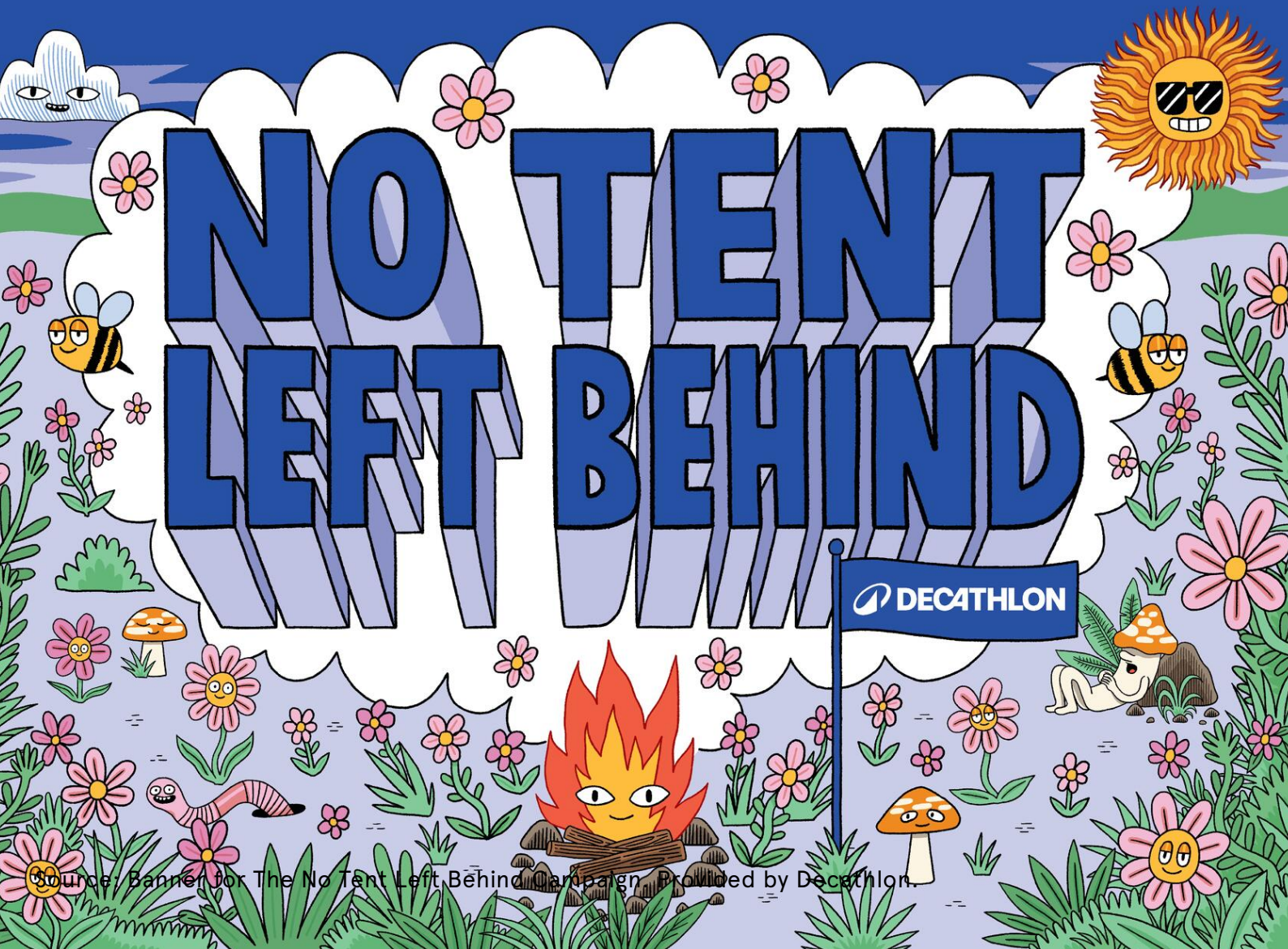


A strategic design approach to minimize the creation of tent waste in the festival industry

Exploring a new sustainable business model for Decathlon's No Tent Left Behind Campaign



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MSc Strategic Product Design
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A strategic design approach to minimize the creation of tent waste in the festival industry

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Preface

The reason I wrote this thesis is no coincidence. During the summer of 2024, I hosted my own stand at the festivals Wildeburg and Wilde Weide with a goal similar to Decathlon's: helping the event to minimize tent waste. At the time, my approach was a bit different. Together with my two friends and fellow startup founders, we created a system that enabled us to collect, clean, and cut large numbers of broken tents in a short time by building our own small circular ecosystem of partnerships. The raw materials were then repurposed into bags, which we sold at the event.

Through this initiative, I met Mathilde Dumas, Monica Meglio, Nico Werkman, and several other inspiring people from Decathlon, who were piloting their No Tent Left Behind campaign for the first time in the Netherlands. Our conversations about the problem and possible solutions deeply inspired me. At that moment, I realized I wanted to do more than just collect waste to create new products—I wanted to tackle the issue at its core. And what better partner than Decathlon? A company that not only explores these challenges but also has the resources and capabilities to test and implement new business models worldwide.

I want to thank everyone from the Circularity team at Decathlon NL for this incredible opportunity and for sharing your knowledge and expertise with me throughout this process. A special thanks to Mathilde Dumas and Monica Meglio for guiding me and believing in the potential future implementation of this project. I also want to express my gratitude to my Chair, Giulia Calabretta, and my mentor, Sander Mulder, for helping me achieve my learning goals and keeping me focused on what truly matters.

Lastly, a big thank you to everyone who participated in the interviews and creative ideation sessions—your input was invaluable. I am truly proud of the outcome of this thesis, and I couldn't have done it without all your support. Let's hope this work serves as a source of inspiration for the circular transition of the festival industry as we know it.

Disclaimer

This thesis is part of an academic project and intended for informational purposes only. It explores potential opportunities but does not represent a confirmed business strategy, policy, or commitment by Decathlon. Conclusions and recommendations are based on the research conducted and should not be seen as binding. No rights or obligations can be derived from the information provided.

Executive Summary

Decathlon is **Europe's leading retailer** for affordable sports and outdoor equipment. However, its **accessibility and low-cost products** have inadvertently contributed to the growing **disposable culture** of camping gear at festivals. In response to this issue, Decathlon launched the **"No Tent Left Behind" campaign**, aimed at exploring sustainable solutions to reduce tent waste.

This Master's thesis explores a **new business model** for the campaign, with the overarching goal of **minimizing tent waste** at festivals. Through extensive research—including **literature reviews, case studies, and qualitative interviews with stakeholders**—this study examines the context of the problem and the evolving needs of the target audience.

In a broader context, the **Green Deal** and its associated policies, such as the **Circular Economy Action Plan (CEAP)**, are driving the transition towards a **Circular Economy**. As circularity gains momentum, the stakeholder landscape within this ecosystem is also evolving. Decathlon, for example, is already exploring various sustainable initiatives beyond the festival setting, including repair, buy-back, rental, and recycling. This existing framework presents a valuable opportunity to implement and test these solutions within event environments.

A notable example is the No Tent Left Behind Campaign, which focuses on repairing abandoned tents and reselling them in stores as second-life products. However, other potential services, such as rental solutions, remain largely unexplored. At the same time, sustainable innovations emerging within the event industry underscore the growing urgency for

event organizers to reduce their carbon footprint.

Focusing on the target audience, research suggests that an **intention-action gap** leads to unsustainable behaviours, often influenced by external factors that vary by context. Qualitative interviews with festival attendees revealed that their choices are shaped more by a lack of convenient sustainable alternatives and post-festival fatigue, rather than by a deep-seated concern for the environment.

Additionally, these interviews highlighted a major challenge: the inconvenience of carrying camping gear from place to place. However, festival visitors expressed that their unsustainable behavior could change if given an alternative that enhances comfort and fun while simultaneously being affordable. Based on these insights, the key design priorities for future concept development are **comfort, convenience, fun and affordability**.

Through creative sessions and concept analysis methods, a conceptual rental model was developed, accompanied by a detailed implementation plan. The concept is designed around the needs of three key stakeholders: festival visitors (target group), festival organizers (incubators), and Decathlon (initiator). It has undergone multiple iteration cycles to ensure desirability, viability, and feasibility.

The implementation plan includes a service blueprint, mapping out the interactions and actions between users, the platform, and stakeholders within the service. Additionally, a strategic roadmap was created, visually outlining a five-year plan, detailing the development of the Product-Service System (PSS) and identifying the key stakeholders and partners involved at each stage.

To assess whether the concept meets the needs of the target group, a business case was developed to estimate the rental price. Together with the client, different options were put together that resembled potential promising rental packages. Using the business

case, price estimations were made and compared with current market competitors. This showed that the rental model was financially promising and validated that it was probably able to compete with the current market standard.



Atmosphere photo 1: Preview of a conceptual visual of the projects solution

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Abbreviations

- CE: Circular Economy
- Decathlon NL: Decathlon specifically in The Netherlands
- Decathlon United: The overarching united level of Decathlon.
- Festival visitors = Target group
- NTLB = No Tent Left Behind Campaign
- EPR = Extended Producer Responsibility
- CEAP = Circular Economy Action Plan

1. Introduction

Source: MaterialDistrict, 2014

1. Introducing the project

This chapter gives an introduction to the research context and the client of this project. After this, the problem statement is clearly defined and the research scope is defined. This research scope is subdivided into 5 research questions which will be answered in Chapter 2: Context and target group analysis.

1.1 Rewiring the Economy: The Shift from Linear to Circular

We are currently navigating a transition from a linear economy, characterized by a "take-make-dispose" model, to a circular economy, which aims to minimize waste by maximizing the reuse, repair, and recycling of resources (Ellen MacArthur Foundation, 2020). In a linear economy, resources are extracted, transformed into products, and discarded after use. In contrast, a circular economy emphasizes the creation of closed-loop systems where the value of materials and products is preserved for as long as possible.

Despite these aspirations, businesses often face a contradiction: the need for growth and competitiveness in markets that prioritize cost reduction. This pressure encourages the production of low-cost, disposable goods, reinforcing a throwaway culture. This culture erodes product quality and the emotional connection between consumers and their possessions (Cooper, 2005).

1.2 The uprise of sustainability policies

To counteract these issues, the European Union has implemented various regulations and goals to guide companies toward circularity. The European Green Deal and the Circular Economy Action Plan (CEAP), one of its main policies, represent significant steps toward curbing the culture of disposability.

1.3 Introducing the client: Decathlon

These policies have prompted retail companies to adapt their business structures from linear to circular models. This shift is also evi-



Figure 1: The No Tent Left Behind Campaign.

dent at Decathlon, a global sporting goods retail company that offers a wide range of sports equipment. Decathlon has developed a transition plan outlining strategies for sustainable development from 2020 to 2026. This plan incorporates a circular business model divided into four segments: Repair, BuyBack, Rental, and Recycling. These segments are designed to accommodate Decathlon's diverse product offerings.

1.4 Introducing the problem context: festivals

This project focuses on the sustainable development of Decathlon's tent business, particularly examining the use of Decathlon tents in festival environments. In the UK alone, an estimated 250,000 tents are abandoned at festivals each year (Better Waste, 2023). In the Netherlands, the sustainability policy of MOJO, the largest event organizer in the country, reports that 400,000 kilograms of waste is left behind on festival campgrounds annually. This includes discarded camping

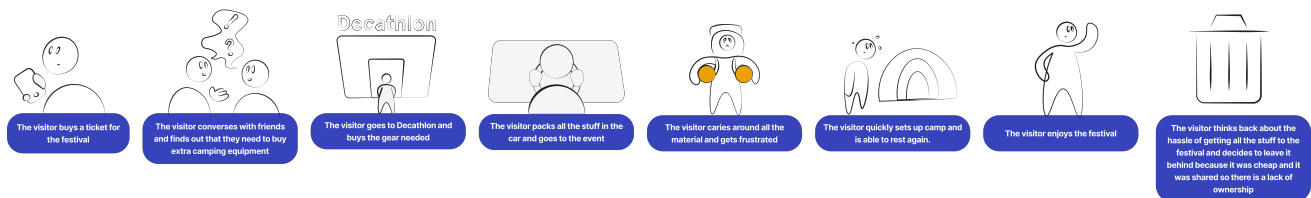


Figure 2: Current customer journey

gear such as tents, air mattresses, and sleeping bags, along with plastic packaging, much of which is abandoned in nature. Since most of this residual waste is incinerated, valuable resources are unnecessarily lost, contributing to CO₂ emissions (MOJO, 2024). The brief customer journey in figure 2 gives a clear representation of this problem.

Furthermore, tents are non-recyclable due to the chemical processing involved in their production and the complex mix of materials used. As a result, most abandoned tents end up in landfills. As Europe's leading retailer of affordable camping gear (Decathlon, 2020), Decathlon has a significant responsibility in addressing this growing waste issue.

In response to this pressing issue and the increasing sustainability regulations, Decathlon launched the No Tent Left Behind Campaign, aiming to minimize tent waste at festivals (Figure 1). This campaign however, is **strongly focussed on sustainable development without having a clear idea about the specific needs of the target group that they try to facilitate**. This thesis will analyze the festival context and target audience, while also exploring the development of a new sustainable business model for the campaign.

1.5 Research scope

The scope of this project is to explore the opportunities of sustainable camping services by Decathlon in a festival context. To achieve this, the following key objective has been formulated: 'The objective of this research is to **explore the context and define the needs of the target group** in order to develop a sus-

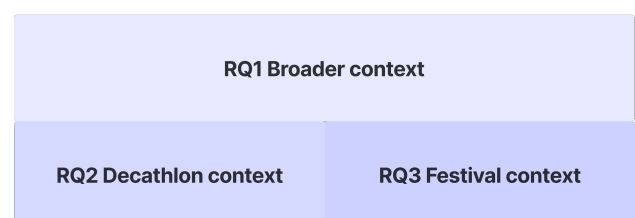
tainable alternative solution that reduces tent waste at festivals.'

- **Core research challenge:** explore the context and define the needs of the target group.
- **Deliverable:** Sustainable alternative solution.
- **Intended outcome:** reduce tent waste at festivals.

1.6 Research questions

Based on this key research objective, 5 sub-research questions have been formulated that will give more insights into different segments of the key objective. **This research is divided into a contextual analysis and a target group analysis.** The first 3 research questions will explore the context in which the initial problem operates. The last 2 research questions aim to create a better understanding on the motivations and needs of the target group at hand (Figure 3).

Context analysis



Target-group analysis

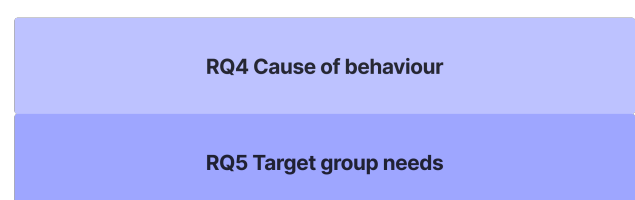


Figure 3: visual explanation of context- and target-group analysis.

1.6.1 Contextual analysis

First it is important to gain knowledge on the general topic of circularity and the need for circular ecosystems in the EU. It gives the research context and shows why this research topic is important in the first place. This leads to the following research question:

RQ1: Why is it important for the retail sector to develop sustainable/circular business models?

Once the broader context is specified, the research dives a bit deeper into the client; Decathlon. In order to imagine a possible new sustainable business model, first the current sustainable development of Decathlon needs to be analyzed. This leads to the following research question:

RQ2: What is the project's client current progress in sustainable development?

The context in which the sustainable solution will be applied also relates to the current status of circular development in the environment of the festival itself. This gives the following research question:

RQ3: What type of sustainable alternatives to minimise tent waste, are currently being offered in the festival context?

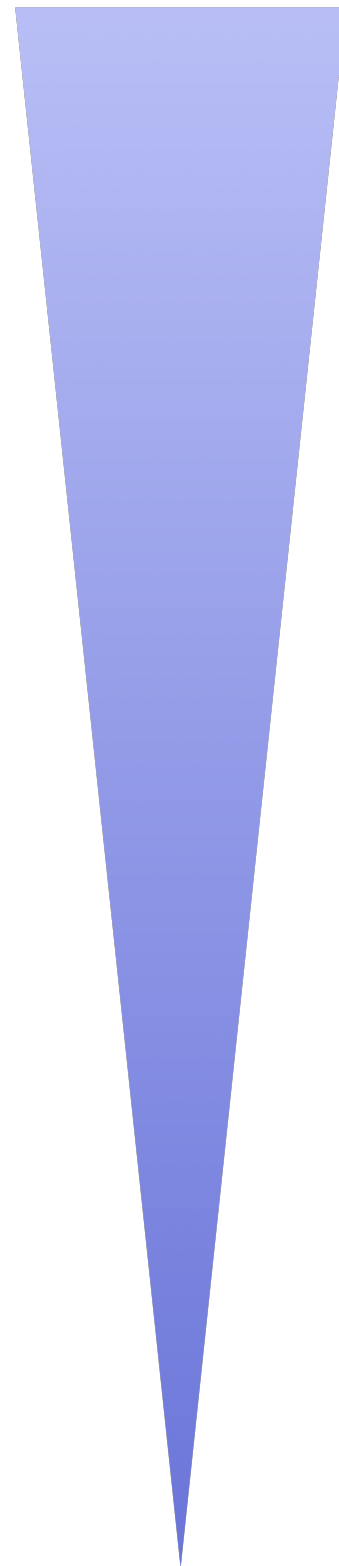
1.6.2 Target-group analysis

The second part of the research aims to define the behaviour of the target group in the established context. The goal is to explore the influencing factors in behaviour and the needs and barriers of the target group. This leads to the following research questions:

RQ4: What causes this unsustainable behaviour of the target group?

RQ5: What are the needs and barriers of the target group?

Research scope



Design goal

Figure 4: visual from research scope to design goal

2. Approach



Source: reuse, 2018

2. Approach

This thesis follows the Double Diamond Method, a strategic design framework developed by the UK Design Council (2005), which is structured into four key phases: Discover, Define, Develop, and Deliver. This approach ensures a systematic and user-centered design process, allowing for thorough exploration, ideation, and refinement (Design Council, 2005). As illustrated in Figure 5, the model consists of two main cycles of divergence and convergence. In the first cycle, the project begins with an exploratory and divergent research phase to understand the context and target group. This involves doing literature research and gathering qualitative data from interview sessions, which is then reviewed, clustered, and synthesized to redefine the core design challenge (Brown, 2009). Once the design challenge is clearly framed, the second cycle begins with ideation, where a broad range of possible solutions is generated. These ideas are then analyzed, refined, and converged into a final concept that directly addresses the initial problem statement. The selected concept undergoes testing and iterative improvements, ensuring its viability, feasibility, and desirability (IDEO, 2015). By integrating divergent and convergent thinking, the Double Diamond Model prevents early fixation on a single solution and encourages a comprehensive exploration of design possibilities, leading to outcomes that are closely aligned with user needs and real-world applications (Design Council, 2019). This chapter gives a clear overview of all the intermediate steps taken in this double diamond to get to the final solution.

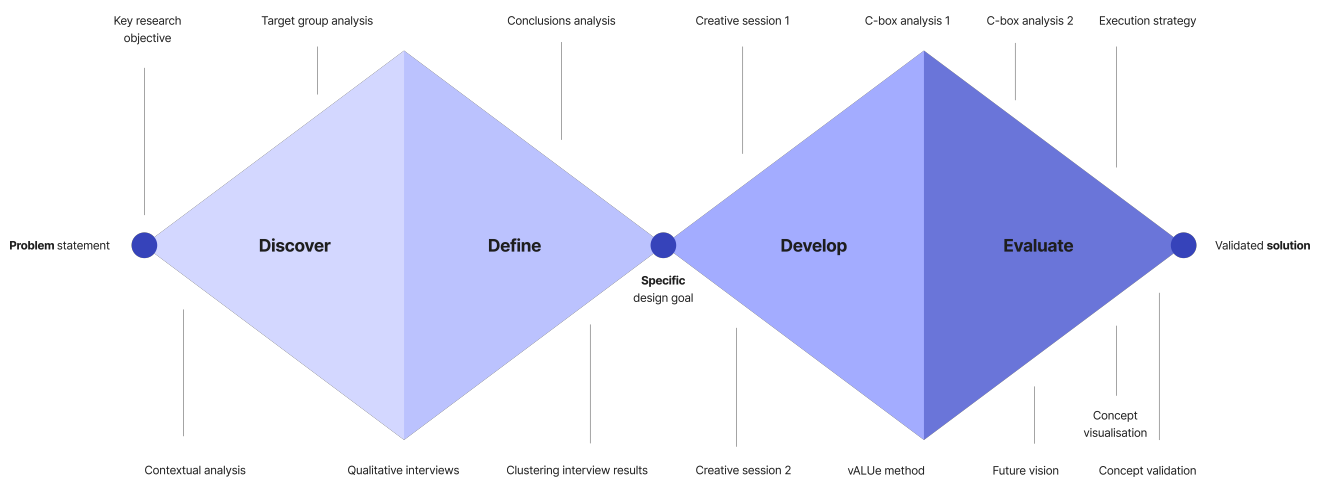


Figure 5: Double Diamond approach

2.1 Discover Phase: context- and target group analysis

The Discover phase focuses on acquiring the necessary knowledge to address the overarching key objective of the project. This key objective is divided into 5 sRQ's each contributing unique insights to the project's goals. All research questions will be discussed and answered in **Chapter 3: Context- and target group analysis**.

The first research question aims to define **why is it important for the retail sector to develop sustainable/circular business models?**

This section explores the development of circularity in the Netherlands. **A literature review** forms the basis of this exploration. These findings will be discussed in Section 3.1.

The second research question aims to **find out what the project's client current progress is in sustainable development?**

Understanding the context and current status of circular development of the leading company in this project is vital to better understand their capabilities and interests as well as the viability and feasibility of future concepts. This exploration is based on **literature reviews** and will be discussed in section 3.2.

The third research question aims to find out **what type of sustainable alternatives to minimise waste, are currently being offered in the festival context?** This includes case examples such as the No Tent Left Behind Campaign on which this project is built. This research part can be found in section 3.3.

The fourth and fifth research questions aim to find out **what the cause is for this unsustainable behaviour of the target group? And what the the needs and barriers are of the target group?**

These questions rely on literature research and **qualitative methods**, including **interviews** with festival visitors who are the main target group of this project. 8 interviews were conducted with festival visitors to create a deeper understanding of their needs and barriers. The goal of these interviews was to define possible needs of our target group based on the interactions between tent and user before, during and after a festival.

After the interviews, the recordings were transcribed and the most interesting findings were structured and organised into themes. These themes were then analyzed to look for saturation. These findings will be discussed in section 3.4.

2.2 Define Phase: specifying the design goal

In Chapter 4 the **specific design goal** was formulated based on the findings of the context and target group analysis. This goal adheres to the SMART framework which is a widely used method for setting clear, structured, and achievable goals (Doran, G. T. 1981). This part of the process is called the define phase. The research conclusions in combination with the specific design goal lead to a set of main design elements which will be used to initiate the development phase.

2.3 Development Phase: from ideation to final concept

Building on the defined design goal, the Development phase dives into an ideation phase. **The first creative session** aimed to generate a high quantity of ideas. This was achieved by formulating a set of 4 H2 (How-To) questions. These type of questions, often referred to as second-level research questions, typically serve the function to explore the opportunities of the researched context (Delft Design Guide, 2013). The generated ideas were then clustered into 3 main themes and used as an inspiration source on a project brief during the **second creative session**. During this session, the second part of the ViP-method was used. This is a context-driven and interaction-centred approach that stimulates participants to create concepts with meaning (Hekkert & Van Dijk, 2011). In total, a set of 7 high quality concepts were generated and presented. Using different methods such as the **vALUe method** and **C-box analysis**, the top 3 concepts were picked for further exploration. In a final co-creative session with the client, a **future vision** was formulated based on the results of the ideation phase. Based on this future vision, the last 3 concepts were put together into a **strategic roadmap**. Together with a **service blueprint** and **business**

case, a clear **execution strategy** was formulated.

2.4 Evaluate Phase: putting to solution to the test

In the Evaluate phase, the solution and execution strategy underwent validation. During the **first validation loops**, Decathlon stakeholders were presented the solution and gave feedback on the feasibility and viability of the concept. This feedback was taken into account to change and alter the different models within the execution strategy. Once the business model was in place, it has been put to the test. To really validate the solution, 3 different rental packages were co-created with the client and calculations were made with the business case to estimate the rental price. After this, the results were compared with market competitors to validate whether the solution had any market value. Based on these results a conclusion and recommendation was written that suggests potential future steps for the further development of the solution. This thesis report ends with a more general final conclusion and recommendation that summarizes the key learnings during this project and discusses how other companies in the industry can use these learnings in their advantage when transitioning towards a more sustainable business model.

2.5 Conclusion

The Double Diamond methodology provides a robust framework for addressing the key research objective. Each phase is designed to ensure that insights are systematically gathered, analyzed, and applied, resulting in a circular business model concept that is both innovative and actionable. This structured approach ensures the creation of a sustainable solution that aligns with stakeholder needs while promoting circular practices in the festival industry.



Atmosphere photo 2: visual camping field

3. Context- and target group analysis



Source: provided by Decathlon

3. Context- and target group analysis

The goal of this chapter is to answer the research questions that are formulated in the introduction chapter. The key objective of this research is to **explore the context and define the needs of the target group** in order to develop a **sustainable alternative solution** that **reduces tent waste at festivals**. This chapter contains literature reviews, case examples and qualitative interviews.

3.1 Circular development

Section 3.1 addresses Research Question 1 **RQ1: Why is it important for the retail sector to develop sustainable/circular business models?**

The goal of section 3.1 is to create a first initial basic understanding of the broader context of circular development. The content in this section is informed by literature reviews and ends with conclusions tailored to the project's context, providing useful insights for future implementation efforts.

3.1.1 What is a Circular Economy (CE)?

The concept of the circular economy (CE) first emerged in the sustainability literature, introduced by Pearce and Turner (1990). It was later defined as "an industrial system that is restorative or regenerative by intention and design" (Ellen MacArthur Foundation, 2015).

Despite its promise, the world remains largely non-circular. According to the Circularity Gap Report (Wit et al., 2019), only 9% of the global economy was circular in 2015. From the 92.8 billion tons of material inputs consumed—including minerals, fossil fuels, metallic ores, and biomass—just 8.4 billion tons were reused. By 2050, this demand for material inputs is projected to increase by 90%, reaching 177 billion tons (Wit et al., 2019). This unsustainable trajectory stems from the linear economic model's assumption that resources are abundant, readily available, and inexpensive to dispose of (European Commission, 2015; Wit et al., 2019).

The CE provides a compelling alternative, advocating for a regenerative system where resource inputs, waste generation, emissions, and energy losses are minimized by decelerating, narrowing, and closing material and energy cycles (Geissdoerfer et al., 2017). Addressing these issues is a critical sustainability challenge, requiring a shift from a linear economy to a circular one that limits resource extraction and amplifies resource recirculation (Campbell-Johnston et al., 2019; Kiselev et al., 2019; Wit et al., 2019).

The R framework, shown in Table 1, is widely utilised to guide the implementation of the circular economy and therefore of great importance to take into consideration. Several R frameworks exist in the literature, which differ in terms of both the Rs included and the meaning assigned to each one. However, these frameworks consistently share a hierarchical structure based on the principle of preferability within a circular economy context. The order of the Rs reflects their circularity value, with those positioned at the beginning representing higher circularity and those at the end indicating lower circularity (Kirchherr et al., 2017). For this research, an 11 R framework developed by Acampora et al. (2020) for circular tourism has been adapted, making it particularly suitable for the festival sector, a sub-category within the broader tourism industry.

Rs	Description
Refuse	<ul style="list-style-type: none"> - Delivering the same task and offering the same function with a radically different product - Refusing to use raw materials and natural resources - Rejecting in first place to purchase to prevent the production of waste - Reflection on the need to hold the event.
Re-servitization	<ul style="list-style-type: none"> - Deliver a service virtually instead of employing a physical product - Smarter and more intensive use of products
Reduce	<ul style="list-style-type: none"> - Reducing the use of primary energy, raw materials and natural resources - Minimizing waste production
Regenerate	<ul style="list-style-type: none"> - Restoring and protecting ecosystems - Returning biological resources to nature
Re-use	<ul style="list-style-type: none"> - Reusing products in good condition by transferring them in their original form to another user
Repair	<ul style="list-style-type: none"> - Repairing defective products to maintain their original function - Maintenance of components and parts so that products can be used longer by one and the same user.
Refurbish	<ul style="list-style-type: none"> - Renovating products by replacing malfunctioning components and parts by new ones
Remanufacture	<ul style="list-style-type: none"> - Re-processing of already used product - Creating new products with functioning parts of old products
Re-purpose	<ul style="list-style-type: none"> - Re-using a product or its part for a different purpose
Recycle	<ul style="list-style-type: none"> - Reprocessing waste materials into new products
Recover	<ul style="list-style-type: none"> - Recovering embedded energy from non-recyclable waste material where feasible

Table 1: 11R framework by Acampora et al. (2020)

3.1.2 Green Deal and circularity policies in Europe

A broader framework, called the European Green Deal, aims to make Europe the first climate-neutral continent by 2050. It encompasses a range of policies that promote sustainable growth and a circular economy while addressing climate change and resource efficiency (European Commission, 2019). By prioritizing circular principles, the European Green Deal seeks to reduce waste, encourage sustainable product design, and support industries in transitioning to eco-friendly practices. This agenda is critical in shifting away from a linear economy, where products are disposed of after minimal use, to a more sustainable, circular model.

The Circular Economy Action Plan (CEAP), adopted by the European Commission in March 2020, is a cornerstone of the European Green Deal, aiming to transition the European

Union towards a sustainable, resource-efficient, and competitive economy. One of the main tools used to achieve this goal is **Extended Producer Responsibility (EPR)**. This framework aims to make sustainable products, services, and business models the norm, emphasizing extended producer responsibility and the circular design of all products. By prioritizing reducing and reusing materials before recycling, the CEAP fosters new business models, such as renting and sharing systems, enabling companies to maintain control over their products throughout their lifecycle and enhance end-of-life recyclability (European Commission, 2019).

3.1.3 Circular Economy in The Netherlands

The Netherlands aims to have implemented a circular economy by 2050 (Ministry of Infrastructure and Water Management, 2023). To define and organise the circularity objec-

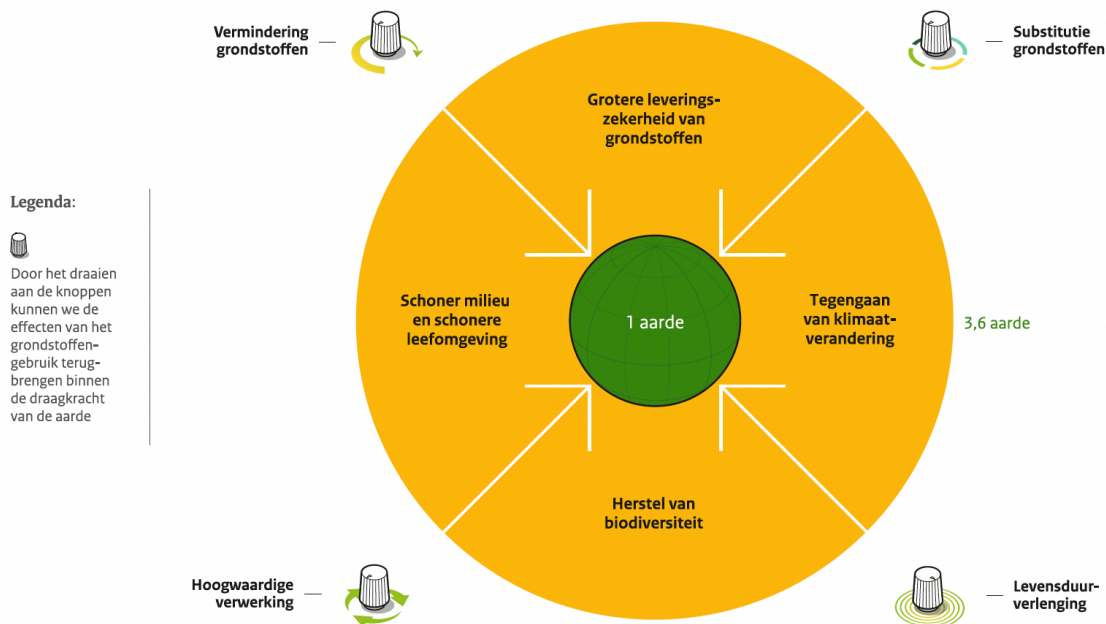


Figure 6: Framework for targets circular economy in The Netherlands (Ministry of Infrastructure and Water Management, 2023).

tives, the four primary 'levers' related to resource use are identified as such (see Figure 6):

Reduction of resource use: Using fewer (primary) resources by avoiding products, sharing them, or improving efficiency ("narrow the loop").

Substitution of resources: Replacing primary resources with secondary materials or sustainable bio-based materials applied in the highest-quality way possible, or using more widely available resources with a lower environmental impact.

Extending lifespan: Using products and components for longer and more intensively through reuse and repair, which slows the demand for new resources ("slow the loop").

High-quality processing: Closing the loop by recycling materials and resources, thereby reducing the amount of waste incinerated or landfilled and increasing the high-quality supply of secondary resources ("close the loop").

Within this framework some specific products categories have been prioritised to undergo

circular development one of which is the textile industry.

3.1.4 The growing interest in circular ecosystems

An ecosystem perspective on strategy offers significant value by emphasizing the management of multilateral dependencies (Jacobides et al., 2018) and addressing the alignment of partners as a critical strategic challenge (Adner, 2017). The concept of "ecosystems" was originally introduced by social scientist Amos Hawley, who described it as "an arrangement of mutual dependencies in a population by which the whole operates as a unit and thereby maintains a viable environmental relationship" (Hawley, 1986, p. 26). In the corporate realm, ecosystems are defined as "the alignment structure of the multilateral set of partners that need to interact in order for a focal value proposition to materialize" (Adner, 2017, p. 40). The actors within an ecosystem are typically characterized by complementarity and interdependence, which means that collaborative efforts are essential to achieve

comprehensive value creation through a systems-level architecture (Adner & Kapoor, 2010; Kapoor, 2018; Kapoor & Lee, 2013). To capture this complexity, Jacobides et al. (2018, p. 2264) described ecosystems as "a set of actors with varying degrees of multilateral, non-generic complementarities that are not fully hierarchically controlled." This definition underscores the non-hierarchical and interdependent nature of ecosystems, highlighting the dynamic relationships necessary for value creation and strategic alignment.

Theory on Circular Economy (CE) and ecosystem combined lead to the definition of a Circular Ecosystem; a network of interconnected organizations, individuals, and processes that work together to sustain a circular economy. Rather than following a traditional linear model where resources are extracted, used, and discarded, a circular ecosystem aims to close resource loops, reduce waste, and maintain materials at their highest utility and value for as long as possible. This type of ecosystem requires collaboration among multiple stakeholders, including businesses, governments, consumers, and waste management companies, to create systems where products, materials, and resources are reused, repaired, refurbished, and recycled effectively.

The concept of a circular ecosystems can be understood from two distinct perspectives: the actor-centric view, termed "ecosystem as affiliation," and the activity-centric view, known as "ecosystem as structure" (Adner, 2017). Within the context of a Circular Economy (CE), ecosystem as affiliation emphasizes the need to include all relevant stakeholders across the material flow chain, or loop, to achieve circularity. In contrast, ecosystem as structure focuses on the specific activities required from each stakeholder, highlighting the interdependent coordination necessary for tasks such as collecting materials at the

end of a product's lifecycle and reintegrating them into the circular system (Adner, 2017). This dual perspective underscores the complexity of circular ecosystems, as both the alignment of stakeholders and the coordination of their activities are essential to creating effective and sustainable circular systems. At the same time, a circular ecosystem can also be classified in local/global and intra-/cross industrial ecosystems (Pietrulla, 2022). This is dependant on the industry in which the company functions and the geographical placement of the company.

Based on literature reviews, 5 key learning points are derived which proves to be crucial elements for the existence of a circular ecosystem:

Governance model

A functioning circular ecosystem requires clear roles and responsibilities, often coordinated by an orchestrating firm to manage knowledge flow, innovation, and network stability (Parida et al., 2019). Regular touchpoints and strong social relationships between supply chain partners are essential for effective management (Bocken et al., 2016a; Leten et al., 2013; West & Wood, 2013).

Processes

Trust and success in a circular ecosystem rely on transparency and fairness. Benefits must be shared equitably, risks distributed equally, and information freely exchanged (Velter et al., 2020; Alexy et al., 2013). Stakeholders must align interests and collectively define value (Velter et al., 2020).

Clear complementarity

Ecosystems thrive when modularity or non-generic complementarities are established, enabling coordination across production while preserving stakeholder autonomy (Jacobides et al., 2018; Kapoor & Agarwal, 2017). Aligning

responsibilities across the value chain is essential, supported by operations management to balance coordination and flexibility (Leising et al., 2018; Lopes de Sousa Jabbour et al., 2019).

Customer orientation

Circular ecosystem offerings must deliver customer value, ideally exceeding that of individual firms (Adner, 2017). Targeting circularity-aware customers or raising awareness can enhance success (Tunn et al., 2019; Shih et al., 2021). Collaborative arrangements that drive customer and economic value strengthen the ecosystem's long-term viability and innovation potential (Alexy et al., 2013; Cennamo et al., 2018; Leten et al., 2013).

Feasibility, viability and desirability

When developing a sustainable business model, it is essential to balance feasibility, viability, and desirability to ensure long-term success. Feasibility ensures that circular solutions are technically and logistically practical, preventing ideas from being unrealistic or impossible to implement (Bocken et al., 2016). Viability guarantees that the model is economically sustainable, creating value for businesses while reducing resource dependence (Ellen MacArthur Foundation, 2020). Desirability focuses on meeting consumer and organizational needs, ensuring that the solution is attractive, convenient, and encourages adoption (Mont et al., 2014).

3.1.5 Conclusion

Looking back, the goal of this section was to define **why it is important for the retail sector to develop sustainable/circular business models?**

Circular models help businesses align with global and national sustainability initiatives, improve resilience, and reduce environmental impact. The circular economy offers a viable

alternative to the unsustainable linear model, as emphasized by policies like the European Green Deal and the Circular Economy Action Plan. In the Netherlands, circular policies focus on resource reduction, substitution, extended lifespan, and high-quality processing. Rental and sharing systems are particularly effective, giving companies more control over product lifecycles, aligning with the Re-use segment of the 11R framework to extend raw material use.

For retailers, circularity strengthens market position, ensures long-term profitability, and reduces reliance on virgin resources. With growing consumer demand for sustainable solutions, integrating circular practices maintains brand value and engagement. Collaboration with festival organizers, waste management firms, and policymakers is essential to building a supportive ecosystem.

To successfully transition, retail companies must balance feasibility, viability, and desirability, ensuring technical practicality, economic sustainability, and consumer adoption. This approach enables them to drive the shift toward a circular future while maintaining growth and efficiency.

3.2 Circular development within Decathlon

Section 3.2 addresses Research Question 2 (sRQ2): **What is the project's client current progress in sustainable development?**

The goal of this section is to explore the current developments concerning circularity within Decathlon. This creates a more clear understanding of the context and the exact internal capabilities and frameworks that Decathlon has to offer. This section will end with a conclusion how this relates to the learnings from section 3.1 and how Decathlon's current internal sustainable developments can be used and applied in the context of festivals.

3.2.1 Decathlon's transition plan explained

The global consumer class is expected to grow rapidly over the upcoming years. At the same time there are not enough resources on this planet to support this consumption pattern. As a response to this, and the uprise of new policies as discussed in section 3.1, Decathlon created a transition plan for the period between 2020 and 2026. This transition plan is built on three main pillars: 'developing people', 'preserving nature' and 'creating sustainable value' (Decathlon, 2023). The pillar of

'preserving nature' consists of tackling climate change problems and implementing circular economy in their day-to-day business. Decathlon divided their circular model into 3 main areas: Supply from 'economic stakeholders' (production), 'consumer demand' and 'behaviour' (buy and use) and waste management (end-of-life)' (Figure 7).

As discussed in section 3.1 this project is primarily focussed on the use and end of life of tents. Therefore, the sustainable development goals of the 'consumer demand and behaviour' and the 'waste management' are most important to this project as this gives insight into the internal motivators and capabilities of Decathlon. These areas contain circular business models which can be divided into 4 main segments:

- **Repair:** Increase the number of repairable products and offer custom repair services.
- **Buy-Back:** Offer second-hand products online and offline. This also includes a Buy-Back programme in which Decathlon customers are able to sell their products back to Decathlon in exchange for a voucher.
- **Rental:** Developing short-term rentals and monthly subscription models to meet expectations of the uprising consumption patterns.
- **Recycling:** Organising recycling channels for various types of products.

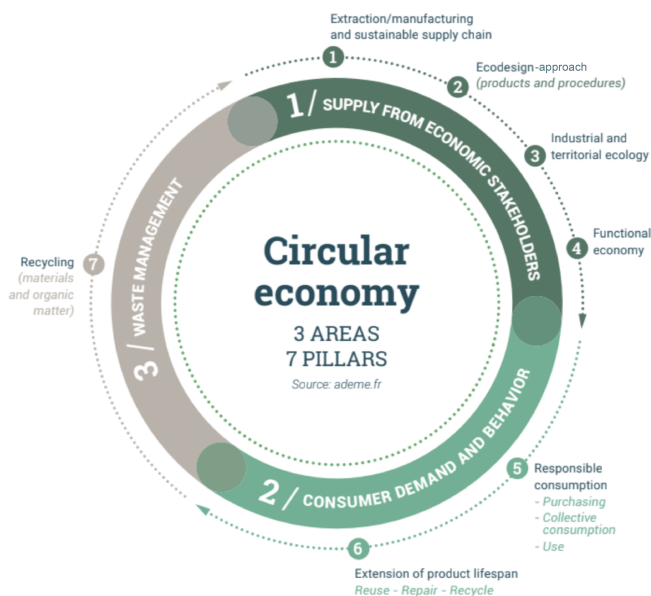


Figure 7: Decathlon's circular economy model (Decathlon, 2023)

3.2.2 Decathlon's transition plan in practice

Since the launch of Decathlon's Transition Plan, the company has taken significant steps toward integrating circular economy principles into its business model. These efforts focus on repairability, rental systems, second-hand platforms, and regulatory advocacy, aligning with both internal sustainability goals and evolving EU legislation.

Advancing Repairability and Product Longevity

Decathlon has made repairability a core priority by establishing in-house repair departments in its warehouses, where products are serviced and refurbished to extend their lifespan. Additionally, customers can purchase spare parts online, enabling them to maintain and repair their own equipment rather than replacing it. To further enhance these services, Decathlon has formed strategic partnerships with external companies, particularly in textile repairs, to reduce waste in the apparel and gear sector.

Decathlon's in-house design teams play a crucial role in these developments. Unlike many competitors, Decathlon designs its own products, allowing for quick adjustments to improve durability and repairability. This ensures a longer product lifecycle and reduces waste (Decathlon, 2023).

Exploring Rental Models

Across Europe, Decathlon is actively testing rental models in different product categories to reduce overconsumption and promote access over ownership. These rental programs help Decathlon retain control over product lifecycles, making maintenance and recycling more feasible. In 2022, revenues from rental initiatives quadrupled, demonstrating growing consumer interest (Decathlon, 2023).

Commitment to Science-Based Targets and Circular Goals

Decathlon has aligned its sustainability strategy with the Science Based Targets initiative (SBTi), committing to reduce CO₂ emissions by 90% by 2026, based on 2016 levels. Other key circular economy targets include (Decathlon, 2023):

- 30% of products in its range classified as repairable
- 100% of repairable products repaired by workshops or customers
- 100% of Decathlon's operating countries offering second-hand sports equipment

Policy Advocacy for Circularity

Decathlon actively supports the establishment of harmonized Extended Producer Responsibility (EPR) schemes, particularly in textiles and footwear, including tents. With an estimated 250,000 abandoned tents at UK festivals each year, EPR schemes are seen as a crucial mechanism for enhancing waste management and product lifecycle control. Such regulations would facilitate the scaling of rental and sharing models, ensuring products are maintained, repaired, and recycled effectively. Additionally, Decathlon calls for EU-wide end-of-waste criteria to streamline recycling and reuse efforts (Decathlon, 2023).

3.2.3 Conclusion

Looking back, the goal of this section was to answer research question 2: **What is the project's client current progress in sustainable development?**

Decathlon has taken significant strides in integrating sustainable services into its business model by focusing on repairability, second-hand sales, rentals, and recycling. Through its transition plan (2020-2026), Decathlon aims to reduce waste, extend product lifecycles, and minimize environmental impact while

aligning with circular economy principles and evolving EU regulations such as the Extended Producer Responsibility (EPR).

Among its key sustainable initiatives, repair services ensure that more products remain in use for longer, reducing unnecessary consumption. Rental models allow customers to access sports and outdoor equipment without the need for ownership, while recycling initiatives focus on managing waste and recovering valuable materials.

In the context of developing a sustainable business model for festivals, rental and sharing models stand out as particularly promising solutions. The current issue of tent abandonment at festivals demonstrates the need for alternative consumption patterns that reduce single-use behaviours. Decathlon's exploration of short-term rentals and subscription-based access models could offer a more con-

venient, cost-effective, and sustainable alternative to festival visitors who might otherwise purchase tents for one-time use.

Additionally, Extended Producer Responsibility (EPR) schemes could play a crucial role in regulating waste management and reinforcing Decathlon's ability to maintain control over its products throughout their lifecycle. This would not only support sustainability goals but also create new revenue opportunities within circular business models.

By advancing rental and sharing systems, Decathlon has the potential to shift consumer behavior at festivals toward more sustainable consumption habits, ultimately contributing to a circular economy in the outdoor and sports industry. These models offer a win-win solution: reducing environmental impact while aligning with emerging consumer preferences for access over ownership.



Atmosphere photo 3: Quechua global design and production centre. (Image provided by Decathlon)

3.3 Circular development in the festival industry

Section 3.3 addresses Research Question 3: **What type of sustainable alternatives, to minimise tent waste, are currently being offered in the festival context?**

Due to an increase in awareness on the environmental impact of festivals, many different types of sustainable alternatives pop up in this industry. The goal of this section is to explore different case examples of initiatives that help to minimize tent waste. Getting a better understanding of the exact environment and learning from previous examples will help to draw some initial conclusions on the potential innovation areas.

3.3.1 Alternative accommodations in the camping area

In addition to bringing their own tents, festival visitors are increasingly provided with alternative accommodation options, such as tent rentals. One notable innovation in this domain is Festitent, a company that offers pre-pitched tents within designated private camping areas. Festival visitors who want to use Festitent's service can either visit the festival's website, which redirects them to Festitent, or go directly to Festitent's website. Festitent offers a range of packages tailored to different comfort levels and group sizes, each including various camping essentials. The available packages vary by festival and may include tents, accessories such as chairs, tables and lanterns. This service is designed to enhance convenience for festival visitors by eliminating the need to transport and assemble their own tents, thereby saving considerable time and effort. Furthermore, it contributes to reducing the environmental footprint of festivals by mitigating tent waste. 36 major festivals in the Netherlands have already partnered with Festitent to expand their accommodation offerings and enhance the overall festival experience. Their success shows that adding convenience for festival visitors can show significant engagement (Festitent, 2025).

Prices between different packages can vary a lot. Taking a 2 person tent package (incl.



The advertisement features a photograph of a blue Festitent tent on a grassy field with two people standing next to it. A label '1 FESTITENT' points to the tent. Below the photo, a banner reads 'EASY CAMPING AVAILABLE IN DARKMODE'. The package title '2P EASY-RELAX' is prominently displayed. The list of items includes: 1 x Festi Tent for two people, 1 x lantern, and 2 x 1P airbed. Additional benefits are 'Ready when you arrive' and a 'Reserved camping spot'. The price is shown as €140 (€14/person/night) with a 'BOOK' button and '8 AVAILABLE' status.

1 FESTITENT

EASY CAMPING AVAILABLE IN DARKMODE

2P EASY-RELAX

- 1 x Festi Tent for two people
- 1 x lantern
- 2 x 1P airbed

Ready when you arrive

Reserved camping spot

€140
€14/person/night

BOOK

8 AVAILABLE

Figure 8: Festitent package example

lantern and 2 mattresses) as example, festival visitors have to pay €140,00 + €100,00 deposit (Figure 8).

Many festivals also provide premium camping options, such as cabins or pre-set group tents, as well as pre-claimed camping areas where attendees can set up their own camps. These services enhance convenience by eliminating the need for festival visitors to search for a suitable spot. While their primary purpose is to improve the festival experience, they may also have a notable impact on reducing tent waste, as they offer alternatives to single-use camping gear.

3.3.2 Decathlon's No Tent Left Behind Campaign

The No Tent Left Behind campaign was piloted in the Netherlands during the summer of 2024 by Decathlon. Quechua, Decathlon's in-house brand for camping gear, is one of the brands that is most present in this waste stream due to its affordability and big market share. The campaign was a collaboration between Decathlon and Kultlab, a prominent festival organizer in the Netherlands. The pilot was conducted at two multi-day festivals: Wildeburg and Wilde Weide.

The campaign's solution involved establishing a tent hand-in point at the festival camping grounds to recycle, repair and eventually resell camping gear as second-hand products in the store. Festival visitors were encouraged to drop off tents that had sustained damage during the event. At the hand-in point, repair experts performed on-site quality assessments to categorise the tents:

- **Repairable tents:** Sorted and prepared for further processing.
- **Non-repairable tents:** Deemed beyond salvage and discarded appropriately.

The logistics process was carefully designed. After the festivals, repairable tents were transported to a third-party partner for cleaning. Once cleaned, they were sent to

Decathlon's warehouse in Tilburg, where the company operates its repair department. Here, the tents were repaired, refurbished, and added to stock as second-life products available for purchase online and in-store.

The NTLB campaign was built upon the already present framework of the buy-back circular business model which has been introduced in section 3.2. The buy-back system allows customers to sell their used sports goods directly back to Decathlon when its still within warranty. The value given back to the customer is determined based on the status of the product. At the same time Decathlon has an in-house repair department which enables customers to get their broken products fixed against payment. The costs for repair and the residual value of the buy-back product is determined with online assessment tools. The framework to put used products back in stock in combination with Decathlon's internal repair department enabled Decathlon to create a collection point at a festival where visitors were able to hand in their tent.

While the No Tent Left Behind campaign was met with positive responses, a reflective session with the NTLB team revealed several challenges. Based on a reflective session with the NTLB team concerning their overall experience with the campaign a few conclusions could be drawn. The campaign did not really incentivise festival visitors to partake in the service in any way. This resulted in an unawareness under the festival visitors. At the same time the process was not cost efficient enough due to high salaries, cleaning costs, transport costs, etc. This resulted in not hitting a break even point. To solve this the costs need to be reduced and/or quantities of tents saved needed to go up. Based on this fact, Decathlon also indicated that they want to explore other concepts that might be more safe when it comes to financial implications.

This proves the relevance of this project. Their end goal is to create a structured business plan to explore partnerships with more big event organisations.

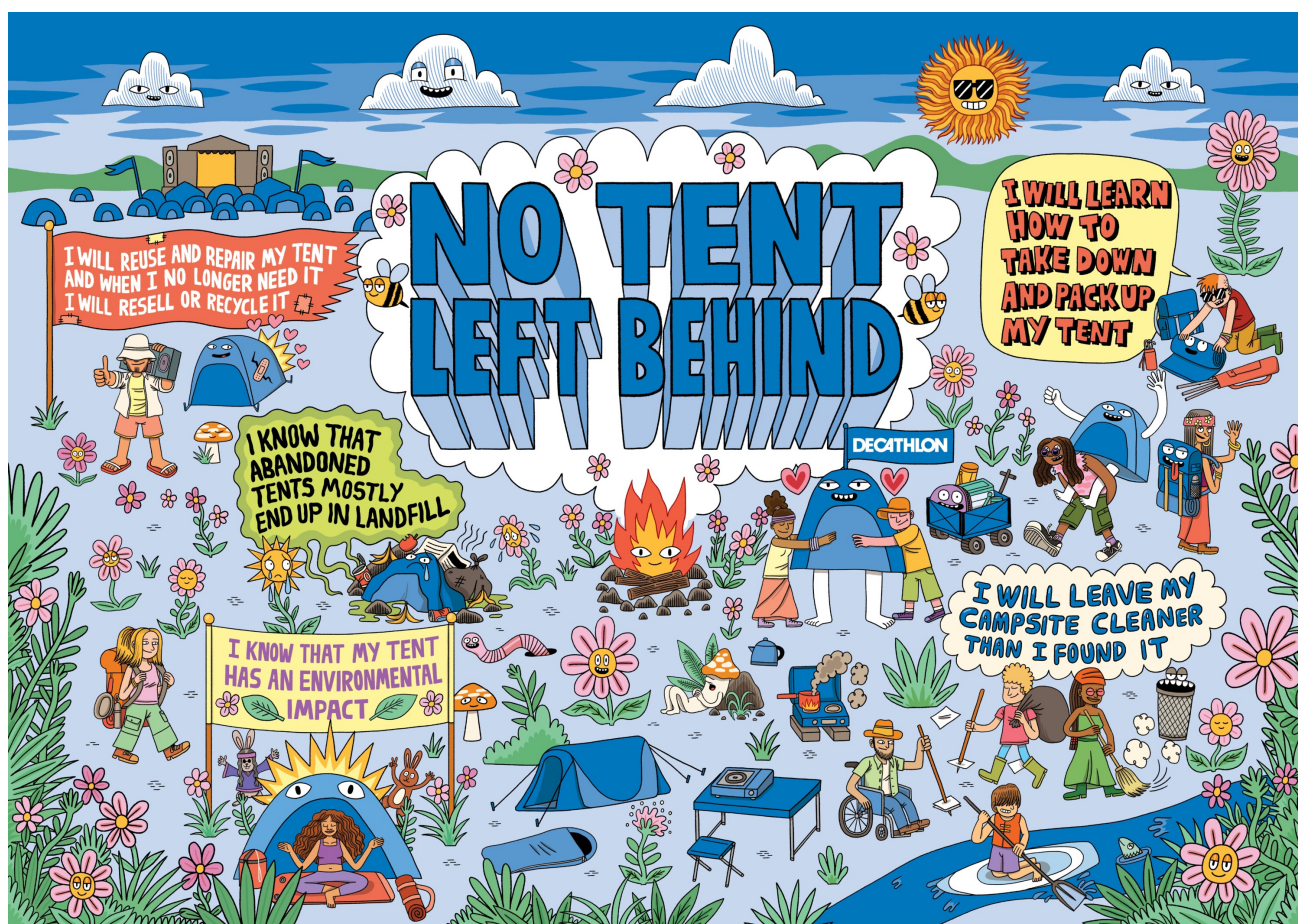
3.3.3 Conclusion

Looking back, the goal of this section was to answer research question 3: **What type of sustainable alternatives, to minimise tent waste, are currently being offered in the festival context?**

Looking at alternative accommodations, tent rental services ,such as Festitent, that uses convenience as an incentive proves to be effective and could possibly be an interesting solution space for this project. This topic however will need to be further discussed during the interview sessions in section 3.4 in order to create a better understanding on its potential. What do the festival visitors think

about the product price/quality ratio of this service? Are the festival visitors satisfied or is there maybe still space to innovate and improve?

The No Tent Left Behind campaign demonstrated Decathlon's commitment to circularity, leveraging its buy-back system and repair expertise to tackle festival tent waste. However, the pilot highlighted key challenges in financial feasibility and visitor engagement, which must be addressed to ensure long-term success. Moving forward, Decathlon is exploring more financially sustainable models to enhance its role in the festival industry's transition to circularity. The insights from this project reinforce the importance of structured partnerships with large event organizations to create scalable solutions for waste reduction and sustainable outdoor experiences.



Atmosphere photo 4: No Tent Left Behind campaign banner (photo provided by Decathlon)

3.4 Needs and barriers of festival visitors: behaviour explained

Section 3.4 addresses Research Questions 4: **What causes this unsustainable behaviour of the target group?** And research question 5: **What are the needs and barriers of the target group?**

This section aims to examine the internal behavioural processes and external factors that influence festival visitors to abandon their tents. Additionally, it seeks to identify the general needs of this target group, which will serve as design criteria for developing an effective intervention. To achieve this, a combination of literature research and qualitative interviews has been conducted. The section begins with an overview of consumer behavior theories and decision-making processes, followed by an analysis of potential external influences contributing to unsustainable behavior at festivals. These insights will then be tested through interviews, exploring both the validity of these assumptions and the specific needs of festival visitors. The methodology and findings from these interviews will be discussed, leading to a final conclusion on the key factors shaping tent abandonment and potential intervention strategies.

3.4.1 Internal decision-making processes: How does it work?

To answer question 4, it is important to understand the internal processes that take place when people in general make unsustainable decisions. Understanding the drivers of consumer behaviour enables businesses to develop solutions that promote positive behavioural change. This approach holds particular relevance in the festival industry, where environmental challenges—such as the significant waste of tents—demand innovative solutions. According to the most recent IPCC report, changes in individual behaviour could reduce CO₂ emissions by 40–70% (PBL, 2022). This statistic underscores the substantial opportunity to reduce environmental impact through targeted interventions.

Recent research from MOJO, the biggest event organisation of The Netherlands, showed that 90% of the interviewed festival visitors value sustainability (MOJO, 2024). Looking at the problem statement of this research, it becomes evident that the intentions of this target group not always align with their actions. This phenomenon is called the intention-action gap (Faries, 2016).

Several factors contribute to this gap, including immediate gratification biases, where short-term rewards overshadow long-term benefits, leading individuals to choose actions that provide immediate pleasure over those aligned with their intentions (Sridharan, 2022). It is imaginable that sustainability belongs to long term benefits and is therefore not top of mind when discarding tents after a festival.

People often make unsustainable decisions because of how our brains process information. According to Kahneman's theory, we have two ways of thinking. System 1 is fast, instinctive, and effortless—it helps us make quick decisions based on habit and intuition. System 2, on the other hand, is slower, more analytical, and requires effort. While System 2 allows us to carefully weigh options and make rational choices, most of our daily decisions happen in System 1 mode, where we rely on shortcuts and familiar patterns. This means that when it comes to sustainability, people often default to convenience rather than consciously considering the long-term impact of their choices (Kahneman, 2011).

3.4.2 External factors & Contextual cues: Why does it happen?

Festival attendees often abandon tents due to several external factors and contextual cues. The affordability and disposability of modern tents make them easy to leave behind, as their low cost diminishes perceived value. Additionally, the physical effort required to dismantle, pack, and transport tents after days of festivities can deter attendees from taking them home. Misconceptions also play a role; some believe that left-behind tents will be recycled by the festival organisation, reducing the guilt associated with abandonment. The festival environment itself, often littered and chaotic by the event's end, can further normalize the act of leaving tents behind, as individuals perceive it as common behavior. Peer influence is significant; if a majority leaves their tents, others are likely to follow suit. Additionally, inadequate facilities for waste disposal or tent recycling can discourage responsible behavior, making abandonment the more convenient option. These factors collectively contribute to the prevalent issue of tent abandonment at festivals.

To answer research question 5 (What are the needs and barriers of the target group?) a series of interviews has been performed with the target group. The method and results are discussed in the following section.

3.4.3 Interview method

For this research 8 interviews have been performed with festival visitors following a qualitative research method. Although multiple day festivals are becoming very popular, there are only a hand full of case studies about circular development in this section of the event industry. In the context of tents at multi-day festivals, initiatives such as rental and repair are emerging within the industry. However, there has been little to no research conducted on the actual needs of festival visitors. Do-

ing qualitative interviews with the target group can lead to a better understanding and possible improvement on the current sustainable solutions that are being offered. Offering better and more compelling solutions will most likely directly affect the overall carbon footprint of the event industry which proves the importance of this research. The context of festivals can be perceived as a dynamic environment looking at the wide variety of festival types and their accompanied experiences. For this reason taking a qualitative approach is most suited when developing interventions in this dynamic environment (Creswell, 2013).

The participants' ages ranged from 23 to 57 to ensure a diverse representation of perspectives and experiences. This approach aimed to enhance the robustness of the findings by ensuring that the data reflects varied demographic contexts and reduces the potential for age-related bias in the insights generated. While the small sample size limits generalisability, the diversity in participant demographics strengthens the validity of the themes identified in the analysis. The goal of this interview is to explore the lifecycle of using tents at festivals (e.g., setup, use, tear-down, disposal) and gather information on current behaviour and experiences of the target group and identify opportunities and barriers to improve the user experience and encourage sustainable behaviour. After that some more specific questions were asked about repair services and alternative accommodation options to create more in-depth knowledge on the target group perspectives on these subjects. The exact questions and format of the interview that was used can be found in Appendix A.

In this study, the interviews were recorded and transcribed verbatim to ensure the accuracy and completeness of the data. Following transcription, an inductive thematic analysis

was conducted, guided by established qualitative research practices (Graneheim & Lundman, 2004; Pratt, 2009). 3.4.4 Interview results

first all relevant quotes of the participants were transcribed into statement cards. These Statement cards were then clustered and categorised. These clustered statement cards can be found back in Appendix B. The following broader categories were used to cluster:

1. Festival preparations
2. Transportation
3. Community building
4. Repair and maintenance (general)
5. Repair and maintenance (tents)
6. Setting up camp
7. Breaking down camp
8. Opinion on alternative accommodation
9. Comfort
10. Opinion on Decathlon/Quechua
11. Type of tent used
12. Cleaning environment

Once all the statement cards were placed into these broader categories, a smaller sub set of themes were identified:

1. Costs
2. Comfort levels

3. Fun festival experiences and community building
4. Tent rental
5. Tent repair
6. The role of Decathlon/Quechua

Next, all statement cards from the broader categories were organised under these themes to identify trends and re-occurring themes. These factors were used as a criterion to evaluate the comprehensiveness of the data. This systematic process allowed for a structured exploration of the data, ensuring a thorough understanding of participants' perspectives while maintaining transparency and rigor in the analysis.

3.4.4 Interview results

Analysing the statement cards within these themes, A set of re-occurring statements were found which can be found in table 2 on the next page. During the interviews all different phases of the customer journey were discussed. After every phase the participants were asked to give the phase a rating based on their satisfaction and mood. Figure 9 shows a satisfaction trend based on the average rating of the participants.

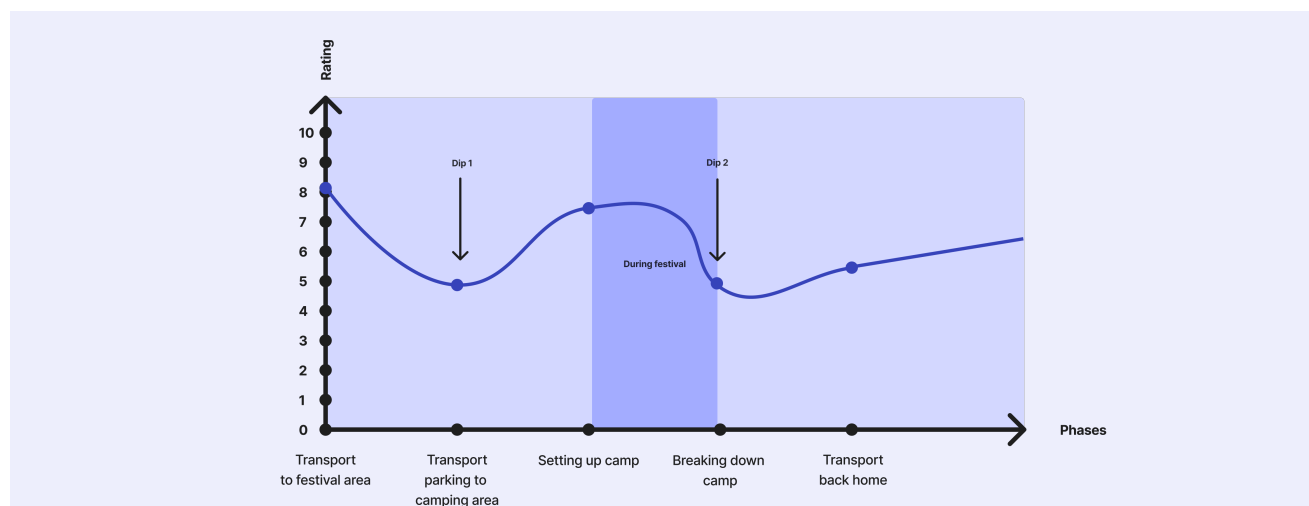


Figure 9: Satisfaction trend during product/user interaction

Themes	Re-occurring statements	Number of interviewees mentioned it
Costs		
	Alternative accommodations are too expensive	7/8
	Would rent a tent if more affordable	4/8
Comfort levels		
	Enjoy the ride to the festival	7/8
	Discomfort between arrival and setting up camp	7/8
	Prefer to share a tent	8/8
Fun festival experience and community building		
	Enjoy setting up camp	8/8
	Connecting with people at camping area plays essential role in festival experience	6/8
Tent rental		
	Currently prefer normal accommodation over tent rental services	8/8
	Current rental services are low quality and straight lined/fixated	4/8
Tent repair		
	Not familiar with tent repair service	8/8
	Experience with tent damage in the past	5/8
The role of Decathlon/Quechua		
	Decathlon is a trustworthy brand	7/8
	Satisfied with price/quality tent	4/8

Table 2: Re-occurring statements during interview sessions

3.4.5 Conclusions

Looking back, the goal of this section was to answer research question 4: **What causes this unsustainable behaviour of the target group?** and research question 5: **What are the needs and barriers of the target group?**

As shown in section 3.4.2, unsustainable behaviour by the target group is highly influenced by external factors and contextual cues such as lack of alternatives, lack of sense of ownership or post festival fatigue.

The interview results reveal several key insights that highlight potential opportunities for inno-

vation in Decathlon's approach to sustainable festival services. A recurring theme is the need to increase convenience and comfort for festival visitors while ensuring that any new service does not compromise the fun and community-building aspects that are central to the festival experience.

Decathlon, and particularly its Quechua brand, is already recognized as a go-to choice for festival visitors, which presents a strong foundation for developing a service that aligns with existing expectations for comfort, quality, and convenience.

Affordability emerged as a critical factor influencing whether participants would engage with a new service. While tent rental services currently exist, participants expressed concerns about high costs and a lack of personalization, particularly when tents are pre-set in uniform rows, which detracts from the festival atmosphere (Figure 10). Tent repair services at festivals, on the other hand, remain largely unexplored, yet interviewees showed interest in such an option. Many festival visitors do not repair their tents simply because they lack the necessary knowledge, tools, or expertise, leading them to abandon them instead.

The correlation between these themes suggests that both rental and repair services hold potential for encouraging more sustainable festival behavior. For tent rental to be successful, it must balance cost, personalization, and the social aspect of festivals, while repair services need to be convenient, accessible, and easy to use. Additionally, Decathlon's strong brand image enhances the likelihood of adoption, as it already represents trust, quality, and ease of

use—key attributes that can facilitate the transition toward more circular festival solutions.

Looking specifically at the satisfaction trend in figure 9 it becomes visually clear that there is a mood dip right before and after the event. The primary reason for these dips are that visitors have to carry around a lot of heavy stuff to and from the camping terrain. This in combination with the (often) hot weather and long queues to enter the festival terrain makes it a generally negative experience. These dips might be interesting and could be used in the advantage of this project to come up with a solution that is a sustainable alternative to the issue and simultaneously flatlines this curve of dissatisfaction.



Figure 10: Example rental tents at festivals.



Atmosphere photo 5: Festival visitor at Leeds Festival. (Source: DailyMail, 2018)

4. Defining the design goal



Source: The girl outdoors, 2016

4. Defining the design goal

This chapter will discuss how all the conclusions of the previous chapter come together to formulate a specific design goal. This specific design goal will be used to steer the ideation phase in Chapter 5.

First of all, looking at the context, it becomes evident that the initial problem is of **international scale** and results in **massive pollution**. It can be concluded that Decathlon and organisations in the event industry should work together in order to create a **circular ecosystem** which meets the requirements of new EU policies, such as the **CEAP and EPR**, concerning the development of a circular economy. **Renting and sharing systems are particularly effective** because they allow companies to maintain greater control over the lifecycle of their products. This aligns with the Re-use segment of the 11R framework as presented in section 3.1.

Looking at the **circular development plans of The Netherlands**, this ties in with the lever that aims to **extend the lifespan of products** with the ultimate goal to slow down the loop. The growing need and customer interest in such services also proves the importance for Decathlon to experiment to make their business future proof.

Decathlon's 2020–2026 transition plan prioritizes these policies and sets goals to transition towards sustainable business models. The company is already actively **experimenting with short-term rental systems and monthly subscription models**, laying the foundation to facilitate shared alternative accommodation in the festival industry. Their warehouses with **repair departments** gives Decathlon the resources to handle logistics, store rental products and repair and resell the products as second-hand in stores. Their unique **in-house design departments** will enable them to easily

customise products to make them rental proof in the future.

Looking specifically at the festival industry, more and more sustainable services are being deployed. This shows that this industry and their target group are also showing increased interest to change the standard. Decathlon has experimented with a first pilot of the **No Tent Left Behind Campaign** in this context, putting full focus on repair and resell. After this initial successful pilot, they **showed increased interest to experiment with other sustainable alternatives**.

Secondly, looking at the target group, it is important to understand that festival visitors are not deliberately polluting the environment. In reality there are multiple contextual cues that could affect their decision making like a **lack of convenient sustainable alternatives, a lack of ownership and post-festival fatigue**.

Interviews with the target group showed that there is a **need for convenience and comfort** when festival visitors interact with their tent. This however, **should not interfere with the free and fun festival experience and community building aspect** as this plays an essential role in the satisfaction levels of the festival visitors. Equally, they **showed interest in alternative accommodations**. The current existing services however are either **to expensive or are to straight lined and fixated** which interferes with the earlier mentioned importance of a fun festival experience. On top of this, the interview showed **high satisfaction** levels from people who owned a **Quechua tent**. This insinuates that Decathlon has a

positive brand image in the context of festivals which can be used in their advantage when offering alternative accommodation options.

The key objective of this project was:

Explore the context and define the needs of the target group in order to develop a sustainable alternative solution that reduces tent waste at festivals.

The context has been explored and the needs and barriers of festival visitors have been identified. This has lead to a clear direction for the ideation phase. The design goal of this project is:

'Prevent further development of tent waste by creating a **5 year implementation plan** for **alternative shared accommodation** at festi-

vals that **increases convenience and comfort** for festival visitors while **maintaining the fun festival experience.'**

This goal adheres to the SMART framework (Doran, 1981):

- **Specific:** Alternative shared accommodation.
- **Measurable:** Increase convenience and comfort. Maintain fun festival experience.
- **Achievable:** An implementation plan.
- **Relevant:** Prevent further development of tent waste
- **Timely:** 5 years

Chapter 5 will use this specific design goal as a direction in which many different ideas and concepts will be explored.



Atmosphere photo 6: Comfortable camping example. Provided by Decathlon.

5. Ideation



Source: The girl outdoors, 2016

2 SECONDS 3

5. Ideation

This chapter will focus on the ideation phase using the following specific design goal:

‘Prevent further development of tent waste by creating a **5 year implementation plan** for **alternative shared accommodation** at festivals that **increases convenience and comfort** for festival visitors while **maintaining the fun festival experience.**’ This ideation phase consists out of 2 creative sessions. The results of the first creative session (H2) were used as a source of inspiration for the second creative session (ViP-method). The final results were then analyzed using the vAL-Ue Method and 2 C-box analysis. 3 promising concepts were then clustered into a final direction. During a final co-creative session with the client, the direction was presented and a future vision was created.

5.1 Creative session 1: Exploring all possibilities



Figure 11: Creative session 1

In the first creative session, a list of ‘How-To’ questions was compiled. These questions were derived from the specific design goal to ideate on different aspects of the design challenge. The questions were presented to a group of 4 fellow students. They were each given 5 minutes to write down as many ideas as possible for every “how to” question presented. In total the session took around 30 minutes. The goal of this creative session was to put quantity over quality. The results of this session were then clustered into 3 main design features: Emotional, practical and fun. These results can be found back in Appendix C.

The following ‘How-To’ questions were presented during the first creative session:

1. How to make rental more appealing than buying?
2. How to increase comfort and convenience for festival visitors?
3. How to build a community?
4. How to increase the bond between a user and product (that is rented)?

5.2 Creative session 2: From ideas to concepts

During the second creative session the designing phase of the ViP-method was used to ideate on possible future concepts. The ViP-method is a context-driven and interaction-centred approach that offers a way to come up with products or services that give people meaning or value by shaping a future vision of the context in which the new product/service



Figure 12: Creative session 2

functions (Hekkert & Van Dijk, 2011). The goal of this creative session was to put quality over quantity and generate concepts that are well thought out and emphasise on many different design aspects. 3 new students were presented a statement of the future context, the specific target as stated in Chapter 4, the 3 important design elements (Comfort, Convenience and Fun) and an analogy that resembles the desired interaction. This design brief can be found back in Appendix D. They were each given 20 minutes to come up with 2 concepts. To stimulate their creativity in the process, the clustered results of the first creative session were handed to them as a stimulus. After the 20 minutes each participant had to pick their favourite concept and present it to the rest of the group. After every presentation, a discussion was opened up to reflect on the concepts. The following design brief was presented to the design students:

The second creative session resulted into a list of 7 promising concepts. All the individual concepts were individually analysed by formulating the advantages and limitations using the vALUe method. The direct results from the session, including the advantages and limitations of the concepts can be found back in Appendix D and E. Below a quick textual explainer of all the concepts:

- **Concept 1:** Custom modular fresh and black Quechua festival tent system rental
- **Concept 2:** Giant pop up partytent rental as marketing stunt
- **Concept 3:** Private and communal area rental space (shared glamping)
- **Concept 4:** Pick up and drop off rental point Decathlon camping gear.
- **Concept 5:** Tents that indicate your mood (private vs outgoing) with colour
- **Concept 6:** Big pre set up partytents with sport themes to unite like-minded people (eg. yoga tent, fitness tent, etc.)
- **Concept 7:** pre-set up Big rental tents for 10+ people groups that strives to give maximum comfort with all senses (the premium fresh and black partytent) (eg. noise cancelling, air conditioning, electricity, fridge, etc.) – based on japanese glamping

5.3 Picking a concept

Once having a clear overview of the pros and cons, all concepts were put into a **first C-box** to rank them based on their feasibility and novelty score (Delft Design Guide, 2013). This is shown in Figure 13.

The top-right quadrant proves to be the most fruitful space and therefore the other concepts outside of this quadrant can be thrown away. The concepts that survived were put in a **second C-box** to rank them based on the initial design elements which are convenience, comfort and fun. This is shown in Figure 14.

5.4 Conclusion

The final concept should be feasible for Decathlon, live up to the design elements and should help to minimise generated tent waste by festival visitors. This means that the final concept ideally is on the far right of C-box 1 and is more towards the middle of C-box 2. Based on this idea, concept 4 proves to be the most interesting solution. On the long term it is possible for Decathlon to move a bit more towards the extremes of comfort, convenience and fun. This is why concept 3, 6 and 7 are included in the strategic roadmap as possible extra future developments of the concept. This strategic roadmap will be presented and discussed in Chapter 6.

Important to note is that the design element 'affordability' is deliberately not taken into account during the creative sessions as this can lead to killing good ideas in the early design stages. This element however will be

brought back up during the final validation phase of the project in Chapter 7.

To check whether concept 4 was also desired by the client, a co-creative session was organized to evaluate the direction. The conclusion was made that concept 4 was indeed the best starting point for further development. Keeping concepts 3, 6 and 7 in mind for future development, the following future vision was co-created as a point on the horizon:

Future vision

'In 2030, Decathlon will have successfully implemented a feasible tent rental system at multiple festivals in Europe which provides convenience, comfort and fun for festival visitors. They improve their service over time and experiment with different forms of alternative accommodation while exploring the boundaries of comfort and fun. This effectively resulted in the minimisation of tent waste and stimulates both Decathlon and the festival organisations in their transition towards circularity while maintaining their position as market leader in the outdoor camping gear segment.'

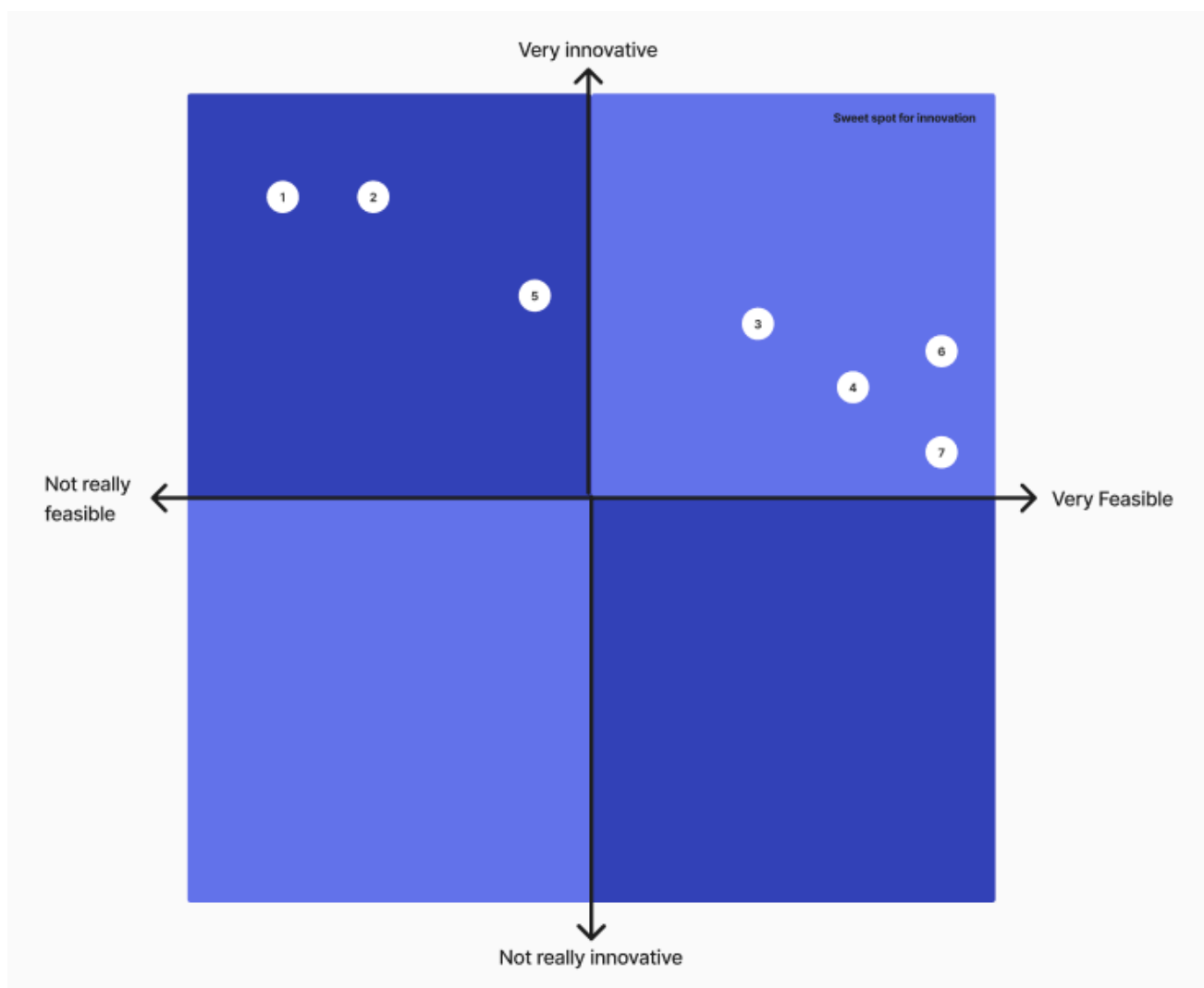


Figure 13: C-box 1 (Novelty vs Feasibility)

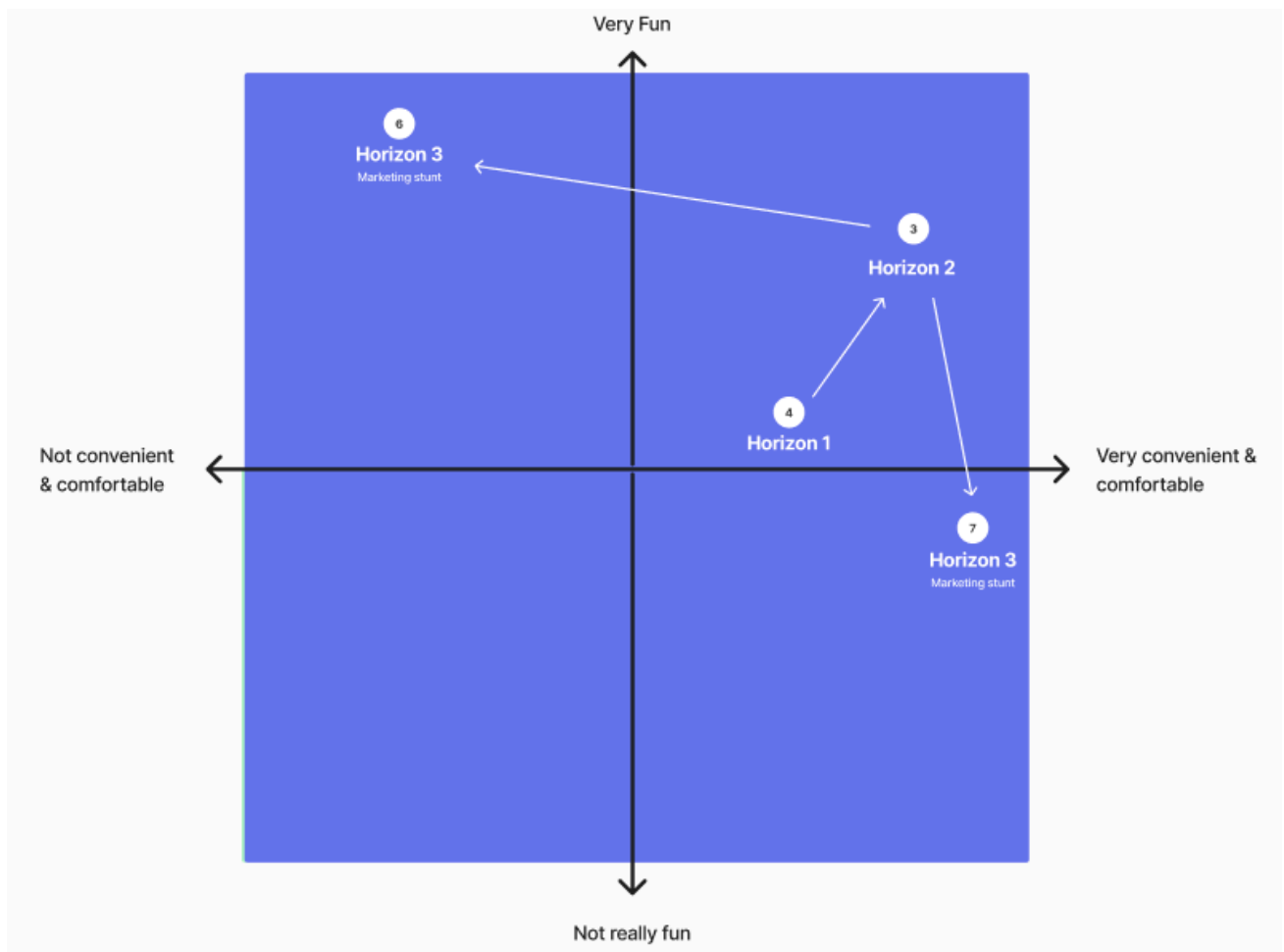


Figure 14: C-box 2 (Comfort and Convenience vs Fun)

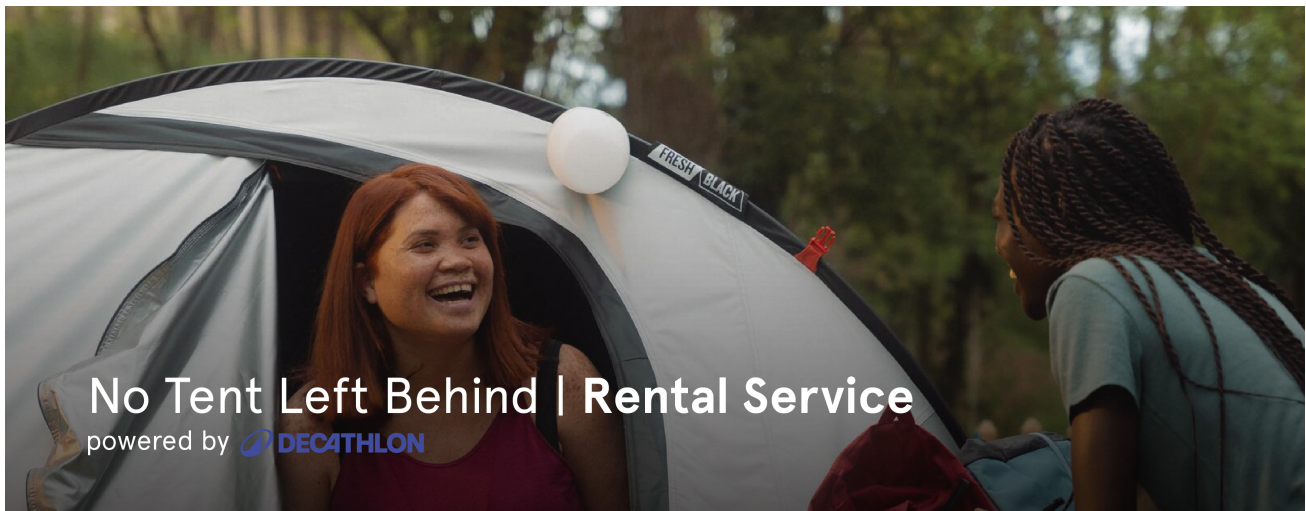
6.Solution



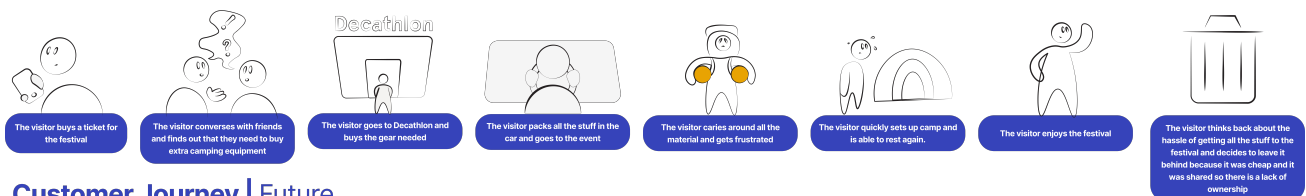
Figure 15: Visuals No Tent Left Behind – Rental Service

6.Solution

This chapter revisits the **initial problem** and introduces the **proposed solution**. It then highlights the **added value** for the client before presenting an **execution strategy** that includes a **strategic roadmap**, **service blueprint**, and **business case** to support effective implementation. As detailed in section 6.2, the solution represents Horizon 1 of the strategic roadmap. The service blueprint and business case are also based on the first horizon and give a more in-depth view on the logistical process and the financial viability of the solution.



Customer Journey | Present



Customer Journey | Future



Figure 16 & 17: present and future customer journey

6.1 Re-introduction to initial problem: Single-use camping gear

The current interaction between festival visitors and their camping gear is not well-aligned. As illustrated in Figure 16, once attendees purchase their festival tickets, they become solely responsible for arranging their own accommodation which can be stressful and can lead to impulsive buying of new products. After gathering all their equipment, fes-

tival visitors often face inconvenience and discomfort when transporting their camping gear, as the process can be physically demanding, frustrating, and exhausting.

Additionally, festival visitors frequently share camping equipment, including tents, chairs, and tables, which reduces their sense of personal ownership over these items. As a result, many attendees view their gear as disposable,

contributing to the widespread practice of purchasing low-cost, single-use products and abandoning them at the festival site. This places the burden of waste management on festival organizers.

What many attendees fail to realize is that these discarded items—especially tents—cannot be recycled due to their complex material composition. Consequently, most of this waste ends up in landfills, exacerbating environmental challenges.

6.2 Introducing the solution: Camping gear rental

As shown in Figure 18 on the next page, the concept intervenes at the very beginning of the customer journey of the festival visitor. During the ticket check-out the visitors are offered the opportunity to directly select and rent extra camping equipment that they need for the event (touchpoint 1). Decathlon takes responsibility of the transportation which increases the comfort and convenience for the visitor. Once the visitor arrives at the festival, they can easily scan their order code and pick up their rented camping gear (touchpoint 2). After the event they hand the rented equipment back in at the drop off point. This easy interaction removes possible frustration and leaves more space to enjoy the camping experience with your friends.

Introducing a rental service at festival campsites enables Decathlon to regain responsibility on the end-of-life of their camping gear segment. Being able to maintain, repair and wash the equipment after every use, could potentially have a massive effect on the footprint of Decathlon when implemented on international scale.

6.3 Value proposition: what does this mean for all stakeholders involved?

The proposed concept delivers strategic, financial, and sustainability benefits to Decathlon and its partners, creating value across multiple dimensions.

6.3.1 Business Benefits

By introducing a rental-based model, Decathlon strengthens its brand visibility and positions itself as a leader in the circular economy. This initiative aligns with sustainability goals while expanding revenue streams—allowing tents to be rented multiple times before being resold as second-life products. Additionally, testing rental services in an experimental setting provides valuable insights into customer behavior and operational feasibility. The model also enhances customer engagement, fostering long-term relationships with festival visitors who seek sustainable alternatives.

6.3.2 Sustainability Impact

The concept directly contributes to waste reduction by minimizing abandoned tents at festivals. By promoting reuse over single-use consumption, the initiative reduces CO₂ emissions associated with manufacturing and disposal, reinforcing Decathlon's commitment to environmental responsibility.

6.3.3 Enhanced Customer Experience

The rental service offers festival visitors a hassle-free camping experience, eliminating the need to carry and dispose of tents post-event. By providing high-quality, comfortable tents, the service enhances fun, convenience, and comfort during festivals. Additionally, it is a cost-effective alternative to purchasing a tent for one-time use, with the added convenience of easy online booking and on-site pickup. Enabling visitors to set up their own camp should make the overall experience more fun and customisable instead of straight

Looking for a **Hassle-free** festival experience this year? **Start renting!**

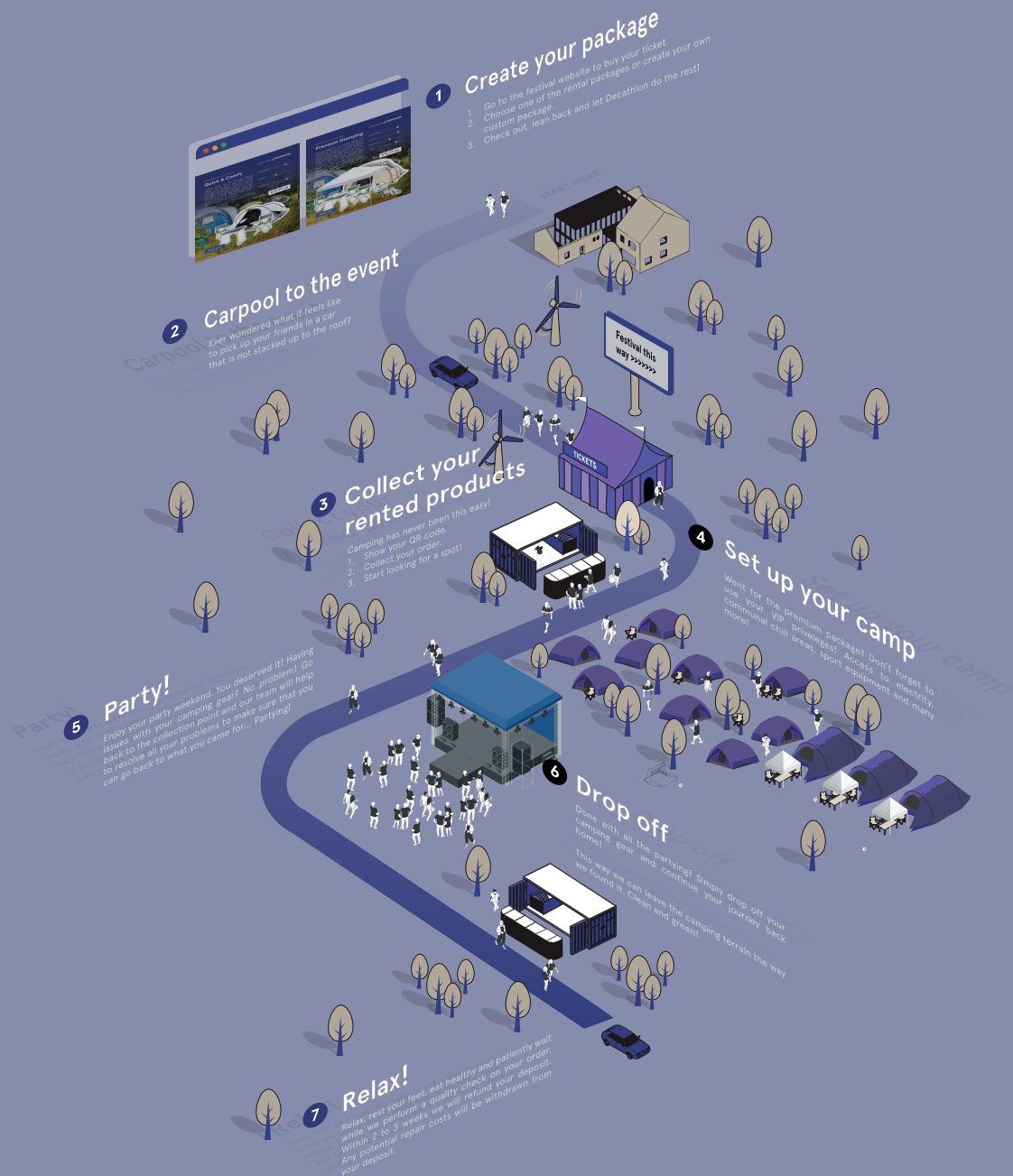


Figure 18: Detailed customer journey visual of concept

lined and fixated which were perceived as important factors by the target group.

6.3.4 Benefits for Festival Organizers

For festival organizers, the concept provides a practical solution to on-site waste management, significantly reducing cleanup costs associated with abandoned tents. Moreover, it enhances the sustainability credentials of the event, aligning with growing environmental expectations from both attendees and regulatory bodies. By partnering with Decathlon, festivals can expand their service offerings, providing an easy, reliable camping solution that attracts environmentally conscious attendees.

6.4 Service Blueprint: a visual of front-end and back-end logistics

Renting camping gear is seamlessly integrated in the ticket check-out system of festival organisations, making it easy to add your specific needs to your check-out card. All orders will be directly communicated to the logistical warehouse of Decathlon where they prepare and pack the orders. All orders can easily be picked up and dropped off at a central collection point at the camping area. This easy and accessible collection point increases the convenience of the visitors while maintaining the fun festival experience of setting up your own camp. A service blueprint (Figure 19) was made to further explain this logistical process and show all actions and interactions between the user, platform and employees that take part in this service. A service blueprint is a detailed visual representation of a service process that outlines the interactions between customers, employees, and systems. It helps businesses analyze, design, and improve service experiences by mapping out key touchpoints, processes, and back-end operations (Bitner, Ostrom, and Morgan, 2008). The customer journey within the service blueprint is based on an assumed scenario that the

customer in question is interested in renting camping gear during the checkout of a festival ticket. The service blueprint underwent many iterations based on feedback from many different stakeholders such as a project manager, warehouse employee, circular centre leader, repair leader and stock manager.

Reading guide service blueprint

1. Evidence: The physical space in which the interaction takes place.
2. Customer journey: The actions taken from a potential customer.
3. Platform actions: The front-end actions of the platform (festival website).
4. Employee actions: The front-end actions taken from the Decathlon employees at the festival.
5. Technology: The technology needed behind the actions.
6. Logistical process: The physical space in which the back end processes take place.
7. Platform actions (2): The back-end actions of the rental service.
8. Employee actions (2): The back-end actions of warehouse employees.

6.5 Strategic roadmap: A multiple year implementation plan (2025 – 2030)

Based on the future vision as presented in Chapter 5, a strategic roadmap was created (Figure 20) which is a visual representation that outlines an organization's strategic goals and the key steps or milestones required to achieve them over a specified time frame. It serves as a bridge between high-level strategy and actionable implementation, ensuring that all stakeholders are aligned toward common objectives (Planview, 2023). The strategic roadmap has 3 horizons which consists of a **value proposition, the visualised Product Service System (PSS), its main features, resources and capabilities and its key stakeholders and partnerships**. Each horizon is carefully put together through conversations with key stakeholders looking at the feasibility, viability and desirability of the horizons. On the next pages the key features of each horizon will be further explained in detail.

Service Blueprint | No Tent Left Behind Rental Service

Scenario

A festival visitor who doesn't own a tent or party tent plans to buy a festival ticket.

After purchasing the ticket, they will likely visit an outdoor store to buy a tent or party tent.

tent. The intervention occurs at the moment of ticket purchase, introducing them to

the No Tent Left Behind rental service as an alternative to buying a new tent.

Target group

Festival visitors that do not (yet) own a tent and/or are looking for a more convenient

and comfortable camping experience.

and comfortable camping experience.

the No Tent Left Behind rental service as an alternative to buying a new tent.

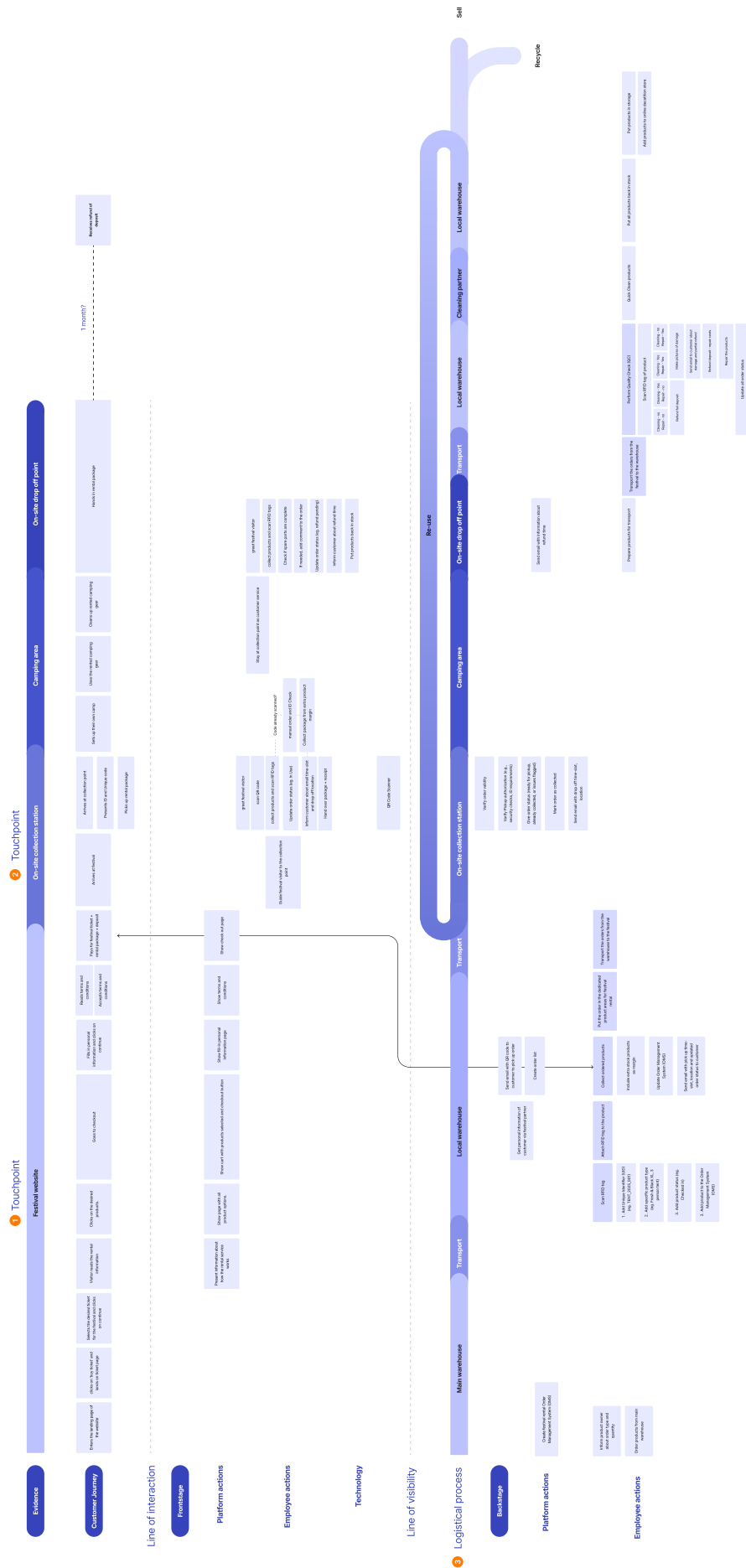


Figure 19: Service Blueprint visual

Figure 20: Strategic Roadmap Visual

Horizon 1: Laying the infrastructure

Decathlon launches its first Classic Rental service at two festivals in the Netherlands, offering a convenient rental service for three essential camping products. Festival visitors can easily book their gear during ticket checkout and collect it hassle-free at the on-site Pick-Up Point. This streamlined process enhances the festival experience while establishing a strong logistical foundation for successful partnerships with festival organizers.

Classic rental Service

The first horizon is all about creating a strong foundation and piloting the classic rental system to validate if the concept is feasible, viable and desirable for all stakeholders involved. This includes the target group, the festival organisation and all internal stakeholders at Decathlon such as warehouse employees, project managers, supervisors and volunteers. At this point, the primary focus of the service is to offer convenience for the target group. In this case, this is achieved by taking responsibility of the transportation and cleaning of the camping gear. This way, festival visitors do not have to go through all the hassle of carrying around their own stuff from their homes to the camping area and clean it afterwards. Decathlon could start offering a first set of basic affordable products that already gain a lot customer traction in their current retail model and are often used in the context of festivals. Think of products such as the 3 person Quechua Fresh & Black pop-up tent, the foldable chairs, tables and party tents. These products could for instance be offered separate or as a package deal (Figure 21).

Ticket check-out integration

The weeks before the pilot, Decathlon will have to partner up with the festival organisation to make sure that the rental service is seamlessly integrated in the ticket checkout platform of the festival (Figure 22). During this period both parties will also come to an agreement on the type and amount of rental

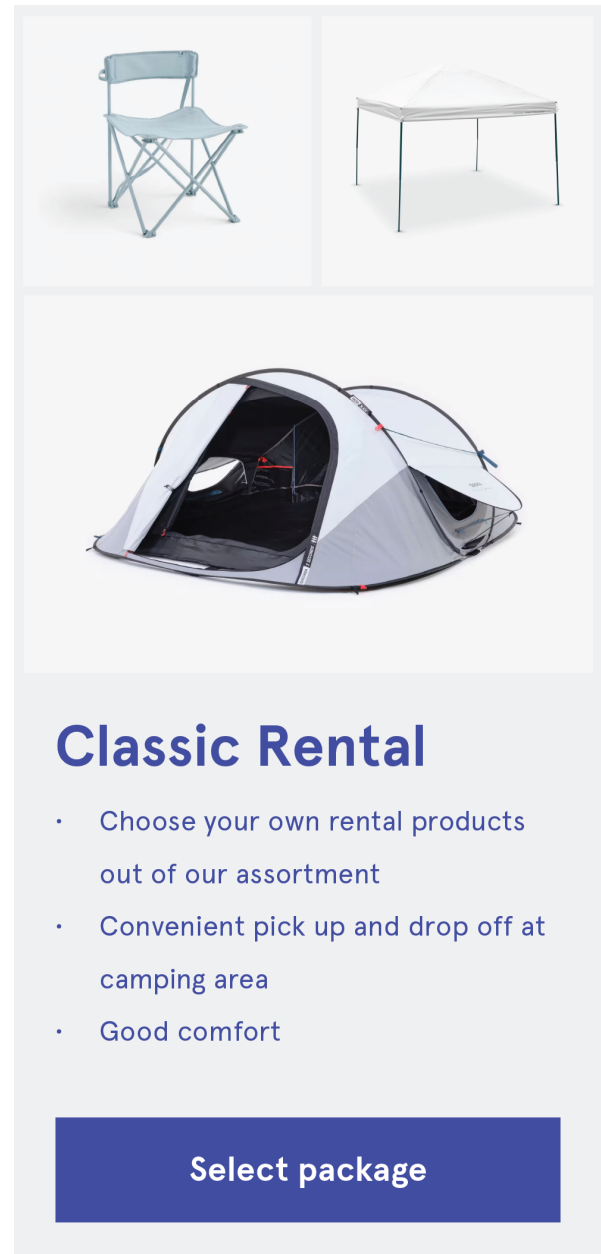


Figure 21: Classic rental service visual

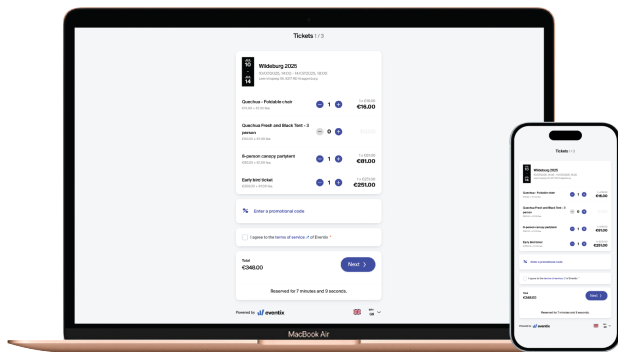


Figure 22: Mock up example of ticket check-out integration

products that Decathlon have to facilitate during the event. These products will be made available in the check out platform and can directly be added to the cart when buying a ticket to the event. The customers will be asked to pay a certain rental price and a deposit in case the products get damaged during the event. Before the check out, customers will be informed about the terms and conditions too the rental model to make sure they are will informed. Once the order is paid, the customer will receive an email with a QR code. This code can be scanned at the rental pick up/drop off point to claim and hand in the order before and after use.

Back-end logistics

To make this seamless experience possible for the visitor, a well designed logistical process needs to be created. After the event organisation and Decathlon come to an agreement on the product offering, the project manager will order the products from the main warehouse after which they will get delivered to the warehouse in Tilburg where the warehouse employees will prepare them for rental. During these preparations custom hard-plastic RFID tags are added to the products to easily scan and update the order status of the products. After tagging and linking all the products to the online Order Management System (OMS), the ordered products are put

on pallets, making them ready for transport to the festival.

Pick-Up and Drop-Off point

Figure 23 is a conceptual representation of how the pick-up and drop-off point could look. The pick up and drop off point on the festival will be hosted by one project manager, a team of employees and volunteers. One of the volunteers scans the QR code of the customer. The ordered products pop up on the screen and another volunteer collects all the products from the storage behind the stand and puts them together on the side. Another volunteer hands over de order and finishes the order. The order status changes and the unique RFID tag code automatically gets linked to the right customer in the system. This makes it possible to track which customer uses which product. This way po-



Figure 23: Concept drawing of the Pick-Up and Drop-Off point

tential extra costs due to maintenance, cleaning or repair can immediately be withdrawn from the customers deposit.

Horizon 2: Expand the offering

Decathlon enhances festival camping with its Classic and Premium Rental services. The Classic Rental provides a wide range of high-quality camping gear, while the Premium Rental offers added comfort, convenience, and exclusive facilities in a private camping area. By redesigning products for durability and easy maintenance, Decathlon streamlines their logistical process. Their service is already available at 5+ festivals in the Netherlands, making sustainable and hassle-free camping accessible to all.

Premium Glamping Rental

If the classic rental system gains traction, Decathlon will expand their offering by adding a premium rental option (Figure 24). Within this premium rental option the boundaries of comfort and fun will be explored. Visitors who pick the premium rental option will still be able to create their own premium rental package with products that offer increased comfort such as more spacious tents, a cool-box, camping lights or hammocks. Visitors with the premium package have access to extra communal facilities such as sport equipment, games, kitchen utensils and electricity to charge your phone. These extra's should enable festival visitors to increase the fun and comfort of their overall camping experience by adding community building activities such as creating chill areas, playing games/sports and prepare food together.

Pre-pitched camping area

Instead of setting up and breaking down your own camp, the premium glamping rental is all about maximum convenience and comfort. All premium orders will be pre-pitched on a private camping area so that you can immediately sit down and start enjoying the event. After the event visitors only have to check out and Decathlon will clean up the camp.

Optimized product quality

Current Decathlon products are designed for retail and not for heavy use rental during festivals. This is why it is important for Decathlon



Premium Rental

- Choose your own private rental products
- pre-claimed camping spot
- Access to communal facilities (eg. gaspit, sport equipment, etc.)
- Convenient pick up and drop off at camping area
- Great comfort!

Select package

powered by  DECATHLON

Figure 24: Premium rental service visual

to rethink the camping gear products that have proven to be most interesting for festival rental in the first horizon. The in-house design team of Quechua will look at all the gathered feedback and data on the use of the products and will redesign the products to be more durable and easier to repair and clean to improve the speed of the established logistical process and equally decrease the depreciation and breakage rate of the used rental

products. Figure 25 visualizes potential design and production improvements that might be made to increase the durability of the rental products. Changing the fabric to a higher quality fabric such as heavy polyester or poly cotton, has most impact on the depreciation of the product. Increasing the quality of parts such as zippers and poles will have more impact on the breakage rate of the products.



Figure 25: visual possible design improvements from retail to rental

Horizon 3: Expand the network, establish and experiment

Decathlon has successfully implemented its Classic and Premium Rental services at multiple festivals across Europe, making hassle-free camping more accessible. To scale and streamline the service, United Level's top management developed an online rental platform, now deployed across Europe. By optimizing stock flow through shared inventory between Decathlon countries and experimenting with bold marketing campaigns that push the limits of comfort and fun, Decathlon attracts more customers while strengthening its brand image.

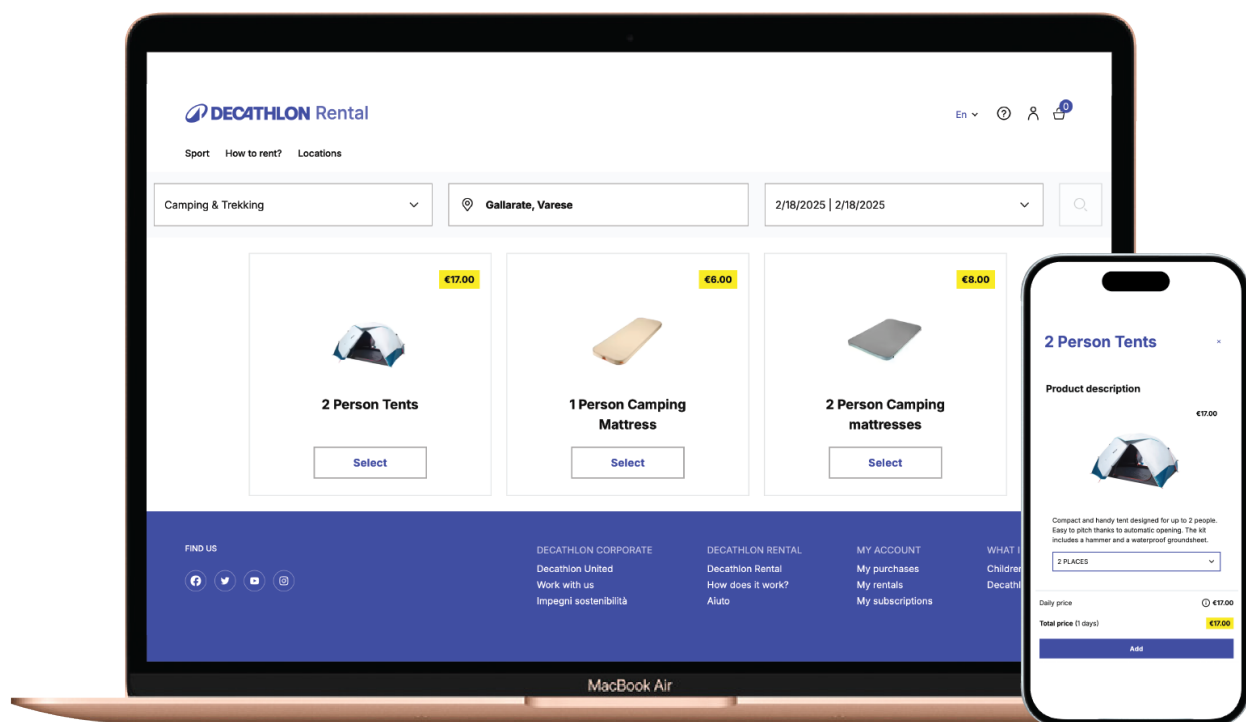


Figure 26: Decathlon rental tool visual

Online Rental Tool & optimized stock flow

Once rental becomes a mainstream topic, Decathlon United will develop and implement a universal rental tool which will enable customers to rent a wide variety of different Decathlon products all around Europe (Figure 26). This universal rental tool will need to be modified to be compatible with short term festival rental. This is because the order han-

dling system will need to undergo a different logistical process. Once this tool is developed, Decathlon will have full authority over the order process and will be able to optimize their stock flow. Decathlon has warehouses/distribution centres scattered all around Europe. Once the service has grown to international scale, it is possible for Decathlon to exchange stock in case, for example, a certain event has

more rental orders than products available in their own warehouse.

Sport events and sustainable prizes

Together with an external partner, Decathlon will start organizing small sport events and challenges at the camping area to create hype and increase the community building experience of the festival. Through the activity of playing sports and building community and friendships, the visitors are able to win sus-

tainable prizes such as discounts on rentals at other festivals. This is a great way to promote new events and increase traction and awareness on the existence of the rental service. Decathlon Playground (Figure 27) is a great example of a previous project where Decathlon hosted small sport events in Paris during the olympic games in 2024. This shows their experience and capabilities to create a similar event in the context of music festivals.



Figure 27: Example picture of the Decathlon Playground project (source: provided by Decathlon)

6.6 Business Case

In order to get a better understanding of the feasibility and viability aspect of this concept, a cost-based rental price model has been developed (See Appendix F [Confidential] for further details). The goal of this model was to calculate the expected rental price, taking different scenarios and expenditures into account. The exact costs for all the expenditures have been checked and validated with different internal stakeholders.

The model contains a list of input assumptions. The most important elements are the amount of festivals/rentals, the product types, the amount of products and whether the products get sold as second-hand after the summer. Within a specific product type there are also different variables to take into account such as depreciation, expected breakage rate and cleaning costs.

Together with the project manager of the No Tent Left Behind campaign, a realistic scenario was created which was perceived to be the most feasible and viable business case option for the client. **This scenario would be that Decathlon offers their rental service at 3 different festivals during one full festival season. In the period after the events, all products will be sold as second-hand products in-store for the remaining product value. The goal is for the rental service to generate as much profit as traditional retail.**

The above mentioned input assumptions were filled in based on this specific scenario. After this, a wide variety of different products within the camping gear category have been added to the model. Chapter 7 will use this business case scenario to explore different possible product packages that Decathlon could offer.

All the steps to calculate the rental price are visualised in figure 28.

cost-based rental price model



Figure 28: Visualization cost-based rental price model

7.Validation



Source: Wildeburg

7. Validation

This chapter will use the business case scenario from section 6.6 as a tool to compare different product packages. The goal is to validate whether Decathlon is able to offer a rental service to their target group that is financially feasible and has competitive market value. First the criteria to create the different options is explained. After this, 3 different options were calculated and visualized. Based on these results, a conclusion was made whether this rental service model can be financially viable. On top of this a recommendation was written which addresses all the limitations and possible improvements of the current business case.

7.1 Benchmarking

First product offering from competitors were analyzed to determine what type of product packages are most interesting for the target group. What type of specific Decathlon products were chosen for the final packages was done with internal stakeholders and based on the following criteria:

1. The popularity of the product
2. Similarity to the competitive products
3. Repairability of the product
4. Easy to set up and break down (for logistics)
5. Offers comfort/convenience

After this, the rental prices of the competitors were used as a cap price for this business case. If the business case shows a price equal or lower than the cap price, it can be concluded that the rental model is very likely to be financially viable. Using the above mentioned criteria and the cap price as a benchmark made it easy to start creating packages.

7.2 Optional packages

The solution consists out of a classic and premium rental option. Together with the client, 3 different options were created that were perceived to be the most interesting to validate. The 'Quick & Comfy' package (Figure 29) is representative for the classic rental service and resembles the convenient affordable step-in option. This option consists out of a 3 person Quechua Fresh & Black tent, 2 fold-

able camping chairs and a foldable camping table. The 3 person Fresh & Black tent is already very popular under the festival target group due to the fact that it is compact and easy to set up and break down. The dark inside of the tent in combination with the bright outside makes the tent very cool and dark which makes the tent comfortable during the night. The foldable chairs and table are great festival essentials to increase comfort. All products in this package are foldable, small and very lightweight which makes them perfect to handle during logistics.

The image is a conceptual marketing visual for the 'Quick & Comfy' rental package. It features a dark blue background with a white tent and two green folding chairs. The text 'Camping rental packages | powered by DECATHLON' is at the top. Below it, the title 'Quick & Comfy' is displayed. A paragraph describes the package: 'Getting ready for the festival season? Check out the quick and comfy rental package! A complete 2-person festival package with Fresh and Black tent, 2 chairs and table. Book your package online and pick it up at the on-site collection point right behind the festival entrance! This setup offers the perfect balance of comfort and convenience at an affordable price. This option is €89,99 cheaper than retail.' To the right, a table lists benefits: 'Convenience +1', 'Comfort +1', and 'Affordability +2'. Below this, the price 'For only €119,99' is shown, with a note '(€20,00/person/night)'. At the bottom, a blue button says 'Book now!'. The background image shows a festival scene with tents and people.

Figure 29: Conceptual marketing visual Quick and Comfy rental package

Camping rental packages | powered by **DECATHLON**

Premium Glamping

Getting ready for the festival season and looking for lift up your camping experience? Check out the premium glamping rental package! A complete 4-person festival package with Air Seconds tent, 4 chairs, a table, cool box, camping-light, access to electricity and sporting equipment. Book your package online and immediately enjoy your pre-pitched camp! This setup elevates your festival experience and offers maximum comfort and fun! This option is €399,99 cheaper than retail.

Convenience	+2
Comfort	+2
Affordability	+1
Fun	+1

For **€299,99**
(€25,00/person/night)

Book now!

Figure 30: Conceptual marketing visual premium glamping package.

The 'Premium Glamping' package (Figure 30) is representative for the premium rental service and resembles the option with maximum comfort, convenience and fun. This option consists out of a 4 person AirSeconds Quechua tent, 4 foldable camping chairs, 1 foldable camping table, 1 partytent, 1 cool-box and access to electricity and sport equipment. The 4 person AirSeconds is more spacious to increase comfort. The tent is still easy to set up and break down due to it's air beams. The partytent, chairs and table are all foldable and lightweight. The cool box is also inflatable. This makes these products perfect for logistics. The camping light is chargeable and therefore very suitable for rental.

Another third option has been added where festival visitors are able to rent a separate partytent (Figure 31). This option was added because most of the camping waste at festivals is due to party tents but partytent rental as a service remains untapped in the festival industry.

Camping rental packages | powered by **DECATHLON**

Party tent rental

Getting ready for the festival season and looking for lift up your camping experience? Rent the high quality Quechua party tent with the new Decathlon rental service! Say goodbye to carrying around heavy partytents. Simply order it online and pick it up at the on-site collection point right behind the festival entrance! This option offers convenience and is the perfect sustainable alternative to single use! This option is €69,99 cheaper than retail.

Convenience	+1
Sustainability	+2
Comfort	+1

For **€79,99**
(€3,33/person/night if shared with 8 people)

Book now!

Figure 31: Conceptual marketing visual party tent rental.

The calculations made to estimate the rental price of each of these options can be found in Appendix G [Confidential].

The following table shows the competitive market value of these packages, the estimated rental price based on the business case and the calculated retail price of the packages. These prices will be compared to draw conclusions.

Type	Retail price	Rental price competitor (similar package)	Rental price Decathlon
Quick & Comfy	€ 210,0	€ 130,0	€ 119,99
Premium Glamping	€ 700,0	€ 300,00*	€ 299,99
Partytent	€ 150,0	N/A*	€ 79,99

Table 3: Price comparison

*Party tents are currently not rentable so therefore the competitor rental price is partially estimated.

7.3 Conclusion

The results of table 3 show that the first 2 options are able to compete with current competitors and therefore the rental service model could be financially viable. However, still many of the costs in the business case are made based on estimations. Although these filled in cost are based on actual realistic numbers which have been discussed with the client, and a risk mitigation and unforeseen cost have been taken into account, it still can not be concluded that the rental service is 100% financially viable. This is due to the uncertainty of different values and some limiting factors. In order to actually validate, the solution needs to be tested in a real life situation. Looking at the original retail prices of the packages, it can be concluded that there is a significant difference in price. The fact that rental can be offered cheaper and increases convenience for the festival visitor indicates that it is likely that the target group will engage with this service.

The specific option for party tent rental can not be compared to the competitive market because it is yet non-existing. However, looking at the low market segment retail price of around €35,00 for a partytent, it can be concluded that the current outcome of the rental price calculation might be a bit too high. The quality of this low market segment party tent is lower but quality is for most festival visitors not of great essence when purchasing a party tent for a festival.

7.4 Recommendations for future concept improvements

To ensure the long-term success and financial viability of the rental model, several refinements and strategic improvements are recommended.

Although the rental tool was developed in collaboration with the client, there may still be

missing costs or miscalculations that impact the accuracy of the rental price. Further development is required to refine the tool, improve its precision, and address potential design flaws. The current business case assumes that all products will be resold as second-hand within two months after the festival season at an estimated residual value and that all rental packages will be fully booked during the festival. However, these assumptions may not fully align with actual conditions, which could affect the financial projections.

To mitigate risks, a 5% risk mitigation rate has been incorporated, but a comprehensive risk analysis is needed to identify potential threats and more precisely assess their impact. Testing the actual percentage of products sold post-festival and incorporating these findings into the business case would enhance its accuracy. Furthermore, the 3% allocation for unforeseen costs requires additional research to generate a more accurate estimate. To improve cost transparency and facilitate scenario comparisons, it is recommended that all costs be adjusted to a cost-per-unit basis, enabling a clearer evaluation of different rental models.

Expanding the range of rental package offerings beyond the three initial options is essential. A broader and more diversified product range, tailored to the preferences of festival-goers, could attract a wider audience. While initial findings suggest that festival visitors are likely to engage with the service due to the price advantages over purchasing retail products, further validation is needed. Future research should involve presenting the rental concept directly to the target audience through surveys or pilot programs to determine whether consumers genuinely prefer renting over buying.

Currently, party tent rentals are deemed financially unviable based on the current business case calculations. However, these findings should be revisited and reassessed through a more detailed cost-benefit analysis. Improving product durability could significantly reduce depreciation and boost long-term revenue. Discussions with Decathlon repair experts suggest that the fabric quality of tents is a primary factor in depreciation. Decathlon already offers poly-cotton tents in larger sizes, which are more durable and designed for long-term use. Introducing these tents into the rental model, or designing custom poly-cotton tents specifically for rental, could extend product lifespans and increase profitability. Moreover, enhancing the durability of other components, such as zippers and poles, could reduce the likelihood of breakage and lower maintenance costs.

At present, all cleaning services are outsourced to an external partner, which is not cost-effective. Although establishing an in-house cleaning service is not feasible within the current warehouse setup, negotiating a multi-year contract with the external partner could lower cleaning costs. Furthermore, reducing the frequency of deep cleaning after each rental cycle could significantly decrease operational expenses.

Labor costs also represent a significant financial challenge. Festival employees are currently compensated at €30 per hour, but replacing them with volunteers who receive festival tickets as compensation could substantially improve financial viability. Additionally, front-end staffing costs are among the highest operational expenses. Collaborating with an external logistics provider to manage front-end operations could help streamline processes and optimize costs.

High festival fees present an additional obstacle to providing affordable rental packages. Decathlon is currently classified as a commercial partner, even though the primary aim of the rental service is to reduce tent waste and promote sustainability, rather than generate profit. With increasing interest in circular solutions among festival organizers, Decathlon should position the rental service as a sustainability initiative when negotiating future partnerships. This repositioning could result in reduced festival fees, improving the financial feasibility of the rental model.

Finally, increasing the number of rental units per festival would enhance economies of scale, making it easier to reach break-even points. While the current rental packages are based on competitor offerings, further research is needed to align Decathlon's rental packages more closely with the specific needs of festival-goers. By implementing these recommendations, the rental model can achieve greater financial accuracy, improve consumer engagement, and position itself as a sustainable alternative to traditional camping gear purchases.

8. Conclusion & Recommendation



Source: provided by Decathlon

8. Conclusion & recommendation

This chapter looks back on all the information presented in this thesis to draw some final conclusions and recommendations. First, the project will be evaluated for one last time. After this the key learnings from this project are put into a broader context in order to answer what these findings mean for companies in general. Although this project is fairly specific, the overarching goal of transitioning towards a sustainable business model is currently being explored in many fields due to these earlier mentioned sustainable policies. This general conclusion and recommendation section is divided into a few topics that resemble the key learnings from this thesis.

8.1 Project evaluation

Looking back, the initial goal of this project was to come with a plan to minimize tent waste in the festival industry. To reach this goal, the context has been analyzed and the needs of the target group were brought into daylight. This resulted in the exploration of a camping gear rental model for Decathlon that offered extra convenience, comfort and fun. This business model consists of a strategic roadmap for implementation and future planning, a service blueprint for front-end and back-end logistics, and a business case to check the financial viability. These models in combination with the experimental visuals of this possible future rental service makes the solution tangible and realistic. The validation of this concept also indicated that any future implementations of this project could be of great value for the client. Therefore it can be concluded, that experimenting with rental models seems like a sound plan for Decathlon. However, as mentioned in the previous chapter, there are a lot of recommendations to further develop and improve this project which they should take into account.

8.2 General conclusion and recommendation

This final part of the thesis will address all underlying learning points during this project that may be useful for other companies who are currently exploring to transition towards a sustainable business model.

8.2.1 Strategic planning and operations

As shown in this project, transitioning from a retail to a rental business model requires major internal adjustments in operations, finance, logistics, and customer engagement. To navigate this shift successfully, retail companies who wish to make this transition should develop a strategic plan that includes inventory management, cash flow tracking, employee training, technology adoption, and, most importantly, building strong partnerships to establish a circular ecosystem. Without these key steps, a company moving from a linear to a circular model risks failure due to poor planning and execution.

8.2.2 Building circular ecosystems

Acquiring and building such a circular ecosystem may sound like an easy task but this is most certainly not the case. Before looking for partners it is first most important to clearly identify the capabilities and weaknesses of the company at hand. When this is established, partners need to be found that are willing and capable to help fill in the gaps. The search for these partners should not be limited to merely bigger organizations. Combining the flexibility and innovativeness of Small to Medium sized Enterprises (SME) with the force and strategy of big corporations can be a great mix of skills for sustainable development.

It is important to take into account that different companies have different capabilities, needs and visions which may lead to a conflict of interest. Eventually all parties involved in this ecosystem want to be treated equally and don't want to take too much financial risk for the sake of this planet. Especially when dealing with differently sized companies, finding the right mutual understanding and respect can be a challenge. This is why face to face meetings are of great essence to find common ground and create a shared future vision just like was done in this project. Once all stakeholders (internal and external) work towards the same goal, actual steps can be made.

8.2.3 Balancing user and planet needs

The most important stakeholder is the end user and this should not be taken lightly. The main focus of this project was to identify needs and barriers of the target group before actually ideating on a conceptual sustainable business model. If a company, or multiple companies for that matter, is/are not moving in the same direction as their target group, this may result in failure and a total waste of energy (which is ironically contradicting to the purpose of this project if you think about it). Once the needs and barriers of your target group are revealed the challenge lies into using those in your advantage to reach sustainable development goals. What the research of this project shows is that sustainability is often a secondary priority and that external factors might lead to unintended unsustainable behaviour of the target group. This refers to the earlier mentioned intention-action gap. So, a way to make sure that a target group starts to adopt sustainable behaviours, the sustainable alternative should be disguised in other, more primary needs. Those needs could be anything such as an increase in convenience, affordable alternatives or something that is more customer friendly. Be-

ing able to balance the needs of user and planet is the ultimate goal to create a business model that is made to last.

8.2.4 Prioritizing sustainability goals over profit

The results of this project showed that it is theoretically possible to create a sustainable business model that is financially viable. However, the margins were quite low and the implementation of such a business model contains a lot of risks. It is important that a company who is willing to test and experiment with these type of business models (eg. Renting, recycling, repair, etc.) is aware that it may very likely affect the overall profit of the company. Sustainability should become a top priority in the company and everyone needs to be informed on the possible financial effects. Of course there are also a lot of positive effects when starting to engage with sustainable practices. Customer satisfaction and loyalty could increase and the brand will gain positive media attention. A good way to handle these possible financial repercussions can be to allocate budget specifically for the development of these sustainable projects. Then, over the longterm, the goal is to make this sustainable project financially independent through the optimization of processes and upscaling the business.

8.3 Final conclusion

In conclusion, this project emphasizes the complexity of transitioning from retail to a rental model, requiring significant internal changes in operations, finance, logistics, and customer engagement. A strategic plan is crucial for success, including effective inventory management, cash flow tracking, and strong partnerships.

Building a circular ecosystem involves understanding company strengths and weaknesses, selecting the right partners, and aligning

stakeholders' goals. Engaging with the target audience and addressing their primary needs can drive sustainability without losing customer engagement.

While sustainable business models are financially viable, they require prioritizing sustainability over short-term profits. By allocating a dedicated budget and optimizing processes, businesses can ensure long-term success and financial independence in sustainable practices.

9. References



Source: The girl outdoors, 2016

2 SECONDS 3

9. References

All illustrations and visualisations are made by me unless otherwise stated. ChatGPT-4 was employed to assist in restructuring and rewriting text authored by myself, enhancing the coherence, fluency, and grammar throughout this thesis.

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Appendix



Source: provided by Decathlon

Appendix



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TU Delft

IDE Master Graduation Project

Project team, procedural checks and Personal Project Brief

In this document the agreements made between student and supervisory team about the student's IDE Master Graduation Project are set out. This document may also include involvement of an external client, however does not cover any legal matters student and client (might) agree upon. Next to that, this document facilitates the required procedural checks:

- Student defines the team, what the student is going to do/deliver and how that will come about
- Chair of the supervisory team signs, to formally approve the project's setup / Project brief
- SSC E&SA (Shared Service Centre, Education & Student Affairs) report on the student's registration and study progress
- IDE's Board of Examiners confirms the proposed supervisory team on their eligibility, and whether the student is allowed to start the Graduation Project

STUDENT DATA & MASTER PROGRAMME

Complete all fields and indicate which master(s) you are in

Family name	<div></div>	IDE master(s)	IPD <input type="checkbox"/>	Dfi <input type="checkbox"/>	SPD <input checked="" type="checkbox"/>
Initials		2 nd non-IDE master	<div></div>		
Given name		Individual programme (date of approval)	<div></div>		
Student number		Medisign <input type="checkbox"/>	HPM <input type="checkbox"/>		

SUPERVISORY TEAM

Fill in the required information of supervisory team members. If applicable, company mentor is added as 2nd mentor

Chair	<div></div>	dept./section	<div></div>	<div>! Ensure a heterogeneous team. In case you wish to include team members from the same section, explain why.</div> <div>! Chair should request the IDE Board of Examiners for approval when a non-IDE mentor is proposed. Include CV and motivation letter.</div> <div>! 2nd mentor only applies when a client is involved.</div>
mentor		dept./section		
2 nd mentor				
client:				
city:	country:			
optional comments	<div></div>			

APPROVAL OF CHAIR on PROJECT PROPOSAL / PROJECT BRIEF -> to be filled in by the Chair of the supervisory team

Sign for approval (Chair)

Name G. Calabretta

Date 14/10/2024

Signature



CHECK ON STUDY PROGRESS

To be filled in by **SSC E&SA** (Shared Service Centre, Education & Student Affairs), after approval of the project brief by the chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total _____ EC

Of which, taking conditional requirements into account, can be part of the exam programme _____ EC

X	YES	all 1 st year master courses passed
	NO	missing 1 st year courses

Comments:

Sign for approval (SSC E&SA)

Name Robin den Braber Date 16-10-2024 Signature RdB

APPROVAL OF BOARD OF EXAMINERS IDE on SUPERVISORY TEAM -> to be checked and filled in by IDE's Board of Examiners

Does the composition of the Supervisory Team comply with regulations?

YES	V	Supervisory Team approved
NO		Supervisory Team not approved

Comments:

Based on study progress, students is ...

V	ALLOWED to start the graduation project
	NOT allowed to start the graduation project

Comments:

Sign for approval (BoEx)

Name Monique von Morgen Date 16/10/2024 Signature Monique von Morgen



Personal Project Brief – IDE Master Graduation Project

Name student Mees Peeters

Student number 4854667

PROJECT TITLE, INTRODUCTION, PROBLEM DEFINITION and ASSIGNMENT

Complete all fields, keep information clear, specific and concise

Project title Extending the life cycle of Decathlon tents through the support of repair.

Please state the title of your graduation project (above). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

Introduction

Describe the context of your project here; What is the domain in which your project takes place? Who are the main stakeholders and what interests are at stake? Describe the opportunities (and limitations) in this domain to better serve the stakeholder interests. (max 250 words)

This project will be done for Decathlon; a global sporting goods retail company that offers a wide range of sports equipment, apparel, and accessories. Decathlon has over 1700 stores in around 70 countries worldwide. Being a big market leader comes with great responsibilities. The purpose of this research is to help the company 'Decathlon' move towards a more sustainable and circular business model. In 2020 Decathlon implemented a transition plan that contains strategies for Decathlon's sustainable developments from 2020 till 2026. The transition plan contains a circular business model which can be divided into 4 segments: Repair, BuyBack, Rental and Second Life. The transition plan states that Decathlon is committed to make 30% of their products qualified as repairable and will make sure that 100% of those product categories are being repaired by either company or customer by 2026. Within this research I will dive into the life cycle of Decathlon tents with a specific focus on the use of tents at weekend festivals and how the practice of repair can be applied here.

Some important stakeholders involved in this practice are 'Decathlon Repair Experts', 'Store Employees', 'Decathlon Customers', 'Weekend Festival Organisations' and 'Festival Visitors'. This research can lead to sustainable but also financial benefits due to increase in time and cost efficiency for both organisations involved (Decathlon and Festival). At the same time 'Decathlon Customers' and 'Festival Visitors' are being handed opportunities to partake in sustainable practices.

→ space available for images / figures on next page

Personal Project Brief – IDE Master Graduation Project

Problem Definition

*What problem do you want to solve in the context described in the introduction, and within the available time frame of 100 working days? (= Master Graduation Project of 30 EC). What opportunities do you see to create added value for the described stakeholders? Substantiate your choice.
(max 200 words)*

The European Union's transition towards a Circular Economy has led to new laws and regulations. Key among these is the European Green Deal, a comprehensive set of initiatives aimed at making Europe climate-neutral by 2050. This includes measures to reduce greenhouse gas emissions, promote renewable energy, enhance energy efficiency, and support circular economic practices. As part of this effort, the Right to Repair legislation grants consumers and independent repair shops the legal right to repair and maintain products. Companies are now required to provide spare parts, repair manuals, and diagnostic tools, reducing dependence on manufacturers.

Despite these initiatives, research by MOJO and ID&T, along with personal observations, highlights a significant issue: large quantities of camping gear, particularly Quechua tents, are being discarded at festivals, even though many are still repairable. Festival-goers often lack the resources or knowledge to fix these tents. This aligns with broader research showing that consumers frequently feel disconnected from the products they purchase, resulting in a reduced sense of responsibility. When individuals are not involved in the creation or repair processes, they may view products as disposable, leading to neglect and shorter product life cycles. Promoting repair culture could strengthen consumers' connection to their products, extending their longevity.

Assignment

This is the most important part of the project brief because it will give a clear direction of what you are heading for. Formulate an assignment to yourself regarding what you expect to deliver as result at the end of your project. (1 sentence) As you graduate as an industrial design engineer, your assignment will start with a verb (Design/Investigate/Validate/Create), and you may use the green text format:

I am going to create a value proposition that supports circular economy at festival events.

Then explain your project approach to carrying out your graduation project and what research and design methods you plan to use to generate your design solution (max 150 words)

First I will perform a case study on the data gathered from last years 'leave no tent behind' campaign in The Netherlands. After that I will do interviews with Decathlon Employees from other countries that are also responsible for the 'leave no tent behind' campaign to talk about their learnings and experiences. This, in combination with my initial research, should give me enough information to form a Research Question with various subquestions. I will then perform indepth literature studies on the found keywords and do Trend Analysis which will lead to concepts for possible solutions that need to get verified. To make these ideas more tangible I will do journey mapping. Based on the research and concept solutions, questions will arise which will get organized into a Qualitative research to test whether these solutions are relevant and fulfill a certain social need. Along the full process I will discuss the feasibility and viability of the project with my coaches at Decathlon. Based on these findings I will eventually create a value proposition which contains financial -and strategic planning (eg. roadmap, break-even analysis, Business model canvas).

Project planning and key moments

To make visible how you plan to spend your time, you must make a planning for the full project. You are advised to use a Gantt chart format to show the different phases of your project, deliverables you have in mind, meetings and in-between deadlines. Keep in mind that all activities should fit within the given run time of 100 working days. Your planning should include a **kick-off meeting**, **mid-term evaluation meeting**, **green light meeting** and **graduation ceremony**. Please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any (for instance because of holidays or parallel course activities).

Make sure to attach the full plan to this project brief.
The four key moment dates must be filled in below

Kick off meeting	08/10/2024
Mid-term evaluation	09/12/2024
Green light meeting	20/01/2025
Graduation ceremony	17/02/2025

In exceptional cases (part of) the Graduation Project may need to be scheduled part-time. Indicate here if such applies to your project

Part of project scheduled part-time	<input checked="" type="checkbox"/>
For how many project weeks	15
Number of project days per week	4

Comments:
I will be working on my start up every friday for the first 15 weeks. for the final sprint of the last 8 weeks I will work full time on my project.

Motivation and personal ambitions

Explain why you wish to start this project, what competencies you want to prove or develop (e.g. competencies acquired in your MSc programme, electives, extra-curricular activities or other).

Optionally, describe whether you have some personal learning ambitions which you explicitly want to address in this project, on top of the learning objectives of the Graduation Project itself. You might think of e.g. acquiring in depth knowledge on a specific subject, broadening your competencies or experimenting with a specific tool or methodology. Personal learning ambitions are limited to a maximum number of five.
(200 words max)

I wish to start this project as I take great interest in the development of circular business models. I have seen with my own eyes how thousands of people at festivals discard their tents like a single use product and I made it my personal task to help fix this issue. Decathlon obviously plays a big role in this domain as Quechua is a big distributor of tents which are used at the festival campside. This is why it felt like the perfect company for me where I can make the most impact.

Skills and knowledge I want to improve:

- Become an excel expert.
- Perform qualitative research.
- Become a technical material expert.
- Structure and organize my own project.

Skills I want to prove:

- Visual Design/Data visualisation.

Appendix A : Qualitative interview format

The goal of this interview is to...

- Explore the lifecycle of using tents at festivals (e.g., setup, use, teardown, disposal).
- **Gather information on current behaviour and experiences of the target group and Identify opportunities and barriers** to improve the user experience and encourage sustainable behavior.

Interview format

Target audience: Multiple-day-festival visitors

Introduction

Thank you for participating in this interview!

The purpose of this research study is to examine the use of tents at festivals and the experiences arising when interacting with tents. The interview will take approximately 30 minutes to complete. Your responses will help me better understand how tents are used and perceived in festival settings, contributing to a master's thesis focused on the development of the event industry.

Here I have a consent form for you. Please read through it carefully and let me know if you have any questions. If you agree to the terms please say: I agree to the terms of this research.

To the best of our ability your answers in this study will remain confidential. We will minimize any risks by keeping all answers to this interview anonymous. IP Addresses will also be deleted after all the data is compiled and all recordings will be deleted after transcription.

Your participation in this study is entirely voluntary and you can withdraw at any time. You are free to omit any questions.

In case needed you can always reach out to me after doing the interview to ask questions or request the deletion of your answers.

Is it okay for you if I record this interview?

Is it okay for you if I reach out to you after the interview if certain things are not clear yet?

A1. Icebreaker Questions

These help participants feel at ease and provide context:

1. How old are you?
 - 1.
2. Where do you currently live?
 - 1.
3. What do you do for work?
4. What did you study?
5. "Can you tell me about your most recent multi-day festival experiences?" What kind of festivals did you visit?
 1. What kind of festivals do you like?
 2. What do you like about them?

A2. General questions about camping and repair

6. What are other occasions in which you use your camping gear?

7. When was the last time you bought new camping gear?
 1. What did you buy?
 2. What was the reason for your purchase?
 3. For how long do you own your current tent?

8. How would you typically handle products that are broken?

1. Do you have experience with repair?
2. What would be incentives for you to repair?
3. When would you deem a product beyond repairable?

B. Pre-festival

8. “How do you typically prepare for a festival in terms of camping gear?” (eg. bring your own gear, borrow, last minute, prepared, pro gear, cheap gear, etc.)
9. When preparing your camping gear for the festival have you ever experienced that something was broken or dirty?
 1. What did you do in this situation?
 2. What was broken/Dirty?
 3. What was the reason for that?
 4. How do you feel about this part of the process?
10. Have you ever considered other forms of accommodation at a festival?
 1. What type of accommodations?
 2. Have you ever heard about tent rentals?
 3. What are your thoughts on tent rentals or renting on location? Explain your answer.
 4. Would there be anything to incentivise you to rent a tent instead of bringing your own?
 5. If so, which incentives would help you/would you like?

B. Explore lifecycle, barriers and opportunities during the festival

11. How do you experience the transportation of your tent and equipment?
 1. What do you usually do?
 2. How do you go? (own car, rental car, friends car, shared car, public transport etc)
 3. If you had to rate this experience from 1-10?
12. **How** do you feel about setting up camp during a festival?
 1. What are your best and worst experiences?
 2. Would you like to tell me a bit more about it?
 3. If you had to rate this experience from 1-10?
13. **How** do you feel about breaking down your camp after a festival?
 1. What are your best and worst experiences?
 2. Would you like to tell me a bit more about it?
 3. Did you ever find yourself in a situation where you had to leave your tent at the camp?
 4. Can you explain why?
 5. If you had to rate this experience from 1-10?
14. **How** do you experience the conditions of the camping area during a festival? Explain your answer.
 1. Do you experience it as organized/structured/clean/chaotic?
 2. How do you typically dispose of your waste?
 3. Did you have different experiences based on how the festival was organised?
 4. Can you tell me the best/worst experience you had?
15. What do you do if/when your tent breaks down during a festival?
 1. What are your considerations when this happens?
 2. What type of barriers might be present? and what could support or enable you to let your product be repaired?

3. Do you feel you are given all the knowledge and tools needed to manage your broken tent?
4. who should give the knowledge?
5. Do you know how to fix a tent?
6. Have you ever done it before?
7. Are you interested to learn?
8. Would you ask a specialist/friend to do it for you?
9. Would you be interested in getting your own repaired tent back instead of buying a new one?
10. Would you do something different/additional if you were given some incentives to get it repaired? if so, which incentives would help you/would you like?
- 11.

C. Wrap-Up and Feedback

Conclude with reflective and opportunity-focused questions:

16. “What do you think festivals and other third parties could do to make managing tents easier and more sustainable?”
 1. What are things you would like to see or do differently?
 2. What do you already do in terms of sustainability in the context of festivals?
 3. “Is there anything you’d like to see changed about how festivals handle camping areas?”
17. How would you describe the perfect festival camping experience?

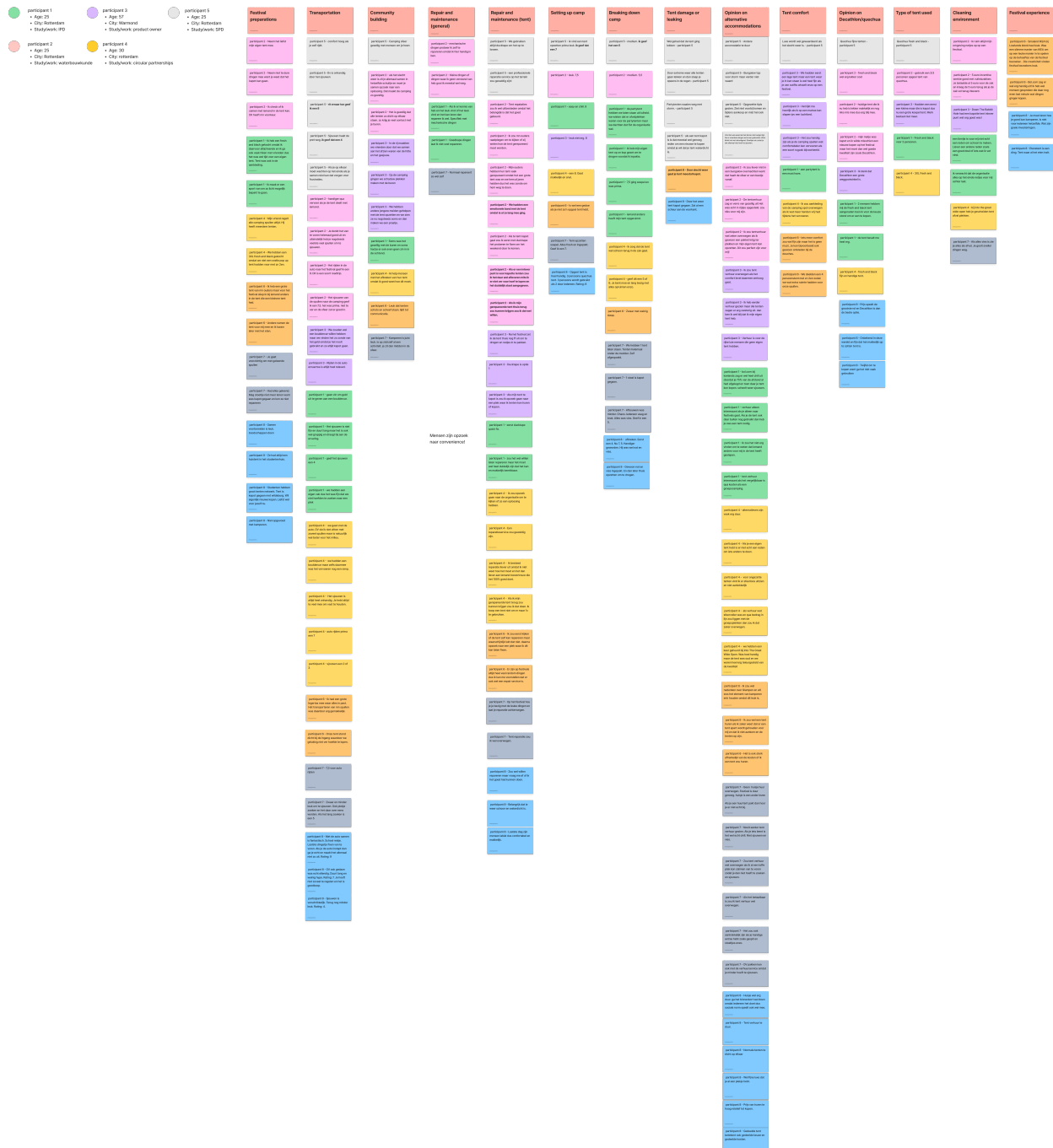
Analyze the Data

Once interviews are conducted, the responses will be analyzed for recurring themes related to **opportunities and barriers**. This will help validate or refine the consumer behaviour theories we are testing and inform actionable recommendations summarized in a Desirability list which will be presented to Decathlon and Kultlab to do a feasibility and viability check.

Checklist

1. Break and repair experience - festival preparations
2. Break and repair experience - During festival
3. Consideration of other accommodations (like rental) before the festival.
4. The effect of the environment on the disposal of waste

Appendix B : Clustered interview results



Costs

- 7/8 participants said that current alternative accommodations are too expensive.
- 4/8 participants said that they would rent a tent if the price was more affordable.
- participants either owned a tent from their parents or bought one for themselves because they plan to use it more often on other hiking/camping vacations.

Comfort levels

- 7/8 participants said that they enjoy the ride to the festival when they go by car.
- Public transportation was perceived to be less enjoyable due to the amount of stuff you have to carry around.
- 7/8 participants experienced strong discomfort in the period between arriving and setting up camp due to the amount of stuff they had to carry around.
- 8/8 Participants prefer to share a tent as it is less uncomfortable to carry one big tent than multiple small ones
- Based on the interviews a trend was created that shows the average satisfaction line of festival visitors. This is shown in figure X. The 2 dips visible are created due to a lack of convenience and feeling tired.

Figure X: Satisfaction trend

Fun festival experience and community building

- 8/8 participants said to enjoy setting up camp.
- 6/8 participants said that connecting and communicating with people at the camping area plays an essential role in the festival experience.
- festival visitors go out to look for adventures and fun experiences.
- Companies such as IKEA and Bol.com that offer a service/experience at the festival were positively received by the participants

Tent rental

- 8/8 Participants currently prefer normal accommodation over tent rental services.
- 4/8 participants said that current tent rental services are too straight lined and low quality.

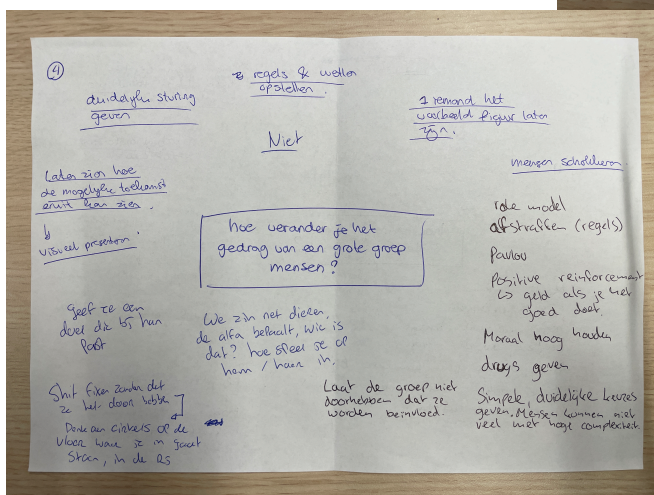
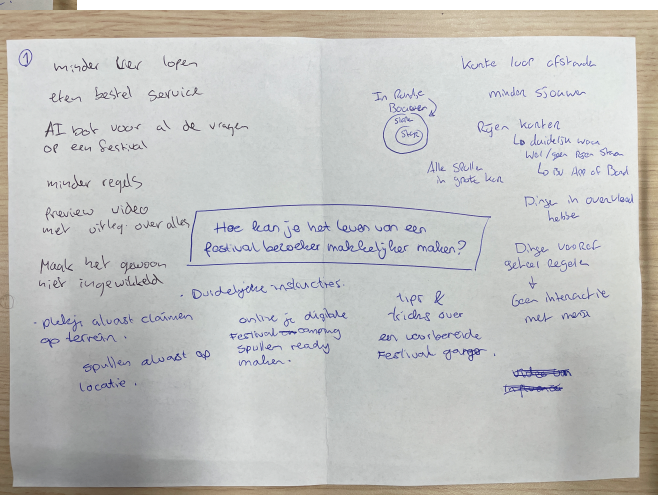
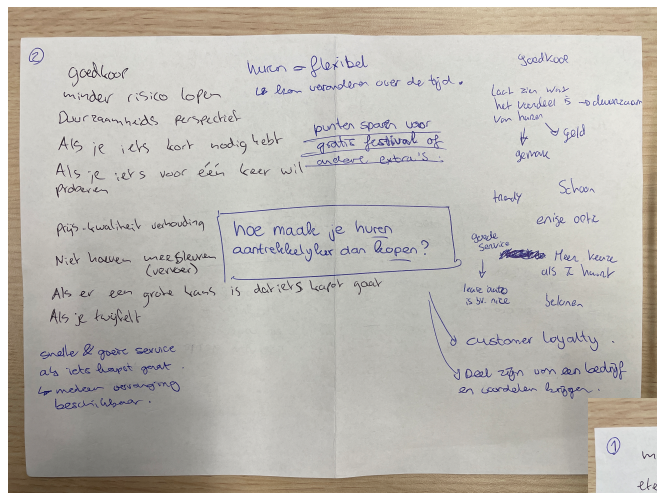
Tent repair

- 8/8 Participants never heard nor seen a tent repair service in a festival context.
- 5/8 participants had experience with tent damage in the past.
- x/8 participants were interested in such a service if their tent would break down.
- Participants indicated that a tent repair should be done professionally to make sure it is cleaned and fully protected against water leakage.

The role of Decathlon/Quechua

- 7/8 participants perceive Decathlon as a trustworthy and go to brand for buying tents for festivals.
- 4/8 participants owned a Quechua tent and were satisfied with the quality and price.

Appendix C: Results creative session 1



③ Deal sluiten met afval verwerkingsdienst.

Maak er een S&P van → B.V. iede tent = 1 flesje of iede tent weg 5 binn. Platen alles = service

Verbranden?

Voorkoop gez. matige tent? later naar zite door festival

Maakt mag een tent laten staan → nieuwe sociale noot.

afval ontvoeren tot kunst.

Behou tenten maken die niet keert gaan + afbrekenbare zon

↓

deurkloze

Gaats gaas oen deklaze

recyden more durable tenten makkelijkter hergebruiken

hoe zorg je voor minder tenten afval?

Minder tenten huisjes vernieuwen hogere kwaliteit tenten duurder maken Meer waarde geven aan een tent tenten maken van minder materiaal tenten deel systeem

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④ Relaties creëren

Semantics Tech / Arts / Business

Sense of ownership Product te kopen door het lang mee laten gaan

Filles

een product geerd geven (potter met menselijke emoties)

het product menselijkheid eigenaarschap geven

het product laten inspireren op sentimentele waarde

stroom op het maken van herinneringen

Life time guarantee → vrand voor het leven

Maak het meer menselijk, voeg AI toe

Maak het duur

Als je het van iemand die je dierbaar is, cooleen krijgen

Personaliteit verspreiden - of - Posaal

Nadzetelijke maken, Netig om te overleven

hoe kan je de band tussen mens & product verstoken?

⑤ Maak het een kunst object, republiec onderdelen in een nieuwe kleur

Workshops geven

technische uitdaging, hobby,

repair cafe' online cursus

bekeerd krijgen

Influencer als voorbeeld

Als je daan waar men van afschaken → S&P kanne leen

Gameby reparaties

haken winnen door meer repareren

Simpel repareren is leuker

Maak de gebruiker trots op de reparatie

minder & het kosten

Handelise maken

reparatie kostte je geld op

Japanese method to increase value by adding valuable/aesthetic repair.

foto maken & delen community feeling

Youtube

Bekende/idool doet het ook

Als je de waarde van het resultaat kent

Door iemand anders laten doen

Lo Ruiten voor iets?

hoe maak je repareren leuk?

How to build a community?

Common purpose

information sharing

Feel connected in a network

everyone knows similar stories

religion

Same values

Shared interaction

Sense of belonging

Predefined interaction points

What does your ideal camping experience look like?

relaxing environment

running water close by

dry area

enough privacy

cozy with partner

bouncy / grassy floor that does not hurt

Friends

keep you warm but still fresh air

Sunrise on your face

usually different country

How to... create a stronger relationship between product and user?

Explanation: People are almost using tents as disposable products indicating that the innovations to make them cheap and easy to set up has lead to a distance between the user and the product. How can we recreate this relationship?

Results:

Sense of ownership by buying the product. (type of service)

Timeless design. (Quality features)

Make a product/service that survives a lifetime. (Quality features)

Link between product/service and heritage (eg. MADE IN NL) (emotional features)

Know the origin of the product/service. (emotional features)

Give the product/service human characteristics. (emotional features)

Give a product/service feeling and human emotions. (emotional features)

The product/service plays into sentimental value (emotional features)

Product/service pushes on creating memories (emotional features)

Life time guarantee > Friend for life (type of service)

Make product/service necessary. (practical features)

The product/service creates a stronger personality/image for the user. Product and user become one. (emotional features)

Limited editions (practical features)

A product with a story (emotional features)

Increase the value by making the product smart with AI (practical features)

Make it expensive (practical features)

Make the product/service personalised/personalisable

Get product/service as a present from a person that you value.

Conclusions:

Renting a tent can also lead to a less strong relationship between product and user.

A lot of ways to increase a relationship between product and user is based on emotional features.

How to... make repair more fun?

Explanation: People are sometimes willing to repair products but do not have the right tools and knowledge to do so. A possible way to convert them into taking the extra step to repair is by making repair a more fun experience. What are possible ways to this?

Results:

Make it like art. Repair in different colors and shapes.

Technical challenge, hobby

Repair cafe

Getting payed (reward incentive) [2]

online course (educational)

Influencer as image and example [2]

Gamify reparations (fun experience incentive)

Gain points when repairing (reward incentive)

Make repair simple and easy to understand

Make the user proud of its repair

Develop skills.

Help other people and work together to achieve a task.

Learn people first how to use the necessary tools

Make it less time consuming
create something of your own. personalised.
spark the imagination of what you can do with the product to repair it.
spark curiosity
Japanese method: increase value by adding valuable/aesthetic repair
Make a picture and share > Community feeling
Youtube
Let someone else do it
Exchange your broken product for something else.
Workshops.

Conclusions:

How to... minimise tent waste?

Explanation: one of the leading questions of this project is how to minimise tent waste. This can be done in a lot of different ways and therefore it is an interesting question to ask people outside of the project.

Results:

Make a deal with the waste management companies to clean it up.
Burn it.
Stop selling low value and cheap products like cheap partytents. Let them be placed with the festival organisation
Make it harder for people to throw away stuff and/or leave it behind. [2]
fees.
Less tents and more houses for rental.
higher quality tents
make tents more expensive
increase the emotional value of tents
make tents of less material
sharing tent system
increase awareness: What does tent waste mean? how big is the problem?
show the potential of the waste.
Make high quality sustainable tents that are more durable and are made for festivals.
recycle
make it more easy to re-use tents.
Make a new social norm: Nobody leaves their tent behind.
Change waste into art.
Gamify: Every tent saved=one tree planted.
Give them away for free to people who are in need of shelter.
Make tents that are easier to repair.

Conclusions:

How to... change the behaviour of a big group of people?

Explanation: People are social animals that tend to copy the behaviour of their fellow humans. The same happens in the festival context. Festival visitors leave their tent behind and other people start to copy it. How can we recreate this by making sure that people copy sustainable behaviour?

Results:

Give them clear instructions.

Show them how the possible future looks if they keep behaving this way

give a visual presentation of the waste that is comprehensible?

give them a goal that fits the needs of the target group

Get stuff done without them knowing.

We are like animals. The alfa decides. Who is the alfa? How can you use this entity in your advantage?

role model

What are ways to change the social norm

Influence their behaviour without them knowing

Shock people to rapidly change behaviour

pavlov effect

keep the moral high

rules and laws

negative reinforcement: punishment

positive reinforcement: money incentive

simple and clear options. high complexity leads to unpredictable behaviour

Conclusions:

How to... make the life of a festival visitor easier and more comfortable?

Explanation: One of the reasons that people leave their tent behind is because it takes a lot of energy and discomfort to clean it up and bring it back to the car.

Results:

Decrease the distance between the camping area and the parking.

Food order system (eg. thuis bezorgd)

AI bot to answer all questions at festivals.

less rules

preview video with explanation

make it easy.

claim your spot at the camping terrain

stuff already at the location like a tent.

Clear communication

Partyzones and chillzones at the camping area

chill spots at the camping area to connect

tips and tricks to prepare for the festival

short walking distances

less carrying your stuff

all stuff in big carts

Life updates about the length of the line at the entrance.

Conclusions:

How to... make rental services more appealing than buying?

Explanation: one of the possible solutions is renting out tents. People however tend to prefer to own a product. What are ways to increase the likeliness of people adopting rental services?

Results:

Renting = flexible. it can change over time

cheap [2]

less risk for the user

short term or one time use products are better to rent

it is better for the environment

if you want to try a product out

Price/quality ratio

don't have to carry all the stuff/transport is easier

If you have a big chance that something breaks, rental is more interesting.

If you still doubt what to buy.

Fast and good service 24/7 when something breaks. Immediate repair possible.

Customer service is better than buying and picking it up yourself.

Make it cheaper over the longterm.

Add extra benefits that have a lot of value for your target group while for you it is a low investment.

social status increases.

collect points for free festival tickets or other extras.

Show the pros of rental: easier, comfort, cheaper, sustainable, etc.

Make it trendy

The product is always clean and fresh for use.

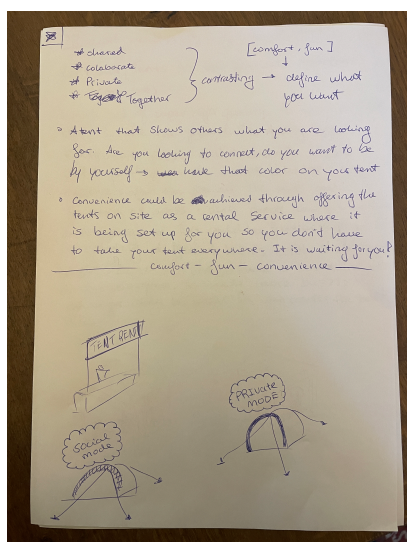
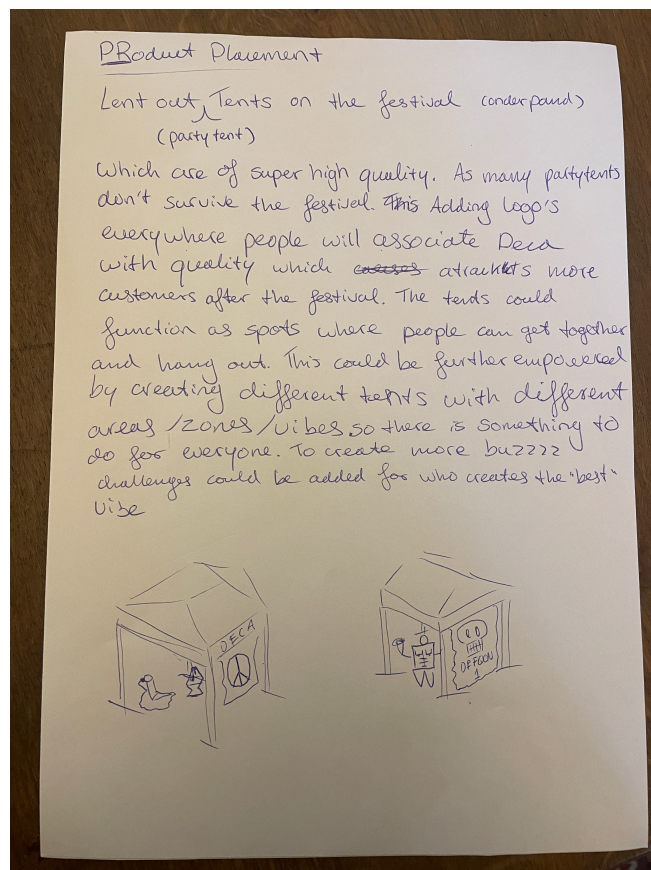
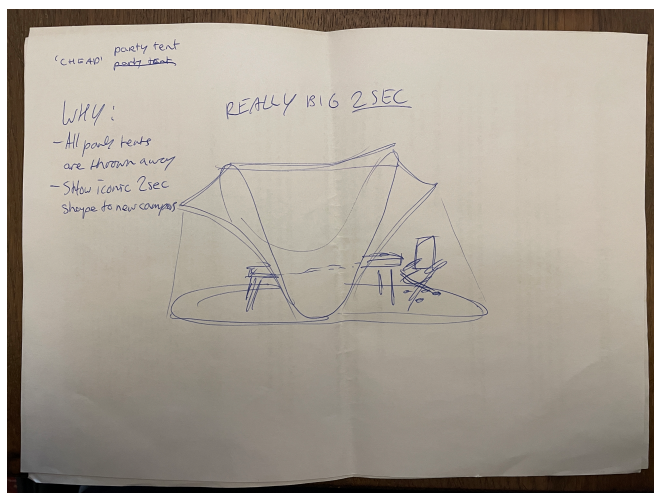
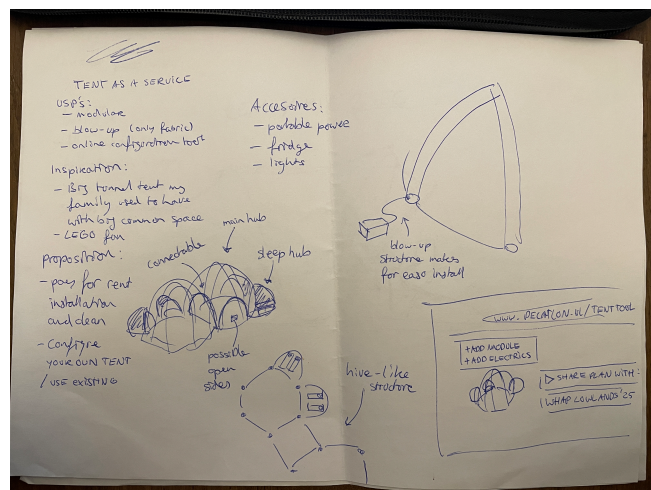
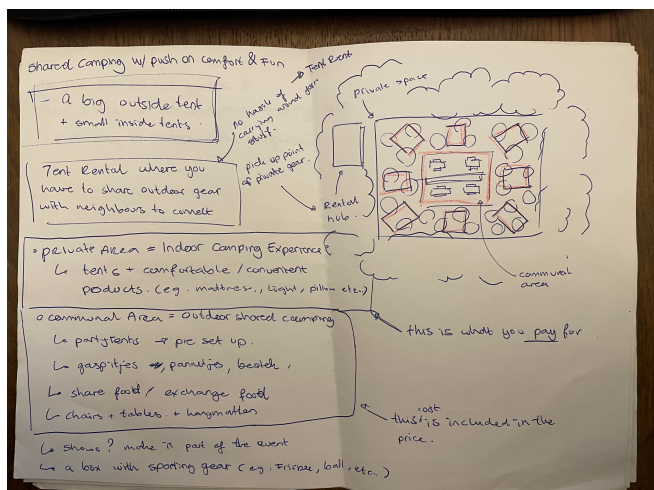
Increase the range of options when you rent.

Customer loyalty: get offered extras when you rent instead of buy.

Conclusions:

Emotional features	Practical features	Fun features
<ul style="list-style-type: none">• Show origin/heritage/lifetime of product.• Give the product human characteristics.• add sentimental value.• Service creates memories with the user.• Service increases social status/personality/reputation of user.• A service/product with a story.• Get service/product as present from someone that you value.• Show the possible future of a tent and the role of the festival visitor in this equation.• Initial target group of the service are example figures for the following group.	<ul style="list-style-type: none">• Timeless design• Service/product that survives a lifetime.• make product/service necessary.• Extremely flexible service (eg. big range of options or change decision based on weather conditions)• Affordable.• Limited edition.• Lower risk for user (eg. when something breaks)• Make transport easier.• 24/7 service.• Camping gear already at location.• Immediate access to explanation videos• Guaranteed fresh and clean tents.• Quality and trustworthy products with functional design elements.• Service adds value by increasing comfort of accommodation.• increase comfort in different sensory experiences (eg. sound proof, visual experience)	<ul style="list-style-type: none">• Possibility to personalise.• Collect points for free festival tickets or discounts.• Chill spots at camping area to connect.• Co-create/co-play/co-experience• Take care of something together.• Pre-determined interaction points.• communication starters.• Interactive games/installations• Exploring the unknown.• Share products within the service.• Visual presentation of size of the waste problem• Find ways to connect your tent with neighbours.

Appendix D : Results creative session 2



Results

Interesting elements

concept 1:

The tent can change shape/colour to define if you want to share/collaborate/be private. Your tent changes with your desires. Social mode vs Private mode. (Fun)

Add tent rental to make it more convenient.

It is already set up.

Concept 2:

Lent out tents/partytents on the festival as collateral. (Convenience)

The tents are very high quality. (Comfort)

By adding Decathlon branding the high quality is associated to the brand Decathlon which attracts more customers after the festival.

Tents function as meeting points with different vibes that bring together like minded people. (eg. Zen tent to do yoga vs tent with gym inside to do sports)

Challenges could be added to gamify the experience of the camping area (Fun)

Concept 3:

Custom made tents that are designed to withstand the harsh festival environment

It is probably easier to clean a tent that you can blow up instead of setting it up.

The custom tent should be a blow up that is easily repairable and cleanable to make it financially viable.

Don't be gentle, it's a rental. - What is stuff that typically breaks and how can Decathlon prepare for this in the design and preparations to minimise tent waste.

Zippers? maybe replace with velcro.

Portable power/small fridge/lights - nice extra features to increase comfort!

Online configuration tool: claim the stuff that you need for your shared tent space with friends, create a floorplan, share your plan with the festival and pick it up at the terrain

Modular tent system: hive-like structure of big (main hub) and small (sleep hub) tents that can be connected. (Fun)

Pay for rent, installation and clean

More control leads to better use of the tents. They are set up correctly and checked in between.

Make custom tunnel tent pieces to connect tents with friends and neighbours and create shared spaces.

Concept 4:

Really big 2 second throwable partytents as an iconic statement piece instead of the cheap low quality partytents.

Concept 5:

tent rental

Create difference between private rental and shared rental

Shared rental/Communal area: Outdoor shared camping experience (this service/cost is included in the total rental price)

Partytents > pre set up

gasburners, pans, cutlery, etc.

A place to share food/eat together

Chairs, tables, hammocks

A box with sporting gear (eg. frisbee, ball, etc.)

Private rental/private area: indoor camping experience

Tent

Comfortable/convenient extra products (eg. mattress, lights, pillow, etc)

concepts

Concept 1: Custom modular fresh and black Quechua festival tent system rental designed to be festival and rental proof. > Durable and extra easy to clean fast

Rental service and online configuration tool for convenience

Fresh and black for comfort

Modular hive like system for fun experience

Concept 2: Giant pop up partytent rental as marketing stunt

appealing to the eye

Good for brand building for Decathlon

Fun experience

increases comfort and convenience

Concept 3: Private and communal area rental space (shared glamping)

Communal area has pre-set up facilities

Includes extras like sports

Private rental can be done via online configuration tool

more expensive

Concept 4: Pick up and drop off rental point Decathlon camping gear

only private rental

Set up camp wherever you want

fairly cheap

Concept 5:

Appendix E : vALUe analysis

vALUe

Concept 1: Custom modular fresh and black Quechua festival tent system rental

Advantages/Plus:

Very novel and unique product

Creates fun experience

Stimulates community building

Convenient

Able to redesign the tent into a more durable and cleanable product

Limitations/Minus:

High production costs

Does not create added comfort

Create a whole list of new products that needs time to land in the market and gain customer loyalty

Prototype to end product takes a lot of time and testing.

Will the product be used outside of festival context?

Festival visitors are not able to create their own campsite.

Production of new tents is not sustainable

Unique/Interesting elements:

Questions:

is the festival visitor market big enough to pull this off?

Concept 2: Giant pop up partytent rental as marketing stunt

Advantages/plus:

appealing to the eye

Good for brand building for Decathlon

Fun experience

increases comfort and convenience

Possible to start with normal party tent rental

possible to expand to different product segments

Limitations/minus:

Create completely new design

high design and production costs

Probably hard to transport due to size

New product needs time to land in the market and gain customer loyalty

Can only be used in festival context

Production of new tents is not sustainable

Concept 3: Private and communal area rental space (shared glamping)

Advantages/plus:

Communal area has pre-set up facilities (convenient)

Includes extras like sport equipment to stimulate fun festival experience

Sporting equipment is easily accessible

Private rental can be done via online configuration tool (convenient)

People are free to set up their own camp

Able to make your experience as comfortable as possible

Limitations/minus:

More expensive than normal camping

Decathlon needs people to secure the private camping area

limited to one specific area on the campsite

Visitors HAVE to share the communal area which makes it less private

Needs testing to first see if Rental gains traction

Concept 4: Pick up and drop off rental point Decathlon camping gear

Advantages/plus:

Convenient because everything is already there

Online configuration tool

Set up camp wherever you want

fairly cheap

Limitations/minus:

Not very novel

Not a lot of engagement with visitors

Not a lot of brand building for Decathlon

Limited product offering

vALUe

Concept 5: Tents that indicate your mood (private vs outgoing) with colour

Advantages/Plus:

A novel idea

Creates fun interaction

gives clear indication of festival visitors needs

Does affect comfort to a certain extend

Festival visitor is given more freedom to play with their environment

Limitations/Minus:

High production costs

Does not create added convenience

Does not create added fun

Creating a new product needs time to land in the market and gain customer loyalty

Prototype to end product takes a lot of time and testing.

Will the product be used outside of festival context? probably not.

Production of new tents is not sustainable

Concept 6: Big pre set up partytents with sport themes to unite like-minded people (eg. yoga tent, fitness tent, etc.)

advantages/plus:

Extra Fun experience at campsite

Helps with community building/brings people together

Possibility to organise little sport events to win festival tickets/decathlon giftvouchers

good for brand building of Decathlon

Limitations/minus:

Does not add to comfort

has limited effect on convenience

Does not really affect accommodation/can not be considered as alternative accommodation

needs money and time to produce

Needs a lot of organisation and programming to do activities etc.
Takes up a lot of space at the event which probably also costs a lot of money

Concept 7: pre-set up Big rental tents for 10+ people groups that strives to give maximum comfort with all senses (the premium fresh and black partytent) (eg. noise cancelling, air conditioning, electricity, fridge, etc.) - based on japanese glamping

Advantages/plus:

Maximum convenience and comfort

Could be a fun price that you can win when you buy a festival ticket.

Good for brand building of Decathlon

Limitations/minus:

Low impact due to size

Only fun for a selected group of people

Not cost efficient

Questions for C-box analysis:

Will Decathlon be able to implement the concept?

How novel/innovative is the concept?

To what extend is the concept in line with the needs of the target group?

How do the different needs compare to each other in the concept?