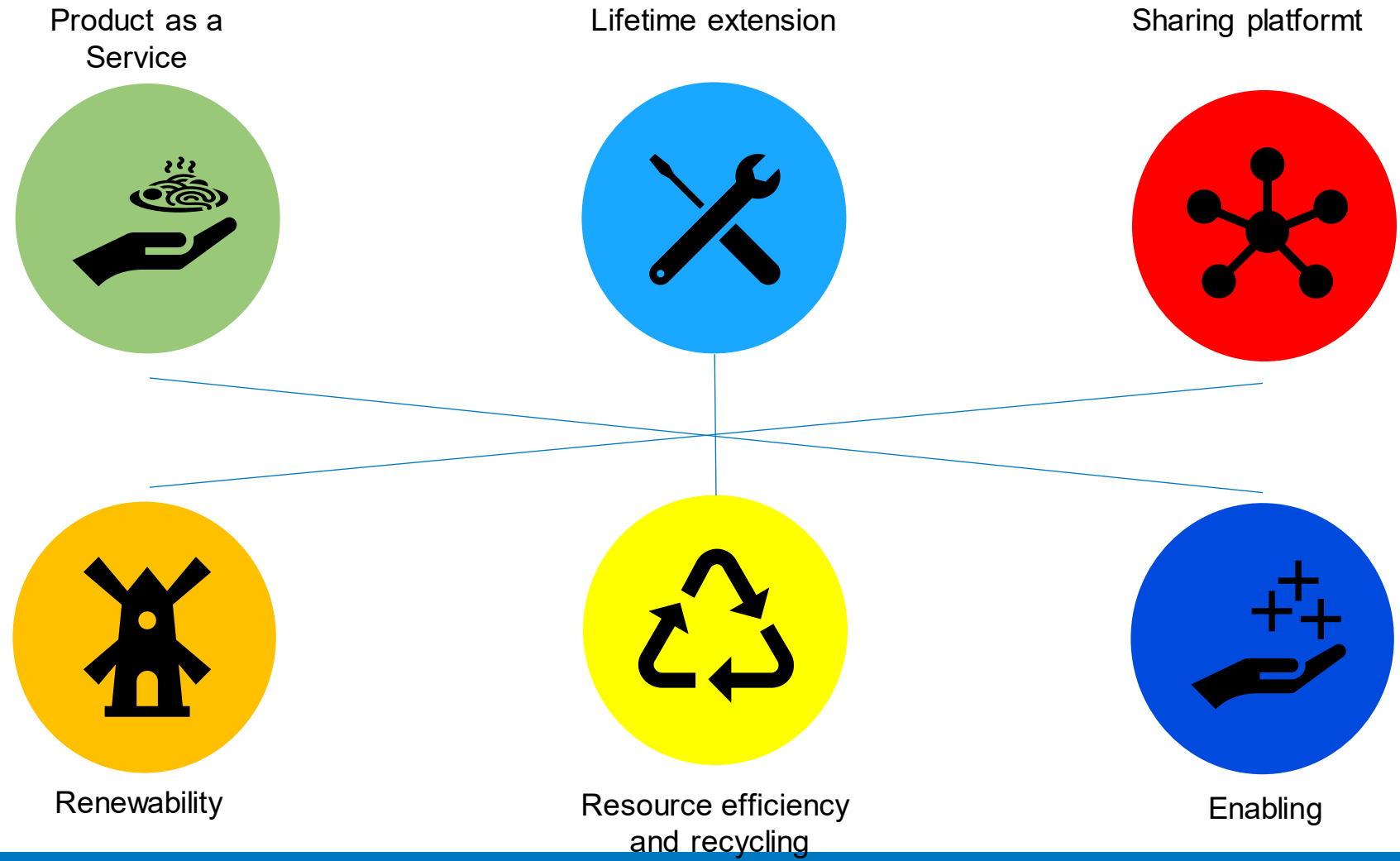


# Circular Economy Methods and Effectiveness



# Circular economy business models

- Are business opportunities and creates competitiveness
- Can used also as combination.



# CE business model & maximize positive environmental impacts and minimize negative impacts

Be part of solution –

3.6.2024



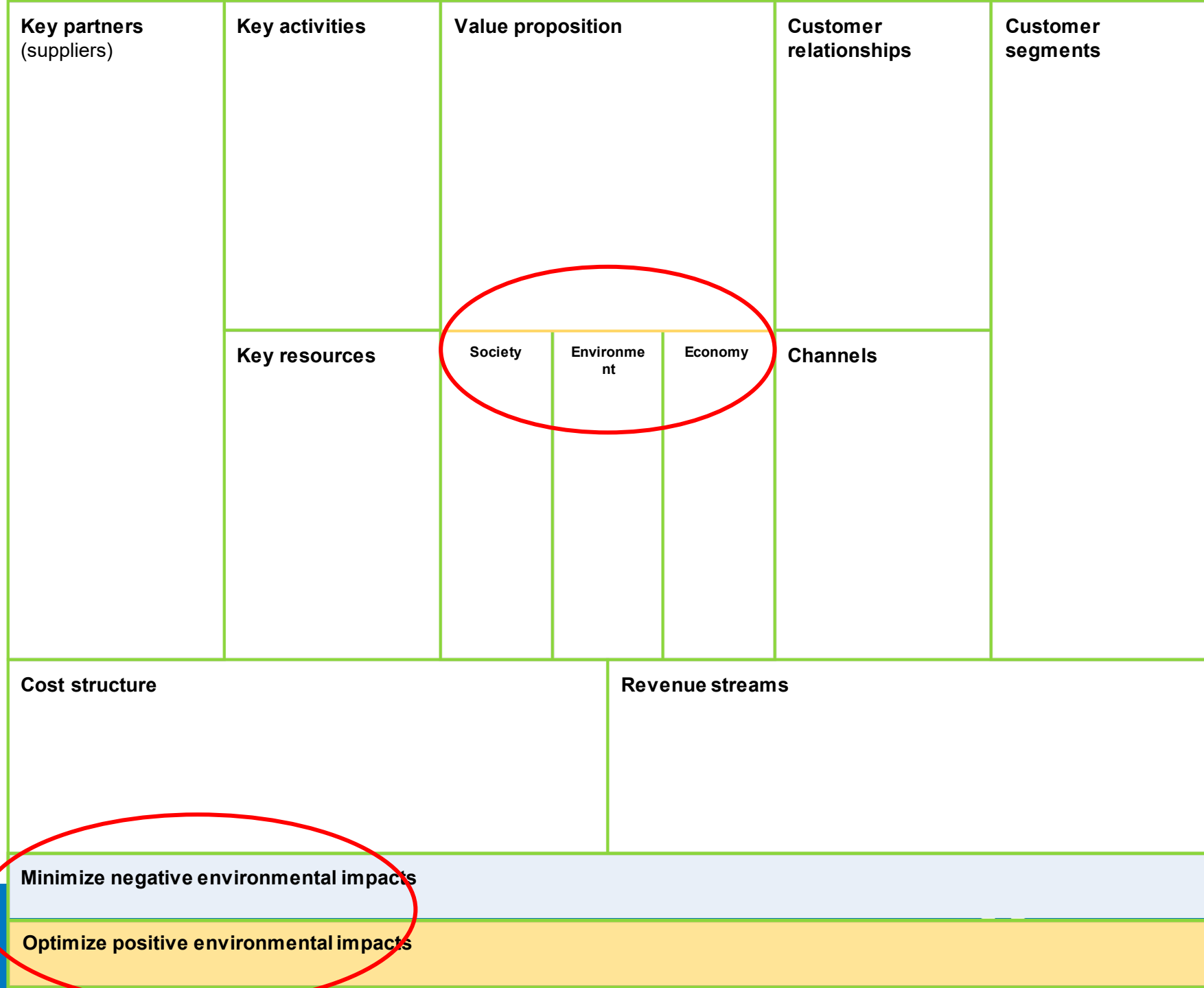


# Circular Economy Business Model Canvas with Environmental Impacts

Watch the video  
<https://www.youtube.com/watch?v=QoAOzMTLP5s>

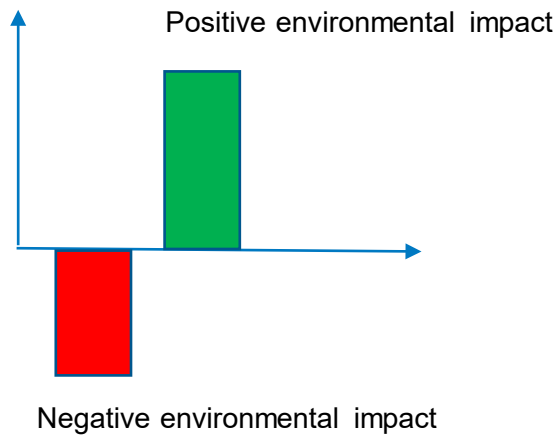
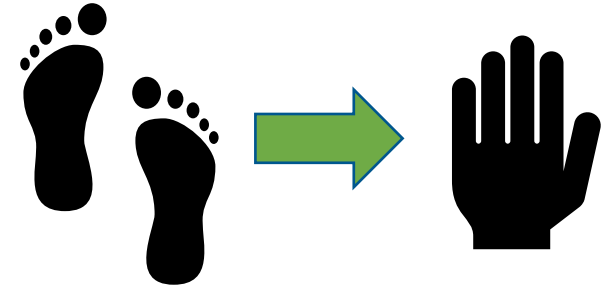
Choose the idea that you want to develop further and create business model that take into consideration all the aspects in this canvas

Understand more the frontage of your business and that what is happening at the backstage



# Business from Handprint Thinking

**Carbon handprint:**  
Focus on reducing **customers'** greenhouse gas emissions



**Environmental handprint maximization:**  
The goal is to maximize the **positive** environmental impact of customers

**Carbon footprint**  
Emissions caused by human /company/ product activity, it concentrate negative environmental impact

# Example: ResQ Club marketplace



## Value Proposition and slogan

**Leave no meal behind.**

Every month, people like you use ResQ to save tens of thousands of meals from ending up in the trash bin. With a 97% satisfaction rate on all orders, saving the world has never tasted this good!

**Start Eating**

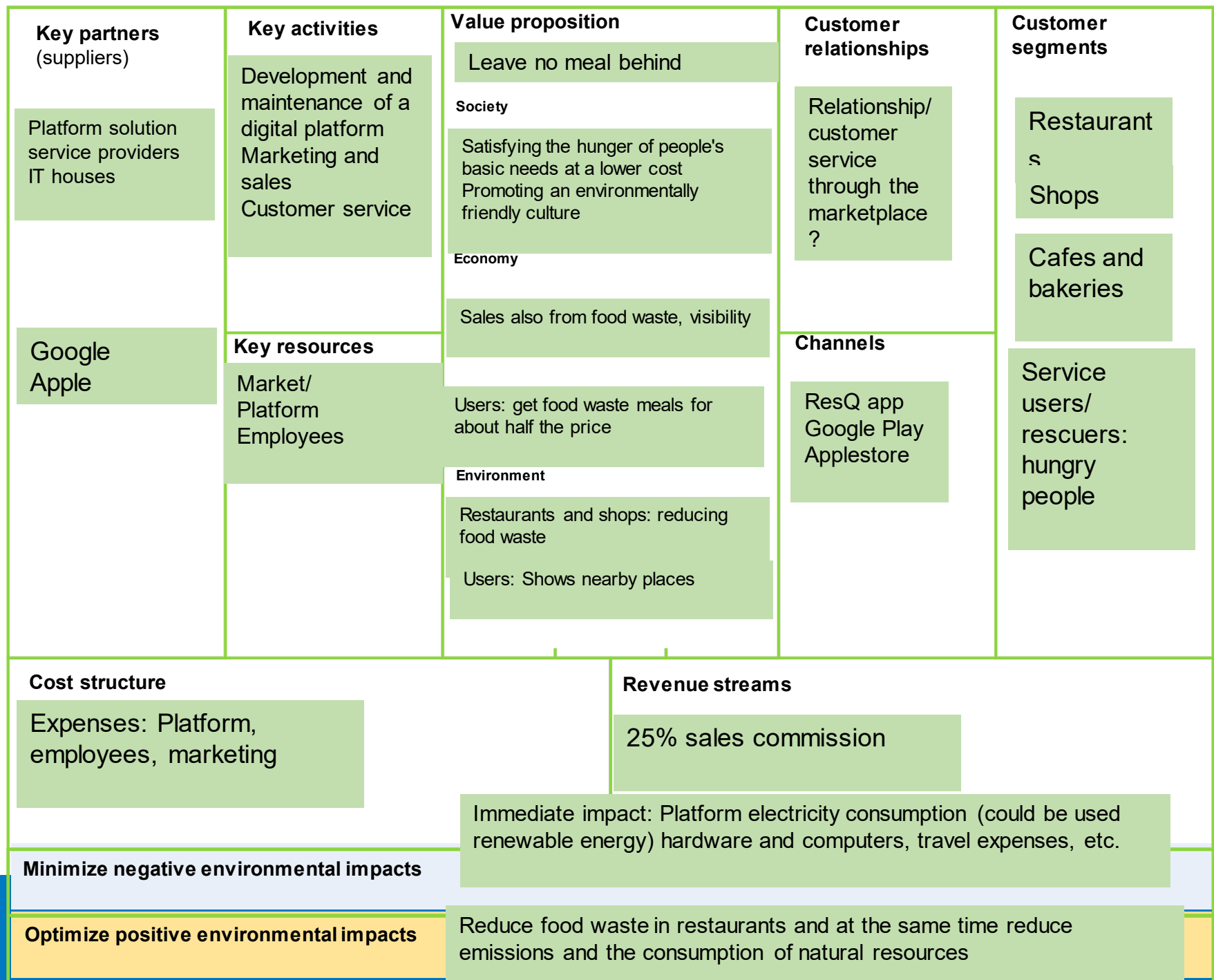
**Start Selling**

**Eating** with ResQ saves you hundreds of euros every year.

**Selling** with ResQ increases your revenue by 2-6%.

**Example: ResQ Club**  
a marketplace for food waste

**Circular economy business model:**  
Sharing economy  
Resource efficiency





# The Instruction for teams to practice CE BMC

- Case is a finish company Fortum Battery Recycling Oy
  - Concentrate for battery recycling and save the used materials
  - <https://www.fortum.com/services/battery-recycling>
  - Video <https://www.youtube.com/watch?v=ZaWKTGvv14Q&t=10s> (2min)
- All teams discuss the case and collect ideas of
  - Optimise Positive environmental impacts
  - Minimize Negative environmental impacts
- Create short summary to present and discuss
  - Use paper, your laptops or Flinga, Miro as tool
- Time for work 30 min + around 15 min discussion



# Ideas

- **Optimise Positive environmental impacts**

- Stable supply chain
  - Quality of the raw material important to save resources
- Reduce the waste can reduce the risk of contamination of water/soil
  - It can contaminate food, causing disease
- Offer service of maintenance for batteries
- Offer waste management to the customer

- **Minimize Negative environmental impacts**

- Reduce the use of resources
- Reducing the overall number of produced batteries (cars in the road, as example)
  - Energy saved is the energy that you never spent
- More transparency about the use of material/energy for the companies
- More research to produce less toxic batteries
- Use less toxic energy sources/ energy vectors
- Reduce the CO2 emissions