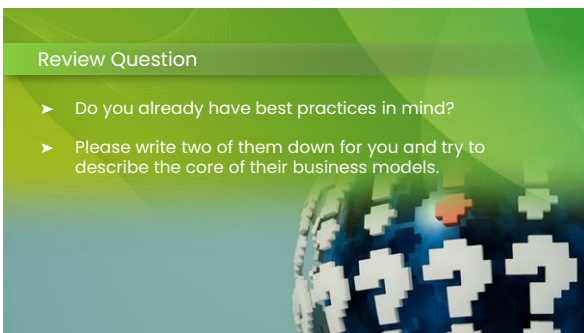


Progetto L2C – Modulo III

Prof. Schulte

Lez. 3.4 - CASE STUDIES AND BEST PRACTICES



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Lez. 3.4 - CASE STUDIES AND BEST PRACTICES

About

- ▶ Founded 2013 in Amsterdam, the Netherlands
- ▶ Sector: IT, electronics, smartphones
- ▶ About 80 employees in 2023
- ▶ Fairphone B.V. sees itself as the initiator of a movement to fairly produced long life electronic devices

Background

- ▶ The greatest environmental impact in the entire life cycle of a smartphone is caused by the production
- ▶ Smartphones contain various pollutants and numerous valuable raw materials, e.g. special metals
- ▶ Some of these raw materials are rare and are mined under catastrophic conditions for people and nature

- ▶ Many of them are of strategic importance for sustainability technologies
- ▶ Some components are hard to recycle, not all are fully recovered
- ▶ **Need to use smartphones for as long as possible:** The possibilities to repair, refurbish and recycle smartphones must be exploited as fully as possible

- ▶ The environmental impact of a smartphone decreases significantly the longer it is used
- ▶ Replacing or repairing phone components significantly reduces the environmental impact

Years	Impact per year of use	% Change
3 years	14	-
5 years	10	-30% p.a.
7 years	8	-45% p.a.

Solution approach

- ▶ Individual components must be easy to separate
- ▶ Individual components, for example batteries should be easy to remove
- ▶ A modular system in design significantly increases the options to extend the life of a smartphone

solution

- ▶ **Fairness and circularity are the core ideas of the business model of Fairphone B.V.**
- ▶ Raw materials like tin, tantalum, tungsten or gold are sourced from certified mines


solution

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- ▶ The smartphones are designed to be easy to repair, to refurbish and to recycle
- ▶ **Business model(s)**: Product life and use extension and design for recycling

solution 

Achievements and success

- ▶ World's first modular smartphone on the market
- ▶ Various sustainability certifications and the first-ever Fairtrade-Certified Gold Supply Chain for consumer electronics; highest score in eco rating



- ▶ Engagement for fair working conditions, establishing worker representation in supply chain and awareness about the social and environmental impact of electronics



Challenges and obstacles


- ▶ **Supply chain complexity**: complexity of global sourcing is challenging for ensuring a transparent and ethical supply chain for all components
- ▶ **Market competitiveness**: Maintaining market competitiveness in terms of features and pricing are delicate tasks with a clear focus on ethical and sustainable products
- ▶ **Scale and impact** as a small player

Impact and future plans

- ▶ Aim to improve electronics industry step by step by demonstrating there is a better way of doing business
- ▶ Proof that a company that sells 100.000 smartphones a year can survive and have some impact on the industry
- ▶ Clear request to the electronics industry by Fairphone's plan to scale up and spread their mission wider

Review Question

What is a significant challenge faced by Fairphone in the smartphone market?



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About

- ▶ Founded 2016 in Poland
- ▶ **Sector:** Food industry
- ▶ 3 employees in 2022
- ▶ **Founding motivation:** respond to the needs of customers: a great interest in edible packaging

Background

- ▶ High environmental impact of food packaging
- ▶ Need of restaurants and companies to offer disposable biodegradable packaging



Solution approach

- ▶ Core idea originates in the founders' vegan restaurant
- ▶ Tackle the problem of resource consumption and waste from traditional packaging
- ▶ Address and foster the demand for environmentally friendly serving bowls
- ▶ **Business model:** circular inputs and product life extension

solution 

Achievements and success

- ▶ Successful launch of production of edible cups in 2020
- ▶ One-year shelf life as core success factor
- ▶ More than five million tons of CO2 emissions saved within two years



Challenges and obstacles

- ▶ Development of the technology and the oven for producing edible cups
- ▶ Scepticism of professionals and companies
- ▶ Keeping motivation high



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Impact and future plans

- ▶ Goal to further optimize and extend the shelf life of the edible cups to up to two years
- ▶ Aim to create high-quality, long-lasting products while supporting the local economy

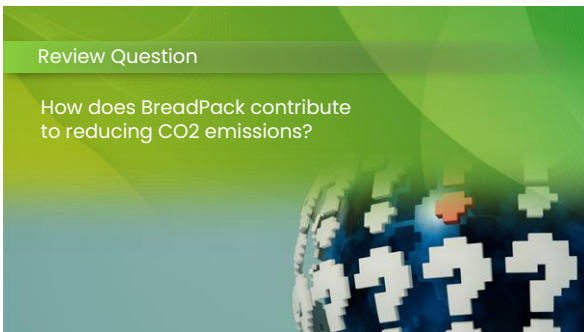


- ▶ Plan to build smaller branches that work with local products and maintain an ecological approach throughout every stage of business development



Review Question

How does BreadPack contribute to reducing CO2 emissions?



CENTRO 3T FROM ITALY



About

- ▶ Founded 2012 in Italy
- ▶ Sector: agriculture
- ▶ 7 employees in 2022
- ▶ **Founding motivation:** to address the waste of wool and reuse it to meet another need



Background

- ▶ Wool not suitable for manufacturing is wasted a lot
- ▶ Ecological impact of waste of wool
- ▶ Great interest in urban gardening



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Solution approach

- Reuse of wool waste in agricultural activities
- Use of wool instead of soil for urban gardening
 - Combination of two needs to one solution
- **Business model(s):** circular inputs, product use extension

solution 


Achievements and success

- Ten years of development from understanding the problems to the implementation
- Acquired funding to expand their project
- Positive impact on vegetable production in their gardens



Challenges and obstacles

- Influencing culture and sensitizing people to recycling materials
- Technical challenges
- Necessity to experiment due to lack of experience of others and guidelines




Impact and future plans

- Plan to expand the project by improving wool collection and transportation
- Aim to build a professional network at the European level



Review Questions

What challenge did Centro 3T meet that companies might face developing their own CE business model?



VEGASYSTEMS FROM GERMANY



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About

- ▶ Founded in 1997 in Germany
- ▶ Sector: IT, electronics
- ▶ 25 employees in 2022
- ▶ **Transformation motivation:** to save money, to address the waste of hardware and reduce the company's carbon footprint

Background

- ▶ A lot of IT hardware was disposed of every year though being fully functional
- ▶ Data centres need a lot of energy
- ▶ Energy prices in Germany are usually higher than in the surrounding countries

Solution approach

- ▶ Implementing a system of heat recovery and changing the energy used to 100 percent renewable sources
- ▶ Introducing the reuse of IT hardware by transforming part of the business model
- ▶ **Business model(s):** product as a service, product life extension

solution 

Achievements and success

- ▶ **Establishment of circular processes preventing hardware from going to waste:** not a single server has been disposed of in the last two years
- ▶ Showcasing how to make a data centre adopt circular habits



Challenges and obstacles

- ▶ Overcoming resistance among employees
- ▶ Shifting mindsets towards reuse
- ▶ Navigating through complexity of circular processes, standards, certifications and legal conflicts with CE goals



Impact and future plans

- ▶ Pursuing circular economy principles
- ▶ Achieving the goal of **99%** material reuse
- ▶ Engaging with associations to address issues of legal standards colliding with CE goals




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Review Questions

What was the core motivation for VegaSystems' transformation?



SUMMARY
REVIEW QUESTIONS

- ▶ Do you already have best practices in mind?
- ▶ Please write two of them down for you and try to describe the core of their business models
- ▶ What is a significant challenge faced by Fairphone in the smartphone market?

- ▶ How does BreadPack contribute to reducing CO2 emissions?
- ▶ What challenge did Centro 3T meet that companies might face developing their own CE business model?
- ▶ What was the core motivation for VegaSystems' transformation?

CASE STUDIES AND
BEST PRACTICES

